

**ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE
PROPOSED SUBDIVISION OF THE REMAINDER OF FARM
HELAO NAFIDI TOWNLANDS NO. 997 AND CREATION OF A
PUBLIC ROAD, OHANGWENA REGION**

ENVIRONMENTAL SCOPING REPORT

Prepared For

Dr. John Mofuka

P.O. Box 2520, Oshikango

0812484901

johnmofuka@gmail.com

Prepared by



 +264 81142 2927

 info@greegain.com.na

 <https://www.greengain.com.na>

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DOCUMENT INFORMATION

Project Name	Proposed subdivision of the Remainder of Farm Helao Nafidi Townlands No. 997 and Creation of a Public Road, Ohangwena Region
Proponent	Mr. John Mofuka P.O. Box 2520, Oshikango 0812484901 johnmofuka@gmail.com
Town Planner	Toya Urban Planning Consultant P. O Box 99294 Windhoek
Local Authority	Helao Nafindi Town Council Address: Private Bag 503, Ohangwena Tel: 065 260000/2619000 Inquiries: S Mangundu
EAP	Green Gain Consultants cc Address: P. O. Box 5303, Walvis Bay Contact: Mr. Joseph K. Amushila Cell: 0811422927 Email: info@greegain.com.na
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LIST OF ACRONYMS

DEAF:	Directorate of Environmental Affairs and Forestry
EAP:	Environmental Assessment Policy
EIA:	Environmental Impact Assessments
EMA:	Environmental Management Act
EMP:	Environmental Management Plan
HN:	Helao Nafindi Town Council
I&APs:	Interested and Affected Parties
MAWLR	Ministry of Agriculture, Water, and land Reform
MEFT:	Ministry of Environment, Forestry and Tourism
MURD:	Ministry of Urban and Rural Development
NORED	Northern Regional Electricity Distributor
NSA:	Namibia Statistic Agency
PPE:	Personal Protective Equipment
RA;	Roads Authority
URPB:	Urban and Regional Planning Board

EXECUTIVE SUMMARY

Mr. John Mofuka, hereinafter referred to as the proponent, has acquired property (Portion 20 of Farm Helao Nafindi Townlands N0.997 with the aim of constructing a medical facility. Currently there is no street access to the property, hence the proponent considered a number of options to create an access road to the facility.

In terms of the Environmental Management Act (EMA) No. 7 of 2007 (Schedule 5.1) and its regulations (GN No. 30 of 2012), the construction of a public road or a road which caters for more than one lane of traffic in both directions cannot take place without an ECC being obtained. The proposed subdivisions will be carried out in line with the Urban and Regional Planning Act, 05 of 2018 and approval will be obtained from the newly established planning board, Urban and Regional Planning Board (URPB).

Green Gain Consultants cc was appointed to conduct the required Environmental Impacts Assessment (EIA) study and apply for the ECC for the proposed activities. This study was carried out in line with the requirements of the Environment and Management Act (Act No. 07 of 2007) and its Regulations (GN No. 30 of February 2012). Since the proposed project is of a small scale with limited impacts only a scoping process was employed. A multidisciplinary approach was used which includes collection of baseline information both biophysical environment and socio-economic as well as consultation with potential Interested and Affected Parties (I&APs) and relevant stakeholders.

This Scoping Report presents an assessment of potential environmental and socio-economic impacts. Also attached is an Environmental Management Plan (EMP) which details a list of mitigation measures to avoid and minimize potential negative impacts and optimize the potential positive impacts. It also outlines roles and responsibilities of the proponent and other different role players. The EMP, upon approval by the Ministry of Environment and Tourism (MEFT) will be a legally binding document to which the proponent will be needed to adhere to. Thus, a copy should always be given to any contractor or sub-contractor to be involved in the construction or maintenance of the proposed road.

1. INTRODUCTION AND BACKGROUND

1.1 BACKGROUND

The proponent intends to construct a medical facility on Portion 20 of Farm Helao Nafindi Townlands No.997. To provide access to the facility, the proponent considered a number of options to create an access road to the facility. The first option was to create a direct access road between two existing gravel roads linking the facility directly to the Trunk Road (TR1/12), which are about 150 metres apart also connecting to TR 1/12.

After consultation with the Roads Authority (RA), it was observed that there is limited space for additional access to TR 1/12. Therefore, the proponent was requested to instead create an access road interlinking the two (2) exiting gravel streets. As such, the proponent must carry out certain town planning procedures to enable the creation of the aforesaid road as follows.

- Subdivision of the Remainder of Portion 20 of Farm Helao Nafindi Townlands No. 997 into Portion 55 and Remainder (R/PTN 20).
- Amendment of title conditions for portion 55 (portion of the remainder of portion 20 of the farm Helao Nafidi Townlands No.997) from “Undetermined” to “Business.
- Subdivision of the remainder of the Farm Helao Nafidi townlands No.997 into portion A (2588m²), Portion B (1283m²) and the remainder
- Amendment of title conditions for portion a (portion of the remainder of the Farm Helao Nafidi Townlands No.997) from “Undetermined” to “Street” (free of conditions).
- Amendment of title conditions for portion B (portion of the remainder of the Farm Helao Nafidi townlands No.997) from “Undetermined” to “Public Open Space”.

1.2 SCOPE OF THE STUDY

The environmental scoping study was conducted in line with the Namibia's Environmental Impact Assessment Regulations (GN No. 30 of 2012). It indicates a description of the affected environment and the way the proposed activities may affect the environment.

A multidisciplinary approach was used to collect baseline information. Information pertaining to the receiving environment and its social surroundings has been sourced through site investigations, Village Council documents and the use of Geographic Information Systems (GIS) mapping. The study also benefited a great deal from Interested and Affected Parties contributions.

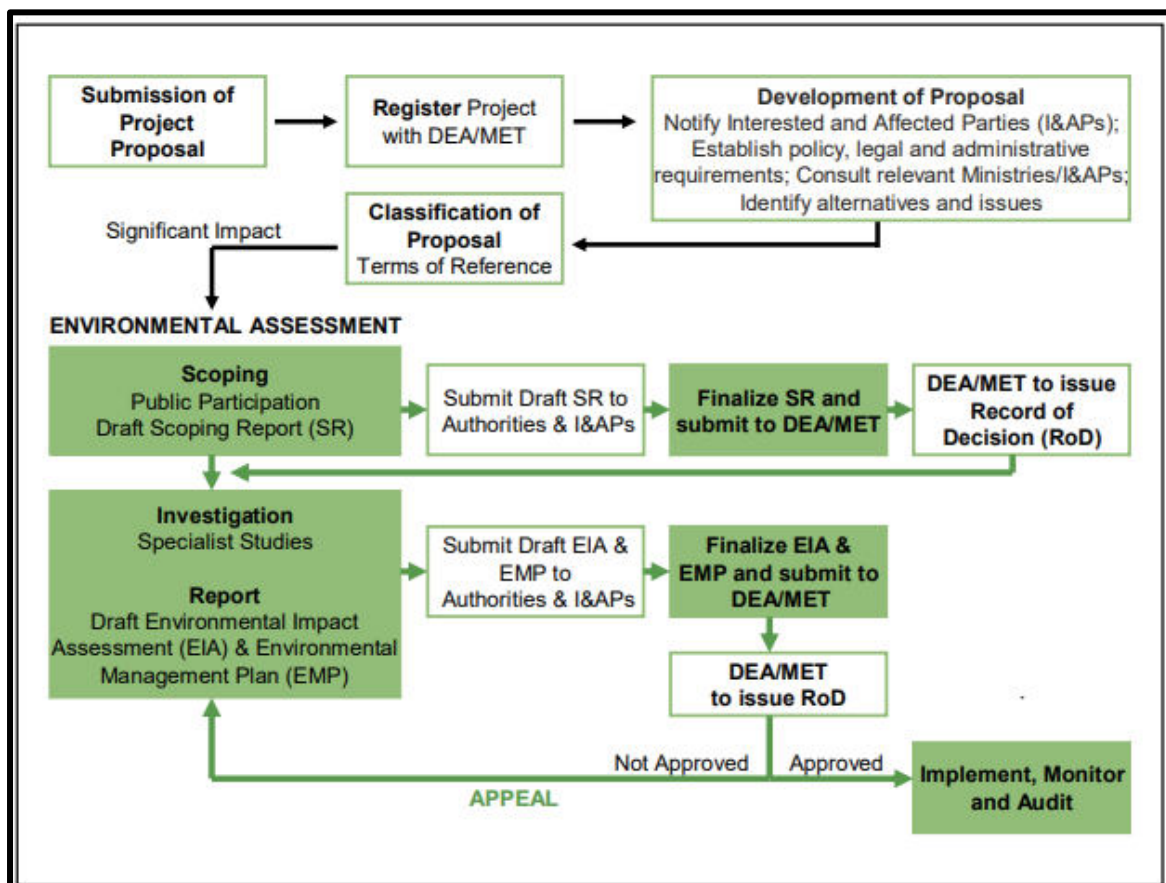


Figure 1: EIA process in Namibia

1.3 PURPOSE OF THE STUDY

The aims of this Scoping process are.

- Evaluate the suitability of the proposed activities against the biophysical and socio-economic of the area.
- Propose the appropriate mitigation measures to avoid, mitigate or lessen the negative impacts.
- Consult all I&AP's and relevant stakeholders.
- Above all, comply with the EMA, No. 07 of 2007.

1.4 Environmental Assessment Practitioner (EAP)

Green Gain Consultants cc is a Namibian based professional environmental and natural resources consulting firm established and driven through belief, passion, and dedication to sustainable development. Established in 2012, Green Gain has grown into a substantial team of environmental practitioner in Namibia providing innovative and cost-effective solutions to environmental challenges and help our clients meet regulatory and stakeholder expectations for environmental performances. The table below presents detailed information about Green Gain Consultants cc.

Table 1: Details of the EAP

Environmental Assessment Practitioner (EAP): Green Gain Consultants cc	
Physical address	Cnr. Joe Davis and Paul van Harte, Narraville, Walvis Bay
Postal address	P.O. Box 5303, Walvis Bay
Contact numbers	0813380114 or 0811422927
Email address	info@greengain.com.na mailto:greengaincc@yahoo.com
Expertise	<p>Name: Mr. J.K. Amushila</p> <p>Qualifications: M. Sc. Environmental Management, B. Honors Agriculture, B. Degree Agriculture, National Diploma in Agriculture.</p> <p>Experience: He is a registered EAPAN member (No.165) He has worked on several EIA and SEA projects. Through his consulting work he gained experience of not only EIA project management, but also environmental specialist experience as well as public consultations.</p>

2. APPROACH TO THE STUDY

Given the nature of the proposed activities a scoping assessment was deemed sufficient. The following methods were used as part of the study.

- **Site visits to collect primary data.**
- **Legal and policy review**
- **Gleaning over existing information pertaining to similar developments and issues**
- **Discussions, meetings, and site visits with the Authority and in this case the proponent**
- **Incorporate opinions and concerns raised by interested and affected parties.**
- **Make professional judgments and recommendations.**

2.1 Baseline study

a). Site Visits:

Sites visit was conducted to collect biophysical data such as.

- Flora and Fauna of the area
- Roads and traffic information
- Land use and adjacent areas
- Hydrological features
- Soil and Geology
- Topographic features, etc.

b). Review of Policy and Relevant Documents/Literatures

The following Literatures were reviewed.

- Helao Nafindi Town Planning Scheme
- Local Authorities Act, (Act 23 of 1992)

2.2 Public participation process

The Environmental Assessment Regulations specifies that a Public Participation Process must be conducted as an integral part of the EIA study. This was adhered to, as potential I& AP and relevant stakeholders were invited to register and forward concerns / comments to the EAP to ensure an equitable and effective participation.

2.2.1 Notification of IAPs and Stakeholders

Potential interested and affected parties (I&APs) were notified through newspaper advertisements and public notices which provided brief information about the proposed project and the EIA process. Public notices were advertised twice in two local newspapers, New Era 08 and the Confidante newspapers for 13 and 20 October 2023. Public notices were also displayed at the Council offices and at the project site.

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED SUBDIVISION OF PORTION 20 OF FARM HELAO NAFINDI TOWNLANDS NO.997 AND CREATION OF A PUBLIC ROAD (STREET), OHANGWENA REGION.

Notice is hereby given to all potential Interested and Affected Parties (I&APs) that an application for the Environmental Clearance Certificate will be submitted to the Environmental Commissioner in terms of the Environmental Management Act (Act No.07 of 2007) for the following activities.

Project title: Subdivision of the Remainder of Portion 20 of Farm Helao Nafindi Townlands No. 997 and Creation of a Public Road (Street)

Location: Helao Nafindi, Ohangwena region

Proponent: Mr. John Mofuka

EAP: Green Gain Environmental Consultants cc
I&APs are hereby invited to register, request for Background Information Document (BID), and send their comments to eia@greengain.com.na on or before 27 October 2023.

The need for a public meeting will be communicated to all registered I&APs.

 For more information
+264811422927 or jkondja@gmail.com

Figure 2: Public notices

3. DESCRIPTION OF THE PROPOSED ACTIVITIES

3.1 Locality

The proposed development site (Remainder of Portion 20) is located along the trunk road from Omafo to Oshikango in the Helao Nafindi townlands, No.997 on the following coordinates ~ 17.431336° (latitude) and 15.888269° (longitude).



Figure 3: Locality map

3.2 Site overview

As depicted in Figure 3 below, the land earmarked for the proposed medical center (marked in blue) lies between two (2) exiting gravel streets (marked in green) also connecting to TR 1/12, which are about 150 metres apart.



Figure 4: Site overview

3.3 Proposed subdivision



The intended activities are as follows.

- Subdivision of the Remainder of Portion 20 of Farm Helao Nafindi Townlands No. 997 into Portion 55 and Remainder (R/PTN 20).
- Amendment of title conditions for portion 55 (portion of the remainder of portion 20 of the farm Helao Nafindi Townlands No.997) from “Undetermined” to “Business”.
- Subdivision of the remainder of the Farm Helao Nafindi townlands No.997 into portion A (2588m²), Portion B (1283m²) and the remainder
- Amendment of title conditions for portion a (portion of the remainder of the Farm Helao Nafindi Townlands No.997) from “Undetermined” to “Street” (free of conditions).
- Amendment of title conditions for portion B (portion of the remainder of the Farm Helao Nafindi townlands No.997) from “Undetermined” to “Public Open Space”.

Figure 5: Proposed subdivision layout

3.4 Project alternatives

The EIA Regulations stipulate that the Scoping process should investigate alternative development options to any proposed developments/activities. The following alternatives were considered.

a). Do Nothing

The “Do-Nothing” option will imply that no action will be taken. This option will not be ideal as the street is necessary to provide access and enable traffic free flow.

b). Design and layout options

The proposed layout as presented in Section 3.3 above was considered ideal and in accordance with the Townships and Division of Land Ordinance 11 of 1963, the new Urban and Regional planning Act, 05 of 2018 and consistent with the requirements of the HN Town Planning Scheme. Hence no other alternative layout or design is required.

3.3 Need and desirability

The “need” and “desirability” for the intended activities is based on the following aspects.

- The creation of public road is necessary to provide accessibility to the proposed facility.
- The need for the proposed subdivision activities is based on the recommendations of RA and therefore considered lawful and bidding.
- The proposed activities (subdivision and creation of a street) would not compromise the integrity of the town spatial development framework.
- The approval of this application would not compromise the integrity of the existing environmental management priorities for the area and that of the town.

4. THE AFFECTED ENVIRONMENT

This section provides a brief description of the existing biophysical and built/social environments. It draws on information from site visits, the study team and member's experiences, background literature as well as maps and photographs. It also presents a background against which the positive and negative impacts of the proposed options can be assessed.

4.1 Socio-economic

a) About the town

Helao Nafidi is a town in Ohangwena Region in northern Namibia at the border to Angola with a population size of about 19,375 inhabitants. At a regional level, Ohangwena is one of the most densely populated regions with 20.4 people per square kilometers. The city is named after Nabor Helao Nafidi, a national hero who dedicated his life to Namibian independence.

It has been established in 2004 as an amalgamation of several villages and settlements along the main road between Oshikango and Ohangwena which are both also part of the town. The town is separated into three urban areas, Oshikango in the north, bisected by the Namibian–Angolan border, and Omafo and Ohangwena south of it, with settlements and villages in the agricultural area between them. All the villages that have been combined to form the town (Onhuno, Ohangwena, Omafo, Engela and Oshikango) and is a focal point for free trade between the Namibia and Angola.

Helao Nafidi is inhabited by the Kwanyama community, a subgroup of the Ovambo. Members of this community live on both sides of the border and speak the same language. In the years 2005 and thereafter, foreign investors, mainly Chinese, have bought communal land in large quantities, leaving villagers without the means to raise livestock and farm. Some of the land transfers are thought to be unlawful, facilitated by corrupt town officials. Helo Nafidi has large townlands and is home to the region's largest library.

b) Bulk service supply

The town is properly planned with all the formal development provided with modern services such as reticulated water, a water borne sewage system, electricity, telephones and roads. All the properties in the town (formal and informal) are accessible through all-weather gravel roads. All formal houses are served with electricity while the power authority can connect consumers who require power in town any time, they pay the required connection fees.

c) Economic development

The border post at Oshikango is currently the busiest Namibian border post with on average 500 people crossing per day.[3] This has brought business opportunities to the surrounding area. With the help of the European Union an Export Processing Zone was established there, consisting of 14 warehouses. Omafo, another suburb of Helao Nafidi, hosts Helao Nafidi Annual trade fair and expo.[6]

The parallel prevalence of land owned by the villages, the town, and land under traditional jurisdiction has led to uncertainties about ownership that had to be settled in court.[7] The case of Helao Nafidi, where traditional authorities and the town and village councils frequently disagree on what is in their respective jurisdiction, can be seen as an example of the clash between tradition and modernity in Namibian law.

d) Social Development

In mid-2005, the second stage of the new Northern Railway began construction from Oshivelo to Oshikango. By mid-2006, it had reached Ondangwa. A train called Omugulugwombashe Star traveled weekly on this track until the locomotives broke down after a few rounds of service and were found unsuitable for Namibia's railway network.[9] The railway extension to Ohangwena and Oshikango is under construction, and a short extension across the border was proposed in 2008 to bypass the congested border post. In October 2022, the town was equipped with Namibia Traffic System offices, which will handle the registration and licensing of vehicles, annual renewal of vehicle licences, renewal of driving licences, and testing and issuing of learners' licences.

4.2 Biophysical

a) Topography and surface drainage

The geographical setting of the Helao Nafindi town consists of both highland and low-laying areas. The formal townships located in the centre of the town are on highland areas while the town lands located in the southern, eastern, and western parts are low lying areas. The low-laying areas are normally affected by seasonal floods and as a result become isolated from the rest of the town during flood events.

b) Climatic conditions

The climatic condition of the northern central of Namibia is described as semi-arid to sub-humid with the rainfall confined in summer months (November-March). The area receives a significantly greater amount of precipitation, averaging around 400 mm (15.7 in) per year. The rainfall pattern is highly variable in amount and distribution. The wet and dry spells are thus a normal climatic feature of this environment, and it has been persistent for millions of years. Temperatures are also cooler and more moderate, with approximate seasonal variations of between 10 and 30 C (Kangombe, 2010).

c) Hydrology

Namibia's northern part, commonly known as the "Cuvelai-Etosha-Basin" is formed by sand deposit from water borne deposit millions of years ago. These deposits of sand and water borne deposits formed the Kalahari Basin. The deposits of sands, clay and calcretes makes up the Kalahari Group. The country has been divided into twelve hydrogeological regions based mainly on geological structure and groundwater flow and according to the national hydrogeological map, the area is part of the Cuvelai-Etosha groundwater Basin. Most of the land surface of this basin is very flat dipping from some 1150m above sea level (m.a.s.l). There is a presence of main natural water courses (Iishana's) surrounding the town (running from north to south in the entire town). The formal townships are not seriously affected by flood and are served with storm water drainage system which drains water from the town into the low laying areas. The flood water covers the flood prone areas and main access roads interrupting accessibility to some vital services (hospitals and private clinics, schools, shops, etc.) and other human settlements located nearby town.

d) Soil

The soil of the norther Namibia is dominated by deep Kalahari and Namib sand that mostly occur in the formation of sands and other sedimentary materials, while the clay sodic sands dominate in the Oshanas. The soil type classification is termed to be favorable for crop cultivation and plant grow in general, and this is determined by its physical properties to the nature of water retention, lower salinity and high nutrient level. In principle, the soil comprises of mosaic soil types such as clay and average salty clay. This determines that the main soil dominance is Eutric Cambisols that are characteristic by their definition on consistency, colour and structure. To an extent, it is found in the depression of low-lying areas of the landscape, and typically contain accumulations of calcium carbonate (Mendelssohn, 2002).

- Flora and fauna

In terms of flora, the project site is found in the Camel Thorn Savanna vegetation area. This vegetation type is an open savanna on deep sandy soils with good grass cover, where the Camelthorn (*Acacia erioloba*) is dominating among other trees and shrubs. Some of the shrubs and trees on and around the site include Camelthorns, palms (*Hyphaene coriacea*). The typical vegetation around the site is shown in Figure 5-2. Most of the proposed actual site footprint has no vegetation as it has already been cleared, due to urban development.

5. LEGAL REQUIREMENTS

The following is a brief overview of all pertinent Acts, bills, laws, policies, and standards regarding the environment which were considered while conducting the Scoping study for the intended activity.

Table 2: Applicable National Laws

LEGISLATION	PROVISION	PROJECT IMPLICATION
Constitution of the Republic of Namibia (1990)	The articles 91(c) and 95 (i) commits the state to actively promote and sustain environmental welfare of the nation by formulating and institutionalizing policies to accomplish the sustainable objectives which include: <ul style="list-style-type: none"> - Guarding against overutilization of biological natural resources, - Limiting over-exploitation of non-renewable resources, - Ensuring ecosystem functionality, - Maintain biological diversity. 	The proposed development must be of sound environmental management objectives.
Environmental Management Act No. 07 of 2007	The purpose of this Act is to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment; to provide for a process of assessment and control of projects which may have significant effects on the environment; and to provide for incidental matters. The Act gives legislative effect to the Environmental Impact Assessment Policy. Moreover, the act also provides procedure for adequate public participation during the environmental assessment process for the interested and affected parties to voice and register their opinions and concern about the proposed project.	This has been complied with; thus, an EIA has been carried out and an ECC will be applied for prior to the creation of the proposed roads.
Water Resources Management Act 2004	The Water Resources Management Act (No 11 of 2013) stipulates conditions that ensure effluent that is produced to be of a certain standard. There should also be controls on the disposal of sewage, the purification of effluent, measures should be taken to ensure the prevention of surface and groundwater pollution and water resources should be used in a sustainable manner.	The protection of ground and surface water resources should be a priority. Obligation not to pollute surface water bodies.

Pollution Control and Waste Management Bill	This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management. This Bill will license discharge into watercourses and emissions into the air.	All activities shall be conducted in an environmental sustainably manner.
Labour Act (No 11 of 2007)	135 (f): “the steps to be taken by the owners of premises used or intended for use as factories or places where machinery is used, or by occupiers of such premises or by users of machinery in connection with the structure of such buildings of otherwise in order to prevent or extinguish fires, and to ensure the safety in the event of fire, of persons in such building;” (Ministry of Labour and Employment Creation)	Contractors, Sub-contractor shall be guided by this Act when recruiting or handling employment related issues.
Noise Control Regulations (Labour Act)	It is essential to ensure that before any development project is approved and undertaken, an assessment or evaluation of expected noise level is done.	Noise generation during construction/development should be minimized to the satisfactory of neighboring residents and the town Council.
Town and Regional Planners Act, 1996 (Act No. 9 of 1996)	This Act establishes the Namibian Council for Town and Regional Planners, defines functions, and powers of the Council and provides for the registration of town and regional planners and the supervision over their conduct. The Minister may, on the recommendation of the Council, prescribe the kinds of work of a town and regional planning nature which shall be reserved for town and regional planners. The Act also defines improper conduct and defines disciplinary powers of the Council. Furthermore, the Act provides for the establishment of national, regional, and urban structure plans, and the development of zoning schemes. It also deals with a variety of related land use control issues such as the subdivision and consolidation of land and the establishment and extension or urban areas.	A registered Town Planner has been appointed for this project.
Town Planning Ordinance (No. 18 of 1954)	Subdivision of land situated in any area to which an approved Town Planning Scheme applies must be consistent with that scheme (S31).	Town Planning Procedures will be registered through the URPB

Townships and Division of Land Ordinance 11 of 1963, as amended	The objective of this Ordinance is to consolidate and amend the laws relating to the establishment of townships and to provide for the regulation and control of the development and subdivision of land and for matters incidental thereto.	Subdivision of land situated in any area to which an approved Town Planning Scheme applies must be consistent with that scheme (S31).
Urban and Regional Planning Act, 05 of 2018.	The Act and Regulations combine the Townships Board and Namibia Planning Advisory Board (NAMPAB) into one to be known as the Urban and Regional Planning Board and delegate the decisions on town planning applications to Local Authorities. However, an LA can only make decisions after the MURD has declared a Local Authority as an Authorized Planning Authority (APA).	Town Planning Procedures will be applied for the proposed subdivision and rezoning. Since Municipality of Swakopmund is not yet an approved APA, approval should be obtained from the Urban and Regional Planning Board (URPB)
Land Survey Act 33 of 1993	To regulate the survey of land; and to provide for matters incidental thereto.	Surveying procedures must be applied accordingly
Local Authorities Act (No. 23 of 1992)	The purpose of the Local Authorities Act is to provide for the determination, for purposes of local government, of local authority councils; the establishment of such local authority councils; and to define the powers, duties, and functions of local authority councils; and to provide for incidental matters.	The proponent is a Local Authority. The need and desirability for the proposed subdivision has been approved.
Soil Conservation Act 76 of 1969	The Soil Conservation Act stipulates that the combating and preventing of soil erosion should take place; the soil should also be conserved, protected, and improved, vegetation and water sources and resources should also be preserved and maintained. When proper mitigation measures are followed along the construction and implementation phase of the project, the natural characteristic of the property is expected to have a moderate to low impact on the environment.	This should be complied with during the construction phase as outlined in the EMP for this project.

6. ASSESSMENT OF PROJECT IMPACTS

The scoping process has identified potential project impacts during its planning and operation phase and examined each of these issues. In assessing the impact of the proposed development, four rating scales were considered. Each issue identified was evaluated in terms of the most important parameter applicable to environmental management. These include the *extent, intensity, probability, and significance* of the possible impact on the environment. The rating scales used are as follows.

Table 3: Significance assessment

CRITERIA	DESCRIPTION			
EXTENT	National (4) The whole country	Regional (3) Ohangwena region and neighbouring regions	Local (2) Within a radius of 2 km of the proposed site	Site (1) Within the proposed site
DURATION	Permanent (4) Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	Long-term (3) The impact will continue/last for the entire operational life of the development but will be mitigated by direct human action or by natural processes thereafter.	Medium-term (2) The impact will last for the period of the construction phase, where after it will be entirely negated	Short-term (1) The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
INTENSITY	Very High (4) Natural, cultural, and social functions and processes are altered to extent that they permanently cease	High (3) Natural, cultural, and social functions and processes are altered to extent that they temporarily cease	Moderate (2) Affected environment is altered, but natural, cultural, and social functions and processes continue albeit in a modified way	Low (1) Impact affects the environment in such a way that natural, cultural, and social functions and processes are not affected
PROBABILITY	Definite (4) Impact will certainly occur	Highly Probable (3) Most likely that the impact will occur	Possible (2) The impact may occur	Improbable (1) Likelihood of the impact materialising is very low
SIGNIFICANCE	Is determined through a synthesis of impact characteristics. Significance is also an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.			

Table 4: Color coding meaning

Low impact	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction, or operating procedure.
Medium impact	Mitigation is possible with additional design and construction inputs.
High impact	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
Very high impact	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a “very high impact” is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact
Negative (-)	Deleterious or adverse impact.
Neutral (/)	Impact is neither beneficial nor adverse
It is important to note that the status of an impact is assigned based on the status quo – i.e., should the project not proceed. Therefore, not all negative impacts are equally significant.	

7. ANTICIPATED PROJECT IMPACTS AND MITIGATION MEASURES

7.1 Potential impacts during planning and design phase

The first step in avoiding and preventing any possible negative impacts during the construction, operation, maintenance, and decommissioning phase, should start with the planning and designing phase. The following issues should be considered during the planning and design phase.

a) Sizes of the road and of the properties

The proposed properties sizes as depicted in Figure 6 are in accordance with the Urban and Regional Planning Act, 05 of 2018 and in line with the HN Town Planning Scheme. The proposed road size (10 m) also complies to the minimum allowable road size required by the Urban and Regional Planning Act, 05 of 2018 and also considered sufficient to cater for traffic in two directions. The proposed layout is subjected to the approval of the Urban and Regional Planning Board (URPB).

b) Impact on ground water and drainage

Provision must be made for drainage of stormwater from and around the site. This can be achieved by making provision of storm water drainage system i.e., slope road surface or culverts to allow free flow of storm water during rainy season.

c) Provision of service lines

The newly created erven will need to be connected to the municipal services such as sewage, water, electricity, internet, telecommunication etc. Hence, it is recommended that provision for routes along or cross over the proposed road for these services lines. This is to ensure that the associated infrastructure i.e., pipes, manholes, lines etc, will be safely placed and will not interfere with the traffic and road users. Moreover, proper planning will save cost during the installation of these service line both to the Council and to the developer or property owners.

7.2 Potential impacts during Construction phase

Table 5: Potential negative impacts associated with the proposed activities: Construction Phase.

ASPECT	POTENTIAL IMPACTS	RATING (If it does occur)				SIGNIFICANCE OF IMPACT	MITIGATION/ENHANCEMENT MEASURES
		Extent	Duration	Intensity	Probability		
1. BIOPHYSICAL							
Impact on Vegetation	<ul style="list-style-type: none"> Vegetation clearance during construction 	1	1	1	1	Low	<ul style="list-style-type: none"> Vegetation clearance of existing vegetation is inevitable. However, the site only contains a few vegetation covers.
Soil contamination	<ul style="list-style-type: none"> Contamination of soil with chemicals (sodium chloride, Calcium magnesium acetate, etc.) which found in deicer agents 	1	1	2	2	Moderate	<ul style="list-style-type: none"> Any spillage of oil, lubricant etc. must be cleaned up. Environmentally friendly and recommended products must be used for road marking.

Impact on drainage Impact on the	<ul style="list-style-type: none"> Construction works may divert the natural stormwater drainage of the site. 	1	1	1	1	Low	<ul style="list-style-type: none"> There are no major drainage lines affected. However, provision for culverts must be made to enable surface runoff.
Visual impacts	<ul style="list-style-type: none"> Uncompleted construction works may decrease the visual attraction of the area 	1	1	1	1	Low	<ul style="list-style-type: none"> All temporary structures must be removed after construction and all trenches must be covered. Construction waste should be collected and disposed of weekly.
Air quality	<ul style="list-style-type: none"> Dust generation from construction work may decrease air quality. 	1	1	2	2	Moderate	<ul style="list-style-type: none"> Control dust generation during construction period.
	<ul style="list-style-type: none"> Fumes from traffic (road users) and emission of leads from moving vehicles may pollute the air. 	1	1	1	1	Low	<ul style="list-style-type: none"> Limited impact

Water usage	<ul style="list-style-type: none"> The construction of the proposed road will make use of water in its construction phase. 	1	1	1	1	Low	<ul style="list-style-type: none"> Given the size of the proposed road area, the impact on water resource availability is limited and can be accommodated within the available water resources.
2. SOCIO-ECONOMIC							
Dislocation of people	<ul style="list-style-type: none"> Since the proposed development sites are partially occupied, the intended development might result in dislocation of the affected people. 	1	1	1	1		<ul style="list-style-type: none"> Affected people will be accommodated into newly created erven.
Traffic impacts	<ul style="list-style-type: none"> Construction works will increase traffic congestion in the nearby street. 	1	1	2	2	Moderate	<ul style="list-style-type: none"> Erect construction signals at the construction site. There must be at least two flag bearers at the construction site to direct traffic flow.

Nuisance in the form of noise and vibration	<ul style="list-style-type: none"> Generation of excessive noise during construction and operation may be nuisance to the residents. 	1	1	1	1	Low	<ul style="list-style-type: none"> Construction should be limited to daytime. Provide maintenance to construction plant and machineries
Waste generation	<ul style="list-style-type: none"> The construction, operation may result in a myriad of waste products in the environment. 	1	1	2	2	Moderate	<ul style="list-style-type: none"> All waste generated during construction should be contained and disposed properly.
Temporary camps	<ul style="list-style-type: none"> Construction camps onsite can result in secondary environmental impacts i.e., pollution, noise etc. 	1	1	1	2	Moderate	<ul style="list-style-type: none"> Construction camps should be established at the site approved by the Local Authority. Provide ablution facilities at the construction site.
Health, Safety and Security	<ul style="list-style-type: none"> The safety, security, and health of the labour force, employees and general, public may be compromised during construction. 	1	1	2	2	Moderate	<ul style="list-style-type: none"> All employees should be provided with personal protective

							equipment (PPE). • The construction site must be barricaded, and all trenches must be covered to prevent/sealed.
Local employment (positive)	• The construction phase will generate temporary local	1	1	2	2	Moderate	• Preferences should be given
ASPECT	POTENTIAL IMPACTS	RATING (If it does occur)				SIGNIFICANCE OF IMPACT	MITIGATION/ENHANCEMENT MEASURES
		Extent	Duration	Intensity	Probability		
Business opportunities (positive)	• Construction works will also present business opportunity for the local businesses i.e., supplies, construction etc.	1	1	2	2	Low	• Construction materials should be sourced locally as far as possible.

7.3 Potential impacts during operation phase

Table 6 Potential impacts during Operation phase

ASPECT	POTENTIAL IMPACTS	RATING (If it does occur)				SIGNIFICANCE OF IMPACT	MITIGATION/ENHANCEMENT MEASURES
		Extent	Duration	Intensity	Probability		
1.BIOPHYSICAL							
Impact biodiversity (positive)	<ul style="list-style-type: none"> Roadside plants will enhance biodiversity. 	1	1	1	1	Low	<ul style="list-style-type: none"> Provide more plants along the road to make up for vegetation lost.
Impact on small animals (positive)	<ul style="list-style-type: none"> New road may provide habitant for small animals 	1	1	1	1	Low	<ul style="list-style-type: none"> Culverts and other under road structures may serves as habitant
Visual impacts (positive)	<ul style="list-style-type: none"> The road will improve aesthetic view. 	1	1	1	1	Low	<ul style="list-style-type: none"> The road should be taxed to improve view.
Impact on the soil	<ul style="list-style-type: none"> Contamination of soil with chemicals (sodium chloride, Calcium magnesium acetate, etc.) which found in deicer agents. 	1	1	1	1	Low	<ul style="list-style-type: none"> Use environmentally friendly materials and chemicals for road markings etc.
Water usage and contamination	<ul style="list-style-type: none"> Stormwater and surface contamination during road maintenance. 	1	1	2	2	Moderate	<ul style="list-style-type: none"> Only use environmentally

							friendly materials and detergents.
Erosion and surface runoff	<ul style="list-style-type: none"> Due to increase hard surface, the surface will become impermeable, thus increasing the surface runoff. 	1	1	1	2	Moderate	<ul style="list-style-type: none"> Make provision for stormwater drainage.

ASPECT	POTENTIAL IMPACTS	RATING (If it does occur)				SIGNIFICANCE OF IMPACT	MITIGATION/ENHANCEMENT MEASURES
		Extent	Duration	Intensity	Probability		
2. SOCIO-ECONOMICS continue.							
Traffic impacts (positive)	<ul style="list-style-type: none"> New road will allow traffic free flow and accessibility. 	1	2	1	2	Moderate	<ul style="list-style-type: none"> Install Traffic signs to regulate traffic flow.
Development (positive)	<ul style="list-style-type: none"> The proposed road structure will improve the quality of life for the residents. 	1	2	2	1	Moderate	<ul style="list-style-type: none"> Road must be of required engineering standard.

8. CONCLUSION AND RECOMMENDATIONS

The objective of the Scoping Phase was to define the range of the impact assessment and determine the need to conduct any specialist study. It is believed that these objectives have been achieved and adequately documented in the Scoping Report. All possible environment aspects have been adequately assessed and necessary control measures have been formulated to meet statutory requirements thus implementing this project will not have any appreciable negative impacts.

8.1 Assumptions and Conclusions:

- All proposed road networks will not compromise the environmental integrity of the surrounding environment.
- There are no objections or critical issues to the proposed activities.
- The findings of the Scoping Assessment are considered sufficient, and no additional specialist study is required.

It is therefore recommended that the Environmental Commissioner do consider the findings and recommendations of this Scoping process with mitigation measures as outlined herein and in the Environmental Management Plan and subsequently, consider issuing an Environmental Clearance Certificate to authorize for the **Proposed subdivision of the Remainder of Farm Helao Nafindi Townlands No. 997 and Creation of a Public Road, Ohangwena Region.**

9. REFERENCES

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10. APPENDICES

APPENDIX A: Proof of Consultations

APPENDIX B: Approval from Roads Authority

APPENDIX C: Approval from Ministry of Urban and Rural Development

APPENDIX D: EMP

Appendix A: List of IAPs consulted.

Organization	Contacts
Helao Nafindi Town Council	P/bag 503, Ohangwena 065 260000/2619000
Property Owner	Dr. John Mofuka 081
Town Planner	Mr. Simon Shinguto sshinguto@gmail.com
Roads Authority	<p>Mr. Stanley Gariseb Regional Engineering Manager: Oshakati Region, Roads Authority</p> <p>Frans Nghifikua Senior Engineering Manager: Roads Legislation and Compliance Network Planning Division +264 61 284 7427</p>
Ministry of Urban and Rural Development (Planning Division)	Mr. R. Boysen 061297523