Environmental Assessment Scoping Report for

September 2025

Township Establishment on Portion 23 of the remainder of Farm Helao Nafidi No. 997 to become known as Oshikango Extension 2, Ohangwena Region.

APP-006423

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PROJECT DETAILS

Title	Environmental Scoping Report for the: ▪ Township Establishment on Portion 23 of the remainder of Farm Helao Nafidi No. 997 to become known as Oshikango Extension 2, Ohangwena Region		
Report Status	Final		
SPC Reference	HELAO/033		
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LEGAL NOTICE

EXECUTIVE SUMMARY

Introduction

The Helao Nafidi Town Council hereinafter referred to as the proponent intends to undertake the following activities:

- **Cancellation of Townships Board Item No. 1/2014 Dated 20 February 2018;**
- **Layout approval and Township Establishment on Portion 23 of the remainder of Farm Helao Nafidi No. 997 to become known as Oshikango Extension 2; and**
- **Inclusion of Oshikango Extension 2 in the next Zoning Scheme to be prepared for Helao Nafidi.**

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

As such the proponent appointed Stubenrauch Planning Consultants (SPC) to undertake an independent Environmental Assessment (EA) in order to obtain an Environmental Clearance Certificate (ECC) for the above activities. The competent authority is the Ministry of Environment and Tourism: Department of Environmental Affairs (MET: DEA).

Project Description

The proponent intends to establish Oshikango Extension 2 on Portion 23 of the Farm Helao Nafidi Townlands No. 997, located within the Helao Nafidi Local Authority area. The proposed township will consist of 84 erven and a remainder designated for streets and public infrastructure. This development seeks to contribute meaningfully to sustainable urban growth by addressing both formal land needs and existing planning inconsistencies.

A key feature of this project is the implementation of the Flexible Land Tenure System (FLTS), in accordance with the Flexible Land Tenure Act, 2012 (Act No. 4 of 2012). The Act introduces starter title and land hold title, alternative forms of secure land tenure aimed at improving land access for low-income residents. This system is expected to provide legal recognition to residents, facilitate incremental housing improvements, and contribute to the socio-economic upliftment of beneficiaries. The development aligns with the Helao Nafidi Town Council's objectives to promote inclusive, equitable, and well-serviced urban development.

The re-planning of Oshikango Extension 2 has become necessary due to the expansion of oxidation ponds in the area, which now encroach on a number of previously planned erven. The township establishment process presents an opportunity to revise the layout to reflect current ground realities and ensure that essential infrastructure—particularly sanitation services—is spatially and legally integrated within the township design.

Namibia is currently facing a pressing urban challenge marked by the rapid growth of informal settlements, where many households lack secure tenure and access to basic services. The

establishment of Oshikango Extension 2 is a proactive planning intervention aimed at preventing further unregulated urban sprawl. By formalising land tenure and providing a structured, serviced alternative, the project will contribute to more dignified and sustainable living conditions for current and future residents.

Public Participation

Communication with Interested and Affected Parties (I&APs) about the proposed development was facilitated through the following means and in this order:

- A Background Information Document (BID) containing descriptive information about the proposed activities was compiled and sent out to all identified and registered I&APs via email on **20 June 2025**;
- Notices were placed in the New Era newspaper and the Namibian Newspaper dated **20 & 27 June 2025,** briefly explaining the activity and its locality, inviting members of the public to register as I&APs (**Appendix B**); and
- A notice was fixed at the project site (see **Appendix A**);
- A public meeting was held on **03 July 2025** at Oshikango, Trees next to the service station near the open markets.

Public consultation was carried out according to the Environmental Management Act's EIA Regulations. After the initial notification, the I&APs were given two weeks to submit their comments on the project (until **23 July 2025**). The comment period remained open until the final scoping report was submitted to MET.

The Draft Scoping Report was circulated from the **15 August 2025 until the 01 September 2025** so that the public could review and comment on it. The overall commentary received from the public on the draft report was documented in the comments and responses report document of this report.

Conclusions and Recommendations

With reference to **Table 12**, none of the negative construction phase impacts were deemed to have a high significant impact on the environment. The construction impacts were assessed to a ***Medium to Low (negative)*** significance, without mitigation measures. With the implementation of the recommended mitigation measures in Chapter 7 as well as in the EMP**,** the significance of the construction phase impacts is likely to be reduced to a ***Low (negative)***.

With reference to **Table 13**, none of the negative operational phase impacts were deemed to have a high significance impact on the environment. The operational impacts were assessed to a ***Medium (negative)*** significance, without mitigation measures. With the implementation of the recommended mitigation measures in Chapter 7 as well as in the EMP**,** the significance of the construction phase impacts is likely to be reduced to a ***Low (negative)***.

It is recommended that this project be authorised because, should the development not proceed, the subject area will remain in its current undeveloped state, limiting its potential to contribute to the town's structured growth. The local community is expected to benefit significantly from the proposed development through the creation of employment opportunities during the construction phase, as well as through increased investment and activity in the area. The establishment of the new township is also anticipated to uplift the social well-being of the Helao Nafidi community by providing access to planned erven and basic services under the Flexible Land Tenure System. Given the potential for economic stimulation and improved living conditions, the social impact of the project is considered to be of High (positive) significance.

The "no go" alternative was thus deemed to have a High (negative) impact, as all the benefits resulting from the development would not be realised.

The significance of negative impacts can be reduced with effective and appropriate mitigation provided in this report and the EMP. If authorised, the implementation of the EMP should be included as a condition of approval.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ANNEXURES

Annexure A: Proof of Site Notices/ Posters
Annexure B: Proof of Advertisements
Annexure C: Public Participation process
- I&AP Database & Registered List
- Emails sent of BID
- Emails sent of DESR
- Public Meeting Presentation
- Public Meeting Minutes
- Attendance Register
- Comments if any

Annexure D: Curriculum Vitae of Environmental Assessment Practitioner
Annexure E: Environmental Management Plan

LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CRR	Comments and response report
dB	Decibels
DESR	Draft Environmental Scoping Report
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
EAR	Environmental Assessment Report
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
FESR	Final Environmental Scoping Report
GTZ	Gesellschaft für Technische Zusammenarbeit
HIV	Human Immunodeficiency Virus
HNTC	Helao Nafidi Town Council
I&AP	Interested and Affected Party
IUCN	International Union for Conservation of Nature
MET	Ministry of Environment and Tourism
MET: DEA	Ministry of Environment and Tourism: Department of Environmental Affairs
MURD	Ministry of Urban and Rural Development
MWTC	Ministry of Works Transport and Communication
NAMPAB	Namibia Planning Advisory Board
NPC	Namibia Planning Commission
POS	Public Open Space
PPP	Public Participation Process
SADC	Southern African Development Community
SME	Small Medium Enterprise
SPC	Stubenrauch Planning Consultants
USAID	United States Agency for International Development
VMMC	Voluntary Medical Male Circumcision

1 INTRODUCTION

1.1 PROJECT BACKGROUND

The Helao Nafidi Town Council hereinafter referred to as the proponent intends to undertake the following activities:

- **Cancellation of Townships Board Item No. 1/2014 Dated 20 February 2018;**
- **Layout approval and Township Establishment on Portion 23 of the remainder of Farm Helao Nafidi No. 997 to become known as Oshikango Extension 2; and**
- **Inclusion of Oshikango Extension 2 in the next Zoning Scheme to be prepared for Helao Nafidi.**

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

In terms of the Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012), the following listed activities in **Table 1** were triggered by the proposed project:

Table 1: List of triggered activities identified in the EIA Regulations which apply to the proposed project.

Activity description and No(s):	**Description of relevant Activity**	**The portion of the development as per the project description that relates to the applicable listed activity**
Activity 10.1 (a) Infrastructure	The construction of oil, water, gas and petrochemical and other bulk supply pipelines	The project involves the installation of bulk services
Activity 10.1 (b) Infrastructure	The construction of Public roads	The proposed project includes the construction of roads.
Activity 10.2 (a) Infrastructure	The route determination of roads and design of associated physical infrastructure where – it is a public road	The proposed project includes the route determination of roads.
Activity 8.6 Water Resource Development	Construction of industrial and domestic wastewater treatment plants and related pipeline system	The proposed project included the construction of a domestic wastewater treatment plant.

The above activities will be discussed in more detail in Chapter 4. The proponent appointed Stubenrauch Planning Consultants (SPC) to undertake an independent Environmental Assessment (EA) in order to obtain an Environmental Clearance Certificate (ECC) for the above activities. The competent authority is the Ministry of Environment and Tourism: Department of Environmental Affairs (MET: DEA).

The process will be undertaken in terms of the gazetted Namibian Government Notice No. 30 Environmental Impact Assessment Regulations (herein referred to as EIA Regulations) and the Environmental Management Act (No 7 of 2007) (herein referred to as the EMA). The EIA process will investigate if there are any potential significant bio-physical and socio-economic impacts associated with the intended activities. The EIA process would also serve to provide an opportunity for the public and key stakeholders to provide comments and participate in the process.

1.2 PROJECT LOCATION

The proposed township is located on Portion 23 of the Farm Helao Nafidi Townlands No. 997 which is situated adjacently west of the proclaimed township of Oshikango south of the border between Namibia and Angola. The eastern boundary of the extension is defined by the TransNamib railway line which currently terminates at the border. The proposed Oshikango Extension 2 is located directly west of the already established townships of Oshikango Proper and Extension 5.

1.3 ZONING AND OWNERSHIP

Ownership of the remainder of the Farm Helao Nafidi Townlands No. 997 vests with the Helao Nafidi Town Council as per Deed of Transfer No. 7249/2005. There are no restrictive conditions registered against the Deed that would prohibit the intended development, and the land is zoned "Undetermined" which makes it suitable for township establishment purposes.

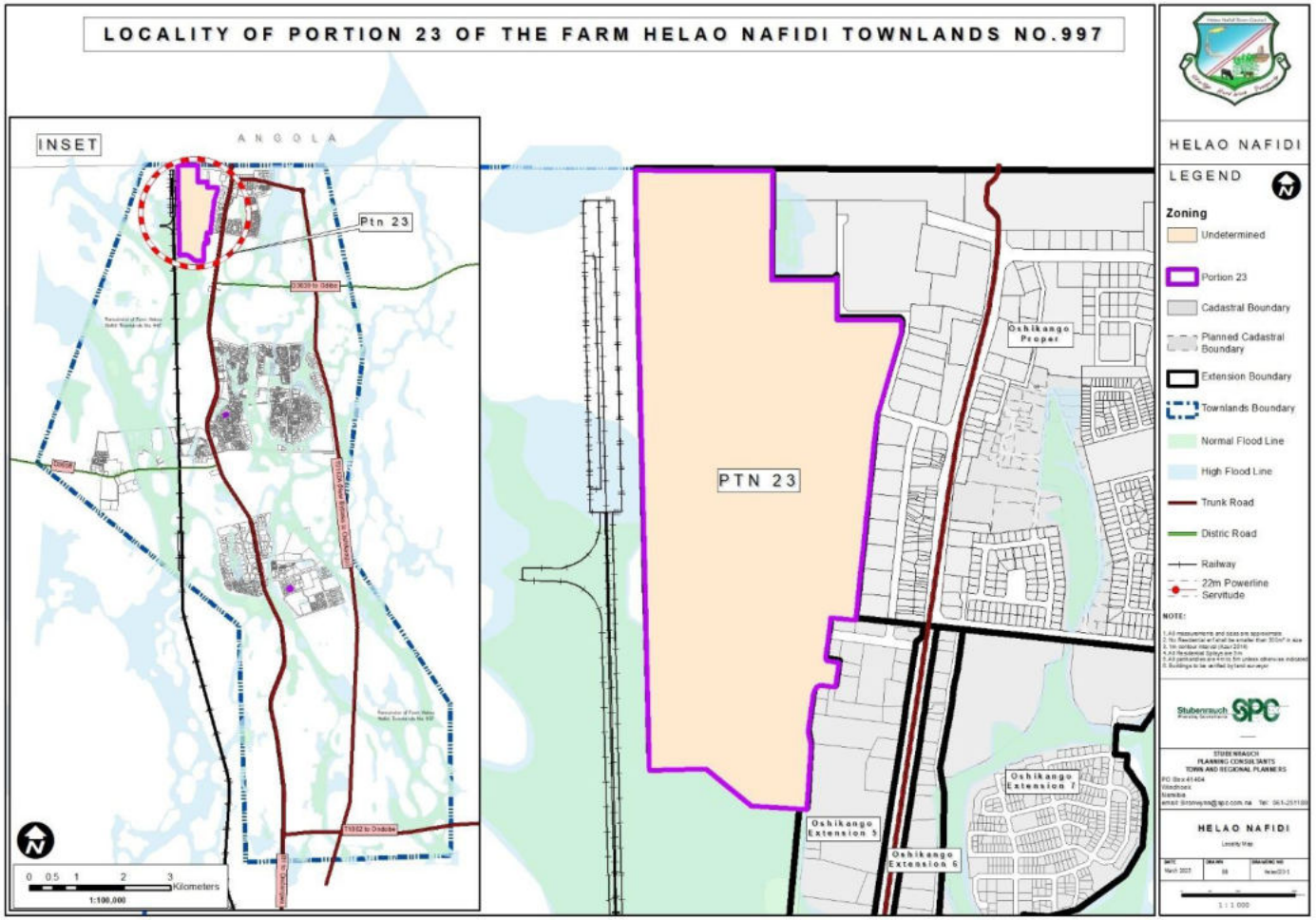


Figure 1: Locality Map of Helao Nafidi

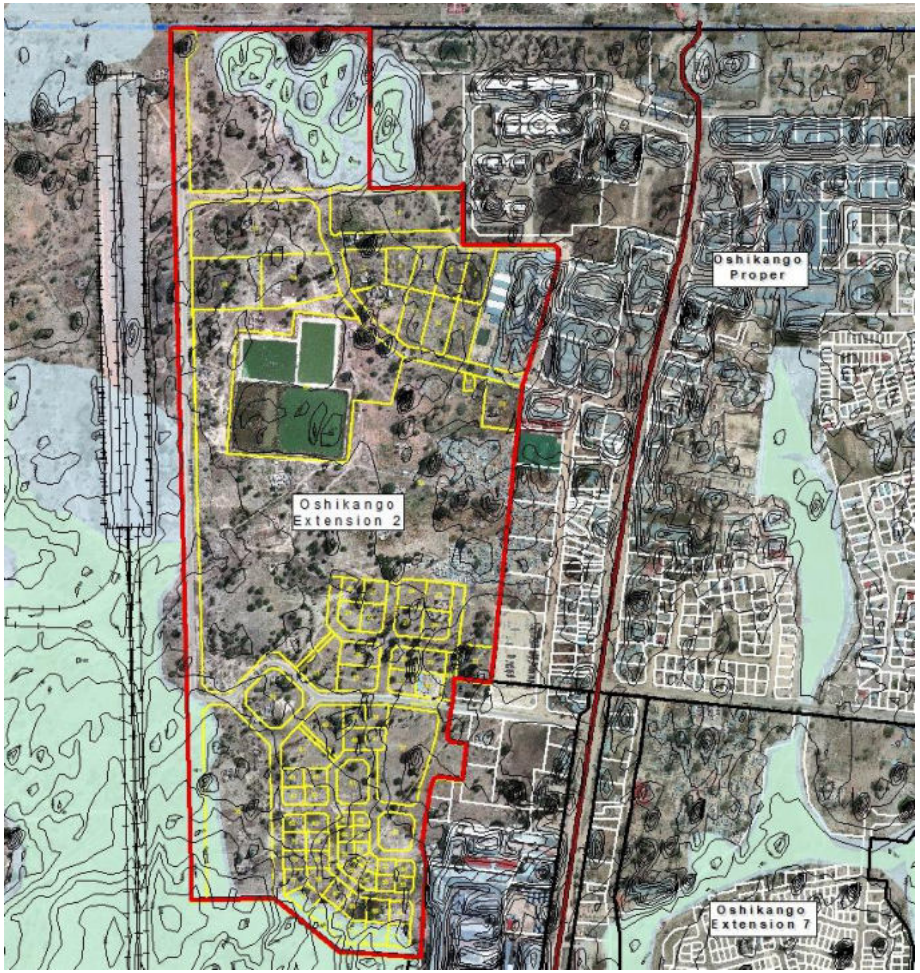


Figure 2: Aerial View

1.4 TERMS OF REFERENCE AND SCOPE OF PROJECT

The scope of this project is limited to conducting an environmental impact assessment and applying for an Environmental Clearance Certificate for the following as indicated in section 1.1 above:

- **Cancellation of Townships Board Item No. 1/2014 Dated 20 February 2018;**
- **Layout approval and Township Establishment on Portion 23 of the remainder of Farm Helao Nafidi No. 997 to become known as Oshikango Extension 2; and**
- **Inclusion of Oshikango Extension 2 in the next Zoning Scheme to be prepared for Helao Nafidi.**

1.5 ASSUMPTIONS AND LIMITATIONS

In undertaking this investigation and compiling the Environmental Scoping Report, the following assumptions and limitations apply:

- Assumes the information provided by the proponent is accurate and discloses all information available.
- The limitation that no alternative except for the preferred subject areas and the 'no-go' option was considered during this assessment. The unique character and appeal of Helao Nafidi were however taken into consideration with the design perspective.
- There are no specific layout design at present, but based on the feasibility study analysis, the proposed subject areas are the identified areas that require urgent intervention.

1.6 CONTENT OF ENVIRONMENTAL ASSESSMENT REPORT

Section 8 of the gazetted EIA Regulations requires specific content to be addressed in a Scoping / Environmental Assessment Report. **Table 3** below is an extract from the EMA and highlights the required contents of a Scoping / Environmental Assessment Report whilst assisting the reader to find the relevant section in the report.

Table 2: Contents of the Scoping / Environmental Assessment Report

Section	Description	Section of FESR/ Annexure
8 (a)	The curriculum vitae of the EAPs who prepared the report;	Refer to **Annexure D**
8 (b)	A description of the proposed activity;	Refer to Chapter 4

Section	Description	Section of FESR/ Annexure
8 (c)	A description of the site on which the activity is to be undertaken and the location of the activity on the site;	Refer to Chapter 3
8 (d)	A description of the environment that may be affected by the proposed activity and the manner in which the geographical, physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed listed activity;	Refer to Chapter 3
8 (e)	An identification of laws and guidelines that have been considered in the preparation of the scoping report;	Refer to Chapter 2
8 (f)	Details of the public consultation process conducted in terms of regulation 7(1) in connection with the application, including	Refer to Chapter 5
	(i) the steps that were taken to notify potentially interested and affected parties of the proposed application	Refer to Chapter 5
	(ii) proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the proposed application have been displayed, placed or given;	Refer to **Annexures A** and **B** for site notices and advertisements respectively.
	(iii) a list of all persons, organisations and organs of state that were registered in terms of regulation 22 as interested and affected parties in relation to the application;	Refer to **Annexure C**
	(iv) a summary of the issues raised by interested and affected parties, the date of receipt of and the response of the EAP to those issues;	Refer to **Annexure C**
8 (g)	A description of the need and desirability of the proposed listed activity and any identified alternatives to the proposed activity that are feasible and reasonable, including the advantages and disadvantages	Refer to Chapter 4

Section	Description	Section of FESR/ Annexure
	that the proposed activity or alternatives have on the environment and on the community that may be affected by the activity;	
8 (h)	A description and assessment of the significance of any significant effects, including cumulative effects, that may occur as a result of the undertaking of the activity or identified alternatives or as a result of any construction, erection or decommissioning associated with the undertaking of the proposed listed activity;	Refer to Chapter 7
8 (i)	terms of reference for the detailed assessment;	NB – Assessment of impacts are included in this EA Report
8 (j)	An environmental management plan	Refer to **Annexure E**

2 LEGAL FRAMEWORK

2.1 LEGISLATION RELEVANT TO THE PROPOSED DEVELOPMENT

There are multiple legal instruments that regulate and have a bearing on good environmental management in Namibia. **Table 4** below provides a summary of the legal instruments considered to be relevant to this development and the environmental assessment process.

Table 3: Legislation applicable to the proposed development

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
The Constitution of the Republic of Namibia as Amended	Article 91 (c) provides for duty to guard against "the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia." Article 95(l) deals with the "maintenance of ecosystems, essential ecological processes and biological diversity" and sustainable use of the country's natural resources.	Sustainable development should be at the forefront of this development.
Environmental Management Act No. 7 of 2007 (EMA)	Section 2 outlines the objective of the Act and the means to achieve that. Section 3 details the principle of Environmental Management	The development should be informed by the EMA.
EIA Regulations GN 28, 29, and 30 of EMA (2012)	GN 29 Identifies and lists certain activities that cannot be undertaken without an environmental clearance certificate. GN 30 provides the regulations governing the environmental assessment (EA) process.	**Activity 10.1 (a) Infrastructure** **Activity 10.1 (b) Infrastructure** **Activity 10.2 (a) Infrastructure** **Activity 8.6 Water Resource Developments**
Convention on Biological Diversity (1992)	Article 1 lists the conservation of biological diversity amongst the objectives of the convention.	The project should consider the impact it will have on the biodiversity of the area.
Draft Procedures and Guidelines for conducting EIAs and compiling EMPs (2008)	Part 1, Stage 8 of the guidelines states that if a proposal is likely to affect people, certain guidelines should be considered by the proponent in the scoping process.	The EA process should incorporate the aspects outlined in the guidelines.

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
Namibia Vision 2030	Vision 2030 states that the solitude, silence and natural beauty that many areas in Namibia provide are becoming sought after commodities and must be regarded as valuable natural assets.	Care should be taken that the development does not lead to the degradation of the natural beauty of the area.
Water Act No. 54 of 1956	Section 23(1) deals with the prohibition of pollution of underground and surface water bodies.	The pollution of water resources should be avoided during construction and operation of the development.
The Ministry of Environment and Tourism (MET) Policy on HIV & AIDS	MET has recently developed a policy on HIV and AIDS. In addition, it has also initiated a programme aimed at mainstreaming HIV and gender issues into environmental impact assessments.	The proponent and its contractor have to adhere to the guidelines provided to manage the aspects of HIV/AIDS. Experience with construction projects has shown that a significant risk is created when migrant construction workers interact with local communities.
Urban and Regional Planning Act 5 of 2018	The Act provides to consolidate the laws relating to urban and regional planning; to provide for a legal framework for spatial planning in Namibia; to provide for principles and standards of spatial planning; to establish the urban and regional planning board; to decentralise certain matters relating to spatial planning; to provide for the preparation, approval and review of the national spatial development framework, regional structure plans and urban structure plans; to provide for the preparation, approval, review and amendment of zoning schemes; to provide for the establishment of townships; to provide for the alteration of boundaries of approved townships, to provide for the disestablishment of approved townships; to provide for the change of name of approved townships; to provide for the subdivision and consolidation of land; to provide for the alteration,	The subdivision and consolidation of land as well as the establishment of townships is to be done in accordance with the act.

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
	suspension and deletion of conditions relating to land; and to provide for incidental matters.	
Local Authorities Act No. 23 of 1992	The Local Authorities Act prescribes the manner in which a town or municipality should be managed by the Town or Municipal Council.	The development must comply with provisions of the Local Authorities Act.
Labour Act no. 11 of 2007	Chapter 2 details the fundamental rights and protections. Chapter 3 deals with the basic conditions of employment.	Given the employment opportunities presented by the development, compliance with the labour law is essential.
National Heritage Act No. 27 of 2004	The Act is aimed at protecting, conserving and registering places and objects of heritage significance.	All protected heritage resources (e.g. human remains etc.) discovered, need to be reported immediately to the National Heritage Council (NHC) and require a permit from the NHC before they may be relocated.
Roads Ordinance 17 of 1972	• Section 3.1 deals with width of proclaimed roads and road reserve boundaries • Section 27.1 is concerned with the control of traffic on urban trunk and main roads • Section 36.1 regulates rails, tracks, bridges, wires, cables, subways or culverts across or under proclaimed roads • Section 37.1 deals with Infringements and obstructions on and interference with proclaimed roads.	Adhere to all applicable provisions of the Roads Ordinance.
Public and Environmental Health Act of 2015	This Act (GG 5740) provides a framework for a structured uniform public and environmental health system in Namibia. It covers notification, prevention and control of diseases and sexually transmitted	Contractors and users of the proposed development are to comply with these legal requirements.

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
	infections; maternal, ante-natal and neo-natal care; water and food supplies; infant nutrition; waste management; health nuisances; public and environmental health planning and reporting. It repeals the Public Health Act 36 of 1919 (SA GG 979).	
Nature Conservation Ordinance no. 4 of 1975	Chapter 6 provides for legislation regarding the protection of indigenous plants	Indigenous and protected plants must be managed within the legal confines.
Water Quality Guidelines for Drinking Water and Wastewater Treatment	Details specific quantities in terms of water quality determinants, which wastewater should be treated to before being discharged into the environment (see Appendix B).	These guidelines are to be applied when dealing with water and waste treatment
Environmental Assessment Policy of Namibia (1995)	The Policy seeks to ensure that the environmental consequences of development projects and policies are considered, understood and incorporated into the planning process, and that the term ENVIRONMENT is broadly interpreted to include biophysical, social, economic, cultural, historical and political components.	This EIA considers this term of Environment.
Water Resources Management Act No. 11 of 2013	Part 12 deals with the control and protection of groundwater Part 13 deals with water pollution control	The pollution of water resources should be avoided during construction and operation of the development. Should water need to be abstracted, a water abstraction permit will be required from the Ministry of Water, Agriculture and Forestry.
Forest Act 12 of 2001 and Forest Regulations of 2015	To provide for the establishment of a Forestry Council and the appointment of certain officials; to	Protected tree and plant species as per the Forest Act No 12 of 2001 and Forest Regulations of 2015 may

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
	consolidate the laws relating to the management and use of forests and forest produce; to provide for the protection of the environment and the control and management of forest fires; to repeal the Preservation of Bees and Honey Proclamation, 1923 (Proclamation No. 1of 1923), Preservation of Trees and Forests Ordinance, 1952 (Ordinance No. 37 of 1952) and the Forest Act, 1968 (Act No. 72 of 1968); and to deal with incidental matters.	not be removed without a permit from the Ministry of Agriculture, Water and Forestry.
Atmospheric Pollution Prevention Ordinance No 45 of 1965	Part II - control of noxious or offensive gases, Part III - atmospheric pollution by smoke, Part IV - dust control, and Part V - air pollution by fumes emitted by vehicles.	The development should consider the provisions outlined in the act. The proponent should apply for an Air Emissions permit from the Ministry of Health and Social Services (if needed).

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
Hazardous Substance Ordinance 14 of 1974	To provide for the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances; to provide for the division of such substances into groups in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances; and to provide for matters connected therewith.	The handling, usage and storage of hazardous substances on site should be carefully controlled according to this Ordinance.
Soil Conservation Act No 76 of 1969	Act to consolidate and amend the law relating to the combating and prevention of soil erosion, the conservation, improvement and manner of use of the soil and vegetation and the protection of the water sources	The proposed activity should ensure that soil erosion and soil pollution is avoided during construction and operation.

This EIA process will be undertaken in accordance with the EIA Regulations. A Flow Diagram (refer to **Figure 3** below) provides an outline of the EIA process to be followed.

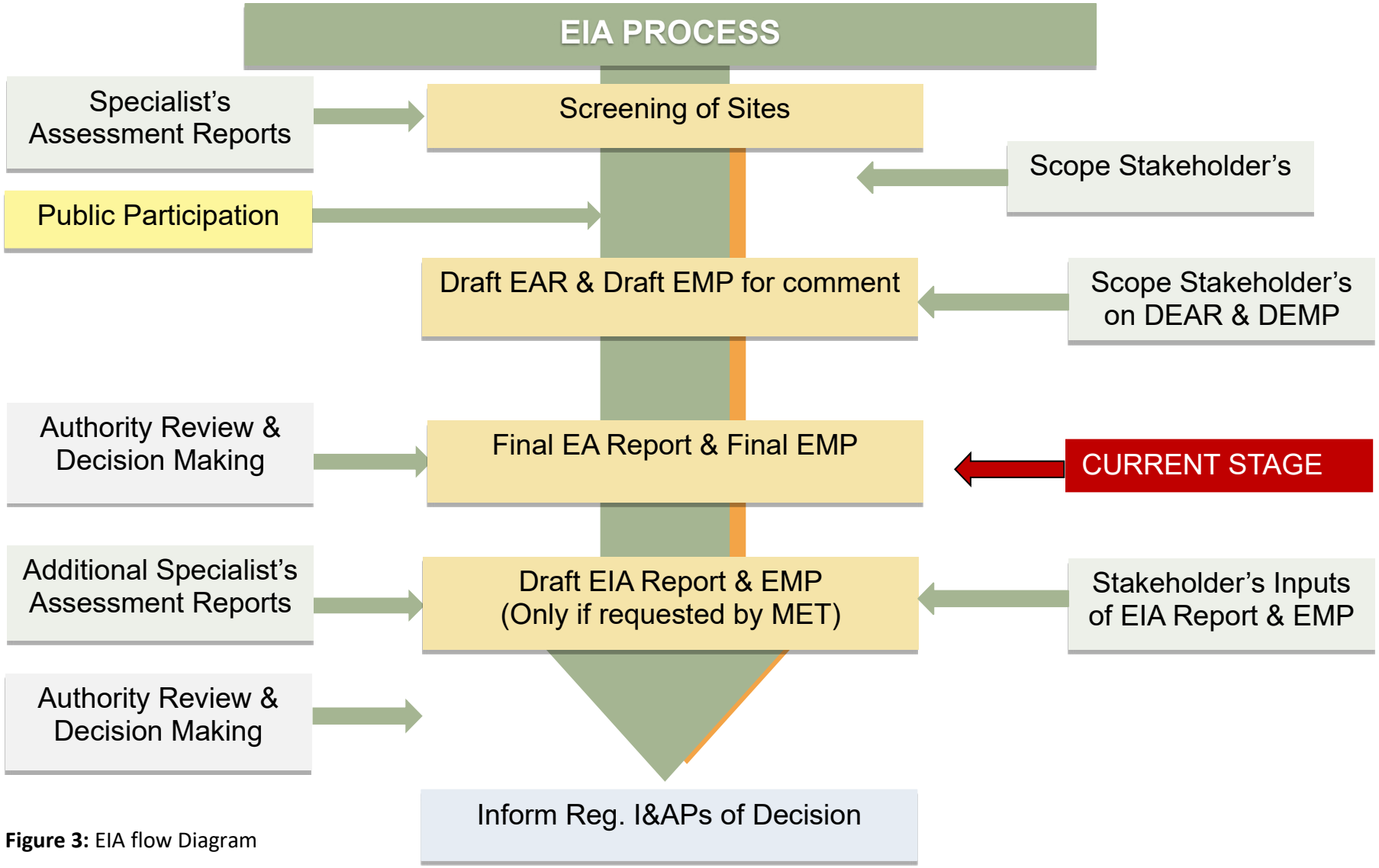


Figure 3: EIA flow Diagram

3 ENVIRONMENTAL BASELINE DESCRIPTION

3.1 SOCIAL ENVIRONMENT

3.1.1 Socio-Economic Context

The statistics shown in **Table 5** below are derived from the 2023 Namibia Population and Housing Census (Namibia Statistics Agency, 2023), and presented from a local and regional perspective.

Table 4: Statistics of the Helao Nafidi Urban Constituency (Namibia Statistics Agency, 2023)

HELAO NAFIDI	
ATTRIBUTE	**INDICATOR**
Population	29 119
Females	15 454
Males	13 665
OHANGWENA REGION	
ATTRIBUTE	**INDICATOR**
Population	337 729
Females	178 028
Males	159 701
Population under 5 years	16.2%
Population aged 5 to 14 years	29.1%
Population aged 15 to 34 years	29.9%
Population aged 35 to 59 years	16.8%
Population aged 60 years and above	8.0%
Female: male ratio	90:100
Literacy rate of 15 years old and above	84.6%
People above 15 years who have never attended school	14.8%
People above 15 years who are currently attending school	24.2%
People above 15 years who have left school	57.7%
Income from pension	23.8%
Income from business and non-farming activities	10.5%
Income from farming	22.1%
Wages and salaries	24.9%
Main Language	Oshiwambo Languages-97.7%

3.1.2 Archaeological and Heritage Context

No archaeological and heritage resources are expected to be found on the proposed sites. The project management should however be made aware of the provisions of the National Heritage Act regarding the prompt reporting of archaeological finds. Section 3.1.2 provides an overview of the archaeological and heritage context of the town and region.

3.2 BIO-PHYSICAL ENVIRONMENT

3.2.1 Climate

The climate of the Ohangwena Region is classified as tropical semi-arid with a dry season of 5-6 months. The average maximum temperature varies between 24 and 32°C with the average minimum temperature between 8 and 18°C. According to the modified Koppen system Ohangwena can be classified as a warm steppe region. Similarities between climatic conditions in northern Namibia and the Sahel region in northern Africa are obvious.

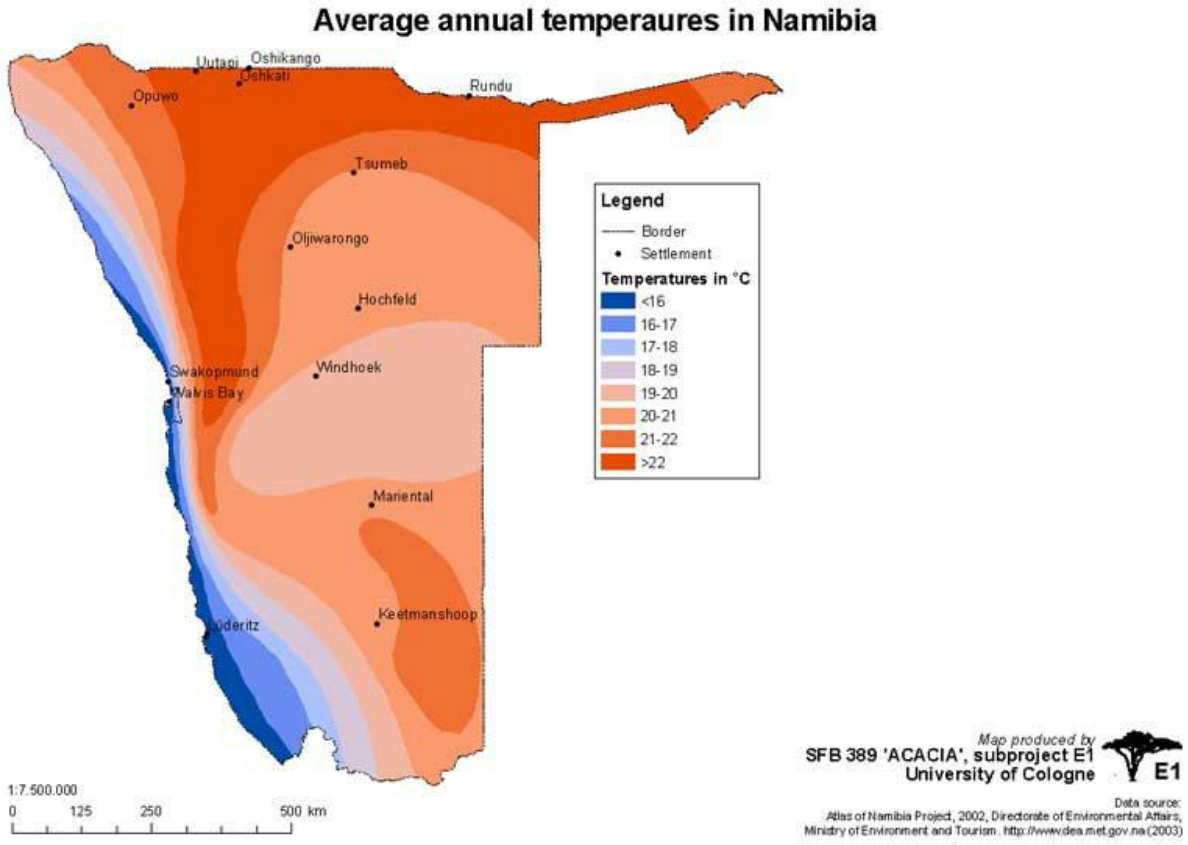


Figure 4: Annual average temperature (http://www.uni-koeln.de/sfb389/e/e1/download/atlas_namibia/e1_download_climate_e.htm#temperature_annual)

The mean annual rainfall in the Ohangwena Region varies between 450 and 550 mm per year as indicated in **Figure 4** above, increasing from west to east. The rains occur usually between October and May, concentrating mainly on the period January-March. Rainfall is highly variable from year to year and place to place. Most of the rain falling in the region has its origin from moisture transported by trade winds from the Indian Ocean. During their movement across southern Africa these winds lose much of their humidity. Rainfall occurs often during convective thunderstorms and can be very

heavy during short periods. Rainfall is mostly experienced during the summer, with the average annual rainfall being more than 600 mm per year as indicated in **Figure 5** below. Most of the rain in Helao Nafidi is experienced between November and early April. Analysis of rainfall in the North-central Namibia over the past 31 years indicated that 11 of those years inadequate rainfall necessary for crop production with surface waters also evaporates quickly or seeps away into the sandy soils *(*Tamayo et al., 2011).

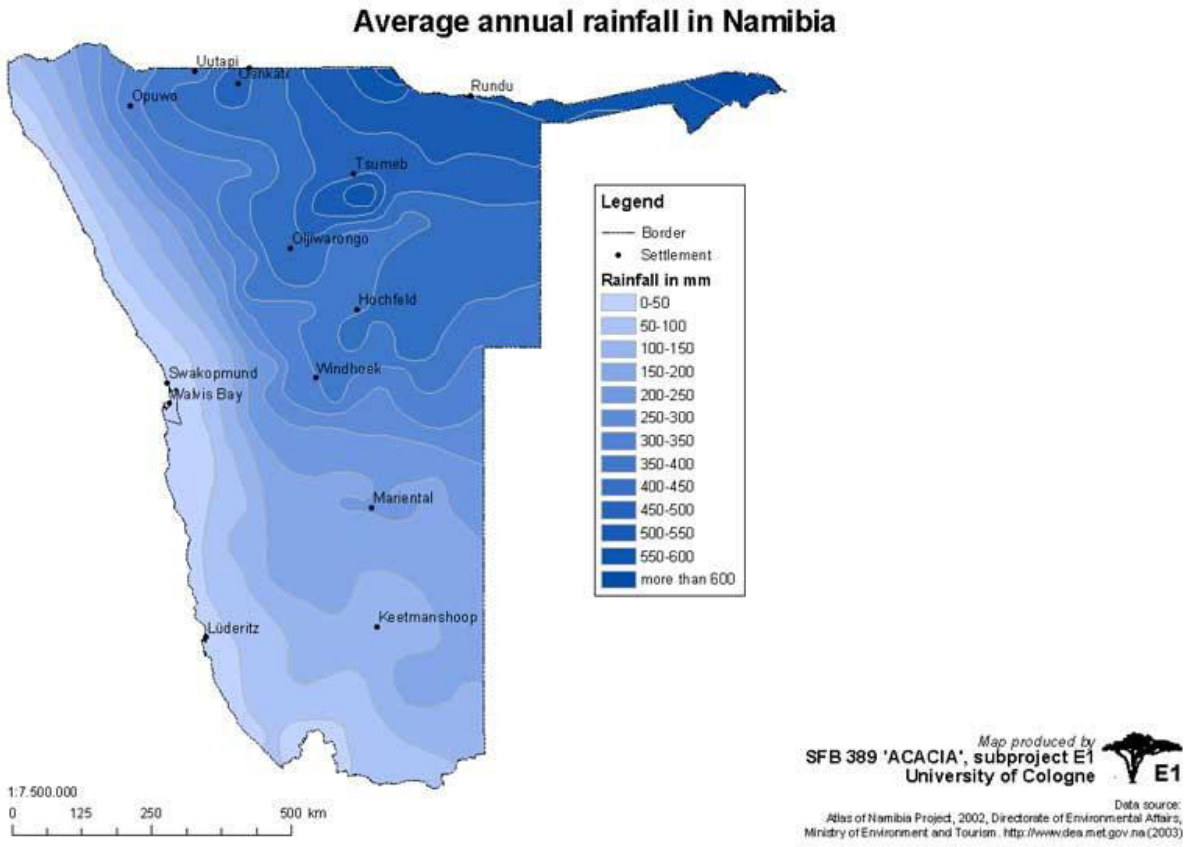


Figure 5: Average annual Rainfall (http://www.uni-koeln.de/sfb389/e/e1/download/atlas_namibia/pics/climate/rainfall-annual.jpg)

3.2.2 Topography, Geology and Soils

The topography of Ohangwena Region is characterized by an extremely flat plain between 1090 and 1150m above mean sea level. The gradient of the plain is approximately 1:2500 decreasing from north to south.

Geologically, Ohangwena Region is in the Kalahari group geological formation, which is floored by mid-Proterozoic crustal rocks of the Congo craton. The formation contains possibly as much as 8600m of sedimentary rocks of the Proterozoic Damara sequence, some 360m of Karoo rocks and about

130m of cretaceous rocks overlain by a blanket of unconsolidated Kalahari sequence sediments up to 600m thick.

The successive layers of sands, sandy clay, sandstones, and conglomerates of the Kalahari group are up to 500 thick and of Tertiary to Quartemary age (30-40 million years). Kalahari sandstones can be seen everywhere in the bottoms of wells, borrow pits and water reservoirs.

The soils of Ohangwena Region can broadly be classified into four groups:
1. Aeolian sands (arenosols)
2. Solonetz soil
3. Non-solonetz soils
4. Black clays.

Helao Nafidi falls within the Cuvelai landscape, the Cuvelai lies on silt, clay, limestone and sandstone sediments. The area is distinguished by a myriad of drainage channels known as oshanas, these oshanas direct water to the Etosha Pan. They often fill with water during the wet season and cut into the underlying sediments (Mendelsohn et al., 2000), making the area subject to seasonal flooding; areas that are most affected by the floods in Ohangwena region are the constituencies of Endola, Ondobe, Omulonga, Engela, Ongenga, Oshikango, Eenhana, and Ohangwena (Tamayo et al., 2011).

Water to the area is partly supplied by Namwater, which is imported from the Calueque dam in Angola. Groundwater is also abstracted from the Ohangwena Kalahari Acquifer by means of boreholes (iwrm, 2015) and traditionally dug wells (Tamayo et al., 2011).

The Region lies within the Kalahari sands geophysical region as depicted in **Figure 6** below. Helao Nafidi falls within the Kalahari Woodland land type indicated as beige in **Figure 6** below.

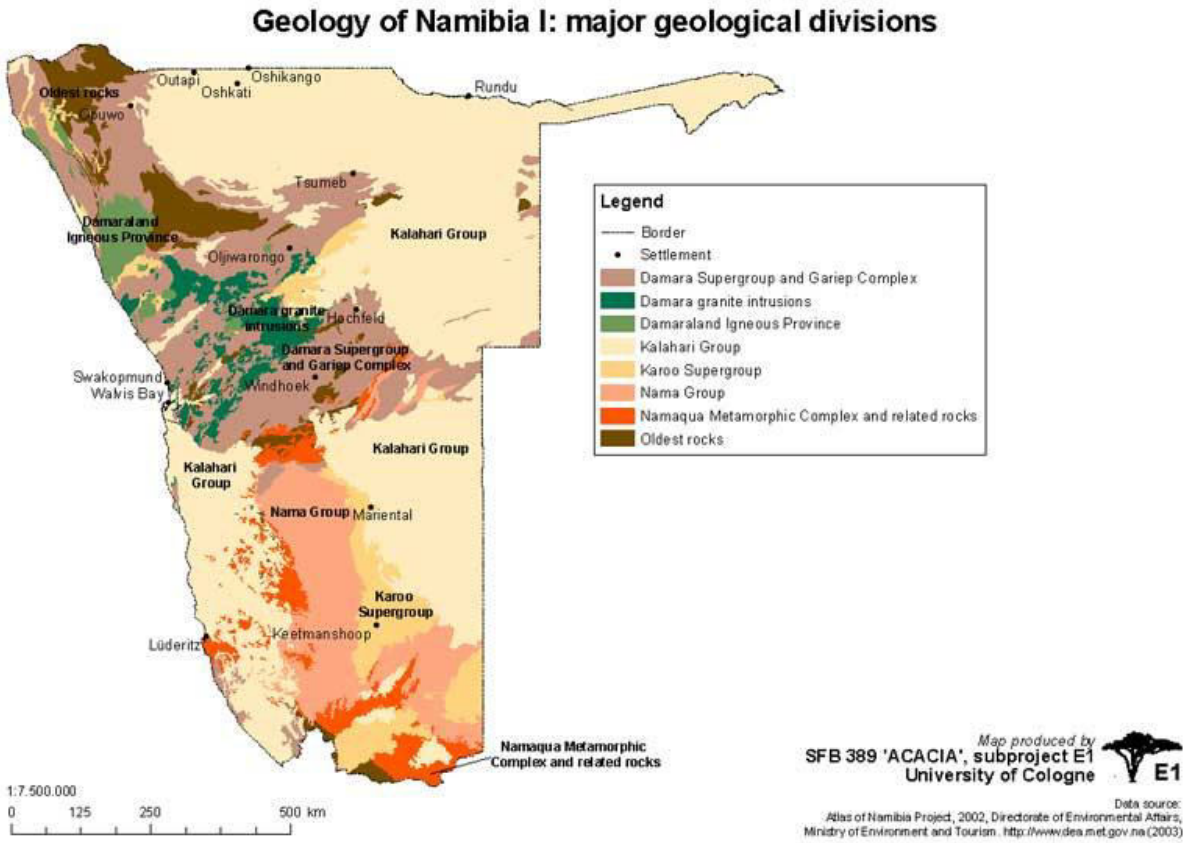


Figure 6: Geology of Namibia (http://www.uni-koeln.de/sfb389/e/e1/download/atlas_namibia/pics/physical/geology.jpg)

3.2.3 Hydrology and Hydrogeology

Namibia is an arid country with low rainfall and high evapotranspiration. The only permanent rivers are along the northern and southern borders. Across the country, surface waters are ephemeral after seasonal rainfall, with many of them dammed. However, in Ohangwena Region, there are no permanent rivers or lakes. Groundwater in this region is available throughout the year but saline. The water resources available for the inhabitants and their livestock are the following:

a) Rainfall during the rainy season. Rainwater can be collected from roofs and surface catchment areas into reservoirs and ponds.

b) Surface water which flows during the rainy season in ephemeral rivers and oshanas and collects in natural pans. This water can be channeled and stored in ponds and reservoirs.

c) Groundwater in different types of aquifers. Many of the aquifers in Ohangwena Region contain however saline water, which is unsuitable for human consumption without removal of salts.

d) River water transported from Kunene River in Angola by means of canals and pipelines to major settlements in Omusati, Ohangwena, Oshana and Oshikoto regions.

The soils in the Helao Nafidi Area have been formed largely from fine sediments carried in water, and are of the Calcisols type, which are not too dense or clayey; and neither too sandy, infertile and porous. These fertile soils and access to fresh water in shallow wells allowed people to settle and farm in the area, it is believed that that the Cuvelai-Etosha Basin supports many more people per unit area than most rural places in Southern Africa (Mendelsohn, Jarvis and Robertson, 2013).

Water to the area is partly supplied by Namwater, which is imported from the Calueque dam in Angola. Groundwater is also abstracted from the Ohangwena Kalahari Acquifer by means of boreholes (iwrm, 2015) and traditionally dug wells (Tamayo et al., 2011).

Having said that there are no perennial rivers or surface waters in Ohangwena region, the region receives seasonal flood waters from the Cuvelai system. Therefore, the seasonal flood in the Cuvelai system is very important for the rural economy in Ohangwena region in a way that the fresh surface water, naturally or artificially collected in pans and oshanas, provides high quality water for rural households until it evaporates. Furthermore, the floodwaters also recharge groundwater, bring in fish, which is an important source of protein for the inhabitants, and regenerate grazing for livestock.

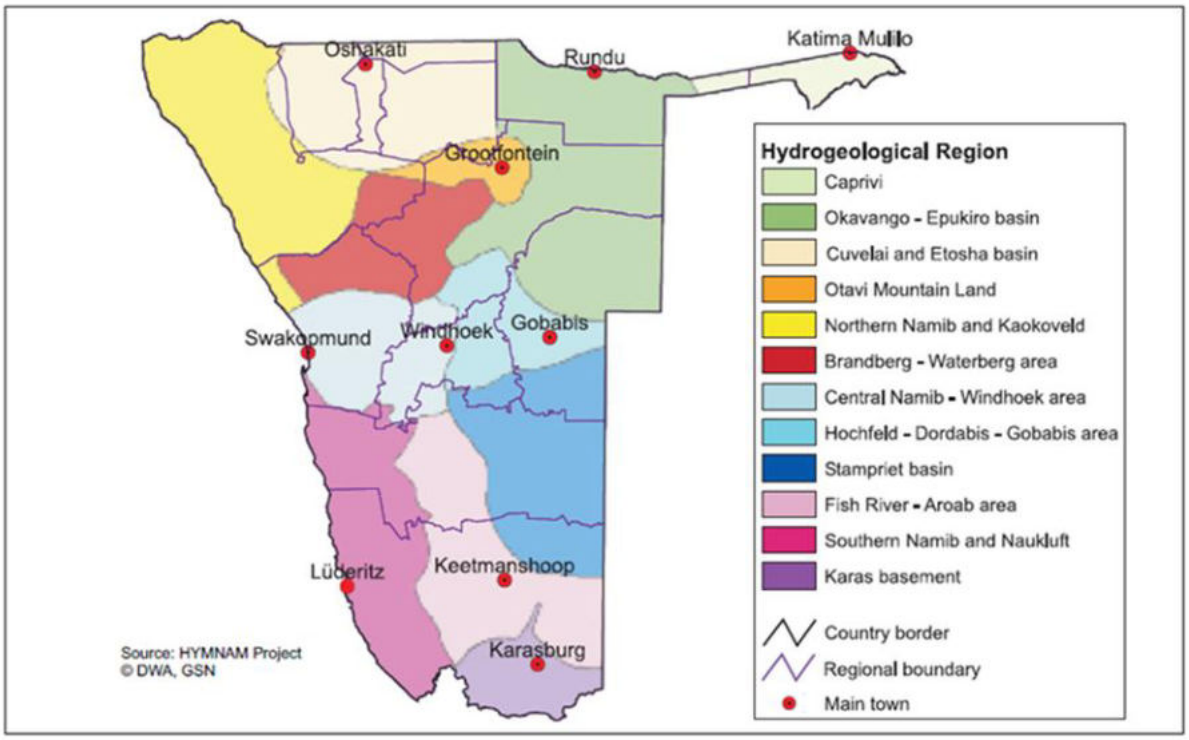


Figure 7: Groundwater basins and hydrogeological regions in Namibia

3.3 TERRESTRIAL ECOLOGY

3.3.1 Flora and Fauna

There are about eight major vegetation types in the Cuvelai Basin strongly influenced by various factors such as the underlying soil, geology and rainfall, Helao Nafidi is located in the Cuvelai Drainage vegetation type. The iishanas and other lowlands in the area are mostly covered by various grass species. On higher ground (omitunda) between the drainage channels Mopane trees and shrubs dominate the woodlands., however a variety of other trees typical of Kalahari woodlands are also found in some areas of the Cuvelai Drainage, Makalani palms are prominent where the soil has some salinity (Mendelsohn, Jarvis and Robertson, 2013). Other trees that could be observed on site include the marula, bird plum, jackal berry and acacia species.

Vegetation resources are a critical part of many households in the Cuvelai basin, with the Helao Nafidi area being no exception. They are used for grazing for livestock, poles for fencing and home construction, fruits for consumption and production of beverages, grass for thatching and production of baskets, wood for fuel, fish traps, storage containers etc. (Mendelsohn, Jarvis and Robertson, 2013).

The area of Helao Nafidi has between 51-80 species of birds; the northern parts of the Cuvelai Basin generally have fewer species due to the dense human population. Frog species are about 11; the African bullfrogs become very abundant after emerging from a state of aestivation during good rains and are harvested as food. The fencing of the Etosha national Park has blocked off the migration routes of wildlife, although some movements of animals may be observed they are relatively few outside the Park (Mendelsohn, Jarvis and Robertson, 2013).

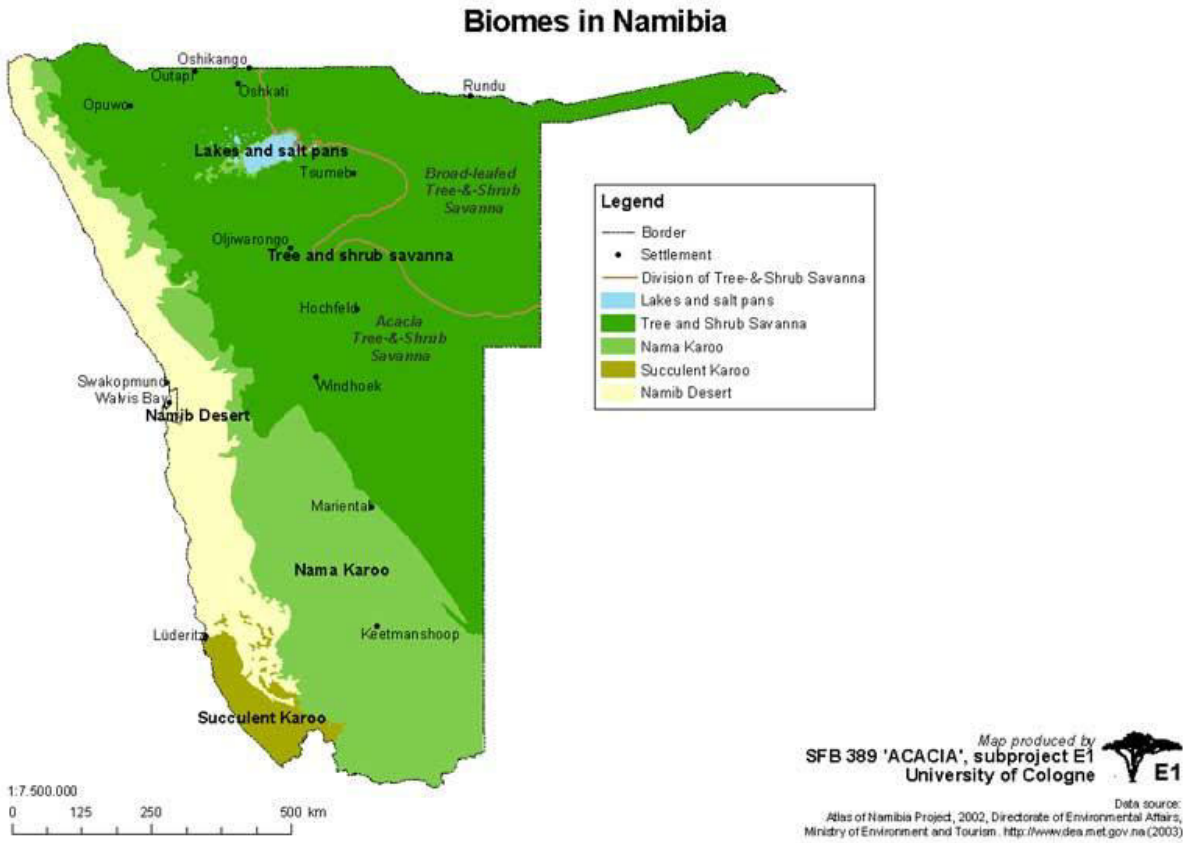


Figure 8: Biomes of Namibia (http://www.uni-koeln.de/sfb389/e/e1/download/atlas_namibia/pics/living_resources/biomes.jpg)

4 PROJECT DESCRIPTION

4.1 PROJECT COMPONENTS

As previously outlined in Section 1.1, the proposed project involves the following activities:

- **Cancellation of Townships Board Item No. 1/2014 Dated 20 February 2018;**
- **Layout approval and Township Establishment on Portion 23 of the remainder of Farm Helao Nafidi No. 997 to become known as Oshikango Extension 2; and**
- **Inclusion of Oshikango Extension 2 in the next Zoning Scheme to be prepared for Helao Nafidi.**

These components will be described in further detail below, in terms of their design, layout and footprint.

4.2 ALTERNATIVES

As pointed out in Section 1.6 above there are no specific layout design at present, but based on the feasibility study analysis, the proposed subject areas are the identified areas that require urgent intervention. As such only the no-go alternative will be discussed below.

4.2.1 No – Go Alternative

The no-go alternative is the baseline against which all alternatives are assessed. This scenario would involve maintaining the current situation, where the subject area remains vacant and undeveloped. As a result, the Helao Nafidi Town Council and local residents would forfeit the potential benefits associated with the township development, including employment opportunities, improved infrastructure, and access to secure land tenure under the Flexible Land Tenure System. Additionally, the continued lack of formalisation may contribute to unregulated settlement patterns. Thus, the no-go alternative is not considered to be the preferred option.

4.3 THE PROPOSED DEVELOPMENT

The proponent intends to establish the township Oshikango Extension 2 on Portion 23 of the farm Helao Nafidi Townlands No. 997. The township is proposed to consist of 84 erven and the remainder (street).

The township establishment will provide an opportunity to implement the Flexible Land Tenure System (FLTS) through the Flexible Land Tenure Act, 2012 (Act No. 4 of 2012), which introduces alternative forms of land title—namely, starter title and land hold title.

This system empowers residents by giving them legal recognition and the ability to invest in their homes, while also supporting the Council's goal of inclusive urban development.

The re-planning of Extension 2 is necessary to address discrepancies that arose due to the expansion of the oxidation ponds, which now encroach on previously planned erven. The township establishment process will allow for the adjustment of the layout to reflect current realities on the ground, ensuring that infrastructure such as sanitation is properly integrated and legally accommodated.

Namibia faces a growing crisis of informal settlements, with thousands of households living in unsafe conditions without access to basic services. The Oshikango Extension 2 development is a proactive planning intervention aimed at curbing informal expansions. By formalising land access and providing planned infrastructure, the township will offer a respectable alternative to unregulated settlements.

4.3.1 Project Description

The Helao Nafidi Town Council is desirous to establish a new township by obtaining the necessary approvals for the following statutory steps:

- **Cancellation of Townships Board Item No. 1/2014 Dated 20 February 2018;**
- **Layout approval and Township Establishment on Portion 23 of the remainder of Farm Helao Nafidi No. 997 to become known as Oshikango Extension 2; and**
- **Inclusion of Oshikango Extension 2 in the next Zoning Scheme to be prepared for Helao Nafidi.**

4.3.1.1 Layout plan for Oshikango Extension 2

The proposed township development of Oshikango Extension 2 comprises 84 erven and the remainder (street). With a clear road hierarchy, mixed zoning for residential, business, industrial, and public uses, and a strong emphasis on walkability and accessibility.

The greater Helao Nafidi is subject to seasonal flooding as it falls within the Cuvelai Drainage System. The area that is predominantly prone to flooding is Erf 1 which has been zoned undetermined.

The overall design of the layout for Oshikango Extension 2 is guided by biophysical factors and environmental considerations.

Residential

The layout includes one (1) residential erf, representing only 0.07% of the total area (Erf 17) to enable the individual to secure a bank loan for the construction of a residential dwelling.

Local authority

The layout includes a total of four (4) Local Authority erven. It is notably large to accommodate existing municipal infrastructure, including the old oxidation ponds and the new sewage treatment plant. This erf also provides space for future expansion of the sewage facility and any additional infrastructure that may be required in the area. Erf 43 is designated for an MTC mobile communications tower, while Erven 83 and 91 have been earmarked for market space and a taxi/bus rank, supporting local commerce and public transportation needs.

Business

A total of 57 business erven is provided. These erven are all situated on the southern end of the development and are intended to accommodate both existing, established businesses and future commercial developments anticipated in the area.

General Industrial

The layout provides for 12 erven zoned for General Industrial use. These erven have been specifically designed to support both existing and future industrial and logistics-related activities. Their inclusion is critical to fostering economic growth within the township by creating space for manufacturing, warehousing, distribution centres, and other industrial operations. Strategically located within the layout, these are well-positioned to benefit from the wide road reserves, which facilitate the movement of heavy vehicles and goods.

Undetermined

The layout includes five erven zoned as "undetermined". These erven have been designated as such due to the uncertainty surrounding their future use in connection with the Ombili FLTS project.

Erf 1, historically used as a gravel pit during the construction of Oshikango, has since experienced unregulated quarrying. As a result, the site is significantly disturbed and now contains large pits that retain water permanently. Despite its current condition, the site holds potential for future recreational, hospitality, or tourism-related development.

Erf 19 partially accommodates the Ombili informal settlement, which borders the Oshikango Proper township to the west. This area forms part of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Inclusive and Sustainable Urban Development (ISUD) Project. The initiative aims to upgrade informal settlements through the implementation of the Flexible Land Tenure System (FLTS), Erf 19 has also been zoned undetermined. Please see **Table 6** and **Figure 9** for the proposed layout of Oshikango Extension 2.

Public open space

The layout includes five public open space erven. Their spatial distribution promotes continuity and accessibility throughout the township. Specifically, Erven 81 and 82 are designed as pedestrian walkways, reducing walking distances between blocks and enhancing connectivity between green spaces most notably, Erf 82 links Erven 80 and 83, both designated as public open spaces.

Erf 80 is envisioned as a multifunctional public space for the Oshikango Extension 2 community. It features mature trees that provide natural shade for gatherings and offers the flexibility to be developed over time in response to residents' evolving needs—an approach that is both minimalistic and adaptable.

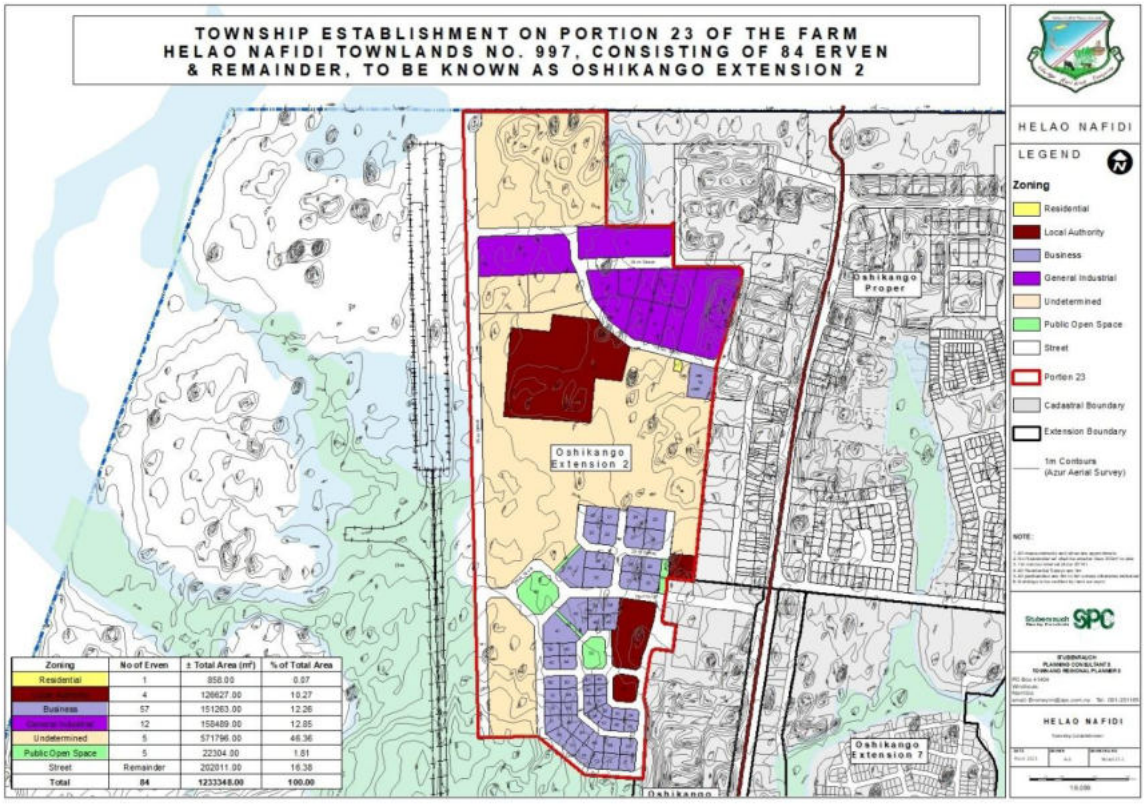
Street

Wide street reserves, ranging from 20 to 30 meters in width, have been strategically planned to accommodate the anticipated high traffic volumes associated with a predominantly commercial and industrial township layout. These wide reserves are essential for supporting the movement of heavy vehicles, delivery trucks, and service vehicles, which are expected to be frequent in such zones. Additionally, the broader road widths allow for the integration of essential infrastructure such as stormwater drainage, pedestrian walkways, and potential future upgrades, ensuring long-term functionality and resilience of the road network.

Table 5: Summary Table of Oshikango Extension 2

Zoning	No of Erven	± Total Area (m²)	% of Total Area
Residential (1:300)	1	858.00	0.07
Local Authority	4	126627.00	10.27
Business	57	151263.00	12.26
General Industrial	12	158489.00	12.85
Undetermined	5	571796.00	46.36
Public Open Space	5	22304.00	1.81
Street	Remainder	202011.00	16.38
Total	**84**	**1233348.00**	**100.00**

The layout of the Proposed Oshikango Extension 2 is depicted in **Figure 9** below.



Zoning	No of Erven	± Total Area (m²)	% of Total Area
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Public Open Space	5	22304.00	1.81
Street	Remainder	202011.00	16.38
Total	84	1233348.00	100.00

Figure 9: Layout of Proposed Oshikango Extension 2

4.3.2 Engineering Services and Access Provision

<u>Electricity, water, sewer and storm water</u>

The proposed township to be established will be connected to the electricity distribution grid of NORED which currently provides electrical power to the town of Helao Nafidi.

The proposed township to be established on will be connected to existing water and sewer reticulation system in Helao Nafidi.

The layout plan for the proposed Oshikango Extension 2 makes provision for an efficient road network for ease of movement within the neighbourhood and for efficient connectivity to the surrounding areas.

The major existing movement networks have been fairly respected and incorporated in the proposed layout plans for the proposed township.

The width of the roads in the proposed within the township ranges between 25m and 30m.

5 PUBLIC PARTICIPATION PROCESS

5.1 PUBLIC PARTICIPATION REQUIREMENTS

In terms of Section 21 of the EIA Regulations a call for open consultation with all I&APs at defined stages of the EIA process is required. This entails participatory consultation with members of the public by providing an opportunity to comment on the proposed project. Public Participation has thus incorporated the requirements of Namibia's legislation, but also takes account of international guidelines, including Southern African Development Community (SADC) guidelines and the Namibian EIA Regulations. Public participation in this project has been undertaken to meet the specific requirements in accordance with the international best practice. Please see **Table 10** below for the activities undertaken as part of the public participation process. The I&APs were given time to comment from **20 June 2025 to 23 June 2025.**

Table 6: Table of Public Participation Activities

ACTIVITY	REMARKS
Placement of site notice/poster in Helao Nafidi	See **Annexure A**
Placing advertisements in local newspapers on namely the New Era Newspaper and the Namibian Newspaper on **20 June 2025** and **27 June 2025**).	See **Annexure B**
Written notice to surrounding property owners and Interested and Affected Parties via Email (**20 June 2025**)	See **Annexure C**
A public meeting held on **03 July 2025** Meeting to start: 14h00 Venue of meeting: Oshikango, Trees next to the service station near the open markets	See **Annexure C**

At the time of drafting this report, no environmental or social concerns related to the development had been received from the general public by the consultant.

5.1.1 Environmental Assessment Phase 2

The second phase of the PPP involved the lodging of the Draft Environmental Scoping Report (DESR) to all registered I&APs for comment. Registered and potential I&APs was informed of the availability of the DESR for public comment *via* a letter/email dated **15 August 2025**. An Executive Summary of the DESR was also be included in the letters to the registered I&APs. I&APs had until **01 September 2025** to submit comments or raise any issues or concerns they may have had with regard to the proposed project.

6 ASSESSMENT METHODOLOGY

The purpose of this chapter is to describe the assessment methodology utilized in determining the significance of the construction and operational impacts of the proposed project, and where applicable the possible alternatives, on the biophysical and socio-economic environment.

Assessment of predicted significance of impacts for a proposed development is by its nature, inherently uncertain – environmental assessment is thus an imprecise science. To deal with such uncertainty in a comparable manner, a standardised and internationally recognised methodology has been developed. Such accepted methodology is applied in this study to assess the significance of the potential environmental impacts of the proposed development, outlined as follows in **Table 7**.

Table 7: Impact Assessment Criteria

CRITERIA	CATEGORY
Impact	**Description of the expected impact**
Nature Describe type of effect	**Positive**: The activity will have a social / economical / environmental benefit. **Neutral**: The activity will have no effect **Negative**: The activity will have a social / economical / environmental harmful effect
Extent Describe the scale of the impact	**Site Specific:** Expanding only as far as the activity itself (onsite) **Small:** restricted to the site's immediate environment within 1 km of the site (limited) **Medium:** Within 5 km of the site (local) **Large:** Beyond 5 km of the site (regional)
Duration Predicts the lifetime of the impact.	**Temporary:** < 1 year (not including construction) **Short-term:** 1 – 5 years **Medium term:** 5 – 15 years **Long-term:** >15 years (Impact will stop after the operational or running life of the activity, either due to natural course or by human interference) **Permanent:** Impact will be where mitigation or moderation by natural course or by human interference will not occur in a particular means or in a particular time period that the impact can be considered temporary
Intensity Describe the magnitude (scale/size) of the Impact	**Zero:** Social and/or natural functions and/ or processes remain unaltered **Very low:** Affects the environment in such a way that natural and/or social functions/processes are not affected **Low:** Natural and/or social functions/processes are slightly altered

CRITERIA	CATEGORY
	Medium: Natural and/or social functions/processes are notably altered in a modified way **High:** Natural and/or social functions/processes are severely altered and may temporarily or permanently cease
Probability of occurrence Describe the probability of the Impact actually occurring	**Improbable:** Not at all likely **Probable:** Distinctive possibility **Highly probable:** Most likely to happen **Definite:** Impact will occur regardless of any prevention measures
Degree of Confidence in predictions State the degree of confidence in predictions based on availability of information and specialist knowledge	**Unsure/Low:** Little confidence regarding information available (<40%) **Probable/Med:** Moderate confidence regarding information available (40-80%) **Definite/High:** Great confidence regarding information available (>80%)
Significance Rating The impact on each component is determined by a combination of the above criteria.	**Neutral:** A potential concern which was found to have no impact when evaluated **Very low:** Impacts will be site specific and temporary with no mitigation necessary. **Low:** The impacts will have a minor influence on the proposed development and/or environment. These impacts require some thought to adjustment of the project design where achievable, or alternative mitigation measures **Medium:** Impacts will be experienced in the local and surrounding areas for the life span of the development and may result in long term changes. The impact can be lessened or improved by an amendment in the project design or implementation of effective mitigation measures. **High:** Impacts have a high magnitude and will be experienced regionally for at least the life span of the development, or will be irreversible. The impacts could have the no-go proposition on portions of the development in spite of any mitigation measures that could be implemented.

*NOTE: Where applicable, the magnitude of the impact has to be related to the relevant standard (threshold value specified and source referenced). The magnitude of impact is based on specialist knowledge of that particular field.

For each impact, the EXTENT (spatial scale), MAGNITUDE (size or degree scale) and DURATION (time scale) are described. These criteria are used to ascertain the SIGNIFICANCE of the impact, firstly in the case of no mitigation and then with the most effective mitigation measure(s) in place. The decision as to which combination of alternatives and mitigation measures to apply lies with the proponent, and their acceptance and approval ultimately with the relevant environmental authority.

The SIGNIFICANCE of an impact is derived by taking into account the temporal and spatial scales and magnitude. Such significance is also informed by the context of the impact, i.e. the character and identity of the receptor of the impact.

6.1 MITIGATION MEASURES

There is a mitigation hierarchy of actions which can be undertaken to respond to any proposed project or activity (See **Figure 10** below). These cover avoidance, minimization, restoration and compensation. It is possible and considered sought after to enhance the environment by ensuring that positive gains are included in the proposed activity or project. If negative impacts occur, then the hierarchy indicates the following steps.

Figure 10: Mitigation Hierarchy

Impact avoidance: This step is most effective when applied at an early stage of project planning. It can be achieved by:

- not undertaking certain projects or elements that could result in adverse impacts;
- avoiding areas that are environmentally sensitive; and
- putting in place preventative measures to stop adverse impacts from occurring.

Impact minimization: This step is usually taken during impact identification and prediction to limit or reduce the degree, extent, magnitude, or duration of adverse impacts. It can be achieved by:

- scaling down or relocating the proposal;
- redesigning elements of the project; and
- taking supplementary measures to manage the impacts.

Restoration: This step is taken to improve degraded or removed ecosystems following exposure to impacts that cannot be completely avoided or minimised. Restoration tries to return an area to the original ecosystem that occurred before impacts. Restoration is frequently needed towards the end of a project's life cycle but may be possible in some areas during operation.

Impact compensation: This step is usually applied to remedy unavoidable residual adverse impacts. It can be achieved by:

- rehabilitation of the affected site or environment, for example, by habitat enhancement;
- restoration of the affected site or environment to its previous state or better; and
- replacement of the same resource values at another location (off-set), for example, by wetland engineering to provide an equivalent area to that lost to drainage or infill.

7 ASSESSMENT OF POTENTIAL IMPACTS AND POSSIBLE MITIGATION MEASURES

7.1 INTRODUCTION

This Chapter describes the potential impacts on the biophysical and socio-economic environments, which may occur due to the proposed activities described in Chapter 4. These include potential impacts, which may arise during the operation of the proposed development (i.e. long-term impacts) as well as the potential construction related impacts (i.e. short to medium term). The assessment of potential impacts will help to inform and confirm the selection of the preferred layouts to be submitted to MET: DEA for consideration. In turn, MET: DEA's decision on the environmental acceptability of the proposed project and the setting of conditions of authorisation (should the project be authorised) will be informed by this chapter, amongst other information, contained in this EA Report.

The baseline and potential impacts that could result from the proposed development are described and assessed with potential mitigation measures recommended. Finally, comment is provided on the potential cumulative impacts which could result should this development, and others like it in the area, be approved.

7.2 PLANNING AND DESIGN PHASE IMPACTS

During the planning and design phase consideration should be given on aspects such as impacts of traffic and existing municipal infrastructure.

7.2.1 Traffic Impacts

The intended development may have an impact on traffic in the subject area as the sites are currently undeveloped. Once the proposed sites are developed traffic in the area is expected to increase. The traffic is not expected to increase significantly as the subject areas are in close proximity to an already developed area within the town.

7.2.2 Existing Service Infrastructure Impacts

The HNTC as the managing authority has committed itself to support the implementation and operation of the proposed township establishments to ensure the provision of tenure security for the respective residents. The servicing process will be under the technical guidance of the HNTC; and it will be conducted incrementally as the funds become available.

The proposed areas are to be connected to the necessary services of the town. Once the sites become developed the increasing demand on the existing services would have to be determined and additional services would have to be provided for if needed.

7.3 CONSTRUCTION PHASE IMPACTS ON THE BIOPHYSICAL ENVIRONMENT

The construction phase impacts are those impacts on the biophysical and socio-economic environment that would occur during the construction phase. These impacts are inherently temporary in duration but may have longer lasting effects.

7.3.1 Flora and Fauna Impacts (Biodiversity)

The proposed site has been disturbed as a result of human activities for residential, commercial, and institutional purposes amongst others. It can however be expected that the surrounding areas which support natural vegetation will also support species of conservation in particular smaller vertebrates (reptiles, amphibians, mammals and birds) because in the Cuvelai Basin relatively few large wild animals live outside the Etosha National Park, movements of wildlife were tempered with firstly as human population in the Cuvelai increased and thereafter abruptly stopped by the erection of game-proof fences around Etosha between 1961 and 1973 (Berry, 1997).

Natural aquatic communities are largely absent from the region as a result of the absence of surface water flow due to the high infiltration rates, however good rains and floods do bring species of fish and frogs.

Large areas of vegetation and trees are still found within the proposed development areas and should be kept as far as possible within the block layouts in order to help with landscaping and softening the sense of place, but also to provide the resources associated with them such as fruits used for consumption and beverages.

The trees located on the subject sites should be accommodated in the proposed use for the area. Trees protected under the Forestry Act 12 of 2001 should be protected within the development and may not be removed without a permit from the local Department of Forestry.

It is anticipated that the proposed development area and associated infrastructure (e.g. water, sewage, access route, etc.) would have localised negative implications on the environment and associated fauna and flora should the proposed mitigation measures as outlined in the EMP be enforced.

7.3.2 Surface and Ground Water Impacts

Surface and groundwater impacts may be encountered during the construction and operation phase, especially if development takes place within the rainy season. The risk of contaminating such water

sources can be increased by accidental spillage of oils and fuels and any other equipment used during construction. This risk is minimized by the fact that the construction phase will be a short-term activity.

7.3.3 Soil Erosion Impacts

Given the characteristics of the proposed site, soil erosion is likely to be encountered especially if construction will take place during the rainy season.

7.4 CONSTRUCTION PHASE IMPACTS ON THE SOCIO-EONOMIC ENVIRONMENT

7.4.1 Heritage impacts

Helao Nafidi is not located in a Heritage Protection Zone. Thus, there will be no impact on the heritage resources of the area. The project management should, however, be made aware of the provisions of the National Heritage Act regarding the prompt reporting of archaeological finds. Section 3.1.2 provides an overview of the archaeological and heritage context of the town and region.

7.4.2 Health, Safety and Security Impacts

Due to the demand for construction workers during the bulk infrastructure service construction of the proposed project an influx of migrant workforce who will require temporary accommodation in Helao Nafidi might be experienced. Experience with other construction projects in a developing-world context has shown that, where migrant construction workers have the opportunity to interact with the local community, a significant risk is created for the development of social conditions and sexual behaviors that contribute to the spread of HIV and AIDS.

In response to the threat the pandemic poses, MET has developed a policy on HIV and AIDS. This policy, which was developed with support from USAID, GTZ and the German Development Fund, provides for a non-discriminatory work environment and for workplace programs managed by a Ministry-wide committee. The MET has also recently initiated a programme aimed at mainstreaming HIV and gender issues into environmental impact assessments.

7.4.3 Traffic Impacts

Traffic is expected to increase during the construction phase of the project in areas where construction will take place. A number of trucks and other heavy machinery will be required to deliver, handle and position construction materials (bulk services materials, etc.) as well as to remove spoil material. Not only will the increase in traffic result in associated noise impacts, but it will also impact on the roads in the area. Safety of pedestrians will also need to be considered, especially with regards to pedestrian crossings, more so the children attending school in the development area. An

increase in traffic will also result in more dust impacts considering that most of the roads in the study area are gravel in nature.

7.4.4 Noise Impacts

Construction may result in associated noise impacts. These noise impacts will mainly be associated with construction machinery and construction vehicles. The impact is however limited mainly to the construction period only.

7.4.5 Dust and Emission Impacts

Excavation and stockpiles during the construction phase could result in dust impacts, if not managed correctly. Dust could impact negatively on the health of the nearby community if mitigation measures are not implemented. Dust impacts are primarily associated with the construction phase.

7.4.6 Municipal Services

The construction phase will result in additional people on-site, who will require provision of the following services:

- Potable water for domestic (ablution and drinking) and construction purposes.
- Temporary toilets during the construction phase.
- Solid waste management (domestic and construction waste).

These services if not managed well are likely to create an opportunity for water wastage; litter; solid and human waste pollution.

7.4.7 Storage and Utilisation of Hazardous Substances

Hazardous substances are regarded by the Hazardous Substance Ordinance (No. 14 of 1974) as those substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances. During the construction period, the use and storage of these types of hazardous substances, such as shutter oil, curing compounds, types of solvents, primers and adhesives and diesel, on-site could have negative impacts on the surrounding environment if these substances spill and enter the environment.

7.4.8 Waste Impacts

During construction waste may be generated on site. Waste generated during construction must be disposed of at the nearest approved landfill site.

7.5 OPERATIONAL PHASE IMPACTS

The operational phase impacts are those impacts on the biophysical and socio-economic environment that would occur during the operational phase of the proposed project and are inherently long-term in duration.

7.5.1 Visual and Sense of Place Impacts

The extent of this disturbance will depend on how highly the interested and affected parties valued the initial aesthetic quality of the site. The intended activities for the proposed sites may alter the sense of place for the existing community and property owners situated in close proximity to the site, as well as the residents of Helao Nafidi who frequent the site. The additional buildings and infrastructure to be erected on site will cause a higher visual impact to the natural area.

7.5.2 Noise Impacts

The operational activities may result in associated noise impacts, depending on the exact type of activities taking place on the properties. However due to the nature of the land uses proposed for the subject erven it is not expected that the noise levels will be significant if managed well.

7.5.3 Emission Impacts

The air quality in the area is considered to be fairly good. Additional emissions are not expected due to the land uses that are intended for the site.

7.5.4 Waste Impacts

Increased amounts of waste may be generated as a result of the operational activities at the sites. Effective waste management on site should be practiced as per the recommendations in the EMP.

7.5.5 Social Impacts

Many people in Helao Nafidi town are residing and conducting business activities in informal structures that are not properly serviced with the relevant municipal services such as water, sewage, electricity and roads. The subject areas will be provided with these amenities, which will enhance the

quality of life of the residents and attract more investors. This will in turn uplift the general economy of the town and create more employment and business opportunities for the residents.

7.6 CUMULATIVE IMPACTS

The cumulative impact of the proposed developments regarding the degradation of the project area is very difficult to rate. If all proposed mitigation measures are however in place to minimise the overall impacts then the cumulative impact can be expected to be rated as ***Medium-Low (negative)*** for the proposed developments.

7.7 ENVIRONMENTAL MANAGEMENT PLAN

An Environmental Management Plan (EMP) is contained in **Annexure E** of this report. The purpose of the EMP is to outline the type and range of mitigation measures that should be implemented during the construction, operation and decommissioning phases of the project to ensure that negative impacts associated with the development are avoided or mitigated.

7.8 SUMMARY OF POTENTIAL IMPACTS

A summary of all the potential impacts from the proposed project assessed above is included in **Table 8**. The **Tables 09 – 11** provide a summary of the mitigation measures proposed for the impacts. While some difference in magnitude of the potential impacts would result from the proposed alternatives this difference was not considered to be significant for any of the potential impacts. As such, the table below applies to all proposed alternatives.

Table 8: Summary of the significance of the potential impacts

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	Significance	Probability	Confidence	Reversibility	Cumulative impact
PLANNING AND DESIGN PHASE										
1. Traffic Impacts	Helao Nafidi	No mitigation	Local	Medium	Medium term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Low	Medium term	Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
2. Proposed services	Helao Nafidi	No mitigation	Local	Medium	Medium term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Low	Medium term	Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
CONSTRUCTION PHASE										
3. Biodiversity (Fauna and Flora)	Helao Nafidi	No mitigation	Local	Medium-Low	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	Significance	Probability	Confidence	Reversibility	Cumulative impact
4. Surface & ground water	Helao Nafidi	No mitigation	Local	Medium	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Low	Short term	Medium - low	Probable	Certain	Reversible	Medium - Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
5. Soil erosion	Helao Nafidi	No mitigation	Local	Medium	Short term	Medium – low	Probable	Certain	Reversible	Medium – low (-ve)
		Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
6. Heritage	Helao Nafidi	No mitigation	Local	Very low	Short term	Very low	Probable	Certain	Irreversible	Very low(-ve)
		Mitigation	Local	Negligible	Short term	Negligible	Probable	Certain	Irreversible	Negligible (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
7. Health, safety and security	Helao Nafidi	No mitigation	Local	Medium-Low	Short term	Medium-Low	Probable	Certain	Reversible	Medium-Low (-ve)
		Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
8. Traffic impacts	Helao Nafidi	No mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	Significance	Probability	Confidence	Reversibility	Cumulative impact
		Mitigation	Local	Very low	Short term	Very low	Probable	Certain	Reversible	Very low
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
9. Noise impacts	Helao Nafidi	No mitigation	Local	Medium	Short term	Medium - low	Probable	Certain	Reversible	Medium - Low (-ve)
		Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Very low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
10. Emissions impacts	Helao Nafidi	No mitigation	Local	Medium	Short term	Low	Probable	Certain	Reversible	Low (-ve)
		Mitigation	Local	Low	Short term	Very Low	Probable	Certain	Reversible	Very Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
11. Municipal services	Helao Nafidi	No mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
		Mitigation	Local	Very low	Short term	Very low	Probable	Certain	Reversible	Very low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
12. Waste	Helao Nafidi	No mitigation	Local	Low	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Very low	Short term	Low	Probable	Certain	Reversible	Low (-ve)

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	Significance	Probability	Confidence	Reversibility	Cumulative impact
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
13. Hazardous Substances	Helao Nafidi	No mitigation	Local	Low	Short term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Very low	Short term	Low	Probable	Certain	Reversible	Very low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
OPERATIONAL PHASE										
1. Visual & sense of place	Helao Nafidi	No mitigation	Local	Medium	Medium term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Medium-Low	Medium term	Medium-Low	Probable	Certain	Reversible	Medium-Low (-ve)
	No go	No mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
2. Noise	Helao Nafidi	No mitigation	Local	Medium-Low	Medium term	Medium-Low	Probable	Certain	Reversible	Medium-Low (-ve)
		Mitigation	Local	Low	Medium term	Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral

Description of potential impact	Project alternative	No mitigation / mitigation	Extent	Magnitude	Duration	Significance	Probability	Confidence	Reversibility	Cumulative impact
3. Emissions	Helao Nafidi	No mitigation	Local	Medium-Low	Medium term	Low	Probable	Certain	Reversible	Low (-ve)
		Mitigation	Local	Low	Medium term	Very Low	Probable	Certain	Reversible	Very Low (-ve)
	No go	No mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
4. Waste	Helao Nafidi	No mitigation	Local	Low	Long term	Medium	Probable	Certain	Reversible	Medium (-ve)
		Mitigation	Local	Very low	Long term	Low	Probable	Certain	Reversible	Low (-ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
5. Social impact	Helao Nafidi	No mitigation	Local	High	Long term	High (+)	Probable	Probable	Reversible	High (+)
		Mitigation	Local	High	Long term	High (+)	Probable	Probable	Reversible	High (+)
	No go	No mitigation	Local	Neutral	Long term	Neutral	Probable	Probable	Reversible	Neutral
		Mitigation	Local	Neutral	Long term	Neutral	Probable	Probable	Reversible	Neutral

Table 9: Proposed mitigation measures for the planning and design phase

PLANNING AND DESIGN PHASE IMPACTS	
Impact	**Mitigation Measures**
Traffic	• Ensure that road junctions have good sightlines. • Provide formal road crossings at relevant areas. • Provide for speed reducing interventions such as speed bumps at relevant road sections.
Existing Service Infrastructure	• It is recommended that alternative and renewable sources of energy be explored and introduced into the proposed development to reduce dependency on the grid. • Solar geysers and panels should be considered to provide for general lighting and heating of water and buildings. • Water saving mechanisms should be considered for incorporation within the developments in order to further reduce water demands. • Re-use of treated wastewater should be considered wherever possible to reduce the consumption of potable water. • Engineering solutions are to be imposed on the management of stormwater to help curb the effect of inundations on the settlements. Where necessary, the stormwater should be channelled out of the settlements into the main storm water channels (iishana) to prevent damages to the properties.

Table 10: Proposed mitigation measures for the construction phase

CONSTRUCTION PHASE IMPACTS	
Impact	**Mitigation Measures**
Flora and Fauna	• Adapt the proposed developments to the local environment – e.g. small adjustments to the site layout could avoid potential features such as water bodies and vegetation. • Prevent the destruction of protected and endemic plant species. • Prevent contractors from collecting wood, veld food, etc. during the construction phase.

CONSTRUCTION PHASE IMPACTS	
Impact	**Mitigation Measures**
	• Do not clear cut the entire development site, but rather keep the few individual trees/shrubs not directly affecting the developments as part of the landscaping. • The plants that are to be kept should be clearly marked with "danger tape" to prevent accidental removal. • Regular inspection of the marking tool should be carried out. • The very important plants should be "camped off" to prevent the unintended removal or damage to these trees. • Recommend the planting of local indigenous species of flora as part of the landscaping as these species would require less maintenance than exotic species. • Transplant removed plants where possible, or plant new plants in lieu of those that have been removed. • Prevent the introduction of potentially invasive alien ornamental plant species such as; *Lantana, Opuntia, Prosopis, Tecoma*, etc.; as part of the landscaping as these species could infest the area further over time.
Surface and Ground Water Impacts	• It is recommended that construction takes place outside of the rainy season in order to limit flooding on site and surface water pollution. • No dumping of waste products of any kind in or in close proximity to surface water bodies. • Heavy construction vehicles should be kept out of any surface water bodies and the movement of construction vehicles should be limited where possible to the existing roads and tracks. • Ensure that oil/ fuel spillages from construction vehicles and machinery are minimised and that where these occur, that they are appropriately dealt with. • Drip trays must be placed underneath construction vehicles when not in use to contain all oil that might be leaking from these vehicles.

CONSTRUCTION PHASE IMPACTS	
Impact	**Mitigation Measures**
	• Contaminated runoff from the construction sites should be prevented from entering the surface and ground water bodies. • The seasonal flooding that affects the eastern part of the Bonya Informal Settlement can be contained and managed by re-directing the water into the mainstream through a cohesive storm water management plan. • All materials on the construction site should be properly stored. • Disposal of waste from the sites should be properly managed and taken to the designated landfill site. • Construction workers should be given ablution facilities at the construction sites that are located at least **30 m** away from any surface water and regularly serviced. • Washing of personnel or any equipment should not be allowed on site. Should it be necessary to wash construction equipment these should be done at an area properly suited and prepared to receive and contain polluted waters. • The block layout plan for Bonya should make provision for urban agriculture on the blocks that are along the main stormwater channels (iishana). This will help ensure food sustainability for the residents and also promote economic sustainability through the sale of the surplus. The agriculture blocks will be under the administration of the HNTC and will be leased out to individuals or group thereof to help generate revenues for the HNTC.
Soil Erosion	• It is recommended that construction takes place outside of the rainy season in order to limit potential flooding and the runoff of loose soil causing further erosion. • Appropriate erosion control structures must be put in place where soil may be prone to erosion. • Checks must be carried out at regular intervals to identify areas where erosion is occurring. • Appropriate remedial actions are to be undertaken wherever erosion is evident.

CONSTRUCTION PHASE IMPACTS	
Impact	**Mitigation Measures**
Heritage	• The project management should be made aware of the provisions of the National Heritage Act regarding the prompt reporting of archaeological finds. • In the event of such finds, construction must stop, and the project management or contractors should notify the National Heritage Council of Namibia immediately.
Health, Safety and Security	• Construction personnel should not overnight at the site, except the security personnel. • Ensure that all construction personnel are properly trained depending on the nature of their work. • Provide for a first aid kit and a properly trained person to apply first aid when necessary. • Restrict unauthorised access to the site and implement access control measures. • Clearly demarcate the construction site boundaries along with signage of “no unauthorised access”. • Clearly demarcate dangerous areas and no-go areas on site. • Staff and visitors to the site must be fully aware of all health and safety measures and emergency procedures on site. • The contractor must comply with all applicable occupational health and safety requirements. • The workforce should be provided with all necessary Personal Protective Equipment where appropriate.
Traffic	• Limit and control the number of access points to the site. • Ensure that road junctions have good sightlines. • Construction vehicles need to be in a road worthy condition and maintained throughout the construction phase. • Transport the materials in the least number of trips as possible. • Adhere to the speed limit. • Implement traffic control measures where necessary.
Noise	• No amplified music should be allowed on site. • Inform immediate neighbours of construction activities to commence and provide for continuous communication between the neighbours and contractor.

CONSTRUCTION PHASE IMPACTS	
Impact	**Mitigation Measures**
	• Limit construction times to acceptable daylight hours. Construction should be limited to normal working days and office hours from 08h00 to 17h00 and 7:30 – 13:00 on Saturdays. • Install technology such as silencers on construction machinery if noise levels are significantly high. • Provide ear plugs and earmuffs to staff undertaking the noisy activity or working within proximity thereof or alternatively, all construction workers should be equipped with ear protection equipment. • Do not allow the use of horns as a general communication tool but use it only where necessary as a safety measure.
Dust and Emission	• It is recommended that dust suppressants such as Duster be applied to all the construction clearing activities to ensure at least 50% control efficiency on all the unpaved roads and reduce water usage. • Construction vehicles to only use designated roads. • During high wind conditions the contractor must make the decision to cease works until the wind has calmed down. • Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 40 km/hr should be set for all vehicles travelling over exposed areas • Cover any stockpiles with plastic to minimise windblown dust. • Provide workers with dust masks.
Waste	• It is recommended that waste from the temporary toilets be disposed of at an approved Wastewater Treatment Works. • A sufficient number of waste bins should be placed around the site for the general waste. • A sufficient number of skip containers for the heavy waste and rubble should be provided for around the site. • Ensure that no excavated soil, refuse or building rubble generated on site are placed or dumped on surrounding properties or land

CONSTRUCTION PHASE IMPACTS	
Impact	**Mitigation Measures**
	• Solid waste will be collected and disposed of at an appropriate local land fill or an alternative approved site, in consultation with the local authority. • Strictly, no burning of waste on the site or at the disposal site is allowed as it possess environmental and public health impacts
Hazardous Substances	• Storage of the hazardous substances in a bunded area, with a volume of 120 % of the largest single storage container or 25 % of the total storage containers whichever is greater. • Refuel vehicles in designated areas that have a protective surface covering and utilise drip trays for stationary plant.

Table 11: Proposed mitigation measures for the operational phase

OPERATIONAL PHASE IMPACTS	
Impact	**Mitigation Measures**
Visual and Sense of Place	• It is recommended that more 'green' technologies be implemented within the architectural designs and building materials of the development where possible in order to minimise the visual prominence of such a development within the more natural surrounding landscape. • Natural colours and building materials such as wood and stone should be incorporated as well as the use of indigenous vegetation in order to help beautify the development. • Visual pollutants can further be prevented through mitigations (i.e. keep existing trees, introduce tall indigenous trees; keep structures unpainted and minimise large advertising billboards). • Ensure proper and regular maintenance of the area. • No illegal dumping of waste should be allowed
Noise	• Do not allow commercial activities that generate excessive noise levels. • Continuous monitoring of noise levels should be conducted to make sure the noise levels does not exceed acceptable limits.

OPERATIONAL PHASE IMPACTS	
Impact	**Mitigation Measures**
	• No activity having a potential noise impact should be allowed after 18:00 hours if possible.
Emissions	• Consider tarring of the internal road network. • Manage activities that generate emissions.
Waste	• Solid waste will be collected from site regularly. • Waste should be disposed of at an appropriate local land fill, in consultation with the local authority. • No waste may be buried or burned.
Social Impacts	• No specific mitigation measures are required, only that the local community be consulted in terms of possible job creation opportunities and must be given first priority if unspecialised job vacancies are available. • The formalisation of Bonya and Ombili should seek to incorporate the social and cultural practices that are pertinent to the day-to-day operations of the communities to ensure that the social and cultural well-beings of the communities are not disrupted. • Provision should be made for informal markets to enable the residents to operate their day-to-day small scale businesses activities to maintain their livelihoods. • Further provision should be made for sustainable urban agricultural practices to enable the residents to grow their own food and strive towards achieving food security and ending hunger as required by the Sustainable Development Goal 2 (SDG2). • The formalisation of Bonya and Ombili will comprise of both freehold land, starter title and land hold rights to cater to individuals in various income categories • The HNTC to encourage and assist the residents of the affected settlements to form saving groups and raise money for the installation of the necessary engineering services as well as for the administration of the FLTS

8 CONCLUSION

The purpose of this Chapter is to briefly summarise and conclude the FESR and describe the way forward.

8.1 CONSTRUCTION PHASE IMPACTS

With reference to **Table 12**, none of the negative construction phase impacts were deemed to have a high significance impact on the environment. The construction impacts were assessed to a ***Medium to Low (negative)*** significance, without mitigation measures. With the implementation of the recommended mitigation measures in Chapter 7 as well as in the EMP**,** the significance of the construction phase impacts is likely to be reduced to a ***Low (negative)***.

8.2 OPERATIONAL PHASE

The most significant operational phase impact ***medium (positive)*** is the social impact. This is as a result of the potential job opportunities during construction as well the increased development within the area. Furthermore, the community of Helao Nafidi are expected to benefit from the township establishments. The provision of basic services is not only important to ensure the health of a community, but also to promote development. It is envisaged that the township establishments and the construction of bulk services in Helao Nafidi will form the keystone of uplifting and expanding the town and create a more sustainable livelihood for the community socially and economically.

8.3 LEVEL OF CONFIDENCE IN ASSESSMENT

With reference to the information available at the project planning cycle, the confidence in the environmental assessment undertaken is regarded as being acceptable for the decision-making, specifically in terms of the environmental impacts and risks. The Environmental Assessment Practitioner believes that the information contained within this FESR is adequate to allow MET: DEA to be able to determine the environmental acceptability of the proposed project.

It is acknowledged that the project details will evolve during the detailed design and construction phases. However, these are unlikely to change the overall environmental acceptability of the proposed project and any significant deviation from what was assessed in this FESR should be subject to further assessment. If this was to occur, an amendment to the Environmental Authorisation may be required in which case the prescribed process would be followed.

8.4 MITIGATION MEASURES

With the implementation of the recommended mitigation measures in Chapter 7 as well as in the EMP, the significance of the construction and operational phase impacts is likely to be reduced to a

Low (negative). **It is further extremely important to include an Environmental Control Officer (ECO) on site during the construction phase of the proposed project to ensure that all the mitigation measures discussed in this report and the EMP are enforced.**

It is noted that where appropriate, these mitigation measures and any others identified by MET: DEA could be enforced as Conditions of Approval in the Environmental Authorisation, should MET: DEA issue a positive Environmental Authorisation.

8.5 OPINION WITH RESPECT TO THE ENVIRONMENTAL AUTHORISATION

Regulation 15(j) of the EMA requires *that the EAP include an opinion as to whether the listed activity must be authorised and if the opinion is that it must be authorised, any condition that must be made in respect of that authorisation*.

It is recommended that this project be authorised because should the development not proceed the subject area will remain in its current state. The local community is expected to benefit from the development as a result of the potential job opportunities during construction as well as the increased development within the area. Furthermore, the community of Helao Nafidi are further expected to benefit from the proposed development. The significance of the social impact was therefore deemed to be ***High (positive)***.

The "no go" alternative on the other hand was deemed to have a ***High (negative)*** impact, as all the social benefits resulting from the development would not be realised.

The significance of negative impacts can be reduced with effective and appropriate mitigation provided in this report and the EMP. If authorised, the implementation of an EMP should be included as a condition of approval.

8.6 WAY FORWARD

The FESR is herewith submitted to MEFT: DEAF for consideration and decision making. If MEFT: DEAF approves, or requests additional information / studies all registered I&APs and stakeholders will be kept informed of progress throughout the assessment process.

9 REFERENCES

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