

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED ACTIVITY IN HELAO NAFIDI

Township Establishment of
Ohangwena Extension 1, 2 & 3 in
Helao Nafidi, Ohangwena Region.

**List of triggered activities identified
in the EIA Regulations which apply to
the proposed project**

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)

BACKGROUND INFORMATION DOCUMENT

1 PURPOSE OF THIS DOCUMENT

The purpose of this Background Information Document (BID) is to brief Interested & Affected Parties (I&AP's) about the Environmental Impact Assessment (EIA) being undertaken for the proposed development activities in Helao Nafidi.

The BID also provides an opportunity for I&APs to register for the EIA process and to submit any initial comments or issues regarding the proposed project.

2 BACKGROUND INFORMATION

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

- **Subdivision of the Remainder of the Farm Helao Nafidi Townlands No. 997 into Portions A, B, C and the Remainder;**
- **Layout Approval and Township Establishment on Portion A of the Remainder of the Farm Helao Nafidi Townlands No. 997 to become known as Ohangwena Extension 1;**
- **Layout Approval and Township Establishment on Portion B of the Remainder of the Farm Helao Nafidi Townlands No. 997 to become known as Ohangwena Extension 2;**
- **Layout Approval and Township Establishment on Portion C of the Remainder of the Farm Helao Nafidi Townlands No. 997 to become known as Ohangwena Extension 3.**

In terms of the Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012), the listed activities indicated above were triggered by the proposed project.

The proponent commissioned this EIA and appointed Stubenrauch Planning Consultants (SPC) to undertake the necessary activities to enable an application for an Environmental Clearance with the Environmental Commissioner as prescribed by the Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012). In line with

Regulation 21(2) of the mentioned EIA Regulations, this BID is distributed to potential I&APs as part of the public consultation process for this EIA.

This Environmental Assessment will therefore be undertaken to determine the potential environmental and socio-economic impacts associated with the proposed development activity.

3 DEVELOPMENT DESCRIPTION

3.1 Locality

As depicted in **Figure 1** below, Portions A, B and C of the Remainder of the Farm Helao Nafidi Townlands No. 997 as proposed are located adjacent south of Ohangwena Proper in the town of Helao Nafidi.

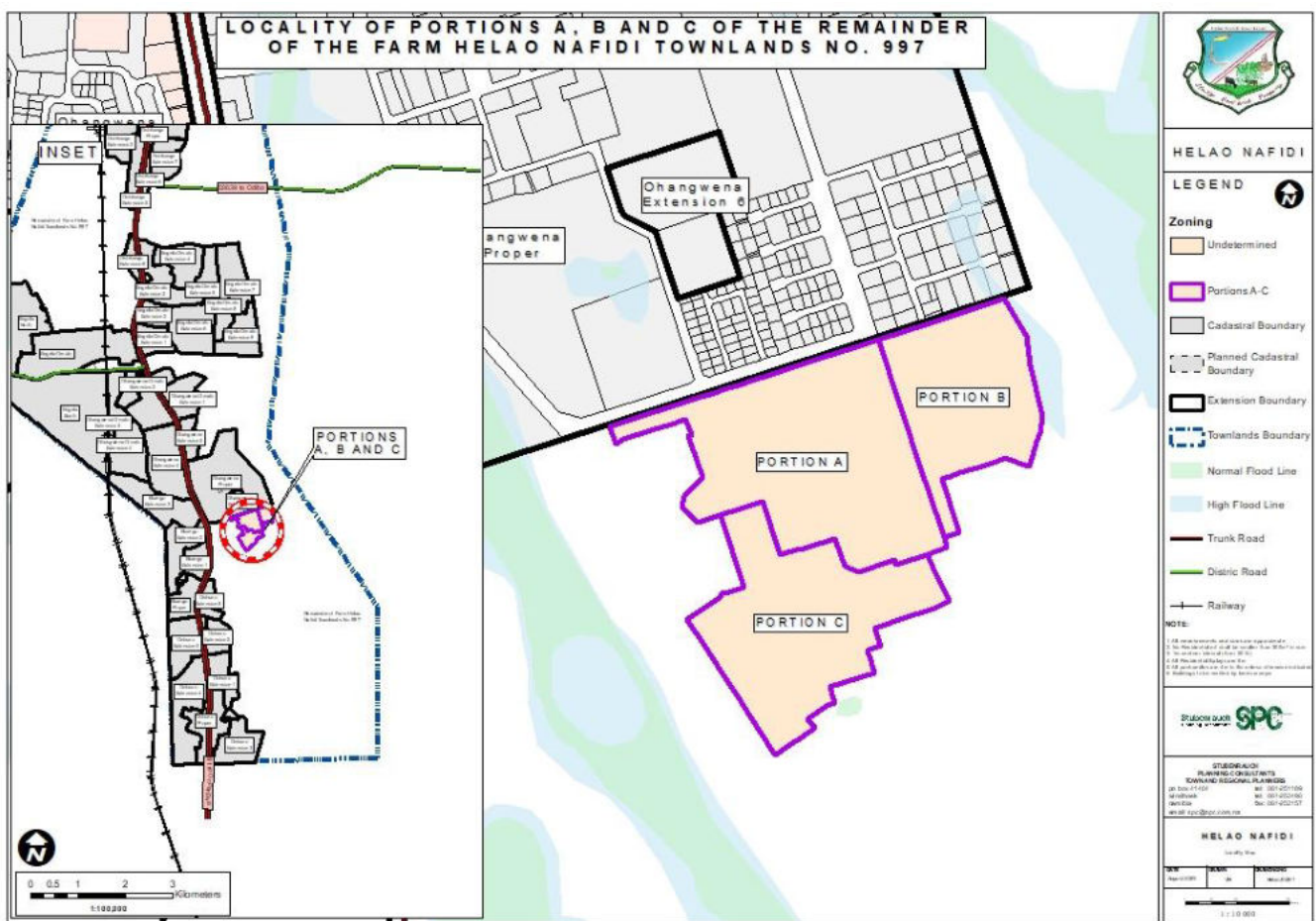


Figure 1: Locality of Portions A-C of the Remainder of the Farm Helao Nafidi Townlands No. 997

3.2 Zoning

The size, zoning and ownership of Portions A, B and C of the Remainder of the Farm Helao Nafidi Townlands No. 997 is outlined in **Table 1** below.

Table 1: Size, Zoning and Ownership

Portion No.	Size (Ha)	Zoning	Ownership	Title Deed No.
Portion A	18.21	Undetermined	Helao Nafidi Town Council	T 7249/2005
Portion B	9.73	Undetermined	Helao Nafidi Town Council	T 7249/2005
Portion C	13.68	Undetermined	Helao Nafidi Town Council	T 7249/2005

3.3 Project Background

The Town Council of has identified the shortage of serviced land to provide for the growing demand for housing for the middle-income bracket in Helao Nafidi. The Council thus instructed Stubenrauch Planning Consultants to develop three new residential neighborhood areas which will provide for the housing needs of the residents of Helao Nafidi.

According to the proposed Helao Nafidi Structure Plan (2022 - 2032), the Town Council of Helao Nafidi confirmed that there is a housing backlog of 5129 residential based on the assumption that the average household size consists of 5 people per household. Accepting that the average township extension is not to provide more than 300 erven this means that there is a need to provide 17 formal residential township extensions. The structure plan has thus identified a possible intervention for this backlog, which is designing and establishing new townships, to cater for the influx of people and backlog of residential erven as well as to encourage property ownership within the town and to increase municipal income through rate and tax collection.

The establishment of the townships of Ohangwena Extensions 1 to 3 is thus needed and desirable with the town of Helao Nafidi, as it is a step taken by the Local Authority to addresses the housing backlog in the town, while simultaneously addressing the priority issues that have been identified by the proposed Helao Nafidi Structure Plan (2022 - 2032).

3.4 Proposed Development

The Helao Nafidi Town Council is desirous to establish three (3) new townships by obtaining the necessary approvals for the following statutory steps:

- **Subdivision of the Remainder of the Farm Helao Nafidi Townlands No. 997 into Portions A, B, C and the Remainder**
- **Layout Approval and Township Establishment on Portion A of the Remainder of the Farm Helao Nafidi Townlands No. 997 consisting of approximately 155 Erven and the Remainder to become known as Ohangwena Extension 1**
- **Layout Approval and Township Establishment on Portion B of the Remainder of the Farm Helao Nafidi Townlands No. 997 consisting of approximately 55 Erven and the Remainder to become known as Ohangwena Extension 2**

- **Layout Approval and Township Establishment on Portion C of the Remainder of the Farm Helao Nafidi Townlands No. 997 consisting of approximately 102 Erven and the Remainder to become known as Ohangwena Extension 3**

Paragraphs 3.4.1 – 3.4.4 below will elaborate on the statutory steps outlined above.

3.4.1 Subdivision of the Remainder of the Farm Helao Nafidi Townlands No. 997 into Portions A, B, C and the Remainder

In order to create the portions on which the townships of Ohangwena Extensions 1 to 3 are to be established on, the Remainder of the Helao Nafidi Townlands No. 997 is to be subdivided into Portions A to C and the Remainder as outlined in **Table 2** below

Table 2: Subdivision of the Helao Nafidi Townlands

Portion	Size (Ha)	Zoning
Portion A	18.21	Undetermined
Portion B	9.73	Undetermined
Portion C	13.68	Undetermined

The subdivision of the Remainder of the Helao Nafidi Townlands No. 997 into Portions A to C and the Remainder is depicted in **Figure 2** below.

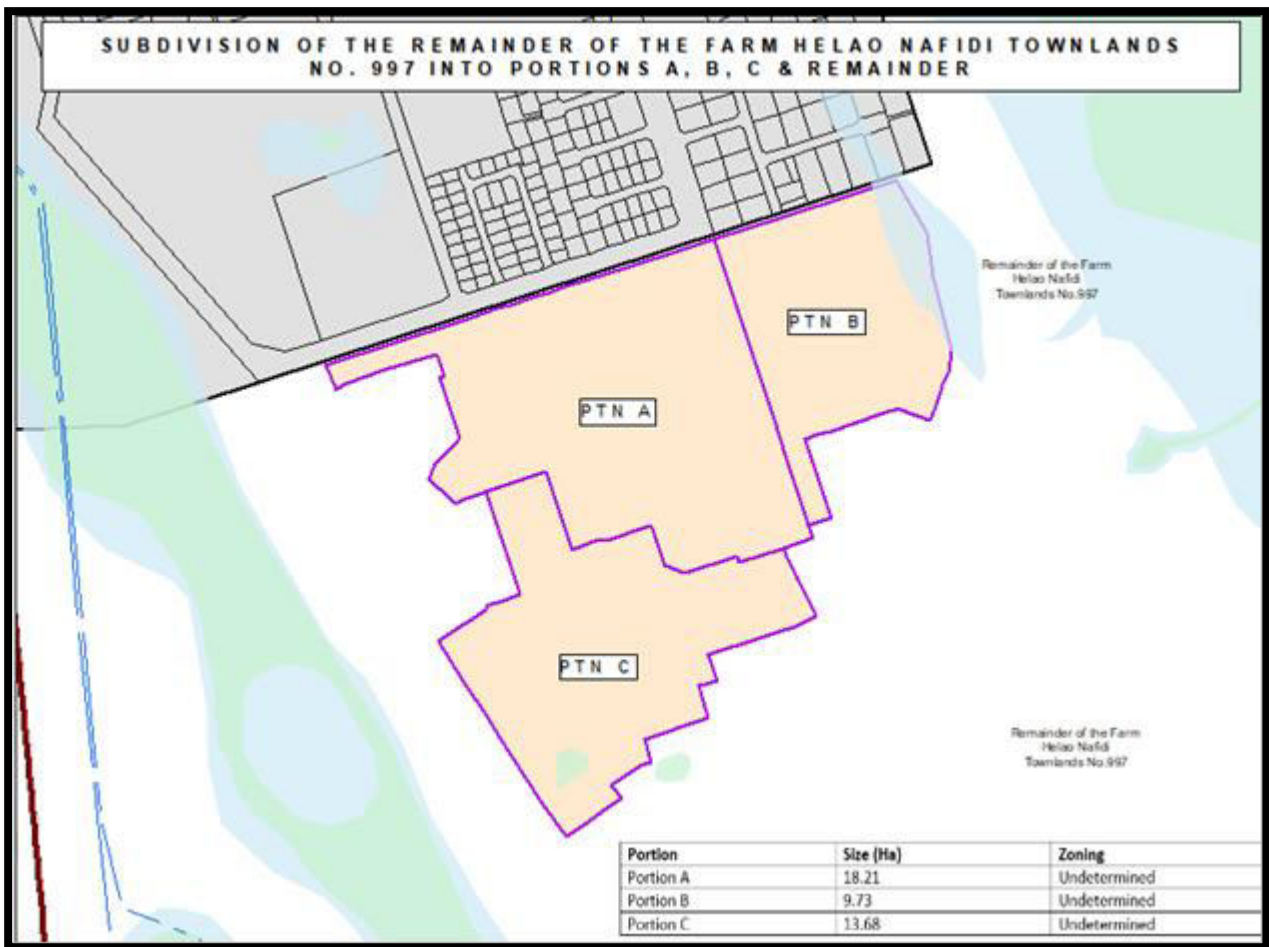


Figure 2: Subdivision of the Remainder of the Farm Helao Nafidi Townlands No. 997 into Portions A, B, C & Remainder

3.4.2 Layout Approval and Township Establishment on Portion A of the Remainder of the Farm Helao Nafidi Townlands No. 997 consisting of approximately 155 Erven and the Remainder to become known as Ohangwena Extension 1

Ohangwena Extension 1 comprises of 155 Erven and the Remainder (streets). The layout makes provision for 154 Residential erven and 1 Public Open Space, as outlined in **Table 3** below.

Table 3: Ohangwena Extension 1 Summary Table

Zoning	No of Erven	± Total Area(ha)	% of Total Area
Residential	154	12.25	67.26
Public Open Space	1	0.46	2.51
Street	Remainder	5.51	30.23
Total	156 and the Remainder	18.21	100.00

Ohangwena Extension 1 seeks to provide residential erven, and this is why the layout is comprised of 154 residential erven. The residential erven in Ohangwena Extension 1 range from 500m² – 1000m² on average, however there are some residential erven that are much larger than this which accommodate existing homesteads such as Erf 119 which measures 2719m² in extent.

There is one (1) Public Open Space in the layout, and this Public Open Space which can be developed into a recreational area, as determined by the community’s needs. This can include a sports field, a play park and other related land uses.

There are no other land uses other than residential and public open space provided for in Ohangwena Extension 1, as the neighboring Ohangwena Proper has these supporting land uses, and they can be utilized by the residents of Ohangwena Extension 1.

The street network of Ohangwena Extension 1 follows a simple grid layout, which will allow for the efficient connection of services, as well as the efficient distribution of traffic throughout the neighborhood. The streets vary in width, from a minimum of 15 meter wide to 45-meter-wide streets. The layout of Ohangwena Extension 1 is depicted in **Figure 3** of this document.

3.4.3 Layout Approval and Township Establishment on Portion B of the Remainder of the Farm Helao Nafidi Townlands No. 997 consisting of 55 Erven and the Remainder to become known as Ohangwena Extension 2

Ohangwena Extension 2 comprises of 56 Erven and the Remainder (streets). The layout makes provision for 53 Residential erven and 2 Public Open Spaces, as outlined in **Table 4** below.

Table 4: Ohangwena Extension 2 Summary Table

Zoning	No of Erven	± Total Area(ha)	% of Total Area
Residential	53		
Public Open Space	1		
Street	Remainder		
Total	55 and the Remainder		100.00

Ohangwena Extension 2 seeks to provide residential erven, and this is why the layout is comprised of 53 residential erven. The residential erven in Ohangwena Extension 1 range from 1000m² – 1400m² on average, however there are some residential erven that are much larger than this which accommodate existing homesteads such as Erf 119 which measures approximately 5387m² in extent.

There is one (1) Public Open Space in the layout. The public open space has been placed at the edge of the township to serve multiple purposes beyond recreation such as to allow for better flood management because that portion falls on high flood line and to accommodate the 22m powerline servitude that runs over it. During heavy rainfall or flood events, this area will act as natural buffer, absorbing access water and reducing the risk of flooding to the residential units. The powerline will be registered against Ohangwena Extension 2.

There are no other land uses other than residential and public open space provided for in Ohangwena Extension 2, as the neighbouring Ohangwena Proper has these supporting land uses, and they can be utilised by the residents of Ohangwena Extension 2.

During the initial planning phase of this extension, Council has identified that a few households as well as cattle pens encroached on to the proposed street. The Helao Nafidi Town Council has however

compensated these households so that they may no longer encroach the street. Therefore, there are no obstructions that will hinder the access in the proposed township.

The street network of Ohangwena Extension 2 same as Extension 1, follows a simple grid layout, which will allow for the efficient connection of services, as well as the efficient distribution of traffic throughout the neighbourhood. The streets vary in width, from a minimum of 15 metre wide to 45-metre-wide streets. The layout of Ohangwena Extension 2 is depicted in **Figure 3** of this document.

3.4.4 Layout Approval and Township Establishment on Portion C of the Remainder of the Farm Helao Nafidi Townlands No. 997 consisting of 102 Erven and the Remainder to become known as Ohangwena Extension 3

Ohangwena Extension 3 comprises of 102 and the Remainder (streets). The layout makes provision for 97 Residential erven, 2 Business erven, 1 Institutional erf and 2 Public Open Spaces, as outlined in **Table 5** below.

Table 5: Ohangwena Extension 3 Summary Table

Zoning	No of Erven	± Total Area(ha)	% of Total Area
Residential	102	8.01	
Business	2	0.28	
Institutional	1	0.56	
Public Open Space	2		
Street	Remainder	3.57	
Total	106 and the Remainder	13.68	100.00

Ohangwena Extension 3 also seeks to mainly provide residential erven, and this is why the layout is comprised of 102 residential erven out of 106 erven being created in this layout. The residential erven in Ohangwena Extension 3 range from 500m² to 1000m² on average, however there are some residential erven that are much larger than this to accommodate existing homesteads, such as Erf 33 which measures 2956m² in extent.

Ohangwena Extension 3 makes provision for two (2) Business erven, and both erven measure 1422m² in extent. The business erven will provide a commercial aspect to the neighborhood, as they can be developed into shops, convenience stores, and other business related land uses that can allow the residents of Ohangwena Extension 3 to obtain amenities, without having to travel to the Central Business District of Helao Nafidi.

The layout makes provision for one (1) Institutional erf. This erf measures 5581m² in extent and it can be developed as per the needs of the community. This includes community facilities such as a library, a community center, a kindergarten, primary school and other related land uses.

Ohangwena Extension 3 makes provision two (2) Public Open Spaces. These Public Open Spaces can be developed into recreational areas, as determined by the community's needs. This can include sports fields, play park and other related land uses.

The street network of Ohangwena Extension 3 is an extension of the neighboring extension of Ohangwena Extension 1. It follows a simple grid layout, which will allow for the efficient connection of services, as well as the efficient distribution of traffic throughout the neighborhood. The streets vary in width, from a minimum of 15 meter wide to 30-meter-wide streets. The layout of Ohangwena Extension 3 is depicted in **Figure 3** below.

These extension layouts are subject to change and will be developed according to the needs and inputs of the community during the public meeting.

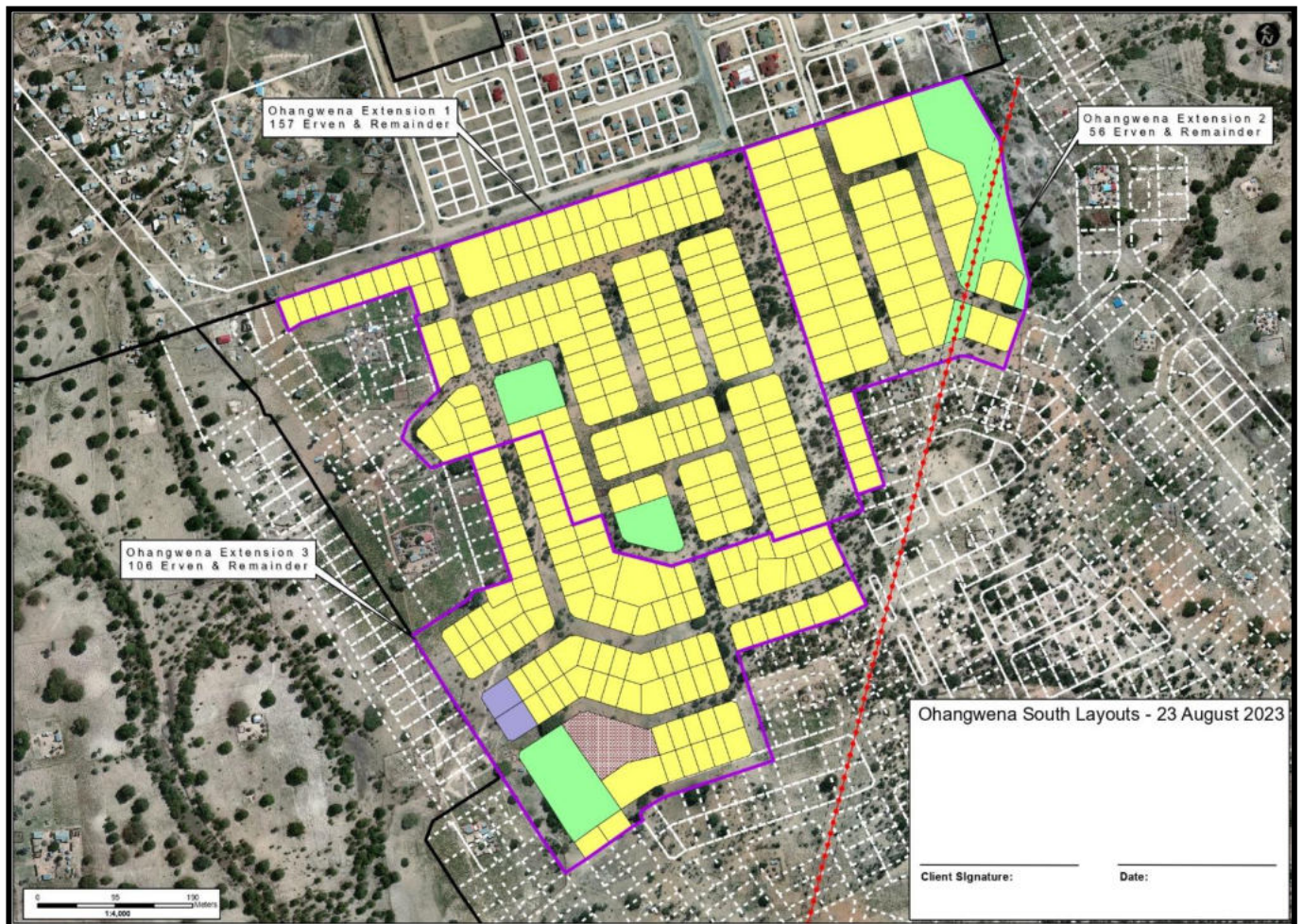


Figure 3: Proposed Layout Plans of Ohangwena Extensions 1 – 3

3.4.5 Engineering services

Electricity, water, sewer and storm water

The design of bulk services as well as internal service delivery for the three extensions will be coordinated and installed as per the specifications of the Helao Nafidi Town Council.

3.4.6 Access Provision

Access to the intended development will be obtained from the internal street network of the adjacent Ohangwena Proper.

4 ENVIRONMENTAL BASELINE INFORMATION

The environmental and social setting of the proposed project area is briefly described in this section. The detailed description of these environmental features will be fully presented in the environmental scoping report.

4.1 Biophysical Environment

Climatically Ohangwena region is semi-arid, and its natural environment has generally a rather low population carrying capacity. Most of the rural population is practicing traditional subsistence agriculture with livestock husbandry as an important component. A major constraint to human life in the region is lack of perennial surface water resources and high salinity of many groundwater aquifers.

4.1.1 Climate

The climate of the Ohangwena Region is classified as tropical semi-arid with a dry season of 5-6 months. 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.

The mean annual rainfall in the Ohangwena Region varies between 450 and 550 mm, 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.

4.1.2 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.

ENVIRONMENTAL ASSESSMENT PROCESS

- Establishing environmental risks of the intended project
- Establishing mitigation protocol
- Preparing the draft Environmental Assessment Report (EAR) and Environmental Management Plan (EMP)
- Public reviewing of Draft EAR and EMP
- Preparing the final EAR & EMP and submitting to MEFT
- Awaiting decision from Authorities
- Communicating decision to Interested & Affected Parties
- Availing opportunities to Appeal.

The successive layers of sands, sandy clay, sandstones, and conglomerates of the Kalahari group are up to 500 thick and of Tertiary to Quaternary 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

4.1.3 Hydrology, Hydrogeology and Drainage system

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.

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.

5 POTENTIAL IMPACTS

The following potential impacts have been identified so far:

- **Traffic Impacts:** During construction the movement of construction material to and from site may cause additional traffic. Traffic may also be increased in the area once the areas are fully developed.
- **Disturbance:** During construction the surrounding property owners and community members may be disturbed by the construction activities.
- **Waste:** During construction and operation, waste may be generated on site which would have to be disposed of at an approved landfill site.
- **Ground and surface water impacts:** may be experienced during construction due to the use of machinery and chemicals to construct the roads and services infrastructure as well as during operational activities.
- **Dust and noise** may be generated during construction activities.
- **Employment Creation:** During construction temporary jobs may be created for the construction of the associated services.

Potential Positive Impacts

- **Socio-economic impacts:** the proposed township establishments will make residential erven available to the residents of the ever-growing town of Helao Nafidi.

More potential impacts of the proposed activity will be identified upon consultations with the public and further research on the area.

6 PUBLIC CONSULTATION

The Environmental Impact Assessment process involves interaction with people who are interested in, or who could be affected by the proposed development and/or operational activities of the proposed Helao Nafidi development. As part of this process a public meeting will be held as follows:

Date of meeting: 13 September 2023

Meeting to start: 14h00

Venue of meeting: Ohangwena, Meeting tree next to the Telecom Network tower

To further obtain inputs into the developments to take place. Communication will be sent out to various potential I&APs and Line Ministries in addition to the public notices to be placed in the newspapers, on the sites and around the subject area to obtain comments on the proposed developments.

7 ALL STAKEHOLDER/INTERESTED & AFFECTED PARTIES (I&AP)

Public participation process gives you the opportunity to:

- Obtain information about the proposed project
- Raise any environmental issues relating to the project

How can you be involved?

- By responding to the invitation advertised in the newspapers
- By registering as an I&AP, for your name to be added to our register list
- Submitting your comments or requests in writing.

We are inviting the public to participate by contributing issues and suggestions regarding the proposed projects on or before **09 October 2023**. For further information, or concerns, I&APs can complete the register below:

8 REGISTRATION AND COMMENTS

Participant Name:	Organization/Affiliations:
Position:	Telephone:
Fax:	E-Mail:

Postal Address:
Comments/Suggestions and Questions:

Please fill in particulars and return completed document to be registered as an Interested & Affected Parties (I&AP) to:

Stubenrauch Planning Consultants (SPC) Tel: 061 25 11 89 E-Mail: bronwynn@spc.com.na
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