

**ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED  
SUBDIVISION OF OMUTHIYA TOWNLANDS NO. 1013 AND TOWNSHIP  
ESTABLISHMENT OF OTHITHIYA PROPER AND OTHITHIYA EXTENSION 1  
AND ASSOCIATED INFRASTRUCTURE, OMUTHIYA, OSHIKOTO REGION**

## **ENVIRONMENTAL SCOPING REPORT**



**Prepared for:**

Omuthiya Town Council  
P. O. Box 19262  
Omuthiya

**Prepared by:**

**Green Gain**  
Consultants

 +264 81 142 2927

 info@greengain.com.na

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

**FEBRUARY 2024**

## DOCUMENT DESCRIPTION

---

**Project Title:** Subdivision of farm omuthiya townlands No. 1013 and township establishment of Othithiya proper and Othithiya extension 1 and associated infrastructure in Omuthiya, Oshikoto region.

**Client:** Omuthiya Town Council  
P. O. Box 19262  
Namibia

**Project location:** Omuthiya  
Oshikoto Region  
Namibia

**Project title:** Environmental Scoping Report

**EAP:** Green Gain Consultants cc  
J. K Amushila

**Application:** **APP002891**

**Date:** **June 2023 to February 2024**

## Table of Contents

---

DOCUMENT DESCRIPTION .....	1
List of Figures .....	4
List of tables.....	4
List of Abbreviations and Acronyms .....	5
1. Introduction and Background.....	6
1.1 Introduction .....	6
1.2 Scope of the study .....	6
1.3 Terms of Reference .....	7
1.4 Project team.....	8
2. LEGAL FRAMEWORK .....	9
2.1 Environmental Management Requirements .....	9
2.2 Applicable legislations .....	9
3. PROJECT DESCRIPTION.....	16
3.1 Locality .....	16
3.2 Site Description .....	17
3.3 Overlapping Land Uses.....	18
3.4 The Proposed Development.....	19
3.4.1 Proposed land uses .....	19
3.4.2 Proposed Township layouts .....	20
3.4.3 Other land uses .....	22
4. DESCRIPTION OF THE AFFECTED ENVIRONMENT.....	25
4.1 Biophysical Environment.....	25
4.1.1 Climate .....	25
4.1.2 Soils and Geology.....	25
4.1.3 Landscape and topography.....	26
4.1.4 Soil and Geology .....	26
4.1.5 Flora and fauna.....	27
4.1.6 Groundwater.....	28
4.1.7 About the King Nehale Conservancy .....	29
4.2 Socio-economic Environment.....	30
4.2.1 About the area.....	30
4.2.2 Socio-economic development.....	31
5. PUBLIC PARTICIPATION.....	32
5.1 Notification of key Stakeholders and Interested & Affected Parties .....	32
5.2 Public meeting.....	33

5.3	Summary of issues raised during consultation. ....	34
6.	IMPACT ASSESSMENT .....	37
6.1	Introduction .....	37
6.2	Method of Assessment.....	37
6.3	Assessment of Identified Impacts .....	39
7.	CONCLUSION AND RECOMMENDATIONS.....	44
7.1	Assumptions and Conclusion .....	44
7.2	Recommendations.....	46
8.	REFERENCES .....	47
9.	APPENDICES.....	48
9.1	APPENDIX A: Council Approval .....	48
9.2	APPENDIX B: Proof of Consultations .....	48
9.3	APPENDIX C: EMP .....	48

## List of Figures

---

FIGURE 1: LOCALITY MAP.....	16
FIGURE 2: TOURIST ATTRACTION SITE IN THE AREA .....	17
FIGURE 3: SITE SURROUNDINGS .....	18
FIGURE 4: PROPOSED TOWNSHIP LAYOUT: OTHITHIYA PROPER.....	20
FIGURE 5: PROPOSED TOWNSHIP LAYOUT FOR OTHITHIYA EXTENSION 1 .....	21
FIGURE 6: TOPOGRAPHIC MAP. ....	26
FIGURE 7: LOCAL FLORA AND FAUNA OF THE SITE .....	27
FIGURE 8: HYDROGEOLOGICAL MAP .....	28
FIGURE 9: MAP OF THE KING NEHALE CONSERVANCY.....	29
FIGURE 10: LOCALITY OF OMUTHIYA.....	30
FIGURE 11: PUBLIC MEETING .....	33

## List of tables

---

TABLE 1: NAMIBIAN LEGISLATION RELEVANT TO THE PROJECT .....	9
TABLE 2: PROPOSED LAND USES .....	19
TABLE 3: IMPACT ASSESSMENT CRITERIA.....	37
TABLE 4: CRITERIA FOR SIGNIFICANCE RATINGS AND ASSOCIATED RANGE OF SCORES .....	38
TABLE 5: POTENTIAL IMPACTS DURING THE DEVELOPMENT PHASE (CONSTRUCTION) OF THE PROPOSED DEVELOPMENT .....	39
TABLE 6: POTENTIAL IMPACTS DURING OPERATION PHASE OF THE PROPOSED DEVELOPMENT .....	42

## **List of Abbreviations and Acronyms**

---

BID:	Background Information Document
EA:	Environmental Assessment
EAP:	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EIA:	Environmental Impact Assessment
EMA:	Environmental Management Act
EMP	Environmental Management Plan
EMP:	Environmental Management Plan
ESR:	Environmental Scoping Report
GG:	Government Gazette
GN:	Government Notice
I&APs:	Interested and Affected Parties
MEFT:	Ministry of Environment, Forestry and Tourism
OTC:	Omuthiya Town Council
PPE:	Personal Protective Equipment
RDC:	Rural Development Centre
KNC:	King Nehale Conservancy

# **1. Introduction and Background**

---

## **1.1 Introduction**

The Omuthiya Town Council, hereinafter referred to as the proponent, intends to subdivide the Remainder of Farm Omuthiya Townlands No.1013 into 23 Portions and Remainder for various development as follows.

- Portion 1 and 2 Township development of Othithiya Proper and Othithiya Extension 1
- Portion 3: Government (Okashana Rural Development Centre)
- Portion 4, 5 & 7-12: Agriculture
- Portion 13: Business
- Portion 14-16, 18: Special.
- Portion 17: Hospitality/Recreational
- Portion 19-22: Public Open Spaces
- Portion 23: Street network

The proposed subdivision and intended land use activities as outlined above, will trigger certain activities listed under the Environmental Management Act of 2007 (Schedule 5.1) and its regulations (GN No. 30 of 2012), as activities that may not be undertaken without an Environmental Impact Assessment (EIA) being conducted and Environmental Clearance Certificate (ECC) being obtained.

Green Gain Consultants cc has been appointed to attend to and complete an Environmental Scoping Assessment, prepare an Environmental and Social Management Plan (ESMP) and apply for the Environmental Clearance Certificate (ECC) on behalf of the proponent.

## **1.2 Scope of the study**

This scoping study was carried out in accordance with the Environmental Management Act (No. 7 of 2007) and it's EIA Regulations (GG No. 4878 GN No. 30). It indicates the description of the environment that may be affected by the activity and the manner in which the activity may affect the environment. Information relating to the receiving environment and its social surroundings has been sourced through the following methods.

- Site visits to collect primary data.
- Gathering existing information relating to similar developments and issues.
- Discussions, meetings, and site visits with authorities.
- Opinions and concerns raised by I&AP's and stakeholders; and
- Ecological/hydrological surveys and qualified opinions.

### 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 process covered the following steps, which are reported in this 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.
- Identify existing environmental (both ecological and socio-economic) conditions of the receiving environment in order to identify potentially sensitive areas.
- Evaluate the need and desirability of the proposed development.
- Notify and consult I&AP's regarding the proposed development and provide them with reasonable opportunity to participate during the process.
- Identify potential environmental impacts the proposed development will have on the natural & urban environment and assess their significance; and
- Outline management and mitigation measures in an EMP to minimize and/or mitigate potentially negative impacts, which cannot be avoided.

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).

The following is vital as part of the scope of work:

a) **Environmental impacts (biophysical)**

- Impact on flora and fauna
- Impact on surface water and ground water
- Impact on land capability
- Solid waste disposal
- Impact of the proposed and required infrastructure and services

b) **Socio-economic impacts**

- Impact on traffic
- Impact on local economy
- Impact on existing land uses



## 1.4 Project team

The project involves the following teams.

Proponent	<b>Omuthiya Town Council</b> P. O. Box 19262 Omuthiya Namibia  Ms. Dina Ambrosius <b>Environmental Officer</b>  Mr. Mario Siukuta <b>Property Officer</b> <a href="mailto:msiukuta@omuthiyatc.org.na">msiukuta@omuthiyatc.org.na</a>
Town Planner	<b>Stubenrauch Planning Consultants</b> PO Box 41404, Windhoek Tel: +264 61 251189 Fax: +264 61 252157
Environmental Assessment Practitioner	<b>Green Gain Consultants cc</b> Office Erf 2696, Joe Davis, Narraville, Walvis Bay Email: <a href="mailto:info@greengain.com.na">info@greengain.com.na</a>

## 2. LEGAL FRAMEWORK

---

### 2.1 Environmental Management Requirements

The proposed activities of Township development and associated infrastructure will trigger activities listed under the Environmental Management Act No. 7 of 2007 and the EIA Regulations (No. 03 of February 2012) as follows:

#### 10. Infrastructure

##### 10.1 The construction of-

- (a) Oil, water, gas and petrochemical and **other bulk supply pipelines.**

##### 10.2 The route determination of roads and design of associated physical infrastructure

- (a) It is a public road;
- (b) The road reserve is wider than 30 meters; or
- (c) The road caters for more than one lane of traffic in both directions.

### 2.2 Applicable legislations

In addition, the development of this kind is guided by a sound legislative and policy framework. This section provides a review of applicable and relevant Namibian legislation, policies, and guidelines. This review serves to inform the Developer of the requirements and expectations, as laid out in terms of these instruments, to be fulfilled before the proposed project may commence. The findings of the abovementioned review in preparation of this scoping report for the proposed development are summarised below.

**Table 1: Namibian Legislation relevant to the project**

Legislation/ Policy/ Guideline	Relevant Provisions	Implications for this project
<b>The Constitution of the Republic of Namibia (1990)</b>	The article 95(i) recites: "The State shall actively promote... maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future" Article 91(c) recites: "The functions of the Ombudsman shall be defined and prescribed by an Act of Parliament and shall include the following... the duty to investigate complaints concerning the over-utilization of living natural resources, the	Through the implementation of the EMP, the proponent shall be advocating for sound environmental management as set out in the Constitution.

	irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia”.	
<b>Environmental Management Act (No. 7 of 2007)</b>	<ul style="list-style-type: none"> <li>• Requires that projects with significant environmental impact are subject to an environmental assessment process (Section 27).</li> <li>• Details principles which are to guide all EAs.</li> </ul>	The EMA and its regulations should inform and guide this EA process.
<b>Environmental Impact Assessment Regulations GN 28-30 (GG 4878)</b>	<ul style="list-style-type: none"> <li>• Details requirements for public consultation within a given environmental assessment process (GN 30 S21).</li> <li>• Details the requirements for what should be included in a Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15).</li> </ul>	
<b>The Regional Councils Act (No. 22 of 1992)</b>	<ul style="list-style-type: none"> <li>• This Act sets out the conditions under which Regional Councils must be elected and administer each delineated region. From a land use and project planning point of view, their duties include, as described in section 28 “to undertake the planning of the development of the region for which it has been established with a view to physical, social and economic characteristics, urbanisation patterns, natural resources, infrastructure, land utilisation pattern and sensitivity of the natural environment”</li> </ul> <p>The main objective of this Act is to initiate, supervise, manage and evaluate development.</p>	The Oshikoto Regional Council is considered to be a stakeholder and was consulted during the EA process
<b>Labour Act (No. 11 of 2007)</b>	<ul style="list-style-type: none"> <li>• Details various requirements regarding health and safety of labourers</li> <li>• Details requirements regarding minimum wage and working conditions.</li> </ul>	The Developer should ensure that all contractors involved during the construction, operation and maintenance of the proposed project comply with the provisions of these legal instruments.
<b>Public Health Act (No. 1 of 2015)</b>	Provide a framework for a structured uniform public and environmental health system in Namibia; and to provide for incidental matters. Part 9 prescribes procedures for Integrated Waste Management, while Part 10 calls for the prevention of creating Health Nuisances.	The developer should ensure compliance with the provisions of these legal instrument. A general obligation for the contractor not to pollute the environment
<b>National Heritage Act (No. 27 of 2004)</b>	Section 48(1) states that “A person may apply to the [National Heritage] Council [NHC] for a permit to carry out works or	Any heritage resources discovered during construction and operations requires a permit from the NHC for relocation.

	activities in relation to a protected place or protected item”.	
<b>Water Resources Management Act (No. 24 of 2004)</b>	<ul style="list-style-type: none"> <li>• Provides provision for the control, conservation and use of water for domestic, agricultural, urban and industrial purposes.</li> <li>• Deals with provision of license/permit that are required for abstracting, using water and discharge of effluent.</li> </ul>	The protection of groundwater resources should be a priority. Obligation not to pollute the environment and soil.
<b>Townships and Division of Land Ordinance (No. 11 of 1963)</b>	Details the functions of the Township Board including what they consider when receiving an application for Township Establishment (S3).	The proposed layout and land uses should be informed by environmental factors such as water supply, soil etc. as laid out in Section 3.
<b>Road Ordinance 1972 (No. 17 Of 1972)</b>	<ul style="list-style-type: none"> <li>• Width of proclaimed roads and road reserve boundaries (S3.1)</li> <li>• Control of traffic on urban trunk and main roads (S27.1)</li> <li>• Rails, tracks, bridges, wires, cables, subways or culverts across or under proclaimed roads (S36.1)</li> <li>• Infringements and obstructions on and interference with proclaimed roads. (S37.1)</li> <li>• Distance from proclaimed roads at which fences are erected (S38)</li> </ul>	<p>The limitations applicable on RA proclaimed roads should inform the proposed layout and zonings where applicable.</p> <p>Access from D3646 road should be approved by the Roads Authority (RA).</p> <p>The following restrictions must apply.</p> <ul style="list-style-type: none"> <li>• 100m from the main road for main building</li> <li>• 30m from the road for any structure</li> </ul>
<b>Pollution Control and Waste Management Bill</b>	<ul style="list-style-type: none"> <li>• To prevent and regulate the discharge of pollutants to the air, water and land;</li> <li>• To furthermore regulate noise, dust and odour pollution; and to establish a system of waste planning and management</li> </ul>	The Developer should ensure compliance with the provisions of these legal instrument.
<b>Soil conservation Act 76 of 1969</b>	<p>The objectives of the Soil Conservation Act 76, 1969 are to make provision for the combating and prevention of soil erosion, and the conservation, protection, and improvement of the soil, the vegetation, and the sources and resources of the water supplies.</p> <p>Part II deals with soil conservation works and it further states that in section 4(1). The Minister may by means of a direct order the owner of land to construct the soil conservation works referred to in such direction either on land belonging to such owner or on land belonging to another person, in such manner and within such period as may be mentioned in such direction, if the Minister is of the opinion that the construction of such soil conservation works is</p>	Prior to the construction of the below ground pipeline and ground level reservoir, geotechnical investigations should be carried out to determine the engineering properties of the soil(s) and/or rock(s) underlying the sites, including the identification of potential problem soils and the presence of an underground water table.

	<p>necessary to achieve any object of this Act in respect of the land belonging to such owner.</p>	
<p>National Labour Act 11 of 2007</p>	<p>The objectives of the National Labour Act are:</p> <ul style="list-style-type: none"> <li>• To establish a comprehensive labour law for all employers and employees; to entrench fundamental labour rights and protections.</li> <li>• Regulate basic terms and conditions of employment.</li> <li>• Ensure the health, safety, and welfare of employees and protect employees from unfair labour practices.</li> <li>• To regulate the registration of trade unions and employers' organization and regulate collective labour relations.</li> <li>• To provide systematic prevention and resolution of labour disputes.</li> </ul> <p>Some of the notable Sections under this Act are:</p> <p>Health and Safety Procedures Section 17 (1) The employer shall prepare any health and safety procedure referred to in sub-regulation (1) in consultation with the workplace safety committee concerned.</p> <p>Section 22. (1) In the event of an accident or dangerous occurrence in or in connection with a workplace or if an employee dies or suffers a serious injury because of such an accident or dangerous occurrence, the employer shall notify and report such accident to the Chief Inspector of Labour of the area.</p> <p>Notification of Occupational Diseases (OD), Section 23. If a medical practitioner finds that any person is suffering from an occupational disease listed in Annexure A. 2(1), or of any other disease that he or she believes was caused by that person's current or past employment, he or she shall immediately and in the form of Form OD. 1, report this fact to the chief medical officer of occupational health and safety.</p>	<p>The Proponent, Contractor, Sub-contractor shall all be guided by this Act when recruiting or handling employment-related issues.</p> <p>The Contractor must adhere to the minimum workplace safety standards such as all employees must be provided with appropriate Personal Protective Equipment (PPE).</p>

	<ul style="list-style-type: none"> <li>• It shall be an unfair dismissal, or unfair disciplinary action, in terms of section 45 by an employer if such employer terminates the services of, or takes disciplinary action against, such employee if such employee has contracted an occupational disease listed in Annexure A. 2 (1), or any other disease, because of his or her past or present employment with such employer. Section 210, states that an employer shall ensure that an employee wears or uses, to the satisfaction of an inspector, suitable and adequate personal protective equipment.</li> </ul>	
Public Health and Environmental Act of 2015	<p>Section 119 of this Act prohibits the existence of a nuisance on any land owned or occupied by the proponent. The term nuisance is important for this EIA, as it is specified, where relevant in Section 122 as follows:</p> <ul style="list-style-type: none"> <li>a) any dwelling or premises which is or are of such construction as to be injurious or dangerous to health or which is or are liable to favour the spread of any infectious disease.</li> <li>b) any dung pit, slop tank, ash pit, or manure heap so foul or in such a state or so constructed as to be offensive or to be injurious or dangerous to health.</li> <li>c) any area of land kept or permitted to remain in such a state as to be offensive, or liable to cause any infectious, communicable, or preventable disease or injury or danger to health; or</li> <li>d) Any other condition that is offensive, injurious, or dangerous to health.</li> </ul> <p>Furthermore, in terms of Section 8 of the Public Health Proclamation 16 of 1936, where a local authority is of the opinion that a nuisance is seriously offensive or a serious menace to the health, it may serve a notice on the owner or occupant of the nuisance to immediately remove the nuisance. Failure to</p>	Nuisance such as dust, noise, bad odours, etc. should be controlled during all project phases.

	abide by this provision is an offense.	
Atmospheric Pollution Prevention Ordinance No. 11 of 1976	<p>This Ordinance generally provides for the prevention of the pollution of the atmosphere and matters incidental thereto. The Ordinance deals with administrative appointments and their functions; the control of noxious or offensive gases; atmospheric pollution by smoke, dust control, motor vehicle emissions; and general provisions.</p> <p>Part IV of this ordinance deals with dust control. The Ordinance is clear in requiring that any person carrying out an industrial process which is liable to cause a nuisance to persons residing in the vicinity or to cause dust pollution to the atmosphere, shall take the prescribed steps or, where no steps have been prescribed, to adopt the best practicable means for preventing such dust from becoming dispersed and causing a nuisance.</p>	Of applicability to the envisaged project, is dust generated by vehicles or equipment as well as dust generated during construction. The risk of dust generation is high at the envisaged site. This deals with air pollution as it affects occupational health and safety, and no consideration is given to the natural environment.
No.5 of 1996: Nature Conservation Amendment Act, 1996.	The purpose of the Act is to amend the Nature Conservation Ordinance of 1975, so as to provide for an economically based system of sustainable management and utilisation of game in communal areas; to delete references to representative authorities; and to provide for matters incidental thereto	The proposed activities should not result in appreciable impacts and competition to the existing conservancy, instead, it must be harmonized with the operation of the conservancy.
Human Wildlife Conflict Policy	<p>The policy of the Government of Namibia is to manage human-wildlife conflict in a way that recognises the rights and development needs of local communities, recognises the need to promote biodiversity conservation, promotes self-reliance and ensures that decision-making is quick, efficient and based on the best available information.</p> <p>In order to achieve this, Government will delegate decision-making to the lowest appropriate and monitoring methods and develop the capacity of all stakeholders to manage human-wildlife</p>	Human-wildlife conflict is bound to occur where people and wildlife co-exist, Therefore the conflict needs to be managed. Since the proposed development site is located adjacent to a wildlife area (Conservancy) any case of human-wildlife conflict should be handled as per the Policy
Local Authorities Act 1992		Of relevance to this project is the Section 3 which defined the

		process to be followed for the proclamation of local authorities
Townships and Division of Land Amendment Act, 2000	<p><b>Establishment of Townships</b></p> <p>When a township has been proclaimed an approved township, under the provisions of this Ordinance or any other law, the dominium of the land therein comprising all public places shall ipso facto vest in the local authority within whose area of jurisdiction such land is situated, or if such land is not situated within the area of jurisdiction of a local authority, in the State in trust for any local authority which may thereafter be constituted in respect of the area within which such land is situated</p>	



### 3. PROJECT DESCRIPTION

#### 3.1 Locality

The proposed development site is located about 8km southeast of the Omuthiya town Central Business District (CBD). The site is sandwich between the B1 road from Oshivelo to Omuthiya and the D3646 road to King Nehale Gate of the Etosha National Park.

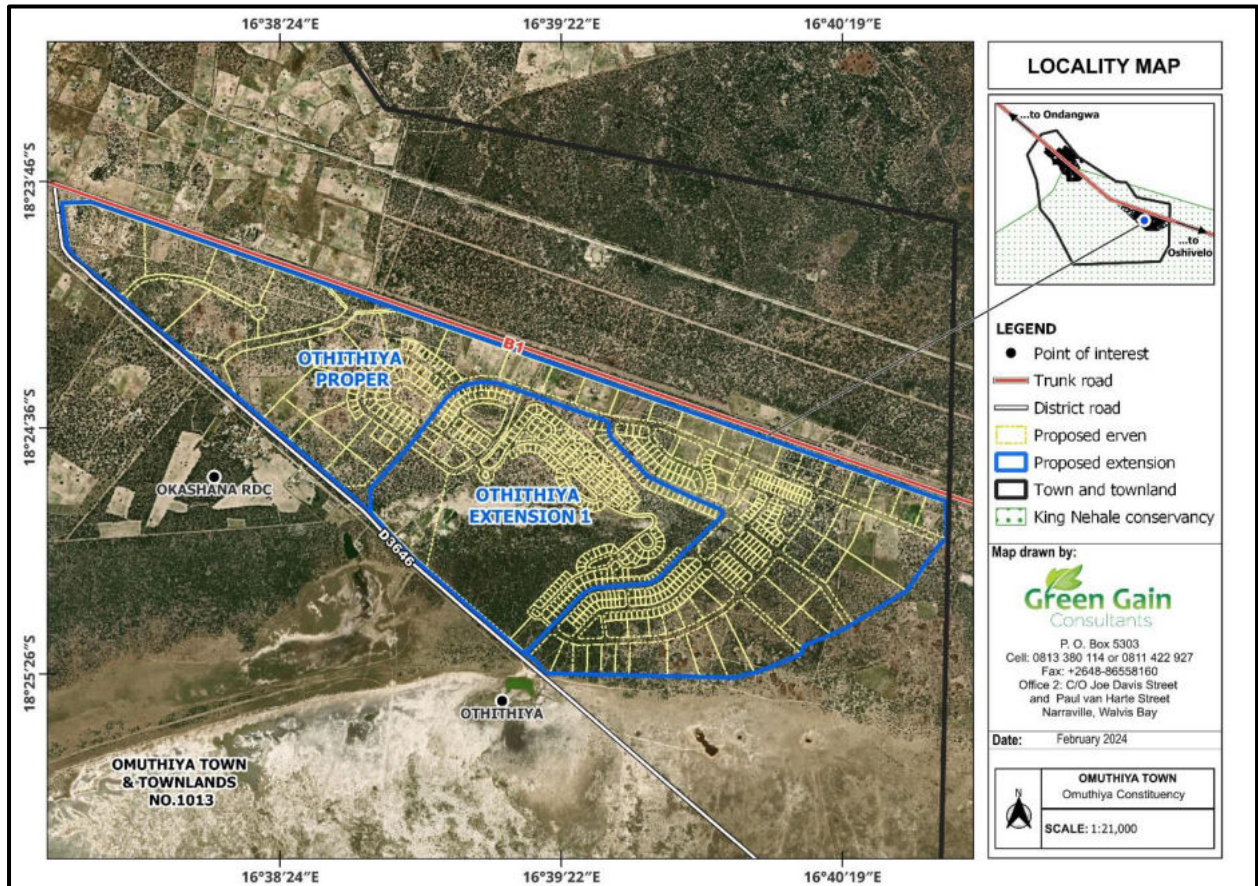


Figure 1: Locality map

### 3.2 Site Description

The proposed development site is located on an overlapping area of Omuthiya townlands and the existing King Nehale Conservancy (KNC). It is also adjacent to the existing Okashana Rural Development Center (RDC) on its west and a traditional home steads village across the B1 road. There are some temporary and make-shift houses, that are believed to be erected by cattle herders from the nearby villages.

The development site is still in its natural state and is occupied by a thick woodland savanna consisting of large trees mixed with shrubs, bushes, and grass species, thus often frequent by grazing and browsing domestic and wild animal. The development site is located a few distance from the water spring, well known “Othithiya” (Figure 2). The spring serves as an important water hole for domestic and wildlife animals, therefore, serves as tourist attraction and is a popular hangout spot in the area where many holidaymakers spent time creating fun memories with their families.



Figure 2: Tourist attraction site in the area

### 3.3 Overlapping Land Uses

As depicted in Figure 3 below, the proposed development site, although within the Omuthiya town and Townlands, it falls under the area overlapping with the existing King Nehale Conservancy.

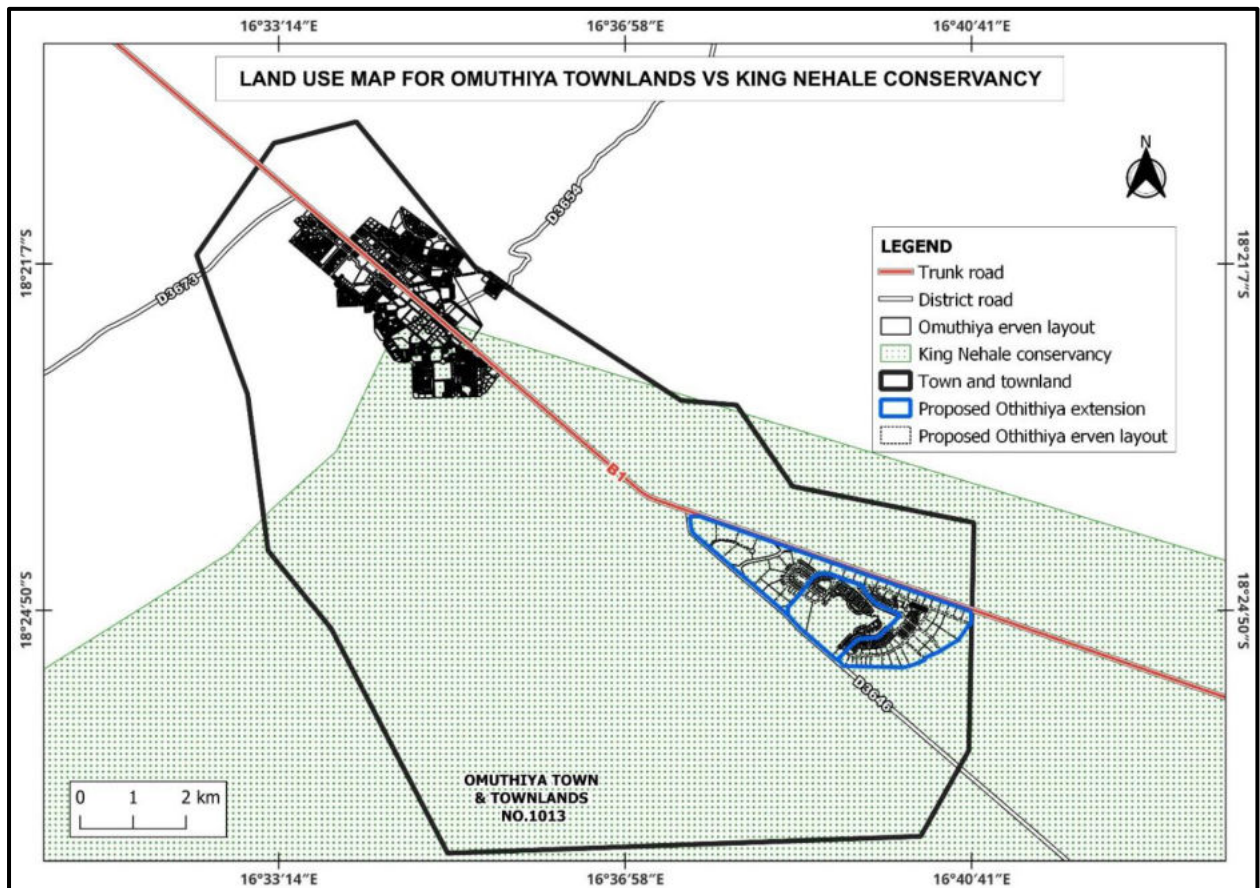


Figure 3: Site surroundings



## 3.4 The Proposed Development

### 3.4.1 Proposed land uses

The council has approved the subdivision of Remainder of Farm Omuthiya Townlands No.1013 into 23 Portions and the township establishment on Portions 1 and 2. Stubenrauch Planning Consultant (SPC), a registered town planning consultant, has been appointed to apply relevant town planning procedures for the required subdivision. Similarly, a registered Surveyor will be appointed to carry out the land survey of the development site.

The proposed township development will be a mixed use consisting of mainly “single residential” *general residential, general business, Institutional, POS and Remainder as Streets*.

Portion 1 and Portion 2 have a combined land surface of 685.54 ha made up of 485.65 for Portion 1 and 199.89 for Portion 2. Both will be utilized for the township development of Othithiya Proper and Othithiya Extension 1 respectively. The proposed townships will be for mixed uses, consisting of a total of 616 erven (339 erven for Othithiya Proper and 277 erven for Othithiya Extension 1). The spatial uses are predominated by residential purposes, followed by businesses, Institutional and complemented by Public Open Spaces and the remainder as street networks.

**Table 2: Proposed land uses**

Zoning	No of Erven	Area (ha)	Spatial Implication (%)
Residential	259	50.59	10.42
General Residential	7	5.10	1.05
Business	2	2.40	0.49
Institutional	1	1.93	0.40
Hospitality	2	5.40	1.11
Agriculture	58	321.28	66.16
Public Open Space	8	19.39	3.99
Street	2	15.14	3.12
Street	Remainder	64.41	13.26
<b>TOTAL</b>	<b>339 &amp; Remainder</b>	<b>485.65</b>	<b>100.00</b>

<u>Zoning</u>	<u>No of Erven</u>	<u>Area (ha)</u>	<u>Spatial Implication (%)</u>
Residential	262	47.46	23.75
General Residential	3	3.53	1.77
Business	3	3.96	1.98
Hospitality	1	20.61	10.31
Private Open Space	1	79.79	39.92
Public Open Space	7	26.73	13.37
Street	Remainder	17.79	8.90
<b>TOTAL</b>	<b>277 &amp; Remainder</b>	<b>199.89</b>	<b>100.00</b>





### **3.4.3 Other land uses**

The proposed subdivision will also result in a creation of 21 other land use blocks which are reserved for different land uses as follows.

- Portion 3 will be zoned “Government” to accommodate the existing Okashana Rural Development Center,
- Portions 4, 5 & 7-12 are reserved for Agriculture uses
- Portion 13: for general “Business”,
- Portion 14-16, 18: will be zoned Special
- Portion 17: will be zoned “Recreational” and will be used for the development of a Camping site.
- Portions 19-22 are located in a low-lying area and thus will be zoned “Public Open Spaces” whereas Portion 23 will be zoned “Street” for access purposes.

**This EIA study does not include listed activities on the remaining Portions (Agricultural on portions 4,5, 7,8,9,10,11 &12 and Recreational activities on Portion 17), thus a separate detailed EIA study should be conducted to assess the suitability of the intended activities on the remaining portions.**

### 3.5 Need and Desirability

The need and desirability of the proposed development is based on the following aspects.

The “**need**” for the project:

- The provision of low-income housing has become a national concern. With the growing demand for serviced land due to rapid urbanization, it is of high priority that the available and developable land surrounding the town area are developed to provide land especially for housing and businesses.
- The project is planned at a time and place in a developing sector of the town and can be regarded as a natural opportunity associated with the growth of the town.

The “**desirability**” of the project:

- As the site is in an “expansion zone” of the town
- The approval of this application would not compromise the integrity of the existing environmental management priorities for the area.
- The location factors favour this land-use (associated with the activity applied for) as it is located within a developing orientated area with much potential for growth.
- It is not anticipated that the activity will result in unacceptable opportunity costs as it will be integrated with the existing developments.
- The proposed development will ensure service delivery is provided while creating business opportunities for developers and creation of local employment.



### 3.6 Project Alternatives

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

- **Land use alternatives:** The proposed development site is within the town and townlands of Omuthiya, thus are expected to be developed at any time to accommodate the growth of town. Hence, the site is considered suitable for the proposed development and no alternative site is required. Moreover, although the OTC has enough vacant land within its town boundaries suitable for housing development, the proposed development site was identified for eco-friendly development to stimulate economic activities in the town due to its proximity to the tourism hot spot. Moreover, the approval of the intended subdivision and layouts will enable the OTC to protect its townland from illegal occupation.
- **Do-Nothing** - The do-nothing (“no go”) option would entail not using the site and maintaining the site as is. From certain perspectives this is not a viable option as the site is situated within a proclaimed area planned for urban use and surrounded by either upcoming or already existing residential communities. By not developing the site, the site will be anomalous in the context of the surrounding urban residential land-uses, and some of the direct and indirect socio-economic benefits (i.e., job creation, housing shortages, provision of further housing aimed at the mature living market, etc.) will not be realized.
- **Alternative design and Layouts-** The design and layout plan are based on existing physical features i.e., houses, business etc. on the site. The proposed design layout was found to be ideal and not expected to give rise to significant environmental impacts, hence no alternative was deemed necessary. However, approval must be obtained from the Roads Authority (RA) for the proposed intersections from D3646 road before the layout can be considered final.

## **4. DESCRIPTION OF THE AFFECTED ENVIRONMENT**

---

This chapter provides an overview of the baseline biophysical and social environmental conditions, with which the proposed development 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. This chapter also identifies sensitivities pertaining to key environmental features as well as potential impacts resulting from the proposed project in relation to these sensitivities.

### **4.1 Biophysical Environment**

#### **4.1.1 Climate**

Northern Central is defined as a semi-arid to sub-humid climate, with hot summers and warm winters. The average annual rainfall in Omutiya is about 470 mm occurring between October and April, with the heaviest falls from January to March and the peak in February. The soils are sandy, allowing high infiltration and the average annual evaporation is about 2 800 mm. 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).

Oshikoto region is one of the northern central regions of Namibia which are traversed by the Cuvelai basins and since the start of 2009 have experienced incessant torrential rains and high-water flows arising from Angola causing severe flooding.

#### **4.1.2 Soils and Geology**

The main soils that occur in these regions are alluvial and other weakly developed low-lying soils. Dark alluvial sand and loam soil are also found in the northern regions.

The soil 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 favourable for crop cultivation and plant growth in general, and this is determined by its physical properties to the nature of water retention, lower salinity and high nutrient level. Soils in the Cuvelai basin are generally nutrient-poor and are often saline. The soil also comprises of mosaic soil type such as clay and average salty clay. This determines that the main soil dominance is characterized by its definition on consistency, colour and structure.

### 4.1.3 Landscape and topography.

Oshikoto Region is mostly flat with pockets of higher ground at the Otavi Mountain Range and the mountain at Halali. The elevation is between 1 090 and 1 150 meters above sea level. The Omuthiya area decreases from 1106 to 1070 m.a.s.l towards to Etosha Pan.

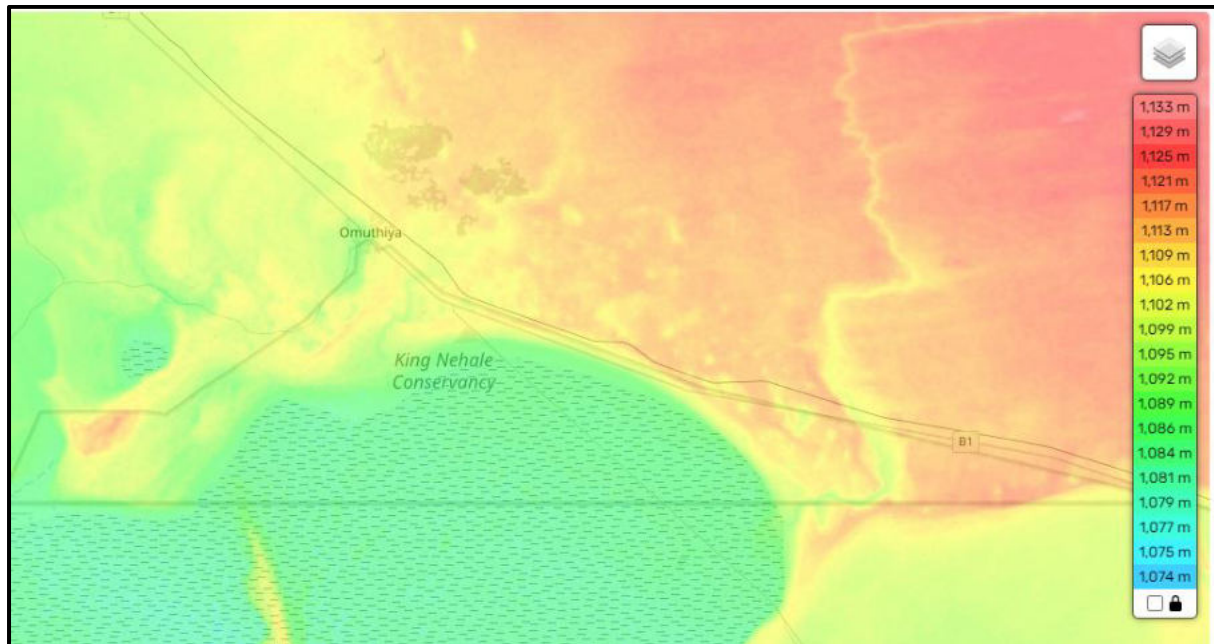


Figure 6: Topographic map.

### 4.1.4 Soil and Geology

Northern Kalahari Sandveld covers the eastern part, Aeolian Sands cover the northern area with patches of Solonchaks which are medium textured, bleached or even white. It covers all plains and drainage depressions and has a very low clay content. Areas bordering Etosha have nonsolonchaks soils that are fertile. These medium-textured soils are often considered ideal for agriculture as they are easily cultivated by farmers and can be highly productive for crop growth. No hard-geological rocks are exposed at the site. The surrounding area is covered with fine sandy soils. The soils are of relatively low soil fertility, with low plant yields.

In terms of Geology, the Oshikoto region lies on old continental base of graphite, gneisses, and volcanic rock however most of this rock lies thousands of meters below the current landscape (Mendelsohn, Obeid, & Roberts, 2000). The predominant rock types in Oshikoto region are Damara sandstone, Otavi dolomites and Nosib quartzite. The Otavi Mountains have rich ore bearing deposits, costly to exploit, while copper is mined. Saltpans occur in northern parts as well as in the Etosha Pan.

#### 4.1.5 Flora and fauna

The development site is still in its natural state and is occupied by a thick woodland savanna consisting of large trees such as *Acacia erioloba*, acacia mellifera, mopane, and silver terminalia *Albizia anthelmintica*, mixed with shrubs and bushes of *Pechuel-loeschea leubnitziae*, makalani saplings.

The local occurring fauna of the area are domestic animals, mainly cattle as well as free roaming wildlife from the Etosha National Park. The development site is located less than a kilometer from the most popular water hole (Othithiya) which serves both domestic animal and wildlife.



Figure 7: Local flora and fauna of the site

#### 4.1.6 Groundwater

Numerous underground caverns, with high-quality groundwater, are found in limestone. The drainage system is defined by three river systems flowing from east to west and two systems originating in Central Angola draining into the Etosha Pan. Oshanas, local flood areas, are found in the northern area and become flooded during rainy seasons. After rain, fresh surface water in pans and oshanas is available until June-July. With ephemeral river in the region, the water source in the ephemeral can be accessed even by hand-dug pit.

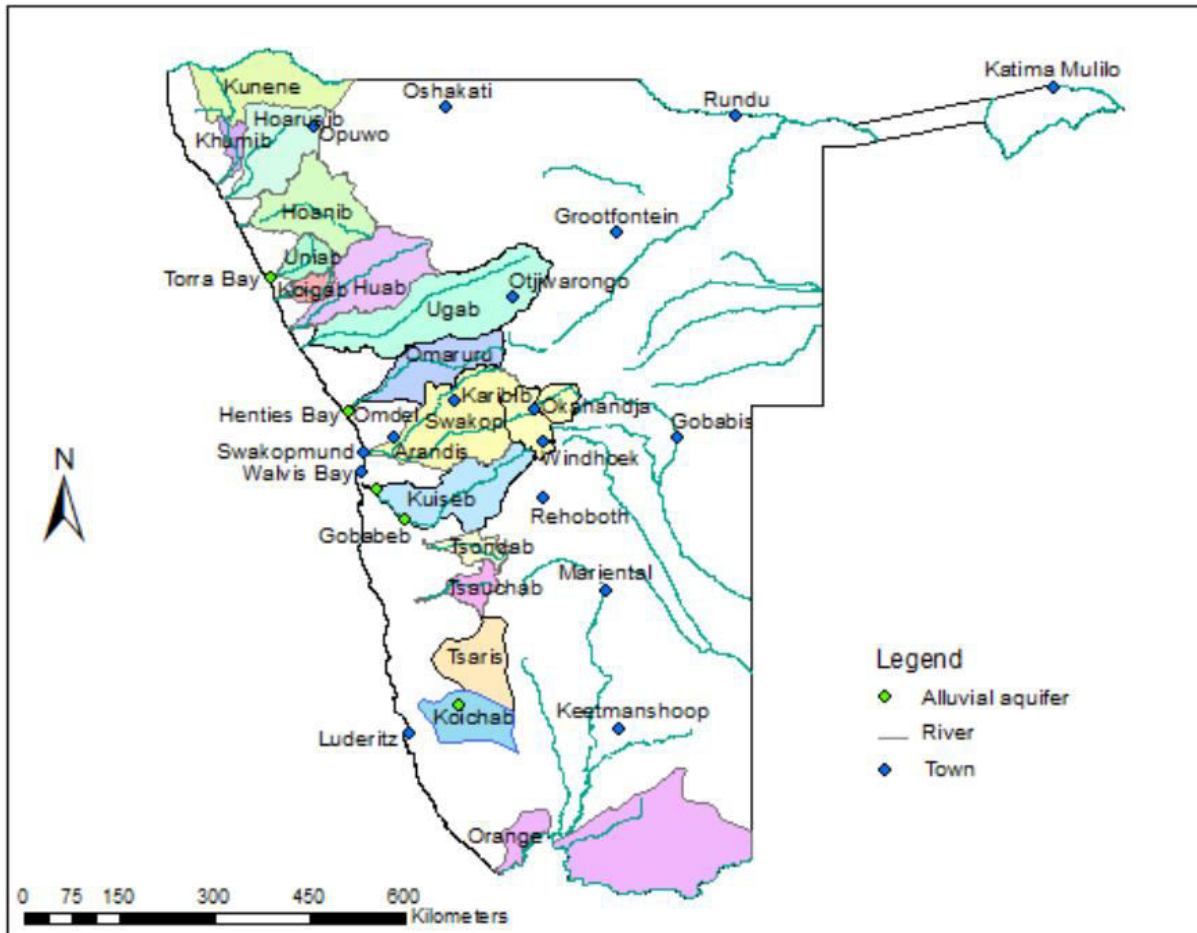


Figure 8: Hydrogeological map

The interconnected ephemeral pans and shallow river courses known as oshanas are the reminders of the proto-Kunene and Cuvelai systems which are emptied into the inland massive lake known as the Etosha lake. Mostly, part of the north/eastbound groundwater flow is shallow, and discharges through numerous springs along the southern margin of the Etosha Pan, where it rapidly evaporates. The potable water in the region is supplied in piped system from the Calueque Dam in Angola, on the Kunene River, to the major urban settlements within the region. This dam does not only provide water to the Oshikoto Region, but it also provides water to the Oshana, Omusati and Ohangwena Regions. The quality of the groundwater in the area is mostly saline and not suitable for human consumption. Water Supply to Omuthiya is from the NamWater pipeline scheme.



#### 4.1.7 About the King Nehale Conservancy

The King Nehale Conservancy (KNC) is located on northern border of Etosha National Park and occupies an area of about 508 km<sup>2</sup>. The conservancy was registered in September 2005 and has a population of approximately 5330. It has a population a flat area with forest, woodland, grassland plains and mixed thorn bush. Average annual rainfall of 400-500 mm.

The major wildlife resources include Gemsbok, springbok, kudu, blue wildebeest, giraffe. There are some enterprises activities operating within the conservancy such as Craft shop; trophy hunting; own-use hunting; Kalahari melon seed harvesting. The conservancy is managed by a Management Committee consisting of 32 members, of which 20 are women (includes craft, tourism, and traditional authority representatives); Executive Committee of 11 members; staff of five; wildlife monitoring using annual count and Event Book monitoring system.

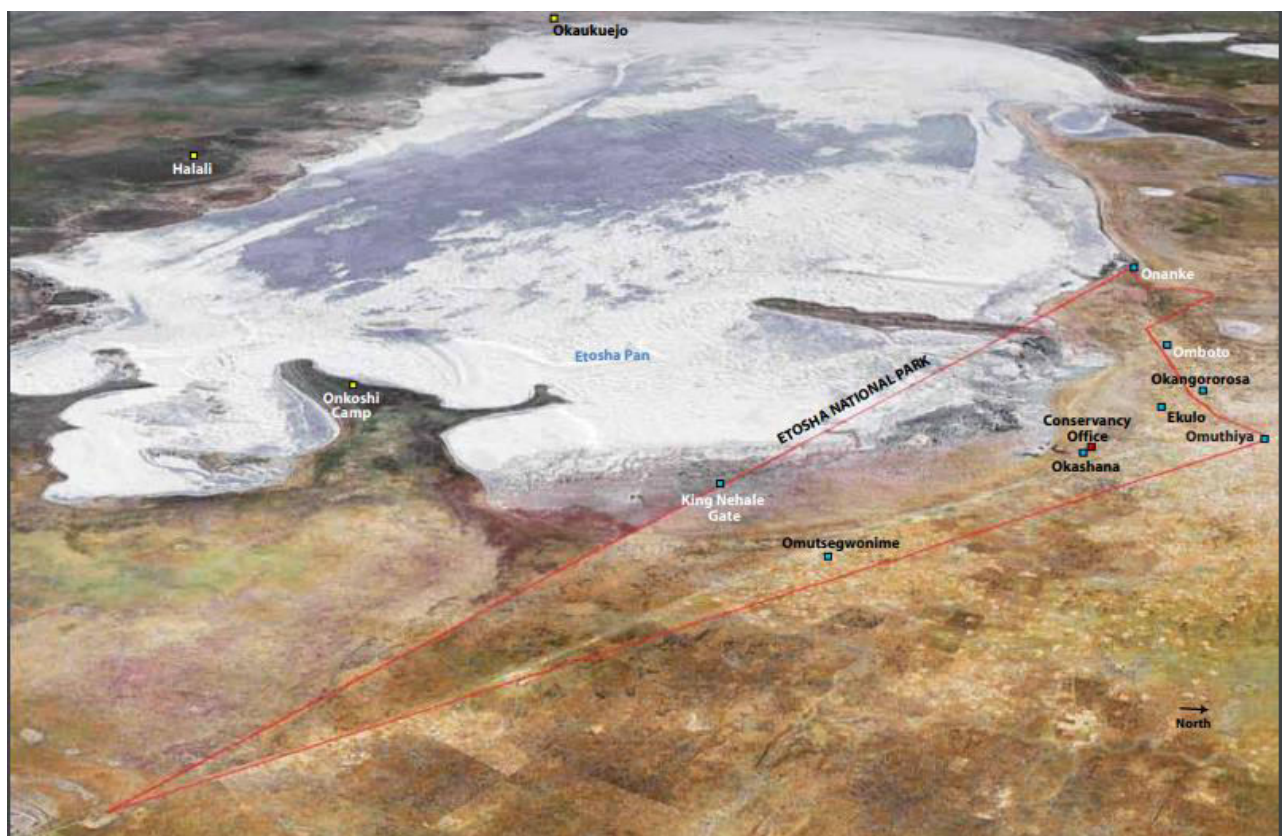


Figure 9: Map of the King Nehale Conservancy

The proposed development site for Omuthiya township development site is located at the Omutse Wondjamba and Okashana area. In terms of the Conservancy land use zoning map, the proposed development site falls under the "Settlement and Cropping Area also referred to as "Area 1.

## 4.2 Socio-economic Environment

### 4.2.1 About the area

Omuthiya, traditionally known as Omuthiya Gwiipundi is the capital town of Oshikoto Region in northern Namibia and is situated approximately 10 kilometres from the northern border of the Etosha National Park. The town was proclaimed in October 2007 and the Omuthiya Town Council was established in September 2008. The estimated current town population is 3 800 of which 2800 are female and about 1000 male, according to the 2011 census. The council, however, predicts the current town population to be about 5 500.00 people. It is uniquely situated on the world famous Etosha Pan, between the main towns of Ondangwa in the north and Tsumeb in the south.



Figure 10: Locality of Omuthiya

#### **4.2.2 Socio-economic development**

The town of Omuthiya is well served by all kinds of businesses from small-scale dealers to large-scale retailers. Agriculture is the main economic activity with tourism becoming increasingly important with direct access from the Etosha National Park via the King Nehale Gate. Having been declared the capital town of Oshikoto region, several government and public institutions as well as Namibian Police (NAMPOL) have opened their regional office headquarters in town. There are two primary schools, two combined schools, one secondary school and a school circuit inspectorate office. The town is also served with a district hospital, a clinic, NIP laboratory, a pharmacy, and General Practitioner (Private Doctors). Additionally, the town has a modern State Veterinary office and National Food Reserves (NFR).

The Town is also served by most known retail brands operating within town, such as Shoprite U-Save, Style, Choppies etc. There are also many other local brands operating, offering a good shopping ambience, especially craft baskets unique to the town and surrounding villages. The town serves as a gateway to and from the northern part of the country and thus tourists and passersby contribute to the business prosperity in town. There is a main road and railway line crosses the town, resulting in ribbon type urban settlement along the road. The town is also home to a few fountains which currently have no activities for the residents or visitors. Additionally, the water from the fountains is currently not used for much except as a water resource for livestock and wildlife. These present numerous opportunities for the town related to the Tourism industry such as hosting/accommodating tourist for day trips into the park, offer cultural experiences to tourists staying within the park or fun and recreational activities at or around the fountains. Activities such as these would lead to employment and income generating opportunities for the residents. Another potential for income and employment opportunities is the agricultural sector.

The Omuthiya town is known to be an agricultural hub for the surrounding villages and neighboring towns like Ondangwa. The town currently hosts AMTA silos for the Mahangu crop, a staple in most northern Namibia regions. The town has an opportunity to supply Mahangu on a large scale to a wider market to the rest of Namibia. Apart from the tourism and recreational potential it also holds possibilities for agricultural development, such as irrigation crops. It has also been established that the area is conducive to producing citrus crops. This can be realized through smart partnerships and cooperation with public enterprises such as Agribusdev (Agricultural Business Development), AMTA (Agricultural Marketing and Trading Agency), NAB (Namibia Agricultural Board), Ministry of Agriculture, Water and Land Reform and educational institution.



## **5. PUBLIC PARTICIPATION**

---

Public consultation is an important component of an Environmental Assessment (EA) as it provides potential Interested and Affected Parties (I&APs) with a platform whereby they can raise any issues or concerns relevant to the proposed project. This assists the environmental consultant in considering the full spectrum of potential impacts and to what extent further investigations are required.

In addition, the public consultation process also grants I&AP's an opportunity to review and comment on all the documents produced throughout the EA process. This is done in accordance with the Environmental Management Act's EIA Regulations. Communication with stakeholders and I&APs about the proposed development were facilitated through the following means:

### **5.1 Notification of key Stakeholders and Interested & Affected Parties**

a). Consultation in terms of the town planning procedures

In terms of Section 107 of the Urban and Regional Planning Act, OTC notified the public its intention to subdivide the Omuthiya Town and Townlands No.103 into different land use portions and the establishment the town extension of Othithiya Proper and Othithiya Extension 1. The town planner (SPC) placed the notices on behalf of Council in two local newspapers, The Namibian and New Era newspaper for 08 and 15 September 2022. At the closing date of 12 October 2023, no objections were received.

b). Consultations in terms of the EIA procedures

Section 21 of the EIA Regulations details steps to be taken during a given public consultation process and these steps have been used in guiding this process. Communication with I&APs about the proposed developments was facilitated through the following means:

- Public Notifications were placed in the local newspapers and public notices.
- The notices were advertised in the New Era and Confidante for 19 and 26 May 2023) in accordance with section 21 (2) of the Environmental Regulations of (GG6 of February 2012). Public notices will also be placed at the Omuthiya Town Council notice board, at the development site and around town.
- The public notices provide brief information about the proposed project and the EIA and invite potential I&APs to register and/or send comments for consideration. The deadline for registration for I&APs and submission of comments was on 02 June 2023.

- The notice provided a brief description of the proposed development, its locality and invites the public to register as I&APs and to the public meeting. (**Appendix C**)
- Identified key stakeholders were invited to submit comments toward the envisaged project.
- Background Information Document (BID) was compiled that contained essential information about the proposed development.

## 5.2 Public meeting

The public meeting was held at on the on Friday 29 May 2023 at Okashana Rural Development Centre. The meeting was attended mostly be the residents, members of the community development committee, the developer, and the EAP. Please see Appendix C for the attendance register.

During the meeting, the EAP and the developer provided a background information on the project and the purpose of the EIA study being undertaken. The proposed township layout, land uses and township boundaries were also presented. Attendants were then given a chance to pose questions and/or give comments to the project team.



Figure 11: Public meeting

### 5.3 Summary of issues raised during consultation.

The consultation period was allowed from 19 May to 02 June 2023. Below is the summary of issues raised during the consultation period.

Issue raised by	Issue (Comment/Question)	Feedback/Response
<p><b>a). Issues raised during the public meeting.</b></p>	<p><b><u>Questions</u></b></p> <ul style="list-style-type: none"> <li>✓ Why did the OTC proceed with the EIA study while there is an ongoing dispute with Conservancy over the overlapping lands?</li> <li>✓ Why does the OTC want to develop this area that is far from town while there is vacant land next to the built-up area?</li> <li>✓ Will there be a second meeting with the Conservancy so that more people can attend?</li> <li>✓ The land zoned “Special” what sort of activities will they be undertaking on the zoning?</li> <li>✓ The OTC was already advised to put the proposed development of Othithiya development on hold while a solution is being sorted.</li> </ul> <p><b><u>Notes</u></b></p> <ul style="list-style-type: none"> <li>✓ The Conservancy was established long time ago and the abundance of wildlife around Othithiya is mainly because of the Conservancy.</li> <li>✓ Local farmers also need to be consulted.</li> <li>✓ We do not want conflicts between the Town Council and Conservancy; hence the TA is advising that the two conflicting parties meet again and resolve the dispute amicably.</li> </ul>	<ul style="list-style-type: none"> <li>• The proposed development site belongs to the Council, thus it's the objective of the Council to stimulate economic development within the town, hence the proposal to formalize Council land to create opportunities.</li> <li>• The consultation process is ongoing. If the need for a second meeting is determined, then it can be arranged. It is also recommended that Council and Conservancy maintain a smooth and health relationship.</li> <li>• Special zoning is reserved for any activity that Council deemed it fit for that area.</li> <li>• Apart from township developments, there are also agricultural activities on some of the land use blocks.</li> <li>• No housing development will take place next to the Othithiya spring.</li> <li>• The council's intention is to develop an eco-tourism housing development.</li> <li>• OTC has a 5year strategic plan and as part of the SP, the development of Othithiya</li> </ul>

	<ul style="list-style-type: none"> <li>✓ The land earmarked for the developed used to be our ancestral land reserved for agriculture.</li> <li>✓ The land is within the Conservancy and is adjacent to the wildlife hotspot. The intended development will create noise for the people and will increase cases of poaching.</li> <li>✓ The grazing and browsing area for our animals will be greatly reduce and might bring pollution to the area.</li> <li>✓ The OTC and the Conservancy need to work together.</li> </ul>	<p>Extension has been highlighted as one of the projects.</p> <ul style="list-style-type: none"> <li>• OTC also intended to formalize the Othithiya spring as a tourist site. The current infrastructure was vandalized.</li> <li>•</li> </ul>
<p><b>b). Issues raised via email communications.</b></p>	<p><b>Issues were raised by KNC are summarised below (See attached copy of the letter on Appendix B)</b></p> <ul style="list-style-type: none"> <li>• The land dispute between the Conservancy and the OTC started in 2005, when the OTC was just a settlement. Despite having two meetings (23/03/2023 &amp; 14/02/23) between the two parties the land dispute has not yet been resolved.</li> <li>• The conservancy felt left out in the planning of the OTC and the extension of the boundaries. The KNC is calling for proper consultation and smooth communication between OTC and KNC.</li> <li>• KNC needs to be consulted separately from other I&amp;APs.</li> <li>• The Othithiya water point serves at least 95% of the Conservancy animal and is an important tourist attraction in the area.</li> <li>• Development too close to Othithiya will drive wildlife away and it will result in few tourists visiting the area which will have ripple effect to the tourist potential of the area. This became evident when the Othithiya water point was upgraded into a recreational facility, only few wildlife visits the water point during daytime due to the presence of people, thus forcing much wildlife to drink only during the night. Hence, bringing development closer to the water</li> </ul>	<p>There is a need for a dialogue between the Conservancy and the OTC. This should be mediated by the Oshikoto Regional Council or the Ministry of Urban and Rural Development.</p> <p>The issues of potential increase in poaching and littering have been addressed under the impact assessment section.</p>

	<p>point will increase the presence of people 24hrs.</p> <ul style="list-style-type: none"><li>• The conservancy serves as a buffer zone between the town and the Etosha National Park, thus offering biodiversity protection and conservation for the area and surrounding.</li><li>• The envisaged housing development will also increase cases of littering in the area and also increasing cases of poaching in Etosha National Park.</li><li>• The KNC are opposing the proposed development and recommended that the issue be handled at Ministerial level.</li></ul> <p><b><u>Gondwana Collection Namibia</u></b></p> <ul style="list-style-type: none"><li>• We are a Tourism Operator with a Lodge only 21km from Omuthiya village and 19km from the proposed extension site.</li><li>•</li></ul>	
--	--	--

## 6. IMPACT ASSESSMENT

### 6.1 Introduction

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 Table below indicates a summary of identified environmental impacts. These impacts are categorized into the various relevant stages of the life cycle of the proposed development, namely: Planning phase, Construction phase and Operational phase. The environmental assessment section of the Scoping Report and the consequent EMP shall also be compartmentalized into these into these phases.

### 6.2 Method of Assessment

The potential environmental impacts associated with the proposed will be evaluated according to its nature, extent, duration, intensity, probability, and significance of the impacts as follows.

**Table 3: Impact Assessment criteria**

CRITERIA	DESCRIPTION			
<b>EXTENT</b>	<b>National (4)</b> The whole country	<b>Regional (3)</b> Oshikoto region and neighbouring regions	<b>Local (2)</b> Within a radius of 2 km of the proposed site	<b>Site (1)</b> Within the proposed site
<b>DURATION</b>	<b>Permanent (4)</b> Mitigation either by man or natural process will not occur in such a way or in a timeframe that the impact can be considered short-lived	<b>Long-term (3)</b> 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.	<b>Medium-term (2)</b> The impact will last for the period of the construction phase, where after it will be entirely negated	<b>Short-term (1)</b> The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
<b>INTENSITY</b>	<b>Very High (4)</b> Natural, cultural and social functions and processes are altered to an extent that they permanently cease	<b>High (3)</b> Natural, cultural and social functions and processes are altered to an extent that they temporarily cease	<b>Moderate (2)</b> Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	<b>Low (1)</b> Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected
<b>PROBABILITY</b>	<b>Definite (4)</b> Impact will certainly occur	<b>Highly Probable (3)</b> Most likely that the impact will occur	<b>Possible (2)</b> The impact may occur	<b>Improbable (1)</b> Likelihood of the impact materialising is very low
<b>SIGNIFICANCE</b>	Significance is an indication of the importance of the impact in terms of both physical extent & time scale, and therefore indicates the level of mitigation required. Significance is given before and after mitigation. The total number of points scored for each impact indicates the level of significance of the impact.			
<b>STATUS OF THE IMPACT</b>	A statement of whether the impact is: <ul style="list-style-type: none"> <li>• Positive (beneficial impact),</li> <li>• Negative (adverse impact), or</li> <li>• Neutral (impact is neither beneficial nor adverse).</li> </ul> Indicate in each case who is likely to benefit and who is likely to bear the costs of each impact.			

**Table 4: Criteria for significance ratings and associated range of scores**

<b>Significance Rate</b>	<b>Description</b>	<b>Score</b>
<b>Low</b>	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.	1 - 4
<b>Moderate</b>	An important impact which requires mitigation. Mitigation is possible with additional design and construction inputs.	5 - 8
<b>High</b>	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.	9 – 12
<b>Very High</b>	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.	13 - 20

### 6.3 Assessment of Identified Impacts

All impacts included in the table below fall within the scope of this project and the responsibility of the Developer. Each of the potential impacts are screened and subjected to the criteria stipulated above in **Table 4**. The significance of each potential impact is determined based on the criteria in **Table 5**. It is expected that most of these impacts can be decreased by the proposed migratory measures.

**Table 5: Potential Impacts during the development phase (Construction) of the proposed development**

ASPECT	POTENTIAL IMPACT	SIGNIFICANCE BEFORE MITIGATION					MITIGATION MEASURE
		Extent	Duration	Intensity	Probability	Significance	
BIOPHYSICAL IMPACTS'	<b>Impact to flora</b> Loss of vegetation during construction	1	3	2	2	Moderate	-Only plants affected by the activities must be cleared. -All indigenous trees must be marked and left out of construction activities where possible. -Fire places should be protected
	<b>Impact to local fauna</b> <ul style="list-style-type: none"> <li>Disturbances to wildlife resulting from construction activities.</li> <li>Increase cases of poaching of wildlife</li> </ul>	2	1	1	2	Moderate	-Construction camps should be located far away from the water point -Operation should be restricted to daytime (07-19:00). No operation during odd hours. -No poaching, chasing, killing, trapping or disturbance of wildlife is allowed. -All cases of HWC should be handled by MEFT in line with the HWC Policy. -Do not leave open trenches, all trenches should be barricaded or covered. -Wastewater and other contaminants should be contained and disposed of properly and regularly.



<p><b>Visual impacts</b></p> <ul style="list-style-type: none"> <li>Alteration of existing visual perspective due to vegetation clearance and presence of waste streams and littering</li> </ul>	1	4	2	2	Moderate	<p>-DO NOT clear all vegetation, leave some</p> <p>-Provide sufficient refuse bins and ensure regular litter picking</p> <p>-Construction materials should be stored at secure areas and out of site.</p>
<p><b>Impact to water resources</b></p> <ul style="list-style-type: none"> <li>Possible surface water pollution or contamination</li> <li>Alteration and blockage of the natural flows which may cause soil erosion.</li> <li>Construction activities will increase demand water</li> </ul>	2	3	3	2	Moderate	<p>-No pollutant must be discharged directly into watercourse or underground.</p> <p>-Underground storage of hazardous goods should not be permitted in the proposed</p> <p>-Ensure there is enough drainage for storm water by placing culverts and drainage channels when constructing access roads and other facilities.</p> <p>-Ensure water recycling measures and provided alternative source of water i.e. rainwater harvesting.</p>
<p><b>Impact to the soil</b></p> <ul style="list-style-type: none"> <li>Loss of topsoil during construction</li> <li>Soil contamination from spills and leakages</li> </ul>	1	2	2	2	Low	<p>-Soil conservation measures should be used on-site to help reduce erosion.</p> <p>-Prevent silting of watercourses by use of silt traps and re-vegetation of disturbed areas</p> <p>-Excavated topsoil must be stockpiled and protected for later use.</p>
<p><b>Land disturbances.</b></p> <ul style="list-style-type: none"> <li>Land use conflict between contractors and KNC, farmers, tourist etc.</li> </ul>	1	1	1	2	Low	<p>-Construction camps must be located at the Okashana RDC, and no camping should be allowed next to the water point/spring.</p> <p>-No poaching, unauthorized driving within the conservancy area. Ensure smooth communication with the KNC.</p> <p>-Provide potable ablution facilities during construction</p> <p>-The site used for construction camps should be rehabilitated after construction phase.</p>
<p><b>Impact to Heritage resources</b></p>	2	3	1	2	Low	<p>-There are no major archaeological or Paleontological grounds to suspend the proposed development. In case of any</p>

	Potential damage or destruction to undiscovered heritage or cultural sites in the area						material of archaeological heritage importance observed during construction/operation phase, it must be reported to the National Heritage Council.
	Spillage, stockpiles, and other construction related activities	1	1	1	2	Moderate	-Concrete mixing should be done on a pre-designed slab underlined by PVC lining or previously disturbed areas -Any spillage (fuel, oil, chemical etc.) must be cleaned immediately. -All construction material must be sourced off-site from commercial sources
<b>SOCIO- ECOCNOMIC</b>	Increase in traffic within the area is expected due to construction activities and establishment of a township.	2	1	1	2	Moderate	-Use the existing access road as far as possible -Flagmen and traffic controls should be appointed to regulate traffic flow of construction vehicles.
	Generation of dust	1	1	1	2	Moderate	-Implement dust control measures -Limit Vehicle speed -Construction activities should ceases incase of strong wind
	Noise created by construction activities, which might be a nuisance to residents and employees.	1	1	1	1	Low	-Construction should be limited to normal working days and office hours (08h00-17h00). -All employees must have PPE. -Watering of all construction haulage signage should be place at the entrance of the construction.
	Loss of agricultural land for grazing & cultivation to residential/town	2	4	3	3	Moderate	-The proposed development site is already a proclaimed townland. Construction activities should be limited to the development site.
	New development will attract new criminal activities in the area	1	1	1	1	Low	-All items should be stored away from the sites -Provide Security on site
	Economic development (+ve)	4	2	1	3	High	-Contractors should source materials from local supplier to enhance the local economy
	Employment of the local community	4	4	2	3	Moderate	-Local laborers (especially the ones from the affected & neighboring village/residents) and local contractors (especially SMME's) should be utilized at greater extent. This should also include the youth, women and people with disability.

**Table 6: Potential Impacts during operation phase of the proposed development**

ASPECT	POTENTIAL IMPACT	SIGNIFICANCE BEFORE MITIGATION					MITIGATION MEASURE
		Extent	Duration	Intensity	Probability	Significance	
<b>BIOPHYSICAL IMPACTS</b>	<b>Impact to flora and fauna (Domestic animal and Wildlife)</b>	1	4	1	2	<b>Moderate</b>	<ul style="list-style-type: none"> <li>-Existing vegetation should be preserved as far as possible</li> <li>-Plant more trees, especially indigenous species to enhance biodiversity</li> <li>-The development site and individual properties should be fenced off</li> <li>-Avoid the introduction of alien invasive plants</li> <li>_Developers/owners should be sensitised to live in harmony with the free roaming wildlife</li> </ul>
	<b>Visual impact</b> Alteration of existing visual perspective	1	4	1	1	<b>Moderate</b>	<ul style="list-style-type: none"> <li>-Maintain the existing indigenous trees community and plan more trees in in and around the development to enhance greenery view</li> </ul>
	<b>Impact to the exiting Municipal services i.e. water, sewerage system, electricity etc.</b>	1	4	1	1	<b>Moderate</b>	<ul style="list-style-type: none"> <li>-The proposed development is part of the approved town SDF and thus have been included in the demand management plan.</li> <li>-Encourage the harvesting of rainwater</li> <li>-Engage NORED for the electricity supply and encourage the use of renewable energy i.e. Solar lights, Solar geysers etc.</li> </ul>
	<b>Possible surface water and groundwater pollution</b> from leaking sewage lines or underground storage of dangerous goods.	2	1	2	2	<b>Moderate</b>	<ul style="list-style-type: none"> <li>-Ensure a proper storm water system around the site</li> <li>-Contaminated run-offs should not be allowed to enter natural water bodies</li> <li>-No pollutant must be discharged directly into watercourse or underground.</li> </ul>

							-All houses must be connected to the Municipal sewer system and Sewage lines must be maintained frequently to prevent leakages
	Impact on the natural watercourse and natural flow of storm water	2	1	1	1	Moderate	-Ensure maintenance of storm water channels. -No waste should be discharged into drainage or natural water flows.
<b>SOCIO- ECOCNOMIC</b>	Increase in traffic within the area and diversion of existing access roads for the community due to the new development	2	4	1	1	Moderate	-Ensure enough access roads and provide regular maintenance -Provide appropriate road signs & markings, sidewalks for pedestrians and taxi ranks should be provided
	<b>Waste Management</b> The proposed development is associated with waste generation and if not properly handled will result in pollution of the surrounding environment	2	4	4	3	High	-Provide sufficient waste refuse bins, skips and transfer station (temporary storage) -Ensure regular waste collection and disposal -Provie additional services for picking of wind-blown litter from streets and surrounding
	Land use conflict between the Town Council and livestock owners over water and grazing area as livestock will be attracted by water and grazing within the new township.	2	4	4	3	High	-All animals currently kept on site must be moved to rural areas and no animal should be kept at any property within this site -The individual properties should be fenced off
	<b>Provision of housing delivery (+ve)</b>	4	4	4	4	High	-Local people must be given the priority
	<b>Employment of the local community (+ve)</b>					High	Local laborers (especially the ones from the affected & neighboring village/residents) and local contractors (especially SMME's) should be utilized at greater extent. This should also include the youth, women and people with disability.
	<b>-Provision of services next to the people (sewage, communication, etc.)</b>	4	4	4	4	High	-Consider inputs from locals

## **7. CONCLUSION AND RECOMMENDATIONS**

---

This EIA study was only done for the proposed subdivision of land and for the township's establishments of Othithiya Proper and Othithiya Extension 1. This EIA does not include the listed activities on the remaining Portions (Agricultural on portions 4,5, 7,8,9,10,11 &12, and Recreational activities on Portion 17), thus a separate detailed EIA study should be conducted to assess the suitability of the intended activities on these portions.

The key potential impacts associated with the construction, operational and maintenance phases of the proposed project have been identified and their significance assessed. All identified impacts can be mitigated to reduce the significance of these impacts to an acceptable level. Mitigation measures are described in greater detail in the EMP. Hence, the project, as proposed in this report, can be implemented with no significant impacts if executed according to the EMP.

### **7.1 Assumptions and Conclusion**

The following assumptions and conclusions are made.

#### **a). The proposed development site.**

- The development site falls under the jurisdiction of Omuthiya Town and Townlands No.1013 which was Gazzetted in 2007 in terms of Section 1 of the Local Authorities Act 1992. The Omuthiya Townlands overlaps with the existing KNC which was gazetted in 2005 in terms of Section 4 (a) of the Nature Conservation Amendment Act 1996.
- In terms of the Conservancy land use plan, the proposed development site falls under the "Settlement and Cropping area" and is adjacent to an area zoned for "Multiple use: tourism priority".
- There are no sensitive cultural or heritage materials on the proposed site identified during the EIA study. However, the site is in proximity to the water fountain popularly known as "Othithiya" which has some cultural and historic attachment to the residents. In case of any other material of heritage or cultural significance, found at site during construction phase, this should be reported to the National Heritage Council (NHC) as per the National Heritage Act mentioned.
- The site is located between two busy roads (B1 and D3646) and has a flat elevation and is characterized by certain watercourses draining towards the Etosha pan.
- The vegetation of the site is not considered sensitive as it is characterized by common species of the Oshikoto woodland savanna.

## **b). About the proposed township development**

- The intended township developments will enable the OTC to address the housing backlog in the town.
- The planning and subsequent development of the site will also enable the OTC to minimize the formation of illegal settlements on the areas not considered for residential purposes.
- The proposed activities on the remaining land portions should be subjected to a detailed EIA study to assess the suitability of each specific intended activities and identify the potential impacts to the receiving environment.

## **c). Public participation process**

- There are presently disputes between OTC and the KNC over the proposed development due to the overlapping land uses.
- The KNC are opposing the proposed development and recommended that the issue be handled at Ministerial level. KNC have raised concerns as outlined in Section of this report.
  - The communication between OTC and KNC is not smooth and thus needs to be rekindled.
  - The main concern is with regards to the proximity of the development to the wildlife hotspot areas (grazing area and the Othithiya water point) and to the Etosha National Park.
  - There is fear that the proposed development will result in habitat fragmentation and will result in ripple effects to the tourism potential of the area.
- On the other hand, the OTC has retaliated that the intended development is to increase economic opportunities within its town, thus the proposed development site has been identified as the prime town land due to its proximity to the tourism area. The intended development will be in a form of nature estates that is compatible with the surrounding environment. Furthermore, the intended township development will help Council to safeguard its townland from illegal occupation as many settlers are observed setting up structures within townlands without any permission.

Against the above background, it is concluded that the proposed development can ONLY be authorized upon the implementation of the recommendations outlined below to ensure a development that is socially acceptable, environmentally friendly, and economically viable for the benefit of both present and future generations.

## 7.2 Recommendations

To the proponent

- Establish and foster consultation with all relevant parties to resolve the existing land use dispute with the King Nehale Conservancy. Relevant parties to form part of the discussions are the two conflicted parties, the Traditional Authority and Oshikoto Regional Council, Ministry of Environment, Forestry and Tourism and Ministry of Urban and Rural Development.
- Human-wildlife conflict is bound to occur where people and wildlife co-exist, therefore the conflict needs to be managed. Since the proposed development site is located adjacent to a wildlife area (Conservancy) any case of human-wildlife conflict should be handled as per the HWC Management Policy.
- Obtain approval from Roads Authority (RA) for the construction of the proposed intersection on the D3646 road to King Nehale Gate to provide access to the new development.
- All properties should be connected to this system which should be linked to the existing oxidation ponds. The use of septic tanks and other underground storage facilities should be disregarded on this area, given its proximity to the natural springs and its natural connection to the Etosha-flood pan.
- Engage with NORED for the provision of sufficient power supply.
- Sufficient fill (gravel) must be provided to ensure stability of the soil, especially on low lying areas to prevent flooding.
- Ensure there is a Storm Water Management Plan for the site to ensure free flow of stormwater from flash flood.
- The project design must incorporate the harvesting and storage of rainwater to reduce the amount of storm water to be attenuated.
- Implement the proposed mitigation measures outlined in the Environmental Management Plan (EMP).

To the Authorities (MURD and MEFT)

- Consider the findings of this EIA study and its recommendations.
- Officially inform the Proponent (OTC) to implement the recommendations outline below and any other conditions deemed appropriate prior to the issuance of the ECC for the proposed **Subdivision of farm Omuthiya townlands no. 1013 and township establishment of Othithiya proper and Othithiya extension 1 and associated infrastructure in Omuthiya, Oshikoto region.**

## 8. REFERENCES

---

- GRN. (2013). 2011 Population and Housing Census Main Report. Windhoek: National Statistics Agency
- Mendelsohn J, Jarvis A, Roberts C, Robertson T. (2002). Atlas of Namibia. David Philip Publishers, Cape Town.
- Republic of Namibia: Ministry of Environment and Tourism, (2012). Environmental Impact Assessment Regulations, GG 4878, GN 29, Windhoek: MET.
- Ruppel O.C. & Ruppel-Schlichting K. 2013, Environmental Law and Policy in Namibia. OrumbondePress.na & Welwitschia Verlag Dr. A. Eckl, Essen, Windhoek, Namibia.
- Government Gazette. No.5367 Promulgation of Water Resource Management Act, 2013 (Act No. 11 of 2013 of Parliament), 2013, Windhoek, Republic of Namibia.
- Kangombe, Nd. F, 2010. The vegetation of Omusati and Oshana regions, central north Namibia (Research Thesis for M.Sc. Plant Science). University of Pretoria
- Tamayo V, et al, Flood risk management Plan, 2011. Ministry of Regional, Local Government, Housing and Rural Development



## **9. APPENDICES**

---

- 9.1 APPENDIX A: Council Approval**
- 9.2 APPENDIX B: Proof of Consultations**
- 9.3 APPENDIX C: EMP**