



Application No: 250814006243

**ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED
WASTE DISPOSAL SITE FOR EENHANA TOWN COUNCIL, AT
EENHANA TOWNLAND, OHANGWENA REGION**



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ACRONYMS

DEA	Department of Environmental Affairs
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ECO	Environmental Compliance Officer
EIA	Environmental Impact Assessment
EMA	Environmental Management Act (No. 7 of 2007)
EMP	Environmental Management Plan
ETC	Eenhana Town Council
MET	Ministry of Environment and Tourism
RD	Red-Dune Consulting CC
SM	Site Manager

EXECUTIVE SUMMARY

Population growth and rapid urban development have increased the generation of household, industrial, and sewage waste. Inadequate waste management is harmful to the environment: it can spread disease, contaminate water resources, threaten animals, and create an eyesore. Measures are therefore required to ensure effective waste management, including provision of managed disposal sites and adequate sewage facilities.

Worldwide, landfilling remains one of the most widely used methods for municipal solid waste management. Eenhana Town Council (ETC) operates a solid waste disposal site on the outskirts west side of town (-17.486115°S, 16.311923°E). The site is used for general waste such as beverage containers, cans, bottles, and plastics. Hazardous wastes, including medical waste, are not accepted at the site.

The Department of Environmental Affairs in the Ministry of Environment and Tourism recommended closure of the existing site, a recommendation reinforced by complaints from nearby residents about air pollution. Consequently, ETC has decided to identify a suitable location for a new waste disposal facility.

Operation of a waste-disposal site is a listed activity under the Environmental Management Act (Act No. 7 of 2007) and cannot proceed without an Environmental Clearance Certificate. Accordingly, an Environmental Impact Assessment was conducted for the proposed new site, with particular attention to leachate control, which is a primary cause of land and water pollution. This study recommends operational guidelines, monitoring protocols, and closure and rehabilitation measures to ensure the long-term environmental sustainability of the new facility.

ETC initially submitted an Environmental Impact Assessment (EIA) and an Environmental Management Plan (EMP) on 15 July 2019, as part of the application for the Environmental Clearance Certificate (ECC) for a new solid waste disposal site, under application number APP-00270. Over the years, follow-up inquiries have been made to request updates on the review process; however, no formal response has been received from the Office of the Environmental Commissioner (**see Annex 1**).

Although efforts to establish the new waste site have been ongoing since June 2019, ETC has been unable to commission the new facility due to financial constraints. As a result, ETC has continued to operate the existing waste disposal site in accordance with the EMP submitted in July 2019.

To ensure compliance with national laws and to facilitate the mobilization of funds for the development of the new solid waste disposal site, this application is now being resubmitted for the issuance of an ECC, to enable the eventual development and operation of the new solid waste management facility for ETC.

Chapter 1. INTRODUCTION AND BACKGROUND

1.1. Introduction

For centuries, landfill sites have been used for solid waste disposal in cities and towns. Eenhana Town is home to over 5,000 people, so a substantial amount of solid waste is produced. Eenhana was proclaimed a settlement in 1992 and a town in 1999. At that time, no law required the town to provide an environmentally friendly waste-disposal facility; instead, a simple “dumping” site without provisions for environmental management was used. The Office of the Environmental Commissioner in the Ministry of Environment and Tourism inspected the existing site and recommended its closure and the establishment of a new, properly managed solid-waste disposal facility.

1.2. Regulatory Requirements

The protection of the environment is provided for under Article 951 of the Namibia Constitution. The Environmental Management Act (Act No 7 of 2007) (EMA) and its Environmental Impact Assessment Regulation 2012, list handling and disposal of waste as an activities that cannot be undertaken without an Environmental Clearance Certificate (ECC) (Table 1).

Table 1 Listed activities in relation to the operation of the waste disposal site

Activity	Listed Activity under EMA
• Activity 2. Operation of Disposal Sites	2.1 The construction of facilities for waste sites, treatment of waste and disposal of waste;

It is against the above statutory requirement that ETC contracted Red-Dune Consulting CC (RDC) to undertake an environmental impact assessment and to develop the environmental management plan for the proposed new waste disposal site at Eenhana Town

1.3. The need and desirability of the project

The dangers of uncontrolled waste disposal are well documented, ranging from environmental degradation and contamination of soil and surface and groundwater to threats to human and animal health and aesthetic nuisances. Solid waste in landfills undergoes decomposition, producing liquids (leachate) and greenhouse gases such as methane and carbon dioxide. During

rainfall, water percolates through the waste and carries a mixture of contaminants into the ground. Because the current site lacks leachate-containment measures, it poses a significant threat of groundwater contamination.

1.4. Terms of reference

The Terms of Reference (TORs) of this EIA is in accordance with the Environmental Management Act 2007 and its Regulation Section 9 (a-b). It further considers other relevant local, national and international laws. These guidelines are aimed to focus on issues of greater environmental concerns and to develop mitigation measures for effective environmental management. The TORs of this project includes, but not limited to the following;

- Provide a comprehensive description of the proposed Project;
- Identify relevant legislation and guidelines for the project;
- Identify potential environmental (physical, biological and social) conditions of the project location and conduct risk assessment;
- Inform Interested and Affected Parties (I&APs) and relevant authorities about the proposed project to enable their participation and contribution;
- Develop an Environmental Management (EMP) that would be a legal guideline for the environmental protection by the project

1.5. Scope

The scope of this EIA is guided by the Environmental Regulations (2012) and follows the process illustrated in Figure 1. The purpose is to identify potential impacts, assess their significance, and develop practical, cost-effective mitigation measures to minimize those impacts. This EIA addresses air pollution, surface- and groundwater contamination, human and animal health and safety, and general littering. Red-Dune (RD) expects the resulting Environmental Management Plan (EMP) to provide effective mitigation measures that will ensure the sustainable management of the waste-disposal site. Furthermore, RD considers the information in this report sufficient for the Environmental Commissioner to approve the project and issue the Environmental Clearance Certificate.

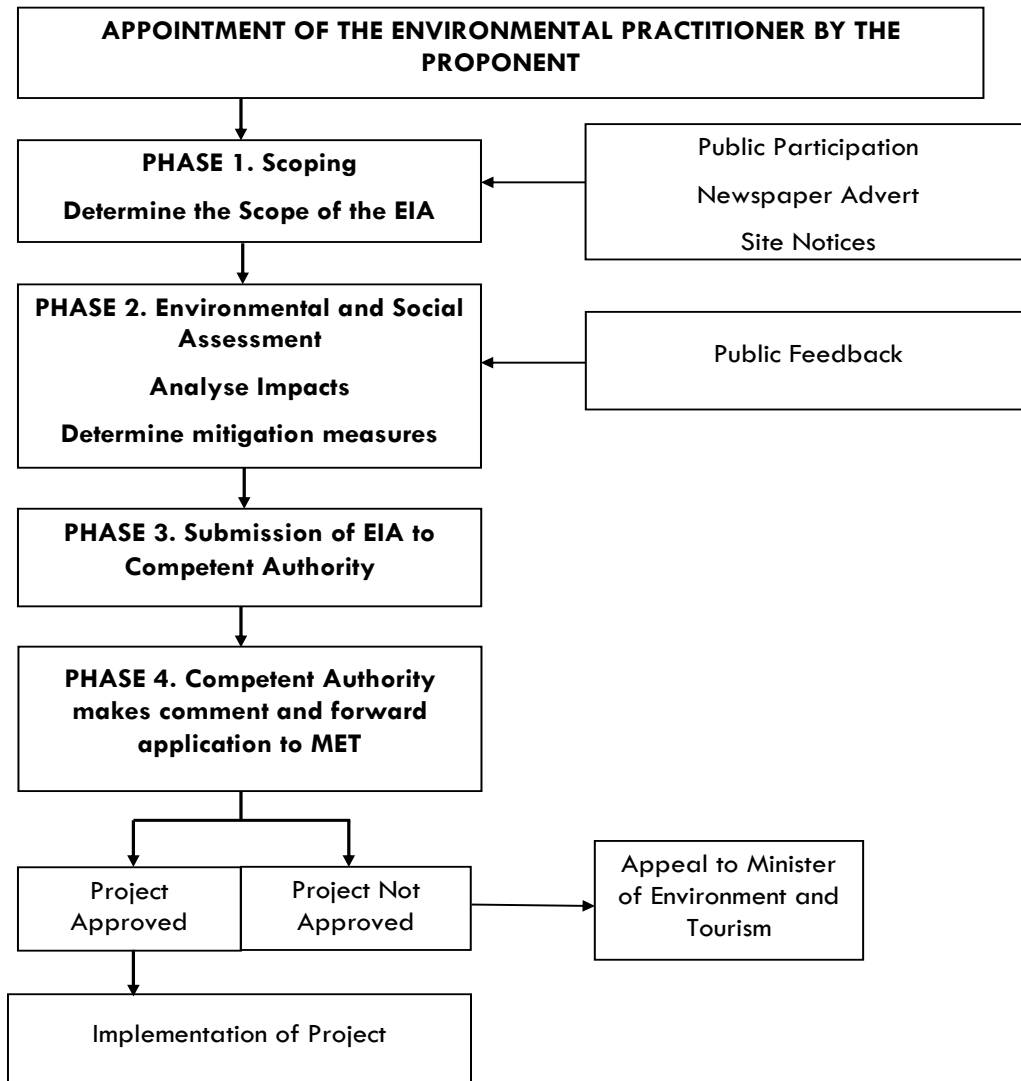


Figure 1. The Scope of the EIA Process in Namibia

Chapter 2. PROJECT DESCRIPTION

2.1. Site Characteristics

The proposed site is located at Ekolola Settlement, northwest of Eenhana Town (17.447749°S, 16.309357°E). The site will cover an area of 5 hectares (ha); subdivision into individual cells will be carried out by the Eenhana Town Council. The area remains largely pristine and is characteristic of subtropical forest (Figure 2). It is accessible via a gravel road, which will require substantial upgrading.

As seen in the Google image, there used to be traditional homesteads in the area; some residents have already relocated, while others are in the process of relocating following town demarcation. The site is more than 1 km from the Ekolola settlement and is not in close proximity to any households

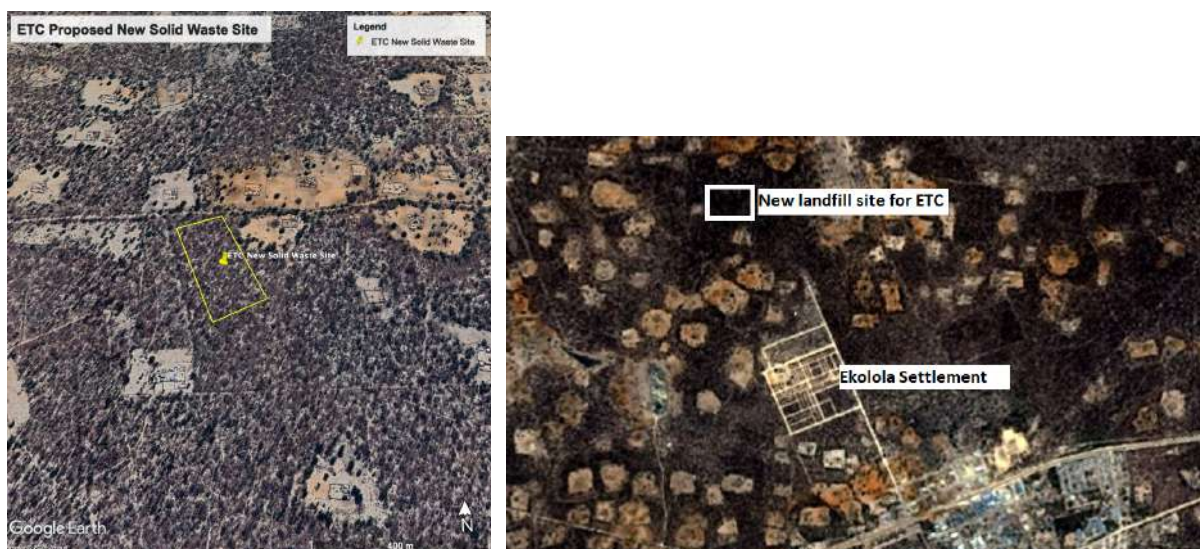


Figure 2. The proposed new waste disposal site for Eenhana Town Council

2.2. Type of Waste Disposal

The waste site will primarily receive household waste, including beverage containers, cans, bottles, and plastics. Hazardous waste, such as medical waste, will be carefully disposed of at designated facilities to ensure environmental and public safety. The site will be enclosed with a fence to enhance security, and a security guard will be employed to monitor and safeguard the premises. Waste management at the site will involve backfilling and compaction, which will be performed using a bulldozer to maximize space efficiency. Controlled burning will be employed as a method to reduce waste volumes, while minimizing smoke emissions and

environmental impact. Additionally, the site will collaborate with recyclers, primarily those involved in the collection and recycling of plastic containers.

2.3. Design and Engineering

Landfill design varies depending on whether the facility serves industrial or municipal purposes. The construction of a general landfill typically includes site preparation, perimeter fencing, access roads, administrative buildings, liners, a leachate management system, and, where necessary, a gas collection system. A critical consideration in landfill engineering is the effective management of leachate to protect groundwater and surface water resources.

2.3.1. Fencing and Excavation

The design and engineering of the Eenhana Waste Disposal Site have considered groundwater protection as well as the safety of people and animals. Air pollution risks were factored into the site selection process. Consequently, the site was located on the northwestern boundary of the town, aligned with the prevailing wind direction, which flows from the southeast to the northwest.

For safety and access control, the entire area will be enclosed with diamond-mesh wire fencing, securely anchored in reinforced concrete.

The Ohangwena Region contains valuable groundwater resources, notably the Ohangwena Aquifer. According to a study conducted by the Federal Institute for Geosciences and Natural Resources (BGR) in partnership with the Ministry of Agriculture, Water and Forestry (MAWF), the top aquifer lies at an average depth of 235 meters (ranging from 189 to 331 meters) and is recharged from across the border in Angola. Additionally, there are patchy, shallow aquifers throughout the region. Groundwater is often encountered at shallow depths, approximately 10 meters on average as evidenced by numerous hand-dug wells used for domestic and livestock purposes. For this reason, excavation at the proposed site must be limited to a depth of no more than 5–6 meters to avoid disturbing the shallow groundwater table.

2.3.2. Water supply

ETC should provide the site with potable water. Regarding sanitation, ETC must provide two portable toilets, one for male and one for female users.

2.3.3. Electricity

Electricity will be required primarily for lighting and the operation of essential equipment. Modern waste disposal facilities typically include a weighbridge to monitor and record the quantity of waste received. Power will be necessary to operate this weighbridge system. Fortunately, electricity is available at the site and can be supplied by the Town Council.

2.3.4. Access road

The site is currently undeveloped but is accessible via an existing gravel road. To ensure that smaller vehicles can reach the site safely and reliably, ETC will be responsible for upgrading this access road.

2.3.5. Leachate management system

Leachate control is essential in any landfill design to prevent environmental contamination. The most used methods for leachate management include:

- Cover systems
- Bottom liner systems
- Pre-treatment of solids

Given the local context, particularly the small population size of Eenhana (just over 5,000 people) and resource limitations, a cover system is considered the most practical solution.

a) The Cover System

The cover system is the most commonly used method to control leachate generation. It involves layering soil or other materials over the waste to limit water percolation, which reduces the formation of leachate. This system also helps control odours, pests, and windblown litter.

There are three main types of cover systems:

Daily Cover A thin layer of sand or gravelly soil is applied over the newly disposed waste every day. This layer reduces water infiltration, controls odours, deters vermin, and prevents lightweight waste from being blown away by the wind. However, consistent availability of suitable cover material may limit daily implementation.

Intermediate Cover Applied at regular intervals e.g., weekly or bi-weekly, this cover uses more material than daily cover due to the greater volume of accumulated waste. It serves a similar purpose, providing temporary protection between daily operations and final closure.

Final Cover This is applied once the landfill has reached the end of its operational life. It consists of a thick (1–2 meter) layer of compacted soil designed to prevent water infiltration. The final cover must be graded with a gentle slope to facilitate surface runoff and prevent water ponding, which could otherwise lead to leachate formation.

b) Bottom Liners System

The bottom liner system is an engineered solution that includes a network of drainage pipes installed at the base of the landfill to collect and direct leachate to a treatment pond (figure 3). The base is typically sloped to facilitate gravitational flow. The standard components of this system include:

- A high-density polyethylene (HDPE) geomembrane installed at the landfill base to prevent leachate from seeping into the soil.
- A leachate collection system placed directly above the HDPE liner.
- A geocomposite drainage layer above the collection system to assist with liquid flow.
- A protective gravel cover, compacted to a minimum thickness of 300 mm, placed over the drainage system to prevent damage from heavy machinery.

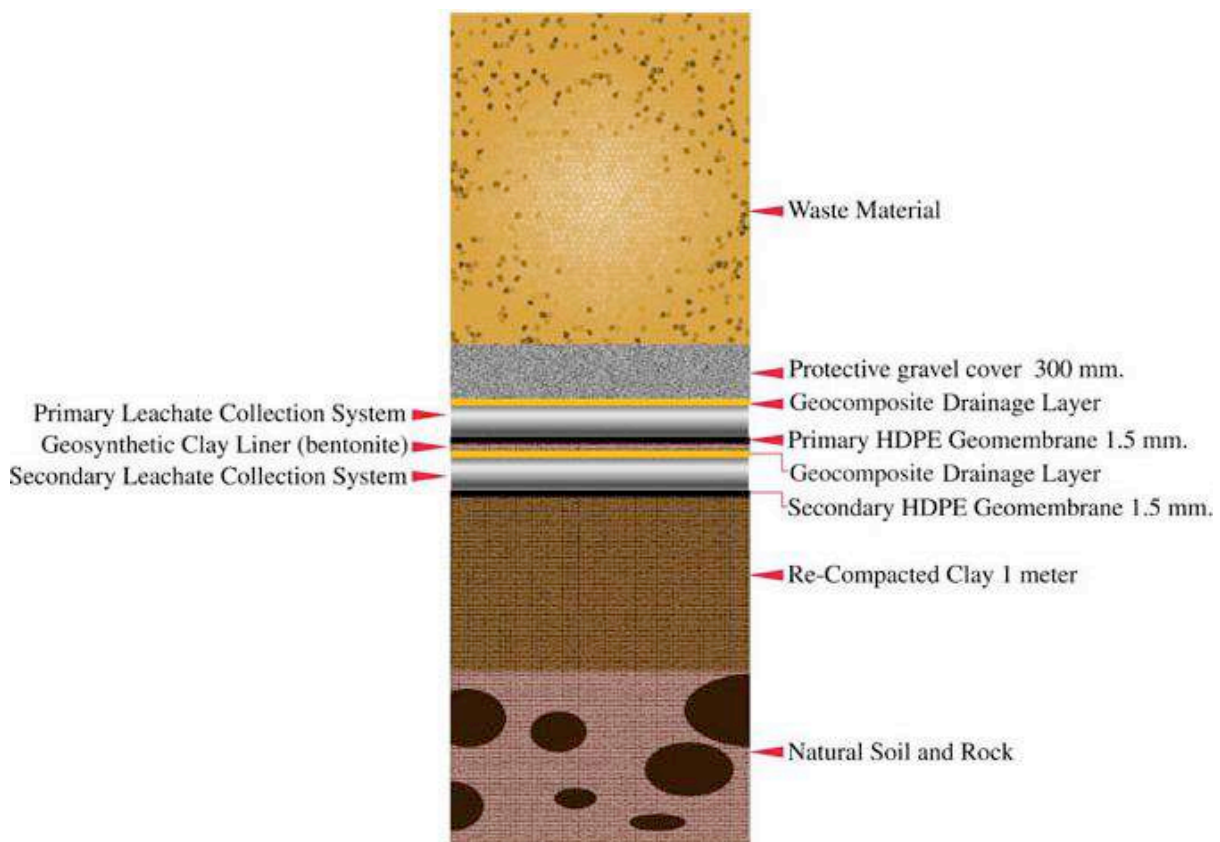


Figure 3. An Example of bottom liner (Li Rong 2009)

Depending on the volume of leachate expected, primary and secondary leachate collection systems may be installed. However, given Eenhana's relatively small population, a dual system is likely unnecessary.

If a bottom liner system is adopted, a leachate collection pond will be required. This pond must be lined with HDPE and supported by a leachate treatment process.

Leachate treatment typically involves a combination of biological and chemical methods:

- **Biological Treatment:** Uses aerobic bacteria to decompose organic matter. However, this alone is insufficient, especially for removing heavy metals.
- **Chemical Treatment:** Complements biological treatment and includes processes such as adsorption, oxidation, or ammonia stripping to handle contaminants that biological methods cannot remove.

While effective, the bottom liner system and associated treatment infrastructure involve significantly higher costs and technical expertise.

2.3.6. Other Infrastructure

In addition to the main components mentioned above, the waste disposal site will include the following supporting infrastructure:

- A security guard room for onsite personnel.
- Recycling and sorting facilities to promote waste minimization and resource recovery.

Chapter 3. DESCRIPTION OF THE AFFECTED ENVIRONMENT

3.1. Land use

The proposed site lies within the boundaries of Eenhana Town. Surrounding land is communal and used primarily for subsistence farming, including grazing of goats, cattle, and donkeys and cultivation of Omahangu crops. An informal settlement, Ekolola, is located within a 1 km radius of the waste site..

3.2. The population demography

Eenhana, is one of the four administrative Regional Capitals in the Oshiwambo speaking Northern Regions of Namibia, others being Omuthiya (Oshikoto), Oshakati (Oshana) and Outapi (Omusati). With an estimated population of approximately 5,000 people, it serves as the Regional Capital of the Ohangwena Region. The region shares borders with Kavango Region to the east, Oshikoto and Oshana Regions to the south, and Omusati Region to the west. Ohangwena spans a total area of 10,703.2 km² and has a population density of about 31.7 persons per square kilometre, which is significantly higher than the national average, making it the second most populous region in Namibia.

According to the 2023 Namibia Population and Housing Census, Ohangwena has a total population of 337,729 people, consisting of 159,701 males and 178,028 females. This represents approximately 11.2% of Namibia's total population. The region has experienced notable population growth, increasing from 245,446 in 2011, which corresponds to an annual growth rate of 2.7%.

The region remains predominantly rural, with 85.5% of the population residing in rural areas. Its landscape is characterized by small towns and scattered villages, resulting in a lower level of urbanization compared to other regions in the country.

3.2.1. Eenhana Population and Growth

In 2001, Eenhana's population was estimated at 2,814. The 2011 Census recorded 5,528 residents. However, the town's 2014 in-house statistics estimate the population of formal and semi-formal settlements at 10,120. This estimate was derived by applying the 2011 average

Figure 4. Drainage of Cuvelai system (F.C.Persendt and C.Gomez 2016)

3.3.2. *Geology and Hydrology*

Namibian's northern part, commonly known as the "*Owambo Basin*" is formed by sand deposit from water borne deposit millions of years ago. These deposit of sand and water borne deposits formed the Kalahari Basin. The deposits of sands, clay and calcretes makes up the Kalahari Group. Some rivers such as Okavango River of the Kalahari Group are still active today, while some drainage are formed up by intermittent flow of water such as the Cuvelai drainage system.

The surface basin is underlain by the Ohangwena Kalahari Aquifer, which is the main source for sustainable water supply in the region. Ground in the region is normally found 10m below the ground.

There are no bulk water schemes such as the network of canals and pipelines that supply water originating from the Calueque Dam in Angola to Omusati and Oshana. Ground water is the main source of water supply in the region.

Surface water in the area is found in the *Iishanas* during rainfall season and the end of the rainfall season; water is found in natural ponds (*Omadhiya*). Surface water that normally last between rainfalls seasons are found in manmade lakes.

3.4. Biophysical Environment

3.4.1. *Ecology*

The impact of developmental projects and related activities may have detrimental effects on the environment, both bio-physical and social. This section focuses on the bio-physical i.e. ecological aspects of the project area. An Ecological Impact Assessment was undertaken to assess the potential impacts of the proposed project. The study was informed by a comprehensive literature review followed by a site visit. The findings and recommendations are summarised below.

Eenhana Town is in the middle of the North-eastern Kalahari Woodland which is composed of broadleaved trees and shrubland. This landscape is characterised by deep sand, tall trees and grassland (Fig 5). The town being amongst the fastest growing town councils in Namibia, environmental transformation has also been rampant in the area. The town council had to expand its municipal boundaries to meet the demand for developmental land.

a) Flora

A site visit was undertaken 6th June 2019 to establish the vegetation in the study area for this EIA. The project area although located within municipal land is well vegetated with tall trees that are typical of the vegetation type. Pictures of the dominant plants are presented in the subsequent table with their conservation status. The dominant tree species found in the project area are *Burkea Africana*, *Terminalia* species, *Combretum* species and a few *Acacia erioloba*. The field assessment was undertaken during the dry phase of the year and no grass species could be identified. However, the common grass species that are known to occur in the area consist of *Cynodon dactylon*, *Schmidtia kalahariensis*, *Brachiaria*, *Antheophora* and *Eragrostis* species.



Figure 5: The landscape dominated by tall trees and deep sand as portrayed above



Acacia erioloba (Camelthorn Tree) and its valuable pods used for animal fodder

Protection status: Protected in Namibia



Pterocarpus angolensis (Kiaat)

Protection status: Near Threatened in Namibia



Erythrophleum africanum (Ordeal Tree)

Protection Status: no conservation status



Boscia albitrunca (Shepherd's Tree)

Protection status: Protected in Namibia



The thicket composed of *Burkea Africana* (Protected in Namibia) and Zambezi Teak trees (*Baikiaea plurijuga*)



Ximenia cafra (Large Sourplum)
No protection status



A mixture of Teak , *Terminalia* and compretum trees



No grass species or tufts were found on site due to the dry season and low rainfall received in the area.

Table 2. Vegetation list of trees occurring in the surrounding and their conservation status

Scientific Name	English Name	Conservation Status
<i>Peltophorum africanum</i>	Huilboom	Protected
<i>Acacia fleckii</i>	Sandveld acacia	-
<i>Bauhinia petersiana</i>	White bauhinia	-
<i>Combretum imberbe</i>	Leadwood	Protected
<i>Philenoptera violacea</i>	Rain Tree	Protected
<i>Ziziphus mucronata</i>	Buffalo-thorn	Protected
<i>Baphia massaiensis</i>	Sand Camwood	-
<i>Grewia villosa</i>	Mallow raisin	-
<i>Acacia luderitzii</i>	Kalahari acacia	-
<i>Commiphora africana</i>	Tall common corkwood	-
<i>Pterocarpus angolensis</i>	Kiaat	Near Threatened
<i>Mundulea sericea</i>	Silver Bush	-
<i>Ficus cordata</i>	Namaqua rock fig	Protected
<i>Grewia flavescens</i>	Sandpaper raisin	-
<i>Loncocarpus nesii</i>	Kalahari apple-leaf	Protected
<i>Grewia bicolor</i>	Omundjembere	-
<i>Terminalia prunoides</i>	Purple-pod terminalia/	-
<i>Schinziophyton rautanenii</i>	Manketti	Protected

b) Fauna

The study area falls within townlands, and no wildlife was observed nor expected to occur. Wildlife naturally relocates further as soon as human activities are introduced in pristine areas. Due to subsistence farming activities surrounding Eenhana Town, livestock have been observed grazing in the surrounding areas (Figure 6). Birds and reptiles are also known to be abundant in the area.



Figure 6: Cow dung in the project area as evidence of livestock occurring

3.4.2. Ecological Impact Assessment

The proponent indicated that there will be a need to clear vegetation in the project sites to enable project activities. This would necessitate permits to be obtained from the Ministry of Agriculture, Water and Forestry; Directorate of Forestry as some of the trees have a protection status as per Forestry Act. Application process for the clearance permit can be a condition to be attached on the Environmental Clearance Certificate.

It is important to put mechanisms in place to ensure that unintentional disturbance is averted. Alteration in the area's landscape, need to be managed in a manner that does not negate the existing natural processes of the area and/or risk the health and safety of its inhabitants and biodiversity stocks. To avert these impacts, it is recommended that project activities be restricted within the confines of precautionary principles to ensure its sustainability.

3.5. Climate Conditions

3.5.1. Rainfall

Namibia is an arid country, its climate is characterised by high temperatures, sporadic low rainfall. Rainfall in decrease from east to west, with Zambezi Region receiving the highest rainfall of 600ml/year. Annual rainfall ranges from 480mm in the west to 600mm in the east. According to Mendelsohn *et al* 2002, rainfall season starts from December to March. In most

cases, the peak rainfall is between January and February, however this is not consistent as some years the rainfall is evenly distributed between December and March.

3.5.2. Temperature

Temperature condition in the northern part of the country is similar. It is mainly hot for most part of the year, with an average maximum temperature ranging between 24 °C-36 °C during summer. While during winter, the temperature is mainly cold ranging between 7 °C - 21°C. October is the hottest month while June/July is normally the coldest month

Chapter 4. PROJECT ALTERNATIVES

The Environmental Management Act (EMA) requires an Environmental Impact Assessment (EIA) to consider a range of project alternatives to ensure that environmental impacts are reduced to an insignificant level. Alternatives may include different project activities, the no-go option, site locations, and technology or equipment choices. The alternatives considered for the proposed waste-disposal site are listed below and described in the sections that follow:

- Alternative project activity
- No-go alternative
- Implement the project
- Site location alternatives
- Technology options

4.1. Alternative project activity

4.1.1. *Landfilling vs Thermal Incineration*

This alternative compares two approaches to municipal solid-waste management: landfilling and thermal incineration. Thermal incineration involves combusting waste in a controlled chamber at high temperatures, reducing waste volume to ash.

Comparison	
Landfilling	Thermal Combustion
Cost-effective for a small town like Eenhana	Very costly to install and operate for a small town such as Eenhana.
Allows waste sorting and recycling, creating local employment opportunities.	Limited opportunity for recycling when waste is combusted.
Can capture methane to reduce greenhouse-gas emissions and potentially generate energy.	Can produce electricity through combustion if a suitable facility is installed.
Has a risk of leachate generation and potential water-resource pollution if not properly managed.	Reduces waste volume and can minimize leachate generation, but requires air-emission controls and produces ash that requires safe disposal.

4.1.2. Implement project vs No Go alternative

This analysis assesses the environmental and socio-economic consequences of proceeding with the project versus maintaining the status quo. A project may not be implemented if it poses dire harmful impact to the environment and socio-economic of people or in instances where the project's impacts are not fully understood and a precautionary approach is applied.

Implement project:

- **Impacts:** vegetation clearing, landscape alteration, visual impacts, and some risk to water resources during construction and operation.
- **Benefits:** provides a properly designed and managed landfill that will improve solid-waste management, reduce uncontrolled dumping, and protect the environment more effectively than the current site.

No Go alternative:

- **Impacts:** continued use of the existing, inadequately designed waste disposal site, with ongoing risks to groundwater, air quality, public health, and local amenity.
- **Benefits:** no immediate vegetation clearing at the proposed site. However, because the proposed site falls within townlands, it may be cleared for other development in the future.

4.1.3. Site alternative

Land available to Eenhana Town Council (ETC) is limited because the town is surrounded by traditional homesteads. Current urban expansion is occurring to the south, while the northern boundary is less developed and less densely populated. The proposed site location was selected with regard to current and planned town development, and to minimize impacts on grazing and local ecology.

4.1.4. Technology

The planned landfill operations do not require specialized technologies that pose significant environmental risks. Standard equipment such as compactors, bulldozers, graders, and basic leachate and stormwater management structures will be used. Selection of appropriate operational practices and pollution-control measures (e.g., leachate containment, gas management where feasible, and controlled waste sorting) will minimize environmental impacts.

Chapter 5. POLICY AND LEGAL FRAMEWORK

The project approval and operation shall be subject by the following national and international laws (Table 3).

Table 3. Policy and Legal framework governing the project

REGULATORY FRAMEWORK	SUMMARY	APPLICABILITY
The Namibian Constitution	The State shall actively promote and maintain the welfare of the people by adopting policies aimed at ... The maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future	Protection of the environment and biodiversity
Environmental Management Act No. 7 of 2007	This act aims to promote the sustainable management of the environment and the use of natural resources and to provides for a process of assessment and control of activities which may have significant effects on the environment; and to provide for incidental matters	The acts provide a list of activities that may not be undertake without an environmental clearance certificate to prevent environmental damages
Draft Pollution Control and Waste Management Bill	This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management	To protect the Environment from possible hydrocarbons and oil leaks from the machinery and vehicles

REGULATORY FRAMEWORK	SUMMARY	APPLICABILITY
Environmental Policy framework (1995)	This policy subjects all developments and project to environmental assessment and provides guideline for the Environmental Assessment.	Consideration of all possible impacts and incorporate them in the development stages
National Solid Waste Strategy	The strategy to control and manage solid waste in Namibia	Solid waste dumped at the site
Regulations Related to the Health and Safety of Employees at Work. Reg No. 156	Promotes the Safety and Health of employees at the work place	Employees subjected to noise and dust
Public Health and Environmental Act No. 1 of 2015	To Protect the public from nuisance and states that no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.	Application of proper mitigation measure to prevent aesthetic pollution and water pollution

REGULATORY FRAMEWORK	SUMMARY	APPLICABILITY
Labour Act No. 11 of 2007	This Act outlines the labour laws which encompass protection and safety of employees at work.	This project will require labour during its operational stage and decommissioning stage.
Regional Council Act, 1992 (Act No. 22 of 1992)	The Regional Councils Act legislates the establishment of Regional Councils that are responsible for the planning and coordination of regional policies and development. The main objective of this Act is to initiate, supervise, manage and evaluate development at regional level.	Observe the regional by laws
Local Authorities Act, 1992 (ACT NO. 23 OF 1992)	provide for the determination, for purposes of local government, of local authority councils; the establishment of such local authority councils; and to define the powers, duties and functions of local authority councils; and to provide for incidental matters.	ETC is governed under the local authority, which gives ETC jurisdiction on Eenhana Townland
Water Act No, 54 of 1956	All water resources belong to the State. It prevents pollution and promotes the sustainable utilization of the resource	Prevention of discharging contaminated water at unauthorised places
Soil Conservation	To promotes the conservation of soil, prevention of soil erosion	Uncontrolled movement of heavy vehicles and truck at areas

REGULATORY FRAMEWORK	SUMMARY	APPLICABILITY
Act No. 76 of 1969		surrounding the site may cause land degradation
Water Resource Management Act No.11 of 2011	The Act stipulates the prevention of both Surface and Ground water sources.	Possibility of surface and groundwater contamination.
National Heritage Act No.27 of 2004	The Act gives provision of the protection and conservation of places and objects with heritage significance.	There were no heritage features identified on site or within the close vicinity of the site.

Chapter 6. PUBLIC CONSULTATION

The EMA requires that the EIA process include a robust and comprehensive public consultation. Public consultation is essential because it gives the public particularly Interested and Affected Parties (I&APs) an opportunity to review the project, identify potential socio-economic and environmental concerns, and propose mitigation measures. It also captures local and traditional knowledge that the Environmental Assessment Practitioner (EAP) may not possess, improving the quality and relevance of impact identification and management.

6.1. Newspaper Adverts

The EMA requires that, the project must be advertised into two (2) daily newspapers that are widely circulated in the country. The project was advertised for two consecutive weeks in the Namibian and the NewEra newspaper the two biggest daily newspaper in the country (Table 4)

Table 4. Days of Newspaper Adverts

Newspaper	Date advertised
NewEra	2 nd & 9 th July 2019
The Namibian	2 nd & 9 th July 2019

Upon seeing the adverts, the public was supposed to request the background information documents which later a scoping report was to be shared with them.

6.2. Public Meeting

The Comment and Response Report is attached under **Annex 2**.

Chapter 7. ENVIROMENTAL AND SOCIAL IMPACT ASSESSMENT

7.1. Introduction

This chapter outlines the potential impacts (negative and positive) associated with construction and operation of the solid waste. The identified impacts are categorized into three components: impacts on the biophysical environment; Impacts on the health and safety; and impacts on socio-economic. It further provide the criteria used for impact assessment. The developed Environmental Social Management Plan (ESMP) for the project is a living document. Hence, impacts that could be identified in future will necessitate an amendment to the ESMP.

7.2. Impact Identification

Potential impacts were identified in accordance with the key Environmental Social Indicators (ESI)² and using literature review, site assessment and public participation process and experience for Red-Dune Consulting (*see Table 5*).

Table 5. Impact identification

Component	Impact	Description	Project Phase	Impact Type
Bio-Physical Environment	Loss of habitat and Biodiversity	The clearing of land for site preparation and the occupation of the site itself can result in the direct loss of habitat for local flora and fauna. This may lead to a reduction in biodiversity, as species that depend on the specific habitat may be forced to relocate	Construction	Negative
	Dust emission	Land clearing, digging and excavation of trenches, movement of vehicles and heavy machinery on project sites may create fugitive dust. Uncoordinated / reckless driving on gravels roads could cause low visibility to other road users.	Construction	Negative

² Guidance Note UNDP Social and Environmental Standards Social and Environmental Assessment and Management July 2022

Component	Impact	Description	Project Phase	Impact Type
		Dust can not only pose health risks to workers, leading to respiratory issues, but it can also affect vegetation, reducing air quality and the overall environment's health.		
	Land degradation / Soil erosion	Site preparation activities, such as excavation and the movement of heavy machinery, can result in soil disturbance and degradation. This includes compaction, erosion, and loss of soil fertility. The removal of vegetation during site clearing can also leave the soil vulnerable to erosion, reducing the land's ability to support future vegetation growth and impacting local ecosystems.	Construction	Negative
	Noise and vibration	The operation of heavy machineries can produce significant noise, which may disturb nearby communities. Prolonged exposure to high noise levels can have detrimental effects on the health of workers and the surrounding population, including hearing loss and increased stress levels.	Construction	Negative
	Traffic emission	The operation of vehicles and machineries can contribute to air pollution through the emission of exhaust gases of SO ₂ , CO ₂ , CO, NO _x and particulates.	Construction	Negative
	Waste generation	Construction produce significant amount of solid waste including, plastic, used	Construction	Negative

Component	Impact	Description	Project Phase	Impact Type
		containers and parts of worn-out equipment.		
	Household waste	The generation of domestic solid waste from workers and operations on-site can lead to pollution if not properly managed. Improper disposal of waste, such as plastics, food scraps, and other materials, can contaminate the local environment and pose a risk to human health.	Construction	Negative
	Soil and water pollution	The use of heavy vehicles and equipment involves the use of oils, grease, and lubricants that, if not properly managed, can leak into the ground and contaminate groundwater sources.	Construction and Operation	Negative
	Aquifer Disturbance	Ohangwena Region is a relatively dry and dependant on underground water. Hence careful handling of contaminant will be required to ensure the shallow aquifers are not polluted are not disturbed.	Construction and Operation	Negative
Health and Safety	Safety risk	Accidents from collision of construction vehicles, in appropriated use of heavy machineries could result into occupational injuries.	Construction	Negative
	Health risks	Risks of hearing impairment from excessive noise, respiratory risks from dust inhalation. New social relationships are often a recipe for spreading of communicable diseases and sexually transmitted diseases such as HIV/AIDS.	Construction and Operation	Negative

Component	Impact	Description	Project Phase	Impact Type
		<p>Furthermore, alcohol and drug use could be prevalent during construction and workers are susceptible to vermin and diseases during operation.</p> <p>Furthermore, the bush working environment makes workers to be prone to venomous insect and snake bites which may lead to fatalities.</p>		
	Hazardous Impact	Heavy vehicles consume significant amounts of oil, and the handling of hydrocarbons will occur on-site. The area where grease, oils, lubricants, and fuel are managed must be properly designed to prevent soil contamination, which could potentially affect both the soil and underground water.	Construction and Operation	Negative
Social Environment	Visual impacts	Poor housing keeping on site	Construction and Operation	Negative
	Employment creation	Namibia is facing high unemployment, particularly among the youth. Every employment, mainly short-term during construction will contribute to socio-economic upliftment of the community.	Construction and Operation	Positive
	Increase in local economy	Construction provides an opportunity for local people	Construction and Operation	Positive
	Heritage and Archaeological Resource	Digging and excavation have the potential to uncover archaeological materials. Therefore, raising awareness	Construction	Negative

Component	Impact	Description	Project Phase	Impact Type
		about the possibility of chance finds is necessary to prevent potential damage.		

7.3. Criterial for impact assessment

The criteria used to assess the impacts and the method for determining their significance are outlined in Table 7 below. This process aligns with international best practices and adheres to the Environmental Impact Assessment (EIA) Regulations under the Environmental Management Act of 2007 (Government Gazette No. 4878).

The core principle of the impact assessment follows a mitigation hierarchy, which aims to first avoid negative impacts through preventative measures, then minimize those impacts to acceptable levels, and, if neither of these options is feasible, to remedy or compensate for the impact.

Table 6. Criteria for Impact Assessment

Risk Event	Rating		Description of the risk that may lead to an Impact
Probability	The probability that an impact may occur under the following analysis		
	1		Improbable (Low likelihood)
	2		Low probability
	3		Probable (Likely to occur)
	4		Highly Probable (Most likely)
	5		Definite (Impact will occur irrespective of the applied mitigation measure)
Confidence level	The confidence level of occurrence in the prediction, based on available knowledge		
	L		Low = limited information
	M		Medium = moderate information
	H		High = sufficient information
Significance	Severity	Rating	None (Based on the available information, the potential impact is found to not have a significant impact)
	Negligible	1	

Risk Event	Rating		Description of the risk that may lead to an Impact
	Low	2	Low (The presence of the impact’s magnitude is expected to be temporal or localized, that may not require alteration to the operation of the project
	Medium	3	Medium (This impact is probable, limited in scale, expected to be of short term / temporary, can be avoided, managed and or mitigated with simple mitigation measures.)
	High	4	High (The impact is definite, mostly predictable, temporal, can be local, regional or national and in long term and reversible. These are impacts that may affect human rights, lands, natural resources, traditional livelihood, critical ecosystem services. The severity of these impact are more limited than sever impacts.)
	Severe	5	Severe (The impact is definite, it has significant adverse impacts on human population and or / the environment which are of large-scale magnitude and or spatial extend such as large geographic area, large number of people or transboundary nature. The impact duration is long term, permanent and often irreversible. Impacts include displacement of human, destruction of critical ecological systems and or cultural and heritage sites etc. The impact could have a no-go implication unless the project is re-designed or proper mitigation can practically be applied.)
Duration	Time duration of the impacts		
	1	Immediate	
	2	Short-term (0-5 years)	
	3	Medium-term (5-15 years)	
	4	Long-term (more than 15 years	
	5	Permanent	
Scale	The geographical scale of the impact		

Risk Event	Rating	Description of the risk that may lead to an Impact
	1	Site specific
	2	Local
	3	Regional
	4	National
	5	International

7.4. Risk Assessment

The significance of the impact was determined using a risk matrix, as shown in Table 7. A five-by-five matrix was applied, where the severity of the impact was categorized and assigned scores ranging from 1 to 5: Improbable (1), Low (2), Medium (3), High (4), and Severe (5). Similarly, the likelihood of the impact occurring was assigned scores as follows: Improbable (1), Low Likely (2), Probable (3), High Probability (4), and Definite (5). The overall impact rating was then calculated by multiplying the scores for impact severity and likelihood.

Table 7. Risk assessment matrix³

LIKELIHOOD	5 Definite	5 Low	10 Medium	15 High	20 Severe	25 Severe
	4 High Probability	4 Low	8 Medium	12 High	16 High	20 Severe
	3 Probable	3 Low	6 Medium	9 Medium	12 High	15 High
	2 Low	2 Low	4 Low	6 Medium	8 Medium	10 Medium
	1 Improbable	1 Negligible	2 Low	3 Low	4 Low	5 Low
		1 Negligible	2 Minor	3 Medium	4 High	5 Severe
		IMPACT SEVERITY / CONSEQUENCE				
		Negligible	Low	Medium	High	Severe

³ Risk Management Guideline for the BC Public Sector (Province of British Columbia Risk Management Branch and Government Security Office 2012)

7.5. Mitigation Hierarchy

Best practises call for mitigation measures to follow a mitigation hierarchy that favours (i) avoidance of potential adverse impacts, and where avoidance is not possible, then (ii) minimization and reduction; where adverse residual impacts remain, then (iii) mitigation measures need to be applied, and, as a last resort, (iv) measures to offset impacts that cannot be appropriately mitigated (*see Figure 7 below*).

According to EIS regulations, the objectives mitigations are to;

- Find environmental ways of doing thing
- Promote environmental benefits of the project
- Avoid, Minimise or remedy negative impacts and
- Ensure that residual negative impacts are within acceptable levels,

Furthermore, during consideration of the mitigation measure, the following mitigation hierarchy was followed.

- Avoid the negative impact through preventative means,
- Minimise the negative impacts to acceptable low levels and,
- If the above two are not possible, remedy or compensate the impact.

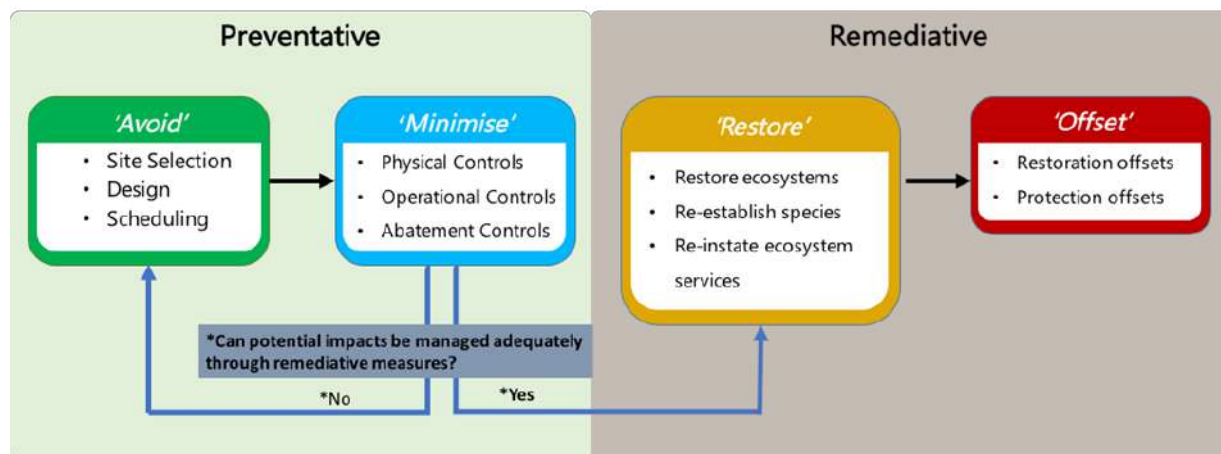


Figure 7. Mitigation Hierarchy Source ⁴

⁴ Cross-Sector Biodiversity Initiative (CSBI). (2015). A Cross-sector Guide for Implementing the Mitigation Hierarchy (p.9)

7.6. Pre-Construction

PRE-CONSTRUCTION PHASE			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
Acceptance of the project by the public The Environmental Management Act (Act No. 7 of 2007) requires that, public and stakeholder are consulted during the EIA process	1. Two advert were placed into two daily newspapers for two consecutive week 2. A Background information documents was given to the registers I&APs 3. A public meeting was held at Eenhana, Ekolola settlement	Type	-VE
		Severity	High
		Scale / Extend	National
		Probability	Definite
		Confidence level	High
		Without Mitigation	High
		With Mitigation	Low

7.7. Bio-Physical Environmental Impact

CONSTRUCTION PHASE			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
Loss of Flora Eenhana town is situated in relatively densely vegetated sub-tropical forest. The proposed site is rich in vegetation, with some protected species in Namibia and shall be lost during clearing. However, the trees and shrubs are evenly distributed in the most part of Eenhana constituency, and Ohangwena region at large. It is not	1. Some of the vegetation requires permit from Ministry of Agriculture Water and Forestry to be cut down. The ECC must be issued with this condition before operation starts 2. Clearing of vegetation must strictly be limited to the area within the sand mining site;	Type	-VE
		Severity	High
		Scale / Extend	Site Specific
		Probability	Definite
		Confidence level	High
		Without Mitigation	High

CONSTRUCTION PHASE			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
expected that clearing vegetation within the proposed are poses a significant impact to the conservation of flora.	3. Mature trees that are cut down may be donated to Eenhana Vocational Training in College for carpentry.	With Mitigation	Medium
Loss of Fauna Land use in communal area is mainly for communal farming which involves farming with domestic animals such as Goats, Cattle and Donkeys and cultivating Omahangu crops. The are no wild animals in the surrounding although small wild animals such as Rabbits and crawling animals may be present.	1. Fence off the perimeter with a diamond mesh wire; 2. Employ a security who shall protect the fence from theft, vandalism and ensure that, the gate is locked to prevent animals from entering the site 3. Do not kill animal, unless such animals poses eminent danger to humans	Type	-VE
		Severity	Medium
		Scale / Extend	Site Specific
		Probability	Probable
		Confidence level	High
		Without Mitigation	Medium
		With Mitigation	Low
Visual Effect Change of visual and aesthetic value as a result transformed landscapes and landfill cells construction as well as other construction activities	1. Contractors must ensure good housekeeping during construction 2. Overburden soil must be well stacked 3. All building must use dull paint to blend in with vegetation	Type	-VE
		Severity	Low
		Scale / Extend	Local
		Probability	Probable
		Confidence level	High
		Without Mitigation	High
		With Mitigation	Medium

CONSTRUCTION PHASE			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
Surface and Ground Water Pollution Ohangwena region is home to Ohangwena aquifer and due to aridity of the of area, ground water is paramount and must be protected. The average depth of the top Ohangwena aquifer is found at 235m deep. The recharge of the aquifer is located in Angola. Fuel, oil and lubricants from heavy vehicle has the potential to pollute land and consequently water sources.	1. Fueling for heavy vehicle on site shall be well coordinated at designated places 2. Stationary vehicles must be provided with drip tray to capture oil, lubricants and hydraulic fluids leakages 3. All vehicle and machinery must be well service to avoid leakages 4. Provide and train on oil spill emergency response 5. Servicing of vehicles and machinery must not take place on site	Type	-VE
		Severity	High
		Scale / Extend	Site Specific
		Probability	Definite
		Confidence level	High
		Without Mitigation	High
		With Mitigation	Low
Land Degradation The uncontrolled movement of heavy machinery at the project site as well as on access loads may cause land degradation.	1. Movement of heavy vehicles must be coordinated and restricted to be within the site and on access roads	Type	-VE
		Severity	High
		Scale / Extend	Site Specific
		Probability	Definite
		Confidence level	High
		Without Mitigation	High
		With Mitigation	Low

CONSTRUCTION PHASE			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
Waste Generation General waste during construction includes, building rubbles, planks, metal offcuts, cement, wires and household waste such as plastic.	1. Provide Skip bins and dustbins to collect waste and be disposed of at an existing wasted disposal site 2. Do not bury waste on site	Type	-VE
		Severity	Medium
		Scale / Extend	Site Specific
		Probability	Definite
		Confidence level	High
		Without Mitigation	High
		With Mitigation	Low
Archaeology or Heritage Impacts The impact on archaeological or cultural site is negligible however “a chance find must be implemented to ensure compliance to the constitutional requirement	1. Heritage, human remains or artefacts find must immediately be cordoned off and reported to the National Museum (+264 61 276800) or the National Forensic Laboratory (+264 61 240461); 2. No artefacts must be removed or be interfered with prior to authorization from the Namibian National Heritage Council (NHC).	Type	-VE
		Severity	High
		Scale / Extend	Site Specific
		Probability	Definite
		Confidence level	High
		Without Mitigation	High
		With Mitigation	Low

7.8. Biophysical

OPERATIONAL PHASE			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
Fauna It has been observed that domestic animals roams around waste disposal site and end up eating plastics and other waste This is deadly to animals.	1. Ensure that there is security to guard the perimeter who must lock the gate every time 2. No animal including pets must be allowed in the landfill site.	Type	-VE
		Severity	High
		Scale / Extend	Site Specific
		Probability	Definite
		Confidence level	High
		Without Mitigation	High
		With Mitigation	Low
Surface and Ground Water Pollution Waste disposal sites are notoriously known for water pollution through run off and leachate. Decomposed materials such as cans, batteries, electricity appliances and many other noxious materials find their way into water stream from surface run off when there is no proper storm water as well as into ground water through percolation of leachate. Large scale	1. Implement a 'Cover System' for leachate management as explained in this report; 2. The Cover System should be supported by lining the base with a high density polyethylene (HDPE) and or; 3. Hire a qualified company to Install a 'Bottom Liner system' for leachate collection as explained in this report	Type	-VE
		Severity	High
		Scale / Extend	Local
		Probability	Definite
		Confidence level	High
		Without Mitigation	High
		With Mitigation	Low

OPERATIONAL PHASE			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
landfill, prevent leachate through the installation of lining materials and leachate drainage collection systems. Two options are available for leachate management, which are both effective given the population of the town.	<ol style="list-style-type: none"> 4. Install a leakage detection and collection layer of 150mm compacted clay liner, 150mm bases preparation layer; 5. Connect the leachate collection into the leachate drainage pipe network which drains into a leachate collection tank / pond. 6. The collected leachate must be treated through a combination of biological and chemical treatment as explained earlier; 7. To prevent surface water pollution, construct storm water system to prevent run of water from entering the site; 8. Construct a storm water system that prevent water to flow from the site into the environmental, but channel this water a leachate collection pond. 		
Visual Impacts Visual impact is the immediate and most common impact associated with waste	<ol style="list-style-type: none"> 1. All recyclable material should be recycled, explore memorandum of understanding with recycling companies; 	Type	-VE
		Severity	Medium
		Scale / Extend	Site Specific

OPERATIONAL PHASE			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
disposal. Plastics and paper that are easily blown away by wind litters the surrounding of the waste site and becomes an eye shore. Inappropriate transportation of waste by contractors lead to waste falling and be scattered alongside the access road to the waste site. Hence is important to ensure a systematic management of visual impact.	<ol style="list-style-type: none"> Only appropriated vehicles with mesh that prevent waste from being blown away can be used to transport waste Implement daily filling and compaction to prevent waste from being blown away; Leave a buffer zone of undisturbed vegetation to act as wind breakers and protect the site from wind In the absence of compaction, burn the waste in an appropriate manner that does not risk fire outbreaks 	Probability	Definite
		Confidence level	High
		Without Mitigation	High
		With Mitigation	Medium
Air Pollution Waste disposal site are associated with the decomposition of organic material by bacteria that causes unpleased odours as well as smoke from burning of waste. While large scale landfills are known to emit greenhouse gases (Methane and Carbon Dioxide) which contribute to global warming.	<ol style="list-style-type: none"> Implement daily waste compaction to prevent bad odours Spray the access road using grey water to suppress dust; Install speed humps to limit speed which must be through the road passing through Ekolola to the site Keep a complaint register for dust impact If necessary, explore the harvesting of Methane 	Type	-VE
		Severity	High
		Scale / Extend	Local
		Probability	Definite
		Confidence level	High
		Without Mitigation	High
		With Mitigation	Low

OPERATIONAL PHASE			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
The current access road is gravel and waste transportation shall produce dust.			
Land Degradation After the construction of the landfill, the landscape of the area shall change which impact drainage and may cause soil erosion by run off	1. Construct a storm water management to avoid erosion.	Type	-VE
		Severity	Medium
		Scale / Extend	Site Specific
		Probability	Probable
		Confidence level	High
		Without Mitigation	Medium
		With Mitigation	Low

7.9. Socio-Economics

CONSTRUCTION AND OPERATION			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
Traffic During Construction, there shall be frequent movement of truck to and from the site. These	1. Trucks must be installed with a rotating headlight beam lights	Type	-VE
		Severity	Medium
		Scale / Extend	Local

CONSTRUCTION AND OPERATION			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
trucks have the potential to destroy the gravel, make excessive dust which is nuisance to nearby houses on the road, and increase risk of accident.	2. Truck must maintain a low speed to prevent excessive dust 3. The road must be maintained by scrapping and compacting 4. Install warning signs where necessary	Probability	Definite
		Confidence level	High
		Without Mitigation	Medium
		With Mitigation	Low
Employment With high rate of unemployment, every project would attract job seekers. Unfair labor practices may result in disputes that consequently leads to industrial actions. Project stages where foreigner are required, the contractor must ensure energy transfer through understand.	1. Employment opportunities should be given to locals for all general work 2. Provide working contract to employees 3. Gender mainstreaming must be considered during recruitment process	Type	+VE
		Severity	Medium
		Scale / Extend	Local
		Probability	Definite
		Confidence level	High
		Without Mitigation	Medium
		With Mitigation	Low
7.9.1. HIV/AIDS, Alcohol and Drug abuse Employment opportunity attract the influx of people to a to project sites. The income earned may lead to alcohol and drug abuse and enhance prostitutions	1. Provide awareness to the employees on danger of alcohol and drug abuse 2. Provide Condoms at friendly site on site, such as toilets	Type	-VE
		Severity	Medium
		Scale / Extend	Local
		Probability	Definite
		Confidence level	High

CONSTRUCTION AND OPERATION			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
		Without Mitigation	Medium
		With Mitigation	Medium
Health and Safety The Regulations Relating to the Health and Safety of Employees at Work, made under Labour Act of 1992 (Act No. 6 of 1992) place legal duty on employers to provide a health and safe working environment to the employees and any person other than the employees who might be affected by their operations. Heavy vehicle makes excessive noise during loading, Excavating and transportation of material. The site is secluded and out of reach for noise pollution to general public. There are no public installations around the area that maybe the noise receptor. Regardless, the employees are subjected to noise, dust, vermin, diseases and injuries during construction.	Health 1. Employees must NOT be exposed to noise levels above the required -85dB (A) limit over a period of 8 hours. 2. Adhere to the Labour act, non-toxic human dust exposure levels may not exceed 5mg/m ³ for respiratory dust and 15mg/m ³ for total dust. 3. Supply clean drinking water to the site, such as portable water tank; 4. There must be two suitable, clean and user-friendly ablution facilities, with separate Male and female toilets. 5. Ensure daily compaction of waste to prevent decomposition that may attract odour, flies, rodents, which causes vermin and diseases	Type	-VE
		Severity	Medium
		Scale / Extend	Local
		Probability	Definite
		Confidence level	High
		Without Mitigation	Medium
		With Mitigation	Low

CONSTRUCTION AND OPERATION			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
	<p>6. Provide employees with adequate PPE</p> <p>7. Avoid waste compaction during extreme windy condition</p> <p>Safety</p> <p>8. Ensure that every employee went through an induction course about safety;</p> <p>9. Employees must be equipped with all necessary Personal Protective Equipment (PPE). These includes, Helmet, Overall, Safety Shoes, Safety Glasses, Gloves, Earmuff etc;</p> <p>10. During operation, minor accidents are eminent, hence there must be a first aid kit;</p> <p>11. Only qualified and licenced personnel must be allowed to operate machinery and vehicles;</p> <p>12. No employee must be allowed to be onsite without PPE;</p>		

CONSTRUCTION AND OPERATION			
Potential Environmental / Social Impact	Mitigation Measures	Significance of the Impact	
	13. Adequate safety signs must be displayed on site; 14. To avoid field fires, smoking is only permitted at designated sites with low risk to fire; 15. Do not allow illegal recyclers on site;		
Improved Infrastructure development The development of the new waste disposal site aims to replace an old site, which is not environmentally sustainable	1. Provision of leachate management system 2. Public satisfaction from the complaints of the current site	Type	+VE
		Severity	Medium
		Scale / Extend	Local
		Probability	Definite
		Confidence level	High
		Without Mitigation	Medium
		With Mitigation	Low

7.10. Cumulative Impacts

Cumulative Impact are possible environmental and social impacts on the receptor caused by the combination effects of more than one project/development. Cumulative impact assessment aims to identify the environmental threats of the proposed project in combination with the existing similar project in the area. There was no significant cumulative impact identified.

7.11. Environmental Management Plans

The Environmental Management Plan is attached in Appendix 5. This Environmental Management Plan (EMP) is a risk strategy that contains logical framework, monitoring programme, mitigation measures, and management control strategies to minimize environmental impacts to be implemented during the project phases. It further stipulates the roles and responsibility of persons involved in the project.

7.12. Decommissioning

It is envisioned that the proposed site shall have a lifespan of more than 50 years. By then, operational procedures may change hence it is recommended that a comprehensive decommissioning plan be undertaken during that time. In general, the decommissioning of the site shall follow the following guidelines;

- Site Clean up
- Site Grading and Compaction
- Final Cover
- Storm water control
- Location records
- Site Access after closure
- Summary of the site closure
- Site Monitoring
- Future use of site

Chapter 8. CONCLUSION AND RECOMMENDATION

8.1. Conclusion

The environmental assessment has identified all possible impacts that may be caused by the landfill site. In accordance with the proposed practical mitigation measures, potential impacts shall have low significance to the environment. Often, landfill sites pose dire threat to water pollution, littering and visual impacts. These major threats were successfully addressed; a leachate management system is recommended to mitigate the effect of water pollution. The proposed site is still a virgin land which have some protected trees, procedures for removal of such trees is recommended.

8.2. Recommendation

It is recommended that the project is approved and be issued with an environmental Clearance Certificate, but subject to and not limited to the following conditions:

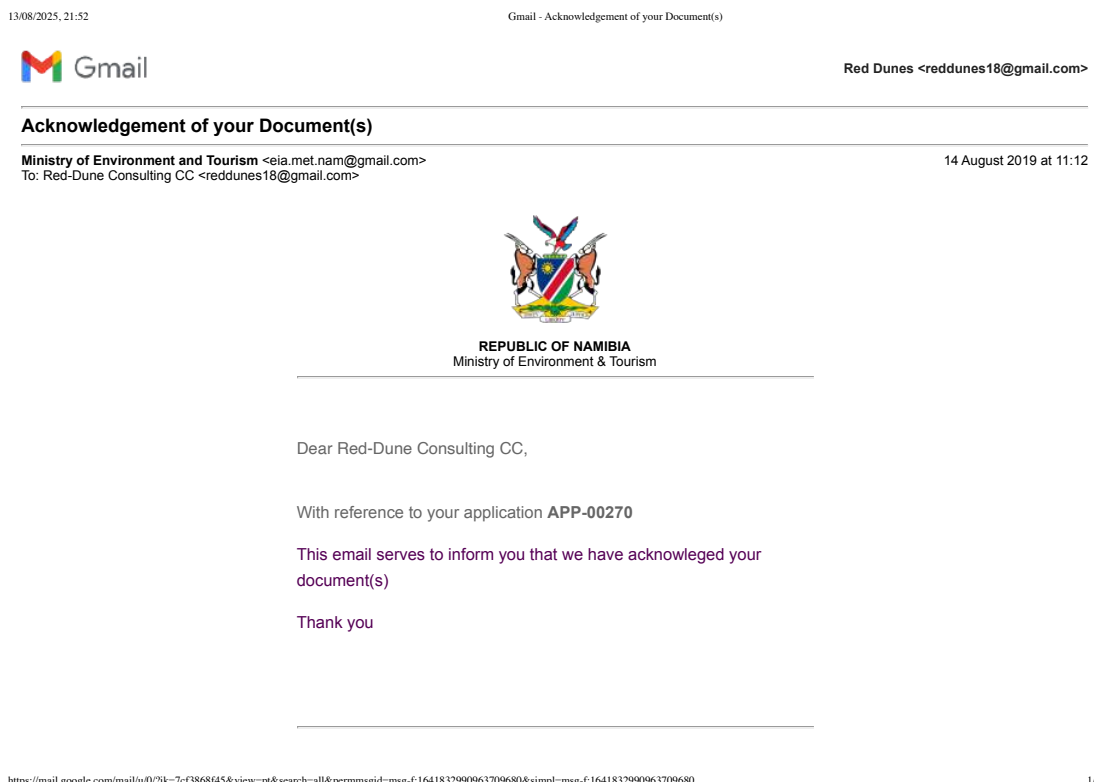
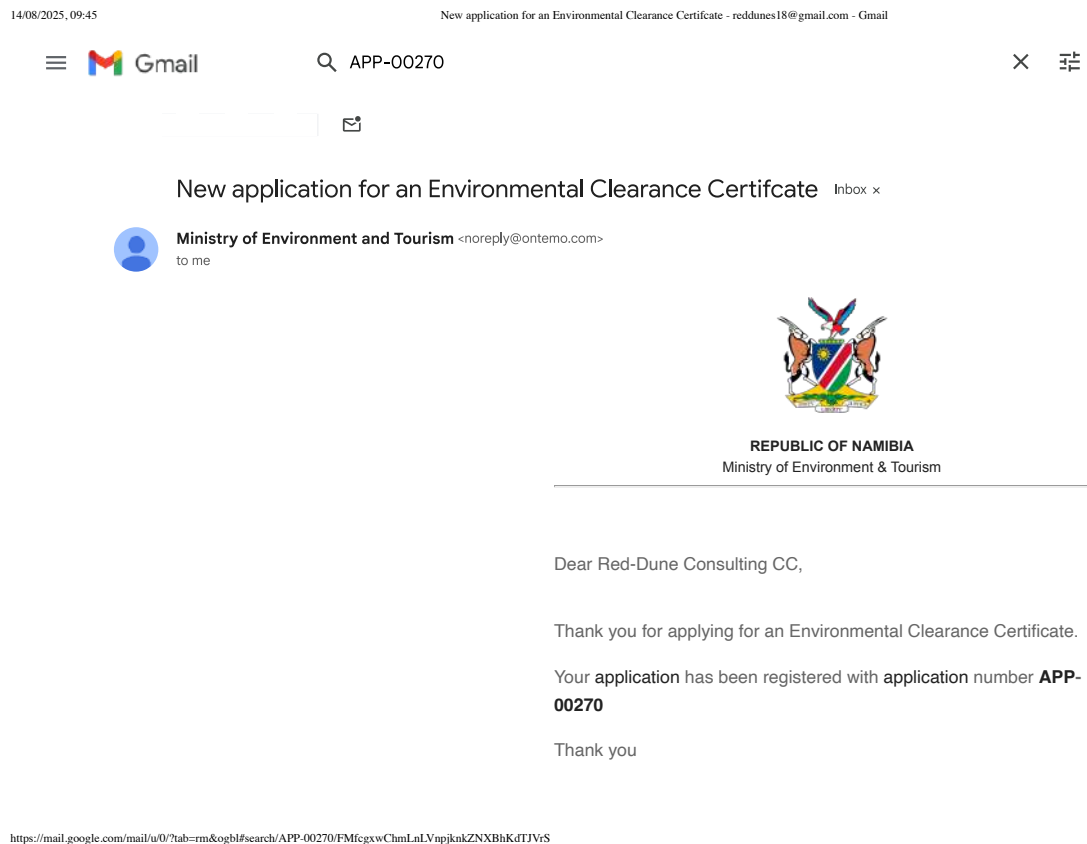
- Proper implementation of the Environmental Management Plan / mitigation measure to ensure environmental protection.
- Acquire permit from the Ministry of Agriculture Water and Forestry for vegetation clearing, especially the protected species.
- Hire competent professional individual or companies to install the leachate management system.
- Implement ground water monitoring system around the site and.
- Undertake bi-annual environmental audit, which must include groundwater analysis.

Chapter 9. REFERENCES AND ANNEXURES

9.1. References

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9. Tim W., (2016)., How to Decommission or Close an Open Dumpsite in an Environmental Sound Manner.
10. Zenas Engineering PLC., (2010). Dilla City Administration Landfill Site Environmental Impact Assessment Report.

9.2. Annex 1. Proof of submission and follow ups





Red Dunes <reddunes18@gmail.com>

Project APP-00270 for waste disposal site for Eenhana

Red Dunes <reddunes18@gmail.com>
To: damian nchindo <damian.nchindo@met.gov.na>

3 August 2020 at 22:28

Dear Damian

The above mentioned application (APP-00270) was submitted on 16 July 2019. It is over a YEAR now. Can I re-upload it as new?

Kindly help
Regards
Ipeinge

9.3. Annex 2. Public Consultations



**PUBLIC CONSULTATION
FOR
THE PROPOSED NEW WASTE DISPOSAL SITE FOR EENHANA TOWN COUNCIL
IN EENHANA TOWNLAND**



11 JULY 2019

CONSULTANT:
Mr. Ipeinge Mundjulu (BSc, MSc)
Red-Dune Consulting CC
P O Box 27623 Windhoek
Cell: +264 81 147 7889

PROPONENT
Eenhana Town Council
Private Bag 8007,
Eenhana

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1. Introduction

A public meeting was held at Eenhana Town on 11th July 2019. The meeting was jointly organised by the office of Eenhana Town Council (ETC) and Red-Dune Consulting. The political heads for Eenhana Town Council attended the meeting. The Chief Executive office, Mr. Walde Ndevashiya introduced the political leadership that were present and informed the public about the purpose of the meeting. He briefly informed the meeting about increase in development of the town and the need for supporting infrastructure to ensure sustainable development. He mentioned that, development in terms of building infrastructures requires building sand, while servicing of land requires gravel for the provisions of roads and elevation. Hence the council felt it fit and environmentally sustainable to source these material by itself for its development.

He further informed the meeting that, the council was advised by the office of the Environmental Commissioner that the current waste disposal site is not suitable and the town should find an alternative site for the waste disposal. The council had then found a new site in Ekolola, within the townland.

The establishment of a waste disposal site and sand mining are listed activities under the Environment Management Act 2007, (Act No 7 of 2007) that cannot be undertaken without an Environmental Clearance Certificate (ECC). The process of obtaining an ECC requires that the public is well consulted about the proposed activities, and that they are not aggrieved. It with this reason that, ETC have appointed Mr. Ipeinge Mundjulu for Red-Dune Consulting CC, an environmental consultant to undertake the Environmental Impact Assessment (EIA) process.

The meeting was then officially opened by the Councillor, his Workshop the Major for Eenhana Town Council, where he welcomed everyone at the meeting and urge participant to express their views without fear.

Mr. Ipeinge for Red-Dune gave an overview of the Environmental Management Act on listed activities and public participation process. He then informed the meeting that he was contracted by ETC for the following activities;

1. Develop Environmental Management Plan and Rehabilitation Plan for existing gravel burrow pits at Ohandiba village,

2. Develop an Environmental Management Plan and Closure plan for the existing waste disposal site
3. Undertake an Environmental Impact Assessment for proposed new waste disposal site and
4. Undertake an Environmental Impact assessment for the proposed Sand Mining site in Eenhana Townland

Mr. Ipeinge briefed the meeting on the on the outcome of the site assessment. The following briefing, comment and responses are those concerning the new waste disposal site.

2. Existing Waste Disposal Site

The current waste disposal site would be closed and rehabilitated as recommended by the Ministry of Environment and Tourism (MET). A closure and rehabilitation plan would be developed for approval by MET.

3. New waste disposal site

ETC has found a new site for the waste disposal at Ekolola within the townland. The site is already surveyed. The site is far from household as it is on the periphery of town. No one must be allowed to settle in close proximity with the site. ETC plans to construct a conventional waste site which shall be lined for the containment of leachate.

The proposed site is rich in vegetation where some trees are protected which requires ETC to obtain a permit from Ministry of Agriculture Water and Forestry to clear the protected vegetation.

4. Comment Question and Response

Name	Comment / Question	Response
Mr Haufiku (HM) (Eenhana)	Will the proposed site be within the town boundary	Yes
Mr. Sikongo Samuel (HM) (Ohandiba)	The current waste disposal site is located in Ohandiba, although the village is now within the town boundary, household in the near surrounding are complaining about smoke during the burning of waste. So we welcome the ETC plans to relocate the site	The comment is well noted,
Sikongo Samuel	You mentioned that, the site must be at least 100m away from residential places. Is that not too short, because we are going to be affected by the smoke and bad odors	A 100m is an interim resolution taken by MET to ensure development of any nature is atleast 100m away from the households. However, for the waste disposal site, it is recommended that the should be in a radius of 1km from residential places. It is unlikely that 1km may be achieved due to the setup of northern homestead. However, due to wind dispersion, it is expected that the smoke would not have impact on the surrounding area. One of the mitigation

Name	Comment / Question	Response
		measure to prevent bad odor shall include the daily filling and compaction waste.
Angelina Nghitotonanye	The effect of sand mining on village roads shall be compensated with the upgrade of one village to gravel road. How about us, close to the proposed waste site? What are going to be compensated with?	The development of the new site does not directly affect community like sand mining on village roads. Issued of concern such as bad odors and smoke are well addressed in the Environmental Management Plan (EMP). For example, to prevent bad odors, frequent waste compaction shall be undertaken.
Jackson Mathew	How will the following effect be addressed? Odor, dust from transportations, inappropriate transportation of waste which shall fall of in our surrounding	It is inevitable that, odor shall always be part of the waste disposal or landfill due to bacteria decomposing material. The impact shall be minimized through frequent filling and compaction. Dust impact from transportation would be minimized by frequent application of dust suppression such as water spray and any other possible dust suppression technology.
Mr. Nafimane Julius Kashihakumwa	We have silted wells that required deepening, can we trade with ETC, and in	The issue can be discussed with ETC.

Name	Comment / Question	Response
	return, ETC deepens our silted sites and we give them sand	
Ms. Ester, HM, Ohaihanya	I would like to add to the possible litter during waste transportation, that issue must be addressed	ETC. The council had outsourced the waste disposal contract and is currently running a tender for companies to apply. The council had put down strict measure that must be met by contractors, such as the type of vehicles to be used and the type of mesh required to carry waste, especially easily blown waste such as paper and plastic.
Silka Haihambo	We do not have enough Toilet in Ekolola, some people were given some were not given. Secondly, give provision for those that can build their house.	Not part of the EIA, councillor to organise another meeting to raise issues pertaining to these.
ETC	We have perhaps exhausted the issues pertaining to the proposed development and the Environmental Impact Assessment to follow. The council shall organise another meeting for you to raise your concerns and perhaps address them. We thank you for coming and for actively participating without fear or favour.	
Hon Councillor of Ondobe Closed the meeting.		

HM = Headman

RP = Headman Representative

HIATUS FROM PAGE 1

Ndeitunga told the media last week that the operation would take a break on Sunday 30 June, though the date of commencement is yet to be announced.

About 90% of members of the public can attest to the good brought on by the operation, Shikongo said.

According to the Khomas commander, who has vowed to rid the capital of crime, drug possession topped the list of the most prominent crimes during the first phase of the just-ended operation.

Second on the list was cellphone grabbing, followed by a number of drunk-driving incidents, he added.

The operation resulted in a reduction in the crime rate as it deterred notorious criminals and those intending to commit crimes.

Shikongo said the operation's image was tainted by assault cases levelled against some of its members.

"The operation is meant to police everywhere," he said, addressing critics who often question why police officers are more conspicuous in Katutura.

He explained that the exercise is not meant to discriminate against others, and that it is informed by crime statistics.

"We feel we haven't done enough in Katutura; some people complain of not having seen our presence," Shikongo said.

Safety and security deputy minister Daniel Kashikola last week issued a stern warning to criminals that security officers will remain visible.

"Do not be mistaken and think we are not there," Kashikola said.

He added that mechanisms are in place to respond to any threats or emergencies which may arise during the operation's break, and reasoned that revealing what the mechanisms are would be a security compromise.

"Communities should be confident of the country's security," the deputy minister said.



PUBLIC NOTICE:

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED;

1. WASTE DISPOSAL SITE AND,
2. SAND MINING SITE

FOR EENHANA TOWN COUNCIL, AT EENHANA TOWNLAND, OHANGWENA REGION
&
INVITATION TO A PUBLIC MEETING

In accordance with the Environmental Management Act (No. 7 of 2007) (EMA) and the Environmental Impact Assessment (EIA) Regulations (Government Notice No 4878 of 2012), notice is hereby given to all possible interested and affected parties (I&APs) that an application will be made to the Environmental Commissioner for an environmental clearance as follows:

Project (s): (1) Waste Disposal Site (2) and Sand Mining Site
Proponent: Eenhana Town Council
Location: Eenhana Townland
Date of Public Meeting: 11 July 2019
Venue: Ekolola Public Meeting Space
Time: 14H00-17H00

Deadline for submission of comments: 19 July 2019
Register as I&APs @: reddunes18@gmail.com or
Call +264 81 147 7889

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Mr J. Nakuta, Cell: 081 127 0661
E-mail: jbnakuta@yahoo.com

KATITI FROM PAGE 1

The NIP is also saying that, if the court ruled against it on that point, it is their case that the termination of Katiti's employment contract was based on a clause in the contract which states that the agreement can be terminated by the parastatal in the event of "documented acts of dishonesty, fraud or gross negligence by the CEO in connection with the performance of his duties to the NIP".

According to the NIP, Katiti's actions as CEO were not in the best interests of the parastatal, and he perpetrated wrongful acts which are actionable, without authority or the approval of the board of directors.

The NIP says those acts only came to the knowledge of the directors in July 2017.

The N\$14 million that the NIP is demanding from Katiti includes an amount of N\$1,88 million spent on the purchase of vehicles and related expenses in terms of an agreement between the parastatal and ST Freight Services CC.

It also includes N\$7,4 million spent on buying furniture, with

related joinery costs, N\$2 million that the NIP claims to have lost due to the withdrawal of N\$7,9 million from an investment account at Old Mutual, and N\$2,7 million, which is the annual cost to the NIP as a result of the creation of the positions of general assistant, assistant OD officer and manager: process analyst.

The NIP is a state agency which handles blood testing and other pathology services. It operates 40 laboratories across the country.

The NIP board suspended Katiti in June, and terminated his contract in August last year.

In documents filed at the Windhoek High Court in May, Katiti says he was employed as NIP CEO for a fixed five-year period from 1 April 2014, at an annual salary of N\$1,5 million.

According to him, he was being paid an annual salary of N\$1,9 million when his employment with the NIP was terminated.

Katiti says the NIP is obliged to pay him N\$3,8 million – equivalent to two years of his salary – for restricting him from conducting business similar to that of his former employer for two years after his departure from the NIP.

NIP acting CEO Mecky

Nghipandulwa told *The Namibian* she would not comment as she was not dealing with the matter.

In a telephonic interview, Katiti said his contract was approved by the NIP board, then chaired by Mandela Kapere, and that the former minister of health and social services, Bernard Haufiku, submitted it to Cabinet for endorsement.

"Let me state at the onset how regrettable it is that the board of NIP continues to knowingly waste public funds on frivolous litigation. It is wasteful and frivolous because my contract of employment, which they now claim to be invalid, was approved by the previous board, and submitted by the then minister of health and social services to Cabinet for endorsement," Katiti said.

On the NIP's claim that he should pay N\$14 million to it, Katiti said he never approved payments to ST Freight Services CC. He added that he was never a member of the NIP tender committee, and could therefore not have procured the furniture, with related joinery costs.

He further stated that he never made any withdrawals of NIP investments, but only approved

them as recommended by the chief financial officer in terms of NIP policies.

"The investment of N\$7,9 million was made for a period of 12 months as at 4 September 2013, and had already matured by the time the withdrawal was made in June 2017," he continued.

"The entire sum of N\$7,9 million was therefore credited to the current account to pay employees salaries for the month of June 2017".

"The investments were withdrawn in accordance with policy provisions [...]. NIP was not prejudiced or compromised, nor did it suffer any financial losses," Katiti said.

The creation of the positions over which the NIP wants him to pay N\$2,7 million was approved by the board's human capital committee and by the NIP board, he noted further, commenting: "It is thus not clear why the board is trying to mislead the public, unless they do not remember their own decisions through sheer incompetence."

The NIP is being represented by Profysen Muluti, while Katiti is represented by Rauha Shipindo from the law firm Metcalfe Attorneys.

SOLDIER FROM PAGE 1

The state is alleging that David murdered Indileni, aged five, between 19 and 21 February 2017 by drowning her in the Goreangab Dam.

Her body was found in the dam on 21 February 2017.

Two days earlier, David had taken their daughter with him on what was supposed to be a visit to the shops to buy some clothing for Indileni, Thomas told the court. She never saw Indileni alive again, Thomas said.

David is charged with counts of murder, read with the provisions of the Combating of Domestic Violence Act, assault with intent to do grievous bodily harm, theft, and malicious damage to property.

In addition to the murder charge, the

prosecution is alleging that David assaulted Thomas in Windhoek on 26 January 2017, that he stole two cellphones from Thomas during December 2016, and that he also broke another cellphone of Thomas and destroyed a SIM card belonging to her during December 2016.

David denied guilt on all of the charges with the start of his trial. His defence lawyer, Mbanga Siyomunji, did not provide a plea explanation to the court.

Thomas told the court that David assaulted her by punching her on the mouth and neck, and hitting her on the forehead and mouth with his head after she had refused to give him N\$20 for taxi fare.

She also recounted that after David had left with Indileni on 19 February 2017, he started to send text messages to her. In one of those SMSes, he asked her why she did not want

him any more, and her response to him was that it was because he had been beating her.

She said David started his next message to her with the word "surprise", before he told her "we" were no longer coming to her as she did not deserve to have them with her any more.

The next day, he also sent her a message in which he told her that she would not be with Indileni any more, followed by another SMS in which he expressed his love for her and said his goodbyes to her.

During all of his communication with her, David never told her that Indileni had accidentally fallen into water or that she was missing, Thomas said.

The trial is continuing.

State advocate Cliff Lutibezi is representing the prosecution.

TREKNET



By Gavin Thomson and Dave Gomersall



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Oshakati Office: Phone: 065-220 246; Fax: 065-224 521

Address: Bahai centre, Unit 13, Frans Indongo Yellow Complex P.O. Box 31, Oshakati

Tuyeimo Haidula's cell number: 081-339 3112; e-mail: tuyeimo@namibian.com.na

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Swakopmund Office: Telephone: 064-463 751 or 064-403 272; Fax: 064-463 756;

Address: Haus Altona, cnr Tobias Hainyeko and Daniel Tjongarero Strs., Swakopmund

Adam Hartman's cell number: 081-250 5966; e-mail: swakop@namibian.com.na

Keetmanshoop Office: Telephone: 063-225 872; Fax: 063-225 877

Address: Sam Nujoma Avenue, Social Security Building 1st floor office number 130

Luqman Cloete's Cell number: 081 27368 14; e-mail: luqman@namibian.com.na

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Weather

Interior: Cold at first, otherwise sunny and mild to warm in the south, central and eastern regions, elsewhere sunny and warm to hot.

Coast: Partly cloudy and mild to warm.

Wind: Moderate northerly to southerly.

Temperature (min-max)

Katima	05-26	Windhoek	02-23
Rundu	10-29	Mariental	05-23
Ondangwa	12-28	Keetmans	07-19
Grootfontein	04-24	Henties	08-16
Gobabis	02-23	Walvis Bay	08-25
Aranos	04-22	Lüderitz	08-22

4310 Housing & Property

• For Sale •

City Center: 2 plots for sale, both zoned Business with very high bulk, N\$11 million each. PropVestors 081 128 0252.

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Big house in Dorado Park near IUM. N\$2,4 million negotiable. Call Sam 081 286 5718. No agents

CLAO190008445

Jireh Real Estate CC

"Selling Master Piece in Every area"

* **Otjomuise Ext 4:** Plot of 1079m²

- Excellent Investment to build 6-7

units Investor Dream N\$1,3 million.

***Olympia:** 3 bedrooms,2 baths, kitchen,

lounge, entertainment area, pool,

d/garage 2,4 million in a CC. ***Rocky**

Crest Flat: 2 bedroom , kitchen, open

living area,carport,N\$1million. * **Klein**

Windhoek: 2 bedroom flat with 2 bath-

room N\$1,4 million. * **Cimbebasia:**

3 bedroom house with single garage

N\$1,560 million. * **Cimbebasia:** 3 bed-

room, open living area,3 air conditioner

in all rooms, d/garage N\$2,090 million

***Suiderhof:** size 1000m² Property

needs TLC 4 bedroom , kitchen, scul-

lery , lounge N\$2,1 million. ***Kleine**

Kuppe: Spacious 3 bedroom house

with 2 baths, d/garage outside flat N\$3

million. Thinking of Selling? May we as-

sist you by sourcing a qualified buyer

for your property ? For viewing please

contact Florencia at 081 218 3747 / 081

122 7886 jirehreaestate12@gmail.com

CLAO190008450

Plot for sale: Rund: kavango industrial-

plot: 5 000m² N\$ 750 000. Residen-

tial plot: 155 000m² N\$7 750 000.

Contact: 081 127 0458

CLAO190008482

Osona Villages: Brand new houses: 2

Bedrooms and 3 bedrooms from N\$600

000 to N\$900 000. Call: 081 787 8778

CLAO190008500

Gms Real Estate

Otjomuise Ext 4 and 5: Brand new

houses: 3 Bedrooms, 2 bathrooms,

open plan kitchen, lounge, single garage.

N\$1,450 million. Call: 081 787 8778

CLAO190008501

4310 Housing & Property

• For Sale •

GMS Real Estate

Academia - Ext 1: Plot 8579 sqm for

N\$22 million •**Lafrenz:** 5600sqm N\$12

million •**Academia:** 5 Bedroom house,

1000m², N\$3,250 million •**Academia -**

Ext 1: 5 Bedroom double storey house

N\$3,2 million •**Dorado Valley:** 2 Bedroom

house N\$1,6 million. •**Rocky Crest:** 3

Bedroom house N\$1,3 million. •**Cimbe-**

basia: 3 Bedroom house, 3 outside flats

N\$1,9 million •**Cimbebasia:** 3 Bedroom

house, N\$1,65 million •**Otjomuise Ext 5:**

3 Bedroom house, brand new N\$1,450

million •**Hochland Park Tauben Glen:**

Newly renovated 3 Bedroom house (750

sqm) N\$3,3 million. Contact: 081 787

8778 / gmsrealestate777@gmail.com

CLAO190008503

Klein Whk: very huge erf 1178m² 4

bedroom house, 2 bathrooms, double

garage, pool, entertainment area,

carport, 2 flats out outside for only N\$

3,2 million, excluding costs •**Westgate**

hills-rocky crest: for rent 3 bedroom

apartment, 2 bathrooms, open plan

kitchen, plus carport, only N\$8 000

available immediately •**Hocklandpark:**

4 bedrooms, 2 bathrooms, double

carport, erf size 1000 m2, 1 bedroom

outside flat, selling below valuation only

N\$ 2,4 million, excluding cost •**Dorado**

valley: free standing 3 bedroom house,

2 bathrooms, garage plus outside room

only selling for N\$ 1,36 million NB:

house needs renovations. Please call

0818341149 / 081 625 1000

CLAO190008512

Windhoek West: Office zoned property, 3

rooms, board room, etc. 1,000 sq meters

ERF, recent Valuation N\$3,6 million, selling

for N\$2,7 million Excluding Transfer, not

negotiable. 081 128 0252.

CLAO190008513

Ondangwa Plot: 6,400 m², on the main

road to Oshikango, valuation N\$2,9 mil-

lion, urgent sale, N\$2,25 Million, CC reg-

istered. Not negotiable. 081 128 0252.

CLAO190008514

Wilcor Real Estates

Otjomuise Ext.10 Phase 2: On show!

Friday from 11h00 till 14h00

Saturday from 10h00 till 14h00

Free standing houses, 2 bedrooms

N\$705 000 (all cost inclusive) & 3 bed-

rooms N\$840 000 (all cost inclusive).

Aluminium window frames, fully tiled,

built-in cupboards in rooms & kitchen

with built-in stove. Cornel 081 277 8250

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Otjomuise: 2 Bedroom flat, open plan

lounge and kitchen, bathroom, court-

yard, only 10 in a complex, all on ground

floor, clean and modern unit, valuation

N\$820,000 selling price N\$780,000 all

inclusive. Call: 081 555 1501

CLAO190008547

N\$1 145 000 Business Zoned Land

Okahandja: Next to new Highway.

Zoning Business Bulk 2! Smallest size

2 150m². Bigger Sizes Also Available.

Already serviced so ready to be devel-

oped. Interested Buyers contact Lou-

rette Liebenberg: 081 124 5868

CLAO190008570

4310 Housing & Property

• For Sale •

Auasblick house: 70% completed Mansion, N\$3,8 Million, CC registered. Buy it, spend N\$3,5 Million to complete it, then you will have a N\$10 million house. Propvestors 081 128 0252.

CLAO190008525

Cosie's Properties CC

Wanaheda: 3 Bedroom house N\$1million.

Hakahana: 1 Bedroom house N\$360,000

Goreangab: Erf for sale N\$285,000 cash

buyer.

Otjomuise: 3 Bedroom house, backyard

flat N\$1,350million

Okuryangava: 3 Bedroom house N\$750

000. Call Cosie 081 723 0144 / 081 452

4828 / 081 127 6084

CLAO190008526

Jatties Park Complex

Rhinopark: N\$895 million • Neat 2 bed-

room unit, bathroom, kitchen, lounge,

tv room, lapa with braai •**Guinea Fowl**

Complex Rocky-Crest: N\$1,250 million

Neat spacious 3 bedroom townhouse,

2 bathrooms, kitchen, lounge, guest toi-

let, double garage, spacious courtyard

•**Dares Complex Otjomuise:** N\$695 000

2 Bedroom unit, bathroom, kitchen,

lounge, courtyard, carport •**Khomas-**

dal: N\$1,560 million 3 Bedroom house,

2 bathrooms, kitchen, lounge, garage,

double carport PLUS separate flat, spaci-

ous erf - situated close to Voerman

Hyper •**Khomasdal:** N\$1,6 million. 3

Bedroom house, 1 bathroom, kitchen,

lounge, dining, TV room, garage, outside

room with bathroom, erf 550 m² - close

to Beukes Spar. Lona 081 127 9808 /

lona1923@gmail.com

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Okahandja: 7 000 m² Size Residential

Erf Ready to be Developed. Already

Serviced. At N\$2 450 000 it is Far Be-

low Current Bank Valuation. Situated in

the heart of town, a stone throw and

walking distance from Main Street and

Business Area. Zoning 1:100 which

allows for 70 Houses To Be Built On

7000m²!! Interested Buyers with pre-ar-

ranged funding are invited to contact

Laurette Liebenberg: 081 124 5868.

CLAO190008569

•**Katutura:** 3 bedroom House, N\$950 000

•**77 Independence:** 2 bedroom flat,

N\$1,2 million

•**Old Hochland Park:** 3 bedroom house,

plus 3 outside flats. N\$2,6 million

Hochland Park: 4 bedroom house, guest-

wing, big lapa, swimming pool, servant

quarter, office, carports, 3x backyard flats,

N\$3,2 million, valuation N\$3,75 million

•**Hochland Park:** 4 bedroom house,

swimming pool, carports 3x backyard

flats, N\$2,3 million.

•**Hochland Park:** 5 bedroom house, ga-

rage for 4 cars, N\$3,1 million.

Contact: 081 448 6034 / 081 555 3024 /

Office: 081 311 3228

CLAO190008572

5360 Motoring

• Vehicles for Sale •



2015 VW JETTA A6

GP 1.4

TSI H/line DSG,

118kw, White. Full Service

History, 55000 km

Lots of extras.

Mint condition.

Price: **N\$ 235 000**

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190008400

2011 Mercedes Benz B180, automat-

ic, petrol, in good condition, mileage

70 896km, local, for sale. N\$68 500

negotiable. Contact 081 252 7564 /

061 269346

CLAO190008546

5360 Motoring

• Vehicles for Sale •

6 Ton Foton Drop side Perkins N\$350

000. 3 **Ton Foton** Drop side Cummins

N\$ 280 000.Contact 081 767 7639

CLAO190008460

BMW 330 with extras, N\$55 000.

Call 081 216 3804

CLAO190008528

5360 Motoring

• Vehicles for Sale •

Solly Trading CC Veterans call for in-

voices: are you looking for a bakkie/

sedan?call us,we have various bakkies/

sedan available in stock (toyota,asu-

zu,nissan,polo,etios,etc) we also do

transport/delivery services in and out

of town, N\$350 per trip (in windhoek).

second hand tyres for sale haida 235/65

r17 N\$1450. **2012 Polo 6 Gti,** import,

black, very neat, 98 112km, urgent

sale N\$103 000 negotiable. **2013 Ford**

Figo 1.4 h/b, silver, low km N\$53 500

negotiable. **2012 Polo 6 1.6** h/b, local,

manual, white, 78 112km N\$83 000 ne-

gotiable. **2016 Toyota Bakkie 2.4** gd6,

small shape, white, very neat N\$169

000 negotiable. **2016 Toyota Bakkie 2.8**

gd6, 4x4, double cab, 55 112km, still on

motor plan, service plan, all extra's on,

light blue N\$352 000 negotiable. **2003**

Toyota Bakkie, 2.7i, 4x4 double cab,

bull nose white very neat all extras on

N\$110 000 negotiable. **2008 Mercedes**

Benz e350 amg, silver, 72 000km, ser-

vice record, very neat N\$129 000 nego-

tiable. **2004 Mercedes Benz C32** amg,

super charge, silver, low km, full house

N\$125 000 negotiable. **2016 Toyota**

Landcruiser 4.2 diesel brown, low km,-</

Agra Limited staff join fight against drought

■ Staff Reporter

WINDHOEK - Agra staff members last week joined the fight against the drought by donating an amount of N\$100 000 to the Dare to Care Fund. Agra staff from all corners of the country decided to collectively raise funds by contributing a share of their salaries to assist in alleviating the plight of drought-stricken farmers.

“Agriculture is the bloodline of Agra Limited, without the farmers Agra would not exist and

therefore it was imperative that we assist our farmers. With this humble contribution, the staff

hopes to assist the fund in reaching the set ambitious collection target of N\$10 million,” said

Ndapewa Neshila, the Communications and Public Relations Officer at Agra.

Agra is one of the pillars of the agricultural community in Namibia. The fully-fledged Namibian organisation is led by a team of qualified and experienced Namibian professionals, who understands the evolving industry and thus provide cost-effective



N\$100 000 in the bag... Agra staff members handing over a donation of N\$100 000 to Roelie Venter, Executive Manager of the Namibian Agricultural Union (second from right) with the CEO of Agra Arnold Klein (extreme right).

Photo: Contributed

product solutions, personal service, and specialised training, she said.

The company spokesperson

noted this donation proves that Agra is living by its corporate value of “Rooted in our People”, which is

a clear indication of the company’s commitment to the agriculture community in Namibia.

“Agra had earlier this year donated an amount of N\$500 000 to the fund which has gone a long way in assisting our farmers, however, because of the extreme climatic conditions, Agra staff felt they needed to further extend their hands to the farmers to survive the drought,” Neshila says.

Roelie Venter, Executive Manager of the Namibian Agricultural Union thanked the Agra staff

for the generous donation. “The donation is highly appreciated, and the fact that it came from the Agra staff indicates the commitment of Agra to the agricultural community in Namibia.

The NAU will ensure that the farmers will receive the intended assistance,” said Venter.

“The Dare to Care Fund, established in 2000, is an initiative by the whole agricultural sector,

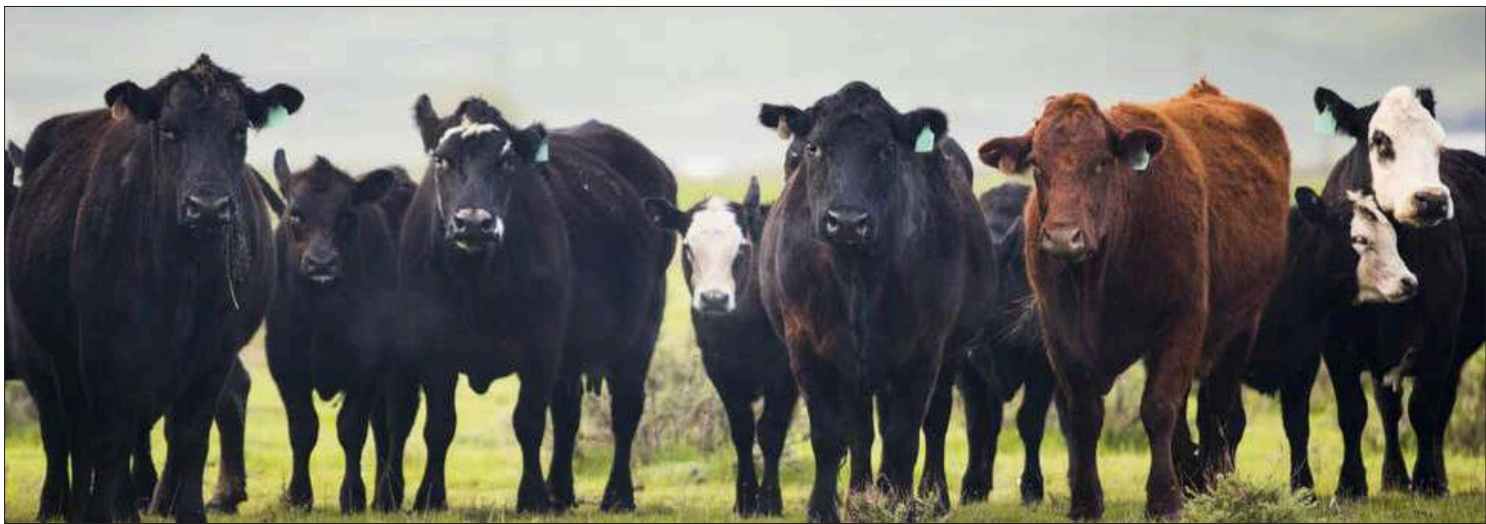
including the Namibia Emerging Commercial farmers Union (NECFU), Namibia Agricultural Union (NAU), and the private sector in Namibia, to assist all drought-stricken farmers to survive the drought. Agra is a founding and active member of the Dare to Care Fund.

Lab grown meat could cause more environmental damage

■ Harry Cockburn

Artificially grown beef could generate longer-lasting and more damaging greenhouse gases than rearing cattle normally, according to a new scientific study.

Agriculture accounts for around a quarter of all greenhouse gas emissions, driving up



Cattle produce large volumes of methane, which remains in the atmosphere for about 12 years. But the effects of carbon dioxide last for millennia.

global temperatures. Cattle, which produce significant quantities of methane and nitrous oxide, are among the biggest contributors.

The demand for beef has also seen vast tracts of land turned into grazing pastures, many of which have to be fertilised with nitrogen-based products, which are also a major source of greenhouse gases.

One touted solution to reducing the environmental impact of beef production is the production of artificially grown meat. Several companies are developing lab-grown beef, pork, poultry and seafood.

But while a move to this means of production could reduce methane levels from beef herds quickly, the new research, published in the journal *Frontiers in Sustainable Food Systems* suggests over a longer time frame, production of lab-grown meat could generate greater concentrations of damaging CO₂.

While methane remains in the atmosphere for around 12 years, CO₂ accumulates for millennia.

The study suggests the

environmental benefits of large-scale production of artificial meat hinge on the means of power generation used to make the artificial product in the factories.

The scientists from the Oxford Martin School said they found cultured meat was not necessarily “climatically superior to cattle”, adding: “Its relative impact instead depends on the availability of decarbonised energy generation and the specific production systems that are realised.”

They reached their conclusion after examining the various possible production methods for cultured meat and their energy demands. They also used three possible meat “consumption pathways” to predict how human demands for beef may fluctuate and change over then next 1,000 years.

Finally they used climate modelling to estimate how different outputs of each of the three greenhouse gases mentioned above - CO₂, methane and nitrous oxide - may affect global temperatures year on year if they increased or decreased, depending on meat consumption and production methods.

The researchers concluded only in the most optimistic scenarios was the impact of lab-grown meat less harmful than cattle rearing.

“In the most optimistic cultured meat

production footprints, emissions are competitive with cattle systems for CO₂ while avoiding the other gases: this is unambiguously superior from a climate perspective,” they said.

But they added: “For the most conservative cultured meat footprint used here, which still had a lower carbon dioxide equivalent footprint than any cattle system in the study, the long-term temperature impact of production is dramatically worse than any cattle system.”

They said this was largely due to the long-term damage caused by carbon dioxide remaining in the atmosphere.

Although they recognised a shift towards renewable low-carbon energy sources is underway in many countries, they said: “The magnitude of energy required is such that sufficient decarbonised energy generation appears unlikely in the near to medium term.”

The demand for beef is growing across the world, with particular growth in Asia where numerous emerging economies and growing household incomes have driven up demand to account for almost 50 per cent of total global beef imports, according to the UK’s Agriculture and Horticulture Development Board.



PUBLIC NOTICE:

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED;
1. WASTE DISPOSAL SITE AND,
2. SAND MINING SITE
FOR EENHANA TOWN COUNCIL, AT EENHANA TOWNLAND, OHANGWENA REGION & INVITATION TO A PUBLIC MEETING

In accordance with the Environmental Management Act (No. 7 of 2007) (EMA) and the Environmental Impact Assessment (EIA) Regulations (Government Notice No 4878 of 2012), notice is hereby given to all possible interested and affected parties (I&APs) that an application will be made to the Environmental Commissioner for an environmental clearance as follows:

Project (s): (1) Waste Disposal Site (2) and Sand Mining Site
Proponent: Eenhana Town Council
Location: Eenhana Townland
Date of Public Meeting: 11 July 2019
Venue: Ekolola Public Meeting Space
Time: 14H00-17H00
Deadline for submission of comments: 19 July 2019
Register as I&APs @: reddunes18@gmail.com or
Call +264 81 147 7889

City of Windhoek approves affordable housing concept

■ Edgar Brandt

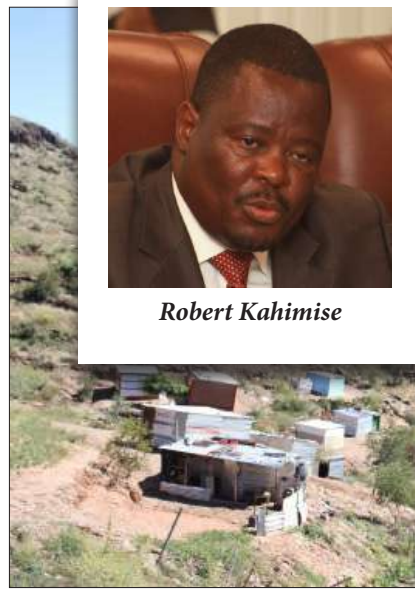
WINDHOEK - The City of Windhoek has for the first time approved an Affordable Housing Concept where it intends to build houses, most of which will be below N\$1 million. This was confirmed at a media briefing last week by City of Windhoek Chief Executive Officer Robert Kahimise.

"We have fenced-off land in the informal areas, to curb further proliferation of illegal land grabbing and invasions. This land will be used for the afore-mentioned project," said Kahimise.

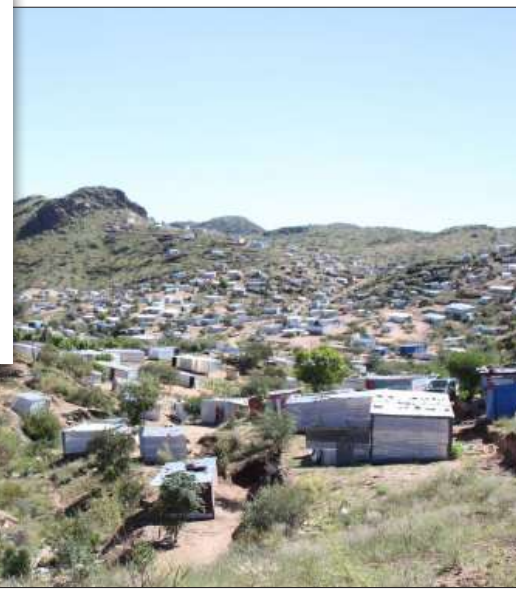
Last year, Namibia's housing backlog was estimated at 120 000 houses and this figure continues to grow annually. The escalating housing backlog is mostly due to the unaffordability of houses which

is exacerbated by a discrepancy in the demand and supply of decent housing. While government has attempted to rectify the slow pace of serviced land and affordable housing, such as through the N\$45 billion Mass Housing Project, the implementation and execution of this and similar programmes has done little to alleviate the plight for inexpensive housing in the country.

Even the private sector has entered the affordable housing arena, through companies such as Bank Windhoek who have announced financing of alternative housing solutions like PolyCare houses. According to Bank Windhoek, it opted to finance potential buyers of PolyCare Houses in response to government's efforts to alleviate the housing shortage and reduce the housing backlog. PolyCare



Robert Kahimise



The proliferation of shacks on the outskirts of Windhoek is testament to the escalating housing backlog. City of Windhoek CEO Robert Kahimise last week said the City has approved an Affordable Housing Concept where it intends to build houses for below N\$1 000 000.

houses, which are estimated to cost between N\$250 000 and N\$350 000, are aimed at medium to low-income individuals or families, who are unable to afford conventional housing at current market prices and interest rates. Meanwhile, also at last week's media briefing, Kahimise noted that within the first three months of his arrival the City of Windhoek, he signed off the Council approved unsolicited Public Private Partnership's (PPP's) Agreements on land and housing delivery.

"This was the last batch of unsolicited land allocations as we

have seen that this method was mostly exploited by City officials and their allies to their own benefit. Council stopped this loophole and no further unsolicited PPPs are being considered except for special projects on un-serviced land. City land is mostly offered through public tender except for institutional land and applications from GRN, SOEs, SDFN, Community organised groups and special projects applications including over the counter applications for vulnerable groups. Another loophole highly exploited is through 'Private treaties'

as this process is where most of the dubious land dealings occurred. In all these efforts, my only intent remains to try and protect the City's image and create a levelled playing field to all residents when it comes to access to land," said Kahimise.

The City of Windhoek CEO continued that since land delivery PPPs were stopped, the City has made available pockets of land and opened them up to the public through avenues such as tender, Offer to Purchase, government land allocations and youth land allocations.

TransNamib commissions N\$22 million Tamping machine

■ Staff Reporter

WINDHOEK – Last week, Deputy Minister of Works and Transport Sankwasa James Sankwasa, commissioned a new Tamping machine for TransNamib. The machine, which is a 08-16 Split Head Model was procured for N\$22 million from the manufacturer, Plasser & Theurer of Austria through their South African agent, with funding from government.

The on-track machineries play a vital role in the maintenance of railway tracks. These are complex and expensive railway maintenance machines which services some track activities which can only be done by such mechanised track equipment.

TransNamib previously had two heavy duty Tamping machines which originated from the South African Transport Services in 1986. These machines were manufactured

in the late 1950's. Only one of the machines is available and it is currently not operational due to mechanical problems and the spare parts are not readily available. The other machine was scrapped hence the urgent need to acquire a new tamping machine.

The Tamping machine is powered by DEUTZ diesel engine and can travel across the country at speeds of up to 60mph (100km/h). This modern high-performance

tamping machine has a measurement system to enable it to understand where faults exist on the track.

This measurement system requires three trolleys – one at the front of the machine, one in the centre (known as the measuring trolley) and one to the rear.

This 08-16 Split Head heavy duty ballast tamping machine is an essential item of equipment used for correcting and maintaining the geometry of the railway track, i.e. vertical and horizontal alignments as well as super-elevation on curves as it removes the vertical roughness of the track.

The 08-16 tamping machine is able to fulfil a maximum tamping rate of 22 sleepers per minute; provide a working tamping rate of 19 sleepers per minute; provide a maximum lift of 100mm and a maximum slew 50mm.

As part of the agreement with Plasser South Africa (Pty) Ltd, Maintenance Support and Training

of TransNamib's Operating staff form part of the package. Thus, the supplier provided a full time fitter to supervise the operation and maintenance of the machine for six months. Hands-on-training was provided to TransNamib staff to operate the machine and carry out day-to-day maintenance. TransNamib has emphasised that it is essential to have well-qualified personnel at the machine in order to carry out maintenance at the highest level. To date, three TransNamib employees received on the job training to operate the machine and carry out the daily maintenance. Two of the staff members received theoretical training, i.e.

one for machine operator course and another for a machine fitter course in South Africa. In total, 48 employees, of which 40 are project workers, work along the machine.

Since its arrival, the tamping machine has already worked in various part of the country covering approximately 350km. It has tamped some sections between Windhoek and Mariental (124km), between Windhoek and Karibib (121 km), and between Oshikango and Omuthiya (105 km).



MUNICIPALITY OF SWAKOPMUND

Notice is hereby given that the Swakopmund Municipality, intends to:

- Permanently close Portion "A" of the Remainder Erf 1023, Swakopmund as "street" (Portion A measure approximately 6 329m² in extent);
- Permanently close Portion "B" of Erf 3778, Swakopmund as "street" (Portion B measure approximately 543m² in extent);
- Consolidate Portion A and B into consolidated Erf X, and
- Subsequently rezone consolidated Erf X from "Street" to "General Business"

Locality plans are available and open for inspection during working hours at the Swakopmund Municipality: Town Planning Division.

Contact Person: JT Heita Tel: 410 4403 (Manager: Town Planning).

Any person having any objections to the proposed steps may lodge such objections, duly motivated in writing, with the Chief Executive Officer on or before **30th July 2019**.

NOTICE NO: 33/2019

A Benjamin
Chief Executive Officer

ENVIRONMENTAL ASSESSMENT OF THE PROPOSED WASTEWATER TREATMENT PLANT (WWTP) FOR LINUS SHASHIPAPO SECONDARY SCHOOL, KAVANGO EAST REGION

Notice is hereby given to Interested and Affected Parties (I&APs) that an application will be made to the Environmental Commissioner in terms of the Environmental Management Act (7 of 2007) and the EIA Regulations (GN. No. 30 of 6 February 2012) as follows:

Proponent: Dunamis Consulting Engineers & Project Managers (Pty) Ltd

Environmental Assessment Practitioner: MZ-Fifteen Environmental, Health & Safety Consultants cc

Project Location: The WWTP would be located within the Linus Shashipapo Secondary School premises, approximately 120 km east of Rundu and 90 km west of Divundu in Katere, Ndiyona Constituency of the Kavango East Region.

Brief Project Description: The construction and operation of a Wastewater Treatment Plant and associated infrastructure.

All I&APs are invited to register and submit their comments or concerns and request for further project information on the contact details below. The last day to register and submit comments is 9 August 2019.

Public meeting: Thursday, 1 August 2019 (Time: 09:00) at Linus Shashipapo Secondary School Dining Hall in Katere.

Contact: Fredrika Shagama at
mz15healthconsultants@gmail.com



PUBLIC NOTICE:

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED;
1. WASTE DISPOSAL SITE AND,
2. SAND MINING SITE
FOR EENHANA TOWN COUNCIL, AT EENHANA TOWNLAND, OHANGWENA REGION
&
INVITATION TO A PUBLIC MEETING

In accordance with the Environmental Management Act (No. 7 of 2007) (EMA) and the Environmental Impact Assessment (EIA) Regulations (Government Notice No 4878 of 2012), notice is hereby given to all possible interested and affected parties (I&APs) that an application will be made to the Environmental Commissioner for an environmental clearance as follows:

Project (s): (1) Waste Disposal Site (2) and Sand Mining Site

Proponent: Eenhana Town Council

Location: Eenhana Townland

Date of Public Meeting: 11 July 2019

Venue: Ekolola Public Meeting Space

Time: 14H00-17H00

Deadline for submission of comments: 19 July 2019








Register as I&APs @: reddunes18@gmail.com or

Call +264 81 147 7889



ATTENDANCE REGISTER FOR PUBLIC MEETING OF THE ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED NEW WASTE DISPOSAL SITE & SAND MINING AT EENHANA TOWNLAND, OHANGWENA REGION

No	Name	Organisation	Contact detail (tel or email)	Signature
1	Mupotulu Jemberis	RED-DUNE CC	0811474889	
2	Amos Nambolo	Eenhana TC	0811297508	
3	Nelamuel H. Hanyiku	ORC-Eenhana	0811476173	
4	RAMBA KAIKO	Eenhana TC	0812179065	
5	Elunike Shonens	Eenhana TC	08123332811	
6	Edemnon Mwanetoko	ORC-Eenhana	0816583922	
7	KAAOS' Tsumthamuk	MEI	0818560756	
8	Julia N. Shilobona	EENHANA TC	0818113700	
9	NALOE NDEWASHA	EENHANA TC	0817421389	
10	MARETITA AICER	EENHANA TC	0816556811	
11				
12				

NAME:		ORGANISATION		CONTACT DETAIL		SIGNATURE
13	Shundifemba Ericson			0813712316		
14	Hammukund Stefanus			0813712316		
15	Horaka. SHCWA			0815573349		Horaka
16	NAFIMALE KASHUKUMWA			0812843769		NAFIMALE
17	Amushilo Lucia P			0816998611		Amushilo L.P.
18	Hakambo Sirkay			0814630765		S. ngumbwa
19	Bahame Mathias			0812363114		
20	Udya Nkaka Ndaga			0817716281		U.N. Ndaga
21	M Agambo			0816407705		
22	M David			0812800871		M David
23	Tuizenwa					
24	Tubere Ndessy			0810515960		T.N.
25	Seima mamecis			081356853		S.m
26	Hien Hamutoko			0813631944		H. Hamutoko
27	Timoteus SHCWA			0816412009		
28	Paulus Kaleonda			0813156368		
29	Lusia Ngilitila			0814029752		L.N. Ngilitila
30	Elisabeta TICA			0812800767		Elisabeta

ATTENDANCE REGISTER FOR PUBLIC MEETING OF THE ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED NEW WASTE DISPOSAL SITE & SAND MINING AT EENHANA TOWNLAND, OHANGWENA REGION

No	Name	Organisation	Contact detail (tel or email)	Signature
1	Angelina Nphateterany		0816580225	Angelina
2	Iitula Tresi Shange		081 7185 84 8	I. Tresi
3	Hartula Hendrina N		08129784975	HHW
4	Shangadi. Penepawulo		0812986416	P.S
5	Hiluya Vakomwa			V.H
6	Hamunyela Teibe		081 3267337	TH
7	Saelson pohwees		0812380755	Br
8	Polea katsongo		0812302698	
9	Ngumbo David		0816445198	David
10	Hailulu Fredrick		0812468595	Hailulu F
11	Tyulus Althulwana	Headman Althulwana	0812172756	Althulwana
12	John M. SHADI	Adv 1505 - Othman	0818497697	SHADI

NAME	ORGANISATION	CONTACT DETAILS	SIGNATURE
31 Go Hieb Andima	E.T.C	0812081403	<i>Go Hieb</i>
32 Selma Shimbamba	E.T.C	08179000248	<i>Shimbamba</i>
33 Auli D. Haihambis	Chaihana	0812985254	<i>Auli D. Haihambis</i>
34 Helena Nelenge	Chaihana	0813745373	<i>Helena</i>
35 Planka Mabeuca	Ekolola	0814625840	<i>Planka</i>
36 Ndabepel Secilia	Ekolola	0816934488	<i>Secilia</i>
37 Piatte Silvanus	Ekolola	0812863085	<i>Piatte</i>
38 Murestano DAVID	Ekolola	0816049977	<i>DAVID</i>
39 Tereza Teni	Ekolola	0817194035	<i>Tereza</i>
40 Hamurana JANA	Ekolola	0816333968	<i>JANA</i>
41 Mwelelwa MARIA	ENHANA	0813690046	<i>Maria</i>
42 SHIKONEN SHIKONEN	EKOLOLA	0813668509	<i>SHIKONEN</i>
43 Ushona Selma	CENA C-nhana	0817004595	<i>Ushona</i>
44 Ndabungile Helena	CCE	0812765171	<i>Ndabungile Helena</i>
45 Dhadia Eben-EZER	Ekolola	08144032817	<i>Eben</i>
46 Gabriel Bazarus	Ekolola	0817304461	<i>GABRIEL</i>
47 Philipus Juvius	Ekolola	0817756277	<i>Philipus</i>

48 Shaluwana Hileni

OHANDIBA

0812979217

Shaluwana

H. Thomas Elyas

Ekolola

0812511058

Elyas

BO. Kima Ekelebia

Andimba

0816872670

Kima

51 Jelma Heimpuh

Ekolola

0813585060

Heimpuh

52 Bawa Kamali

Ekolola

0813585060

Kamali

13	Tedfilius P. Ngauwa	Oharara - Headma		
14	Tasa ni Kama	Ohandiba	Kapotas	Ohangoo
15	Tedfilius abas	pueneolomutunga		
16	Alategake Ngeneo		Ohangoo	Alategake Ng
17	Ndesi Fikamenu	Ekola		Al. Fikamenu
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