

APPLICATION: APP-001226

**ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED
SUBDIVISION OF ERF 2446, CLOSURE AND REZONING OF
PORTIONS A-G FROM “PUBLIC OPEN SPACE” TO “SINGLE
RESIDENTIAL” OKAHAO EXTENSION 9, OMUSATI REGION**



ENVIRONMENTAL SCOPING REPORT

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April 2023

DOCUMENT DESCRIPTION

Project Name	Proposed subdivision of Erf 2446, Closure and Rezoning of portions “A to G” from “Public Open Space” to Single Residential.
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Report Type	Environmental Scoping Report
Assessment Period	March – April 2023

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LIST OF ACRONYMS

EAP:	Environmental Assessment Practitioner
EAPAN:	Environmental Assessment Professionals Association of Namibia
ECC:	Environmental Clearance Certificate
EIA:	Environmental Impact Assessment
EMA:	Environmental Management Act
EMP:	Environmental Management Plan
I&APs:	Interested and Affected Parties
GN:	Government Notice
LED:	Local Economic Development
MAWF:	Ministry of Agriculture, Water and Forestry
MEFT:	Ministry of Environment, Forestry and Tourism
NamWater:	Namibia Water Corporation
NORED:	Northern Electricity Distributor
OTC:	Okahao Town Council
NSA:	Namibia Statistic Agency
POS:	Public Open Space
SDF:	Spatial Development Framework

1. INTRODUCTION AND BACKGROUND

1.1 Background

Epangelo General Dealer cc hereinafter referred to as the proponent has been approved by the Okahao Town Council to purchase a portion of Erf 2446 located in Okahao Extension 9. Approval is subject to conditions that the proponent follow town planning procedures by applying for the subdivision of Erf 2446, Okahao Extension 9 into seven portions (A-G) & remainder and subsequent Closure and Rezoning of the resulting portions from “Public Open Space” to “Single residential” for the development of houses.

In terms of the Environmental Management Act of 2007 (Schedule 5.1) and its regulations (GN No. 30 of 2012), the permanent closure of a Public Open Space may not be undertaken without an Environmental Clearance Certificate (ECC) being obtained.

Green Gain Environmental Consultants cc has been appointed as an independent Environmental Assessment Practitioner (EAP) to conduct an Environmental Impact Assessment (EIA) and apply for the Environmental Clearance Certificate with the Ministry of Environment and Tourism on behalf of the Developer. The study conducted conformed to the requirements of the Environmental Management Act No.07 of 2007 and it's Regulations (GN No. 30 of February 2012). The study was conducted in a multidisciplinary approach where potential Interested and Affected Parties (I&APs) and relevant stakeholders were invited to participate and give their input.

1.2 Scope of the Study

The environmental scoping study was conducted in line with the Namibia's Environmental Management Act (EMA, No.07 of 2007) and the Environmental Impact Assessment Regulations (GN No. 30 of 2012). It indicates a description of the affected environment and the manner in which the proposed activities may affect the environment. Information pertaining to the receiving environment and its social surroundings has been sourced through baseline site investigations, review of relevant legislation, use of Geographic Information Systems (GIS) mapping and Google Earth maps.

1.3 Terms of Reference

The Terms of Reference for the proposed project are based on the requirements set out by the Environmental Management Act (No. 7 of 2007) and its EIA Regulations (GN No. 30 of 2012). The assessment process covered the following steps which are reported in the scoping report as follows:

- Provide a detailed description of the proposed activity;
- Identify all policies, legislation and guidelines that are relevant to the proposed development.
- Evaluate the suitability of the proposed activities against the biophysical and socio-economic of the area;
- Identify the possible environmental and socio-economic impacts of the proposed project activities and identify any gaps of information that require specialist studies.
- Notify and consult all I&AP's and relevant stakeholders regarding the proposed development and provide them with reasonable opportunity to participate during the process;
- Propose the appropriate mitigation measures to avoid, mitigate or lessen the negative impacts; and
- Above all, comply with the EMA requirements.

This scoping report will be submitted to the Environmental Commissioner, as required by Section 27(3) of the Environment Management Act (No. 7 of 2007).

2. APPROACH TO THE ENVIRONMENTAL SCOPING STUDY

Given the nature of the proposed activities, the scoping assessment approach entails the following approaches;

- Site visits to collect primary data
- Legal and policy review
- Gathering over existing information pertaining to similar developments and issues
- Discussions, meetings and site visits with the Authorities
- Incorporate opinions and concerns raised by interested and affected parties
- Make professional judgment 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 Relevant Literatures

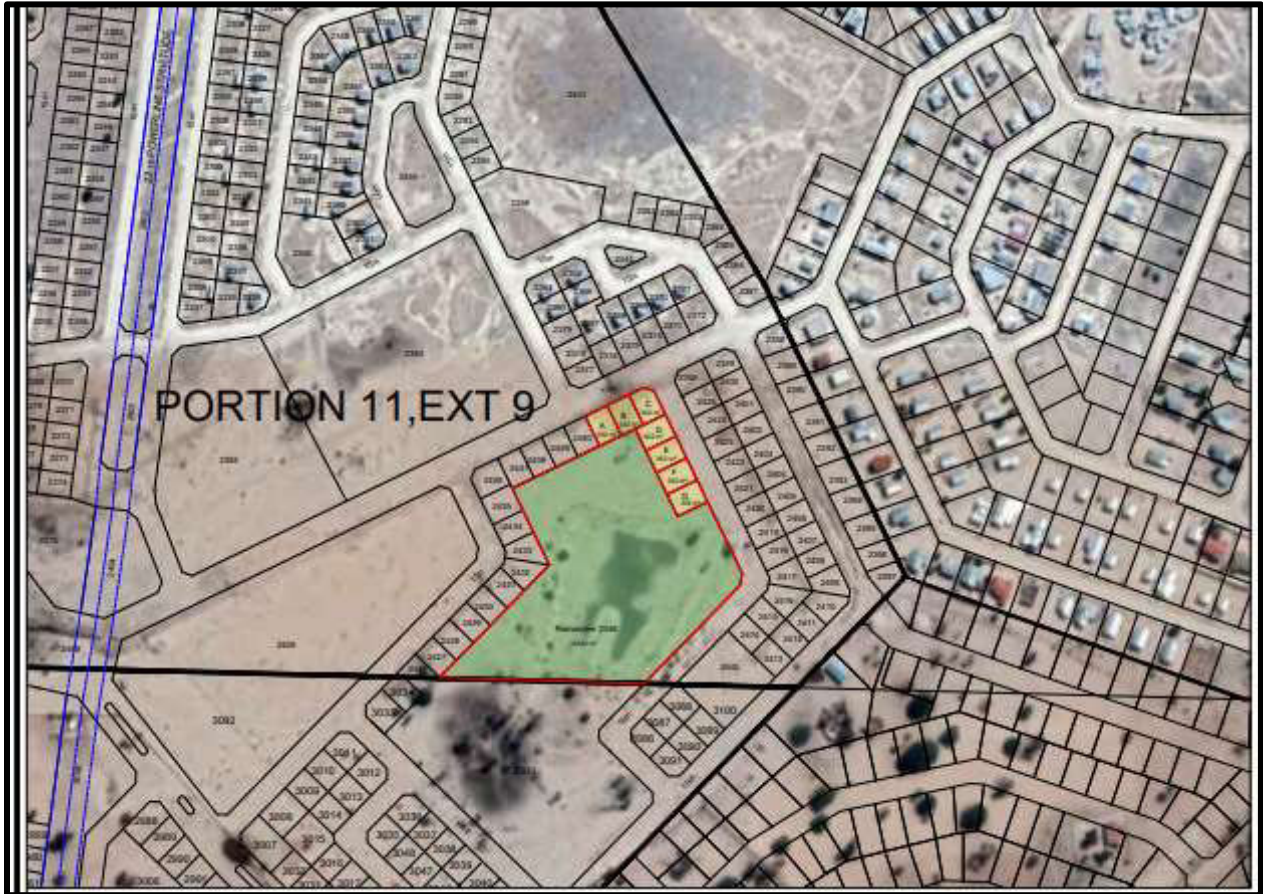
The following literatures was reviewed:

- Local Authorities Act of 1992 (Act 23 of 1992)
- Town Planning Ordinance of 1954 (Ordinance 18 of 1954)
- Townships and Subdivision of Land Ordinance of 1963 (Ordinance 11 of 1963)
- Okahao Town Planning Amendment Scheme of 2012 (SPC)
- Environmental Management Act (Act 7 of 2007)
- Flood Risk Assessment Report 2011 (MURD)

3. PROJECT DESCRIPTION

3.1 Site Locality

Erf 2446 is in Okahao Extension 9, on the following geographical coordinates -17.892132" S and 15.060776" E.



3.2 Site context

Erf 2446 is currently zoned “Public Open Space” and measures approximately 20,896m² in extent. The site is still undeveloped due its water depression nature. It is located at the center of the existing developments, consisting mainly of houses. Municipal services are within the reach of the site.



Figure 2: Photograph taken onsite 2020

3.3 Land uses and adjacent development

The proposed developed site is favorably located adjoining the existing developments in Extension 9. The site is adjacent to existing development consist mainly of residential properties, similar to the proposed land us. It has been confirmed that there are no service lines crossing through the site except for the Electricity Power line (ACB) which traversed on the eastern part of the site. According to NORED, plans are underway for the relocation of the ACB line crossing over the site.

Due to its close proximity to existing development, all major and bulk services such as water, sewerage and electricity are readily available in the area. The services constructed in Extension 2 are considered sufficient to accommodate the proposed development. However, since the site currently serve as a catchment for drainage water in the area, the developer should construct a proper storm water channel.

3.4 Proposed activities

The proponent has received approval from the Okahao Town Council to purchase a portion of Erf 2446, measuring a combined size of 2464m². The proponent is required to apply certain town planning procedures as follows.

- Subdivision of Erf 2446 into Seven Portions (A-G) measuring 352m² each and Remainder measuring 18432m²
- Rezoning of the seven portions (A-G) from “Public Open Space” to “Single Residential”
- Installation of Municipal Services and Development of residential properties
- Erf REM/2446 to remain as Public Open Space

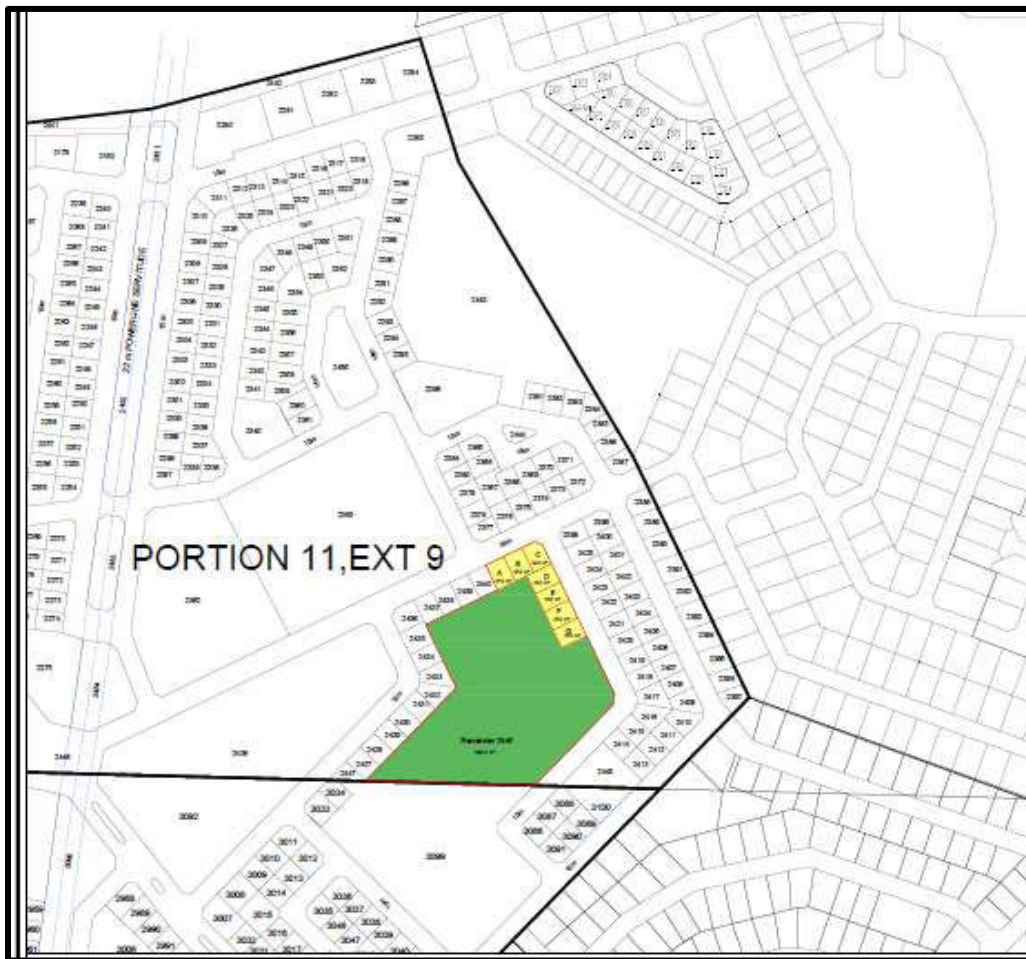


Figure 4: Subdivision of Erf 2446

3.5 Project alternatives

The EIA Regulations stipulates that the Scoping process should investigate alternative development options to any proposed development. The following alternatives were analyzed;

- **Land use alternatives:** Portion of Erf 2446 serves important ecological functions by receiving and containing storm water during rainy season. However, since the site is located in close proximity of existing developments, the site pose as an eyesore and attracts illegal activities such as dumping, especially during dry season.

Since, only a portion of the site is to be rezoned, the intended activities would not compromise the integrity of the existing environmental management priorities for the area. Thus, the remainder portion is still sufficient to play the ecological functions. Moreover, a storm water channel will be integrated in the development to ensure free flow of storm water.

- *No-Go option* will mean, leaving the site as it is (No subdivision and rezoning will take place). The Local Authority is in direct need to provide land, whether business or residential land in order to stimulate economic growth of the town. In order to succeed in this quest, the Town Council must utilize suitable and available land to the fullest capability. Leaving suitable land such as this one, to remain undeveloped will compromise the chance for the town to achieve its goals. For these obvious reasons, the No-Go option is not a preferred alternative.

3.6 Need and Desirability

The proposed development has potential to improve the economic value of the proposed land which is currently an eyesore of the surrounding environment. The proposed site is desirable given the fact that basic infrastructural services such as electricity supply, water, a sewer system and road network are easily accessible.

It is also believed that this development will benefit the town of Okahao at large through job creation and economic spin offs created by the development. The proposed development is considered desirable given the fact that the integrity of the existing environmental management priorities for the area will not be compromised.

4. DESCRIPTION OF THE EXISTING ENVIRONMENT

This chapter provides an overview of the baseline biophysical and social environmental conditions, with which the proposed project will interact. This information has been sourced from observations made and photographs taken during site visits, the team's experience and existing literature from previous research conducted in the area. It also presents a background against which the positive and negative impacts of the proposed options can be assessed.

4.1 Biophysical

a) Climate

Northern Central is defined as a semi-arid to sub-humid climate, with hot summers and warm winters. The average annual rainfall in Okahao is about 470 mm occurring between October and April, with the heaviest falls from January to March and the peak in February. Consequently, there is no flow in the drainage channels during the dry season. The rainfall pattern is highly variable in amount and distribution. Temperatures are also cooler and more moderate, with approximate seasonal variations of between 10 and 30 °C (Kangombe, 2010).

b) Topography

The topography of Okahao is characterised by a combination of high and low-lying areas intersected by shallow water courses. The town is located between 1,000-1100m of altitude and a very flat area with a difference between the higher areas and the more low-laying areas of only 2.0m. The flat shallow depressions or Oshanas fills up with surface water during the rainy season. The Oshanas also receive and keep water from heavy rainfalls that are occasionally experienced in this part of the country.



Figure 6: Topography of western part of Okahao town

c) Soil and Geology

The soil of Okahao 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 type such as clay and average salty clay. This determines that the main soil dominance is *Eutric Cambisols* that characteristic by its definition on consistency, colour and structure. On extent, it is found in the depression of low lying areas of the landscape, and typically contain accumulations of calcium carbonate. These soils are potentially fertile but iron and zinc occurrence might be at lower level concentration sometimes (Mendelssohn, 2002).

d) Hydrology

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 Okahao area is part of the Cuvelai-Etосha groundwater Basin. Most of the land surface of this basin is very flat dipping from some 1150m above sea level (m.a.s.l) in the north-east to 1 080m.a.s.l in the Etosha Pan, which is the largest pan in Namibia. All groundwater within the basin flows towards the Etosha Pan, due to the structure of the basin and because as the pan deepest point, is the base level of the groundwater flow system.

According to the Directorate of Water Resource Management (DWRM), the Okahao area is characterised by the Oshana Multi Layered Aquifer System, constituting unconsolidated to semi consolidated sand and gravel and locally *calcrete*. The groundwater in the area is found at the depth of a range between 0-20 m. The ground water found in shallow discontinuous aquifers (Perched Aquifers) are utilized by the local communities by means of hand dug wells, while deeper groundwater reaching depths of 197m are mostly saline to hyper saline and are virtually unusable due to the presence of dissolved solids derived from the rocks in which the water is stored. According to the Groundwater Quality Guidelines and Standards of the Water Act 54 of 1956, the water with the Total Dissolved Solids (TDS) values greater than the permitted limit of 2000 mg/l is not suitable for human consumption. The water may however, can be used for livestock consumption as is the current case.

e) Flood risk vulnerability

According to the Flood Risk Assessment of 2011, the town of Okahao is not affected directly by the floods but specifically by the heavy rain falls. The rainwater stands still, due to the lack of an appropriate storm water system in place to facilitate the rapid evacuation of the water.

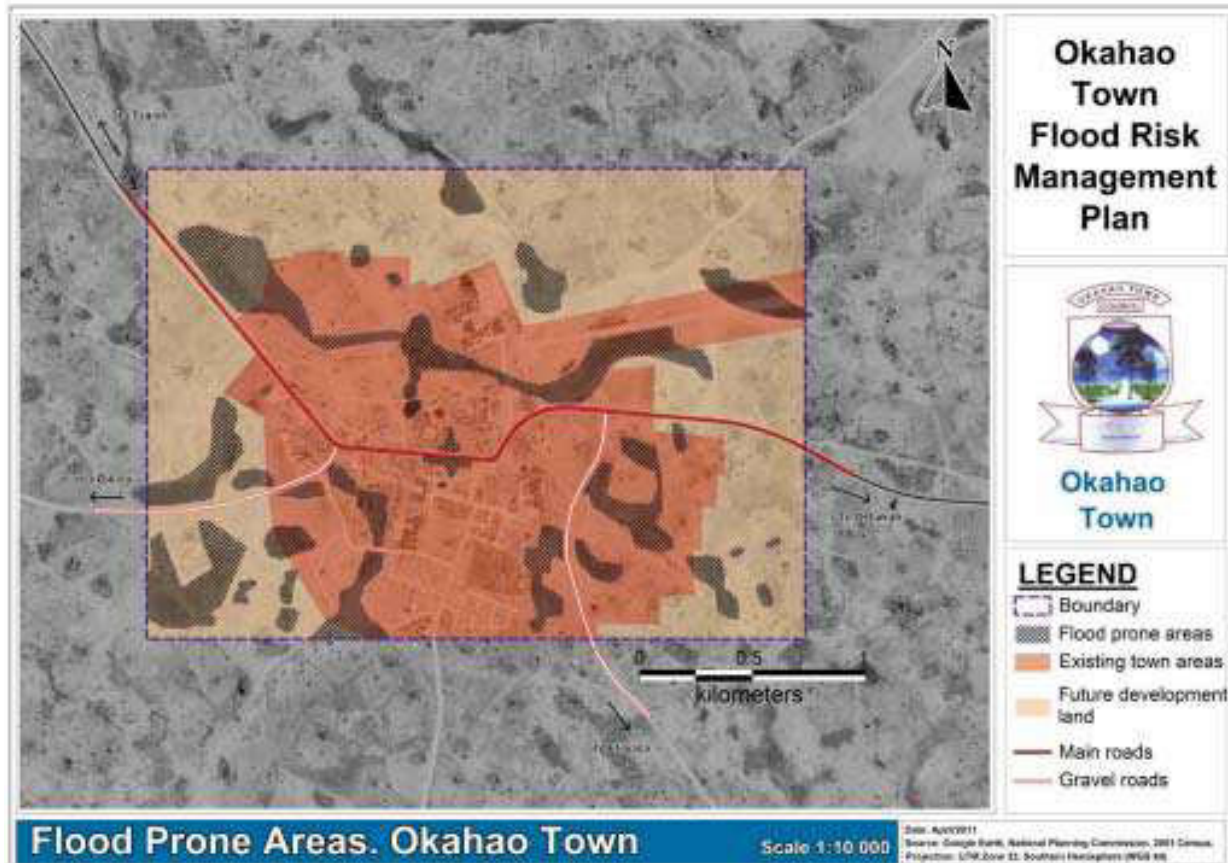


Figure 7: Flood Risk Assessment of Okahao

As it can be seen in the Map above, the areas mostly affected by flood are located at the north of the main road (Tsandi-Oshakati) and east part of the town thus they are in general more low-laying areas with some islands higher than the rest of the area.

4.2 Socio-economic profile of the area

- **Overview**

The information for the socio-economic assessment were obtained from the Town Council's LED, personal observations, as well as from views expressed during public meeting and direct interviews with affected communities.

- **About the town**

Okahao is one of the newly proclaimed local authorities in Omusati Region, northern part of Namibia. It is situated in the Ongandjera tribal area 73 kilometres west of Oshakati on the main road MR123 (Outapi – Tsandi – Okahao) and is the district capital of the Okahao electoral constituency.



Figure 8: Okahao Town

- **Town History**

Okahao is a historical place that is unique in its own right. As a locality, Okahao was a village for the families of Ongandjera Kings. The place was therefore considered occupied with ancestral sanctification. Okahao is also home to Christianity in Ongandjera, as it is here where the ELCIN Finish Missionary set up a centre during the early years of spreading the Christian gospel.

Politically, the town of Okahao is governed by a town council that currently has seven political office bearers, headed by the Worship Mayor. The administration consist of the Chief Executive Officer (CEO) and two main departments which execute the duties of the Council. Okahao Town Council, 2015).

- **Demographics of Okahao**

According to the Population Census of 2011, the population of the Okahao electoral constituency was at 17,548 people of which 1,600 people resides in the town. Although, the urban population of Okahao is very small the actual number of people served by the town is high due to migration of people from nearby constituencies. The majority (51%) of the population are people at the age between 15-59 years old. This same group of people also represent the labour force of Okahao constituency of which 63% are employed while 37% are unemployment (Population Census, 2011). The Town is developing rapidly with regard to services provided by the Town Council and the growth of the population.

- **Bulk service supply**

Water supply: Okahao receives a supply of potable water from Namwater. The main source is a pipeline coming from Ruacana to a dam and treatment plant located in the central area of the town. The distribution system initiates from a water tower located in the Namwater site, to a reticulated network that covers most of the occupied land on the south zone and some parts of the north zone. The town is has a sewerage system that covers most of the urban area, consisting in a reticulated collection network and four (4) pump stations distributed throughout the town area. The final destination of the collected residuals is an oxidation pond located on the south part of the town, outside of town boundaries. All formal residential areas are connected to the town sewage system while septic tanks are found at some informal settlement and nearby villages.

Infrastructure- Okahao is equipped with all relevant infrastructure which make doing business in the town pleasurable. The town is covered by the national electricity system by NORED. The Town has good infrastructure and services (road networks, telecommunications, postal services, schools, hospitals, safety and security services and basic urban services i.e., water, sewer, electrical reticulation and shopping complexes). These services are mainly constructed in all three townships.

Road network: With regards to the road network, the Okahao town is linked to the national transport node infrastructure. Okahao is also connected to main growth centres within Okahao constituency and neighbouring constituencies. The most important road networks includes Oshakati-Okahao-Tsandi-Outapi, Okahao-Omakange-Okahao-Omutambo Gwomawe roads, these roads connect the extreme western end of the east west tourist route from northern east to Etosha, National Park and would enable the tourist access via Okahao to Kunene (Ruacana

waterfalls as well as Epupa falls) these infrastructures provide a good foundation for any economic investments. The telephonic and mobile communication infrastructures are well established (LED, 2012; Okahao Town Council, 2015).

Communication-The town has accessibility to selected services/facilities. These include television, radio, newspaper, telephone and computer. The radio is the most accessible service/facility, with 82.7 % in urban areas.

- **Economic context**

Readily serviced land is available for both residential and commercial use. The town also welcomes Public Private Partnership for developmental projects such as land servicing and other ventures. The good business and investment opportunity in the town is proven by most known retail brands operating within the town such as Shoprite, U-Save, Style, etc. There are also many other local brands operating, offering a good shopping ambiance, especially craft, baskets unique to the town and surrounding villages. Agriculture, (mainly crop and animal husbandry) is the most important sector in the area and is practised mainly on a subsistence basis. However, of late the Okahao town has become an important centre for livestock trading where animal are sold both live or as meat. Other important economic sectors are such as retailers, transport and tourism (LED, 2012). The main employer are the Ministry of Education, Ministry of Health, Social Services and Rehabilitation, Ministry of Safety and Security, Ministry of Agriculture and Forestry, Ministry of Youth and Sport and Culture, Okahao Town Council, NAMPOST, Okahao Constituency Office and the Local Business Sector. There are also many other local brands operating, offering a good shopping ambiance, especially craft, baskets unique to the town and surrounding villages.

- **Public Health and Education**

Okahao is home to six schools which includes two Secondary schools (Etalaleko and Shaanika Nashilongo Secondary School), one combined school (Nangombe Combined School), one primary school (Okahao Primary School), one private school and a kindergarten. There is also a community library, a Police station, a prison and several government ministries (MAWF, MoHSS, MLR and MWT) in the town (Okahao, 2016; LED, 2012).

The town is served with a district hospital with specialised doctors on duty around the clocks. The district hospital is fully fledged with outpatient department, as well as the pharmacy,

radiography, dental clinic, laboratory, eye clinic, a communicable disease control (CDC) department. The hospital was recently renovated and upgraded to the tune of N\$27 million. The town is also served with two PHC clinics, pharmacies and private medical centres for general and dental expertise operating during the day (Okahao Town Council, 2016; MoHSS, 2004).

- **Land availability**

Most of the land within the existing town boundaries developed except for low lying areas. The residential areas are located mostly on the southern part, while the business/commercial development occurs mainly along the Ruacana – Oshakati road, and on the northern side of the town. Extension 2 is located south to southeast of the town and accommodates both residential, local businesses, institutional, government institutions and several vacant areas which are zoned as POS.

- **Provision of Public Open Spaces in Okahao**

The town of Okahao is blessed with a prominent number of developed and undeveloped public open spaces. Most of the areas zoned as POS in the town are low lying areas with water depression features. There are several areas zoned as POS within Okahao extension 2 most of which are low lying areas.

5. Public participation process

The Environmental Assessment Regulations specifies that a Public Participation Process must be conducted as an integral part of the EIA study.

5.1 Notification of I&APs and Stakeholders

Potential interested and affected parties (I&APs) were notified through advertisements that were advertised twice in two local newspapers Confidantes 03 & 09 March 2023 and Windhoek Observer 02 & 09 March 2023. In addition, public notices will be displayed at the Council offices and at the project site. Public notices were also displayed at the Okahao Town Council notice board.



These public notices provided brief information about the proposed project and the EIA process. The public advertisement and notices provided in invitation to any potential interested and affected to be registered and/or send comments for consideration. A public meeting was to be decided upon the consultation process if need arises. The deadline for registration for I&AP's and submission of comments was on the 24 March 2023.

5.2 Key stakeholders Consulted.

Apart from public invitations and notifications, the consultant has identified key stakeholders with relevant authorities to the proposed activities. These includes various departments within the Okahao Town Council, Government Ministries and Public Enterprises. A full list of Stakeholders and IAPs that were consulted is appended to this report (Appendix B).

5.3 Summary of issues from consultation

STAKEHOLDER	ISSUE RAISED	EAP COMEMNTS
Okahao Town Council-Infrastructure	<ul style="list-style-type: none"> • Are there any Service lines Water, Sewage, etc. traversed through the site? • Is the proposed Rezoning in line with the Town Planning Scheme • Any other comment or recommendation for consideration in the study 	<p>No, the services in the area are lined along street reserve. The erf is not affected by services.</p> <p>Yes, the area where erf is located is suitable for general Business purposes, excluding businesses such as factories, garages and hazardous services. The Council will assess the rezoning application to determine the suitability of the proposed development interests on the erf.</p> <p>The area is currently a catchment area for storm water, hence the client is strongly advised to fill up this area with gravel materials compacted to approved engineering standards prior to development. Building Plans will only be approved once the Council is satisfactory with earth work Plans to fill up the area and deviation of storm water.</p>
IAPs	All IAPs were invited to comment on the EIA study as well as to submit any objection with office of the CEO on the proposed Rezoning within the prescribed 14days	<p>General comments from Residents are that, a Storm water channel should be provided to channel water during rainy season.</p> <p>Residents also indicated that since the site is any eyesore, the proposed development is ideal.</p> <p>No objections were received during the given time period.</p>

6. LEGAL REQUIREMENTS

This section provides a review of applicable and relevant Namibian legislation, policies and guidelines regarding the environment which was considered while conducting the Scoping/EIA for the proposed project.

Table 1: Namibian Legislation relevant to the project

LEGISLATION	PROVISION	PROJECT IMPLICATION
1. National Legislation		
Constitution of the Republic of Namibia (1990)	The articles 91I 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.	“Public Open Space closure is subjected to an EIA hence this study. Notices were given to Interested ad Affected Parties
Water Resources Management Act 2004	This Act provides provision for the control, conservation and use of water for domestic, agricultural, urban and industrial purposes. In addition the Act clearly gives provision that pertain with license or permit that required abstracting and using water as well as for discharge of effluent.	The protection of ground and surface water resources should be a priority. Obligation not to pollute surface water bodies.
Draft Urban and Regional	It is envisaged that the current system of land	The Developer shall apply for the

Planning Bill and Regulations	use planning and development controlled in Namibia will be comprehensively reformed by the enactment of the draft Urban and Regional Planning Bill and regulation. The Bill 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 of urban areas.	rezoning of Public Open Space to the Township Board/NAMPAB as per this Act requirements.
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.
Local Authorities Act 1992 (Act No. 22 of 1992)	Section 50 (1) (c) Any person with objection should do so in writing within 14 days Section 50 (3) (a) (ii) Notice should be given to all interested and affected parties for the proposed closure of POS	Notices were given and advertised in the local newspapers No objection was received with the 14days period
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 or 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 recommendation of the Council prescribe the	A registered Town Planner has been appointed for this project.

	<p>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 of urban areas.</p>	
<p>Town Planning Ordinance (No. 18 of 1954)</p>	<p>Subdivision of land situated in any area to which an approved Town Planning Scheme applies must be consistent with that scheme (S31).</p>	<p>Town Planning Procedures will be registered through the NAMPAB</p>
<p>Okahao Town Planning amendment Scheme No.2</p>	<p>Identify different land use categories, zoning, use and consent use.</p> <p>“Public Open Space” is refer to as a land which is under or will be under the ownership of the local authority, which is not leased nor will it be leased on a long term basis, and which is utilized or will be utilized as an open space or a park, garden, picnic area, playground or square and includes a public place.</p>	<p>Consent was obtained from the Town Council for the rezoning of the proposed land from POS to Single Residential. Town Planning procedures will be registered and approval will be requested from NAMPAB.</p> <p>Consent must be obtained if any other activities are required.</p>

7. ASSESSMENT OF PROJECT IMPACTS

The EIA Regulations require “a description of the significance of any significant effects, including cumulative effects, which may occur as a result of the undertaking of the activity”.

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 2: Significance Assessment criteria

CRITERIA	DESCRIPTION			
EXTENT	National (4) The whole country	Regional (3) Omusati 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 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 3: Criteria for significance ratings

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.	

8. ANTICIPATED PROJECT IMPACTS AND MITIGATION MEASURES

The construction and operation of the proposed development and its associated infrastructures may result into a number of potential impacts on the physical, biophysical and socio-economic environment of the proposed site. These impacts could be positive, negative or neutral. Below is description of potential impacts that may arise as a result of the project based on its context, knowledge of the area, issues raised, and information provided during the Public Participation Process.

Table 4: Potential Impacts during Planning & Design and Development

ASPECT	POTENTIAL IMPACTS	SIGNIFICANCE RATING				MEASURES AND REMARKS
		Extent	Duration	Intensity	Probability	
BIOPHYSICAL						
Impact on Biodiversity	<ul style="list-style-type: none"> Vegetation clearance during construction 	Site	Low	Low	Improbable	The vegetation of the site
Topography and aesthetic view	<ul style="list-style-type: none"> Change of visual and aesthetic view 	Local	Medium term	Low	Probable	<ul style="list-style-type: none"> The development site must be kept clear of building rubble and general waste.
Impact on Soil	<ul style="list-style-type: none"> Possibility of erosion during site clearance Compaction of soil during construction Extracting filling material might cause secondary impacts to the source area 	Local	Medium-term	Moderate	Probable	<ul style="list-style-type: none"> All open trenches must be filled, and area must be properly rehabilitated Back filling materials should be sourced from burrow pits with valid ECC.
Impact on Drainage	<ul style="list-style-type: none"> Construction activities may affect the flow of storm water of the area 	Site	Short-term	Moderate	Probable	<ul style="list-style-type: none"> The development of Storm water channel must precede other development activities.

Occupational and Public safety	Air quality	<ul style="list-style-type: none"> • Release of dust from building and development activities, equipment and construction vehicles • Generation of fumes from vehicles and construction equipment may pollute the air 	Local	Short-term	Moderate	Probable	<ul style="list-style-type: none"> • Use dust-suppressing agents i.e. spraying with water • Limit the number of Vehicle and heavy implements at the site • Avoid dust generating activities i.e. blasting during strong wind.
	Noise	<ul style="list-style-type: none"> • Noise impacts during construction phase will occur from construction vehicles etc. which might be a nuisance to residents and employees. 	Local	Short-term	Moderate	Probable	<ul style="list-style-type: none"> • Construction should be limited to normal working days and office hours (08h00-17h00). • Avoid working during odd hours. • Limit the number of Vehicle and heavy implements at the site. • Watering of all construction haulage.
	Waste	<ul style="list-style-type: none"> • Generation of waste through construction and rehabilitation activities mainly building rubbles and domestic waste. • Sewage waste will be generated from temporary construction toilets on site. 	Site	Short-term	Low	Probable	<ul style="list-style-type: none"> • All solid waste generated must be gathered and disposed to the dumpsite. • All properties must be provided with a standard ablution facility and connected to the municipal sewer system
	Water	<ul style="list-style-type: none"> • Contamination of surface water and groundwater from construction activities 	Local	Short-term	Low	Probable	<ul style="list-style-type: none"> • Since the site has a water depression feature, it is advisable that construction activities be carried out during dry season rather than on rainy season. • Do not park Vehicle or Equipment with leaks for too long at the site. • All contaminated soil must be cleaned up.

	<ul style="list-style-type: none"> Construction activities may create a number of health risks to the employees and public at large. 	Local	Short-term	Moderate	Probable	<ul style="list-style-type: none"> All employees must have PPE. Signage should be placed at the entrance of the construction. Employees must be trained on the nature of their duties. Construction equipment must be of required engineering standards
2. SOCIO-ECONOMIC						
Traffic impacts	<ul style="list-style-type: none"> Increase in traffic congestion within the area during construction and rehabilitation activities 	Site	Medium term	Moderate	Probable	<ul style="list-style-type: none"> There is already an existing access road which provides access to the site and adjacent properties. Flagmen and traffic controls should be appointed to regulate traffic flow of construction vehicles.
Crime	<ul style="list-style-type: none"> Construction activities are associated with an increase in criminal activities due to an influx of temporary, migrant workers 	Site	Short-term	Low	Probable	<ul style="list-style-type: none"> All equipment can be stored away from the site or in a secure place.
Employment opportunities	<ul style="list-style-type: none"> The construction phase will provide temporary employment opportunities during construction (+ve) 	Local	Short-term	High	Definite	<ul style="list-style-type: none"> Employment opportunities will be created during development
Economic Development	<ul style="list-style-type: none"> Construction phase will create economic opportunities for the local businesses (+ve) 	Local	Short-term	Low	Highly probable	<ul style="list-style-type: none"> Economic drives will be generated from development of the site

Table 5: Potential Impacts during Operation phase

ASPECT	POTENTIAL IMPACTS	RATING				MEASURES AND REMARKS
		Extent	Duration	Intensity	Probability	
BIOPHYSICAL	Impact on Biodiversity	Site	Long-term	Low	Improbable	<ul style="list-style-type: none"> The development must include greenery as part of landscaping to enhance biodiversity and aesthetic view.
	Impact on Soil	Local	Long-term	Moderate	Improbable	<ul style="list-style-type: none"> Ensure proper drainage from the site. Provide proper maintenance of sewage pipes and rehabilitate the area in case of spillage/leaks
	Impact in Groundwater	Local	Long-term	Moderate	Improbable	<ul style="list-style-type: none"> Fix all leaking sewage pipes. Do not allow direct discharge of pollutants in the surface runoff. Ensure proper drainage of storm water by installing and maintenance of culverts that carries rainwater away from the site to avoid flooding of neighboring properties.
	Waste generation	Site	Short-term	Low	Probable	<ul style="list-style-type: none"> All solid waste generated must be gathered and disposed to the Okahao dumpsite. Ensure maintenance of sewage system.
	Increase Water demand.	Local	Long-term	Moderate	Probable	<ul style="list-style-type: none"> Encourage rainy water harvesting for domestic use to

						reduce water consumption
Increase Electricity demand.	<ul style="list-style-type: none"> Increase demand on electricity 	Local	Long-term	Moderate	Probable	<ul style="list-style-type: none"> Encourage use of renewable energy i.e., Solar geysers to supplement the electricity supply (if deemed feasible).
Increase demand of Municipal services	<ul style="list-style-type: none"> Increase demand on municipal services i.e., sewer connection and maintenance, waste collection etc. 	Local	Long-term	Moderate	Probable	<ul style="list-style-type: none"> Most of the required services are readily available i.e., sewer, water, roads and electricity. Approval must be obtained from the Town Council for all municipal services.
2. SOCIO-ECONOMIC						
Traffic impacts	<ul style="list-style-type: none"> Increase traffic flow on the adjacent roads during operation phase 	Site	Medium term	Moderate	Probable	<ul style="list-style-type: none"> Traffic impacts during operation is expected to be low due to additional access road provided
Economic development (+ve)	<ul style="list-style-type: none"> The proposed development will enhance economic opportunities for local businesses. 	Local	Long-term	High	Probable	<ul style="list-style-type: none"> The development of this property will have positive economic benefits to the town. Developing the site will create new opportunities for unemployed people in Okahao.
Employment creation						

9. 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. The other objective was to identify the gaps of information, hence determine the need for any specialist studies. 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.

9.1 Assumptions and Conclusions:

- The findings of the Scoping Assessment are considered sufficient, and no additional specialist study is required.
- The proposed activity is planned at a time and place in a developing sector of the town and can be a natural opportunity associated with the growth of the town.
- The proposed development will not compromise the provision of Public Open Space in Okahao since only a portion of the site is to be rezoned.
- The proposed development shall be the activities specified under “Single Residential” in line with the Okahao Town Planning Scheme and that consent must be obtained for establishment other activities not specified under the proposed zoning.

9.2 EAP Recommendations

It is recommended that the Developer must.

- Construct a storm water channel to drain water away from the site.
- Apply filling materials by means of gravel of G7 quality which should be compacted to 90% Modd AASHTO.
- Install municipal services i.e., sewerage lines, water line etc upon approval by the Town Council
- Implement the proposed mitigation measures outlined in the EMP.

Lastly, it is recommended that the Environmental Commissioner consider issuing an Environmental Clearance Certificate to authorize for the **Proposed Subdivision of Erf 2446, and Closure and Rezoning of Portions A to G from Public Open Space to Single Residential, Okahao Extension 9.**

10. REFERENCES

- Government Gazette. No.5367 Promulgation of Water Resource Management Act, 2013 (Act No. 11 of 2013 of Parliament), 2013, Windhoek, Republic of Namibia.
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- Tamayo V, et al, Flood risk management Plan, 2011. Ministry of Regional, Local Government, Housing and Rural Development
- Okahao Town Council, 2012. Local Economic Development (LED) of Okahao
- Omusati Regional Council, 2010. Omusati Regional Profile
- Ministry of Health and Social Services, Omusati Regional annual Report, 2003/04

11. APPENDICES

APPENDIX A: List of IAPs

APPENDIX B: Proof of Consultations

APPENDIX C Environmental Management Plan (EMP)

APPENDIX A: List of Registered IAPs

ORGANISATION	REPRESENTATIVE AND TITLE	CONTACT DETAILS
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Developer	Epangelo General Dealer cc Mr. Penda Shatimwene	0816672196
NORED	Mr. Tomas Shikomba	0812176280