

# ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED TOWNSHIP ESTABLISHMENT ON PORTION 133 OF THE HENTIES BAY TOWNLANDS NO. 133 ERONGO REGION



## ENVIRONMENTAL SCOPING REPORT

**Prepared for:**

**THYTEK INVESTMENT CC  
CC/2016/03876  
ERF 4220, MONDESA, SWAKOPMUND  
P. O. BOX 21, SWAKOPMOND**

**Prepared by:**

The logo for Green Gain Consultants features a stylized green leaf icon above the text "Green Gain" in a bold, green font, with "Consultants" in a smaller, grey font below it.

 +264 81142 2927  
 info@greegain.com.na  
 <https://www.greengain.com.na>

**SEPTEMBER 2023**

## DOCUMENT DESCRIPTION

---

**Project Title:** Proposed township establishment Portion 133 of the Remainder of Henties Bay Townlands No.133, Erongo region

**Client:** Thytek Investment cc  
P. O. Box 21, Swakopmund  
Namibia

**Project location:** Henties Bay  
Erongo Region  
Namibia

**Project title:** Environmental Scoping Report

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

**Application:** **APP001712**

**Date:** **July 2023**

# Table of Contents

---

<b>DOCUMENT DESCRIPTION</b> .....	2
List of Figures.....	5
List of tables.....	5
List of Abbreviations and Acronyms .....	6
<b>1. Introduction and Background</b> .....	7
1.1 Introduction .....	7
1.2 Scope of the study .....	7
1.3 Terms of Reference .....	8
1.4 Project team.....	9
<b>2. LEGAL FRAMEWORK</b> .....	10
2.1 Environmental Management Requirements .....	10
2.2 Applicable legislations.....	11
<b>3. PROJECT DESCRIPTION</b> .....	16
3.1 Locality .....	16
3.2 Site Description and existing land uses .....	17
3.3 Adjacent Land Uses.....	18
3.4 The Proposed Development .....	19
3.4.1 Proposed subdivision .....	19
3.4.2 Proposed layout .....	20
<b>4. DESCRIPTION OF THE AFFECTED ENVIRONMENT</b> .....	23
4.1 Biophysical Environment.....	23
4.1.1 Climate.....	23
4.1.2 Soils and Geology .....	24
4.1.3 Hydrology .....	25
4.1.4 Local flora .....	26
4.1.5 Local fauna .....	27
4.2 Socio-economic Environment.....	28
4.2.1 About the area.....	28
4.2.2 Demographic .....	29
4.2.3 Socio-economic development.....	30
4.2.4 Sanitation .....	30
4.2.5 Archaeological and Heritage Context .....	30
<b>5. PUBLIC PARTICIPATION</b> .....	31
5.1 Notification of key Stakeholders and Interested & Affected Parties .....	31
5.2 Public meeting .....	32

<b>6. IMPACT ASSESSMENT</b> .....	33
<b>6.1 Introduction</b> .....	33
<b>6.2 Method of Assessment</b> .....	33
<b>6.3 Assessment of Identified Impacts</b> .....	35
<b>7. CONCLUSION AND RECOMMENDATIONS</b> .....	39
<b>7.1 Conclusion</b> .....	39
<b>7.2 Recommendations</b> .....	40
<b>8. REFERENCES</b> .....	41
<b>9. APPENDICES</b> .....	42
<b>9.1 APPENDIX A: Proof of Consultation</b> .....	42
<b>9.2 APPENDIX B: Issue Response Report</b> .....	42
<b>9.3 APPENDIX C: Council Approval</b> .....	42
<b>9.4 APPENDIX D: EMP</b> .....	42

## List of Figures

---

<b>FIGURE 1: LOCALITY OF THE PROPOSED DEVELOPMENTS</b> .....	16
<b>FIGURE 2: SCENIC VIEW AROUND THE SITE</b> .....	17
<b>FIGURE 3: TRACKS WITHIN THE SITE</b> .....	<b>ERROR! BOOKMARK NOT DEFINED.</b>
<b>FIGURE 4: SITE SURROUNDINGS</b> .....	18
<b>FIGURE 5: PROPOSED SUBDIVISION</b> .....	20
<b>FIGURE 6: PRECIPITATION MAP OF NAMIBIA</b> .....	23
<b>FIGURE 7: SOIL TYPE OF THE SITE</b> .....	24
<b>FIGURE 8: HYDROLOGY MAP OF NAMIBIA</b> .....	25
<b>FIGURE 9: LANDSCAPE AROUND HENTIES BAY</b> .....	26
<b>FIGURE 10: VIEW OF THE PUBLIC MEETING IN SESSION</b> .....	32
<b>FIGURE 11: OVERVIEW OF THE SITE VISIT</b> .....	32
<b>FIGURE 12: PUBLIC AND STAKEHOLDER PARTICIPATION</b> .....	32

## List of tables

---

<b>TABLE 1: NAMIBIAN LEGISLATION RELEVANT TO THE PROJECT</b> .....	11
<b>TABLE 2: PROPOSED LAND USES</b> .....	19
<b>TABLE 3: STATISTICS OF THE ARANDIS CONSTITUENCY AND ERONGO REGION (NAMIBIA STATISTICS AGENCY, 2011)</b> .....	29
<b>TABLE 4: IMPACT ASSESSMENT CRITERIA</b> .....	33
<b>TABLE 5: CRITERIA FOR SIGNIFICANCE RATINGS AND ASSOCIATED RANGE OF SCORES</b> .....	34
<b>TABLE 6: POTENTIAL IMPACTS DURING THE DEVELOPMENT PHASE (CONSTRUCTION) OF THE PROPOSED DEVELOPMENT</b> .....	35
<b>TABLE 7: POTENTIAL IMPACTS DURING OPERATION PHASE OF THE PROPOSED DEVELOPMENT</b> .....	38

## **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
PPE:	Personal Protective Equipment
CDC:	Community Development Committee

# **1. Introduction and Background**

---

## **1.1 Introduction**

Thytek Investment cc, hereinafter referred to as the proponent has been allocated a portion of land on the remainder of Henties Bay Town and Townlands No.133 for the purpose of township establishment. The proposed development site measures approximately 10.5ha and is located south of the town CBD. The intended development will be of mixed uses consisting mainly of residential, business, and institutional properties.

In terms of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN No 30 of 2012), the proposed development may not be carried out without an Environmental Impact Assessment (EIA) being conducted and an 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 its 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 parties

Developer/Proponent		Thytek Investment cc P. O. Box 21, Swakopmund Namibia Mr. Lazarus Shipanaga
Authority		<b>Henties Bay Municipality</b>  064 502 000
Dunamis Consulting (Pty) Ltd		Cell: +264 855 512 173 Tel: +264 833 302 241 Email: <a href="mailto:ndimuhona@dunamisplan.com">ndimuhona@dunamisplan.com</a> P.O. Box 81108 Olympia, Namibia
Environmental Practitioner	Assessment	<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 (construction, operation, maintenance, and decommissioning of the proposed township extensions will trigger activities listed under the Environmental Management Act No. 7 of 2007 and the EIA Regulations (No. 03 of February 2012) as follows:

#### 5. Land Use and Development Activities

##### 5.1 The rezoning of land from -

- (a) Residential use to industrial or commercial use;
- (b) Light industrial use to heavy industrial use;
- (c) Agricultural use to industrial use; and
- (d) Use for nature conservation or zoned open space to any other land use.

#### 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 irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia".	Through the implementation of the EMP, the proponent shall be advocating for sound environmental management as set out in the Constitution.
<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>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	The developer should ensure compliance with the provisions of these legal instrument. A general

	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.	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 activities in relation to a protected place or protected item”.	Any heritage resources discovered during construction and operations requires a permit from the NHC for relocation.
<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 B1 road should be approved by the Roads Authority</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</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>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 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</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>

	<p>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> <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>	
<p>Public Health and Environmental Act of 2015</p>	<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> <ol 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> </ol>	<p>Nuisance such as dust, noise, bad odours, etc. should be controlled during all project phases.</p>

	<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 abide by this provision is an offense.</p>	
<p>Atmospheric Pollution Prevention Ordinance No. 11 of 1976</p>	<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> <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.</p>	<p>Air pollution could occur during the construction phase. It is the responsibility of NamWater to control excessive air pollution and comply with the ordinance.</p>



### 3. PROJECT DESCRIPTION

#### 3.1 Locality

The proposed development site measures approximately 10.5ha and is located south of the town CBD adjacent to the Henties Bay Extension 11 (Sun Bay development).

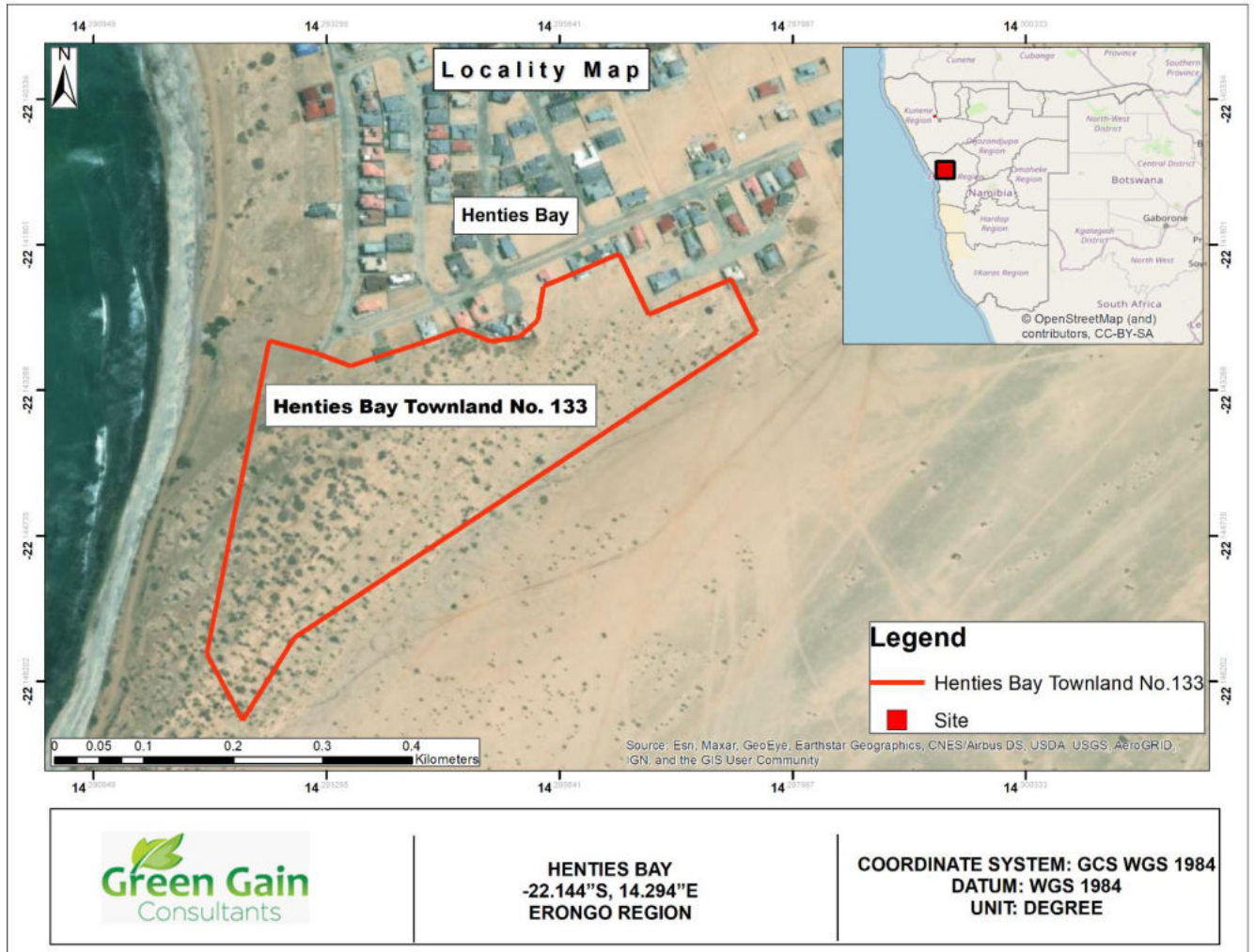


Figure 1: Locality of the proposed developments



### 3.2 Site Description and existing land uses

The proposed development site is still in its natural state and is covered with dune hummocks which are interacted by the local vegetation dominated by *Arthroerualeubnitzia* (Pencil bush).



**Figure 2:** *Scenic view around the site*

The site is somehow disturbed due to its proximity to the existing development and due to frequent movement of vehicles, bikes, and people in the area. This is evident from several paths and tracks in and around the site.

### 3.3 Adjacent Land Uses

The proposed development site forms part of the land that was initially regarded as a Solitude Dune or Conservation area of Henties Bay as per the draft Integrated Urban Spatial Development Framework of 2014/15. However, the draft IUSDF was never approved by Council and no Conservation area was registered for this area.

Moreover, the proposed development site (Portion 133) is surrounded by blocks of land that are allocated to other property developers for similar developments (Figure 4).

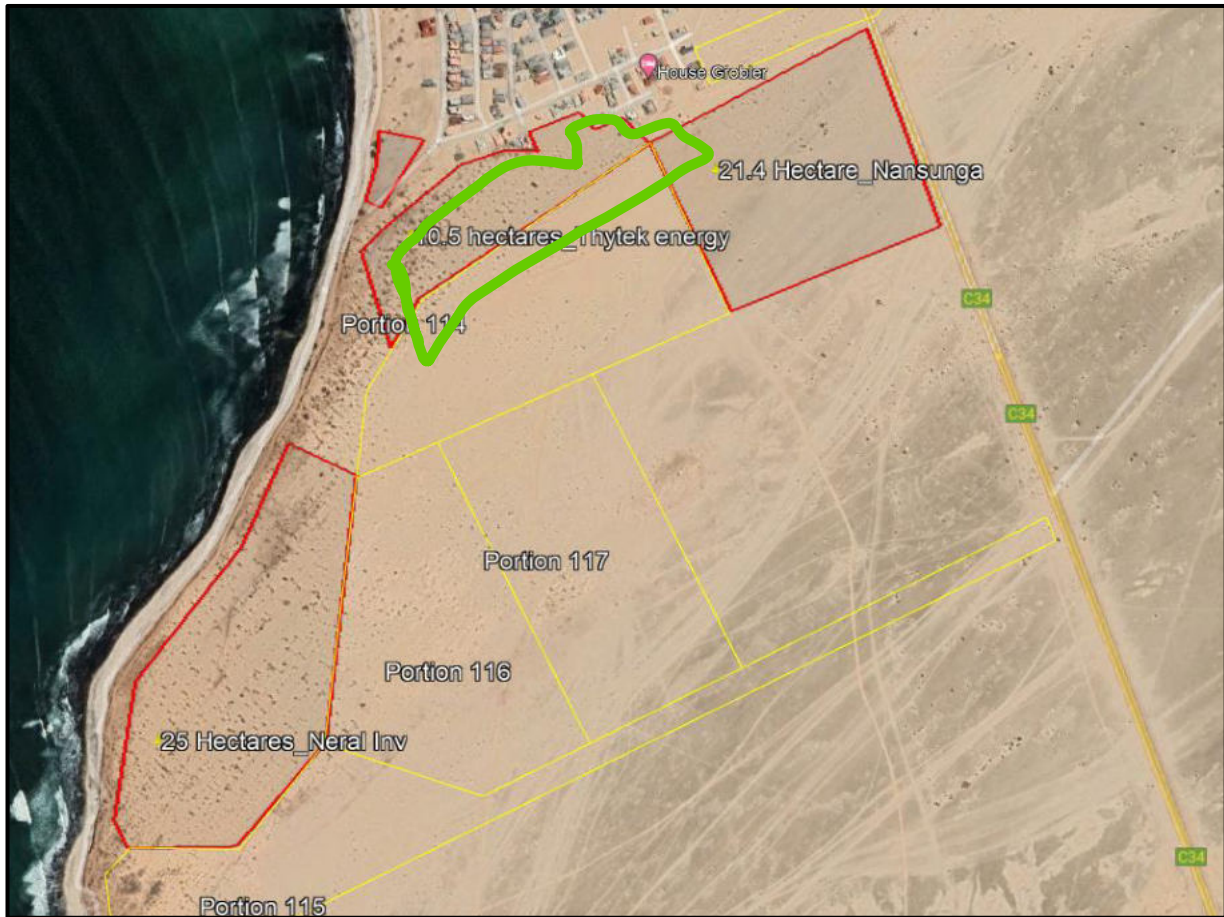


Figure 3: Site surroundings

### 3.4 The Proposed Development

#### 3.4.1 Proposed subdivision

The Henties Bay Municipality has given approval for the alienation of portion 133 by way of a private treaty to Thytek Investment cc. Dunamis Consulting Pty Ltd, a registered town planning consultant has been appointed to carry out the town planning process for the required subdivision of Henties Bay town and townlands No.133 into Portion 133 and Remainder. Similarly, a registered Surveyor has been appointed to carry out the surveying of the development site.

Table 2: Proposed land uses

Land use/Zoning	Total Area (m <sup>2</sup> )	No. of Erven	Percentage (%)
Residential	63363	116	60.3
General Business	4046	2	3.9
Institutional	1728	1	1.6
Public Open Space	9715	6	9.3
Street	26148		24.9
<b>Total</b>	<b>105000</b>	<b>125</b>	<b>100</b>

The development site is located next to the built-up development of Henties Bay Extension 11 where Municipal services are readily available. The proponent will be responsible for servicing of the land and the installation of Municipal services such as Sewer lines, road services, water supply, electricity, telecommunication etc. All services are to be provided at the Municipal standards and are to be subjected to Municipal approval.

### 3.4.2 Proposed layout

The proposed township layout as depicted in Figure 4 above, will be submitted to the Henties Bay Municipality for review before it is submitted to the Urban and Regional Planning Board (URPB) for approval in line with the Urban and Regional Planning Act of 2018.

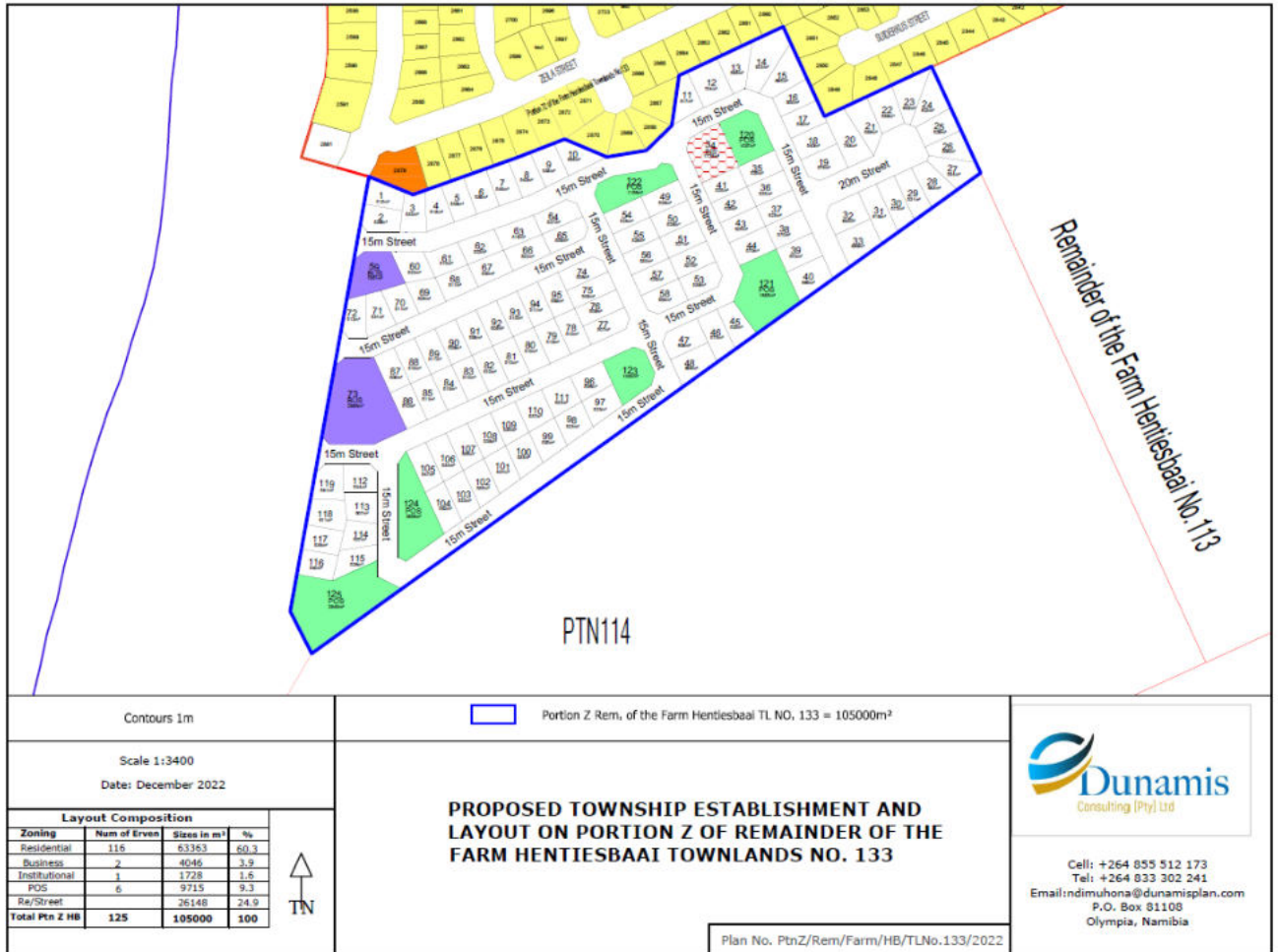


Figure 4: Proposed subdivision

### 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 considered to be a natural opportunity associated with the growth of the town.

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

- As the site is located in an “expansion zone” of the settlement
- 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 stipulate 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 townlands of Henties Bay Townlands, thus are expected to be developed at any time to accommodate the growth of town. Moreover, the site is already occupied by developments which existed before the proclamation of the town; hence, the site is considered suitable for the proposed development and no alternative site is required.
- **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 was found to be ideal and not expected to give rise to significant environmental impacts, hence no alternative was deemed necessary.



## 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

The weather along the coast of Namibia is relatively different from that inland. The coastal climate is characterized by lower rainfall, lower temperature, less radiation and sunshine, stronger winds, and frequent fog (Mendelsohn et al., 2002). The average annual temperature ranges between 16°C and 17°C.

The average maximum temperature for Henties Bay varies between 20°C and 22°C with the average minimum temperature between 8°C and 10°C. The warmest months are between December and March with temperatures between 20°C and 30°C and the cold, foggy months from August to October with temperatures between 14°C and 18°C. Along with the coast, rainfall is much less than further inland. The average annual rainfall for Henties Bay is less than 50 mm per year.

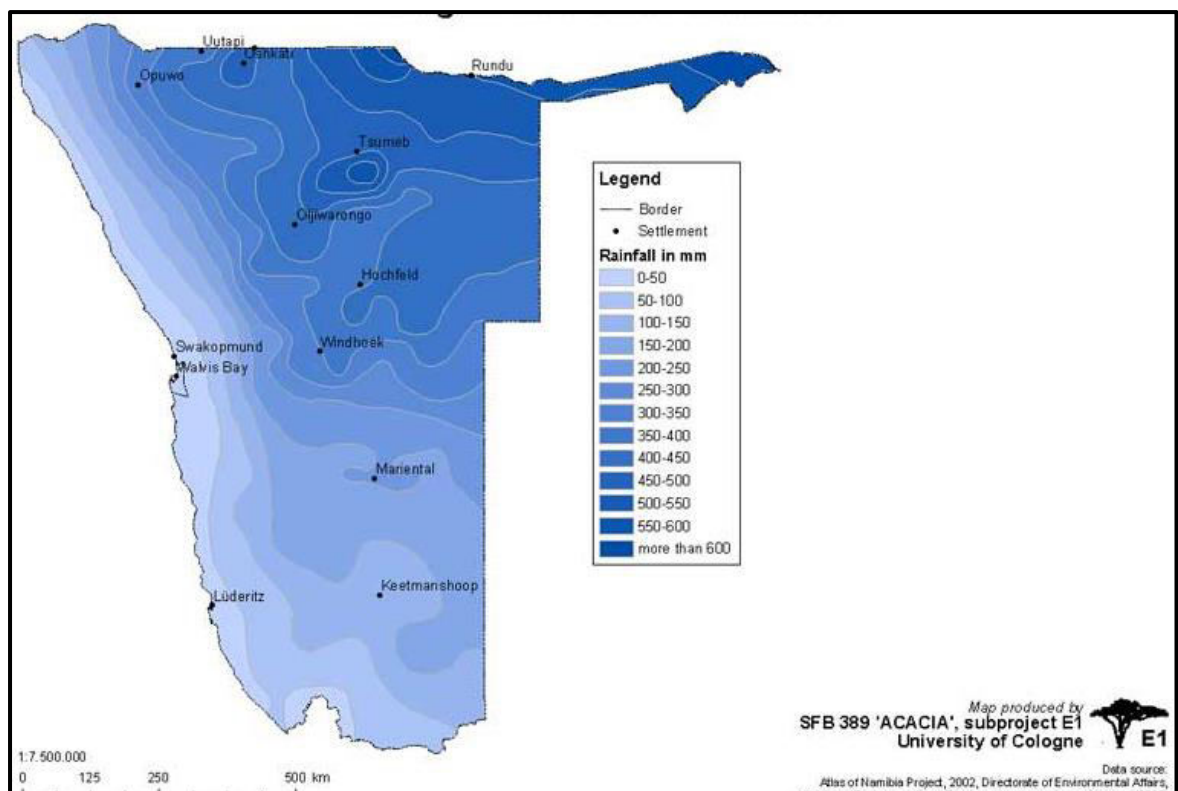


Figure 5: Precipitation map of Namibia

#### 4.1.2 Soils and Geology

The dominant soils in the area are Petric gypsisols and Petric calcisols. Both soils contain abundant quantities of calcium sulfate (gypsum). The geology of the Henties Bay area is made up of Damara sequence rocks of the quaternary age which dates back 137-132 million years ago as shown in Figure 17 below. The Damara sequence belongs to the Swakop Group which is made up of the Khomas and Ugab sub-groups which are classified as hard rock formations.

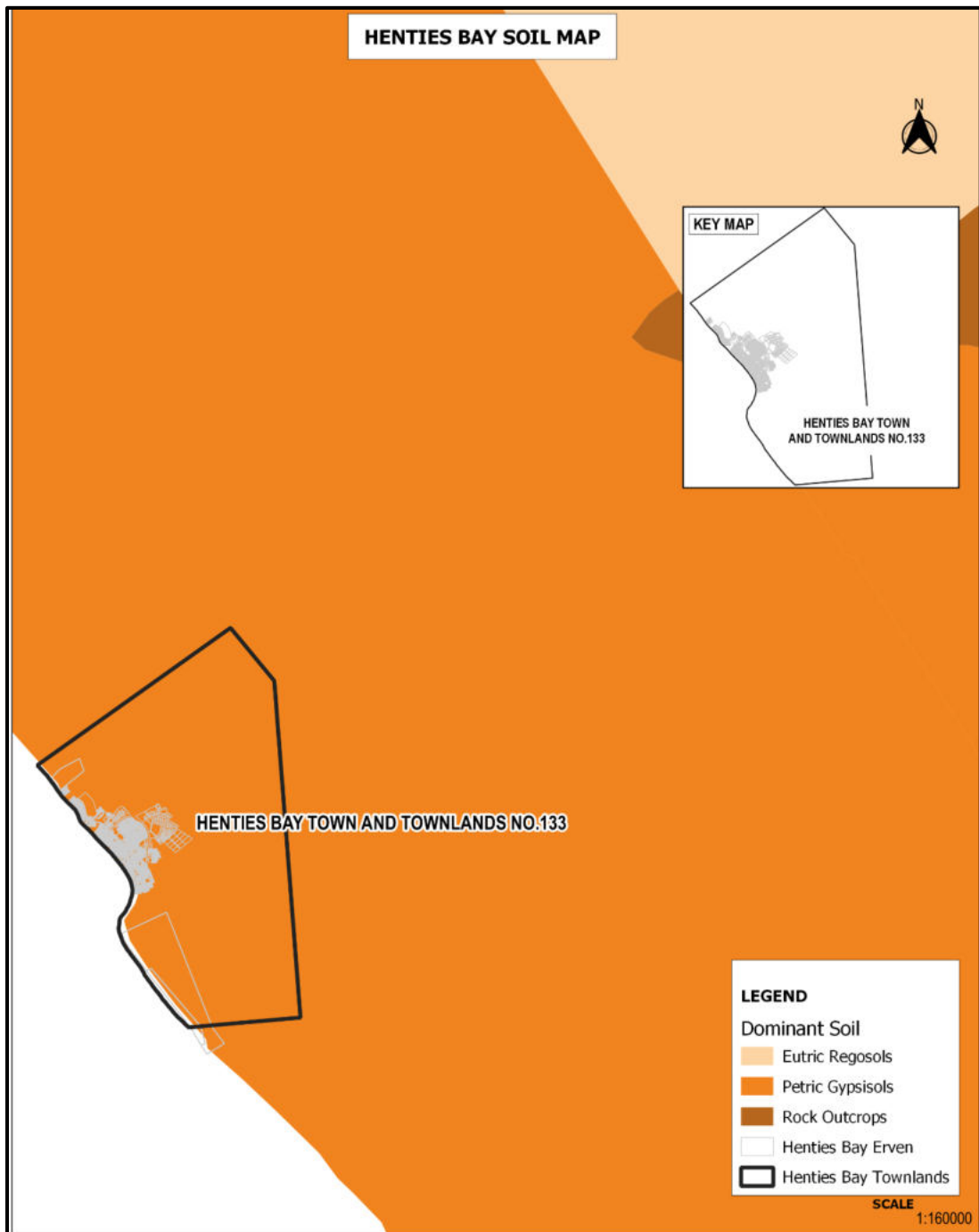


Figure 6: Soil type of the site



### 4.1.3 Hydrology

One of the prominent hydrological features of the Henties Bay area is the Omaruru River (Figure 18) which flows into the Omdel Dam and then to the sea. Henties Bay town is supplied with groundwater from the Omaruru River basin. Both the existing pipeline and the new pipeline cross through this river.

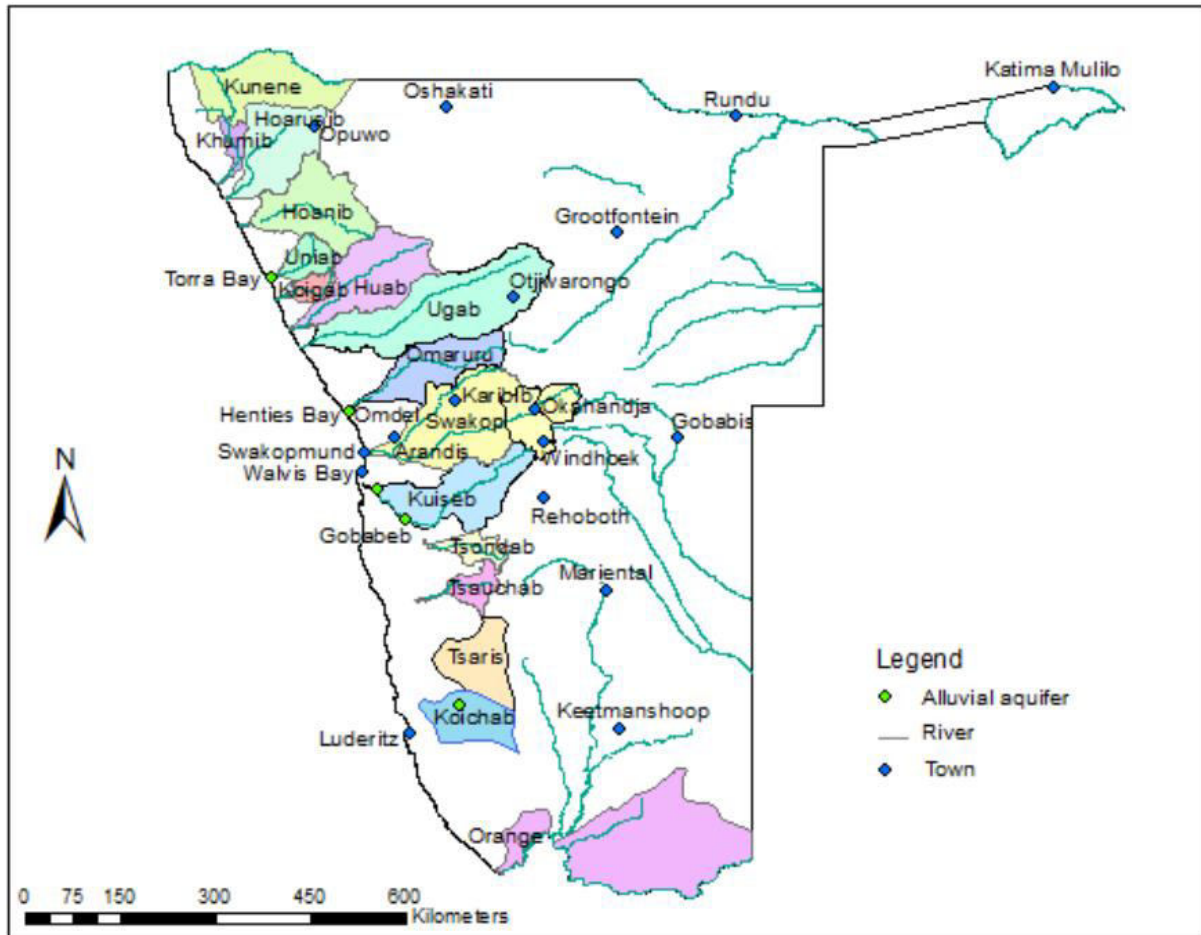


Figure 7: Hydrology map of Namibia

#### 4.1.4 Local flora

Henties Bay falls within the Namib Desert Biome and Central Desert vegetation type and is bordered by the Dorob National Park and has few restrictions, particularly for off-road driving on the beach and across the plains. There are areas along the coast with high concentrations of lichen fields and are thus of ecological significance. The lichen field which was declared as an Important Plant Area is located north of Wlotzkasbaken (27 km south of Henties Bay). The Damara Tern breeding sites, usually in soft dune sand found along the coastline are also considered to be areas of ecological importance (NACOMA, 2013), however these areas are not affected by the proposed pipeline route and the ground level reservoir site.



Figure 8: Landscape around Henties Bay

#### 4.1.5 Local fauna

The local occurring fauna expected to occur at the site and surrounding area include reptiles, birds such as Damara terns (*Sternula balaenarum*) and small ground burrowing animals such as lizards, snakes, and different types of rodents while large mammals that are known to frequent the Henties Bay area are black-backed jackal, brown hyena, oryx and zebra (NACOMA, 2013).



*Figure 9: Local fauna*

The proposed pipeline route and ground level reservoir site are located within the Henties Bay townlands. The proposed pipeline route will follow the existing NamWater pipeline, hence, the site is already disturbed by the current pipeline maintenance works and the movement of vehicles and people. There are also no sensitive flora or habitats and no fauna with territorial needs within the proposed development sites.

## 4.2 Socio-economic Environment

### 4.2.1 About the area

Henties Bay is a coastal town in the Erongo Region of the west coast of Namibia. It is located 70 km north of Swakopmund and it mostly serves as a holiday settlement. Halfway through (35 km) to Henties Bay from Swakopmund lies a settlement of Wlotzkasbaken. Some 60 km to the north of the town is the seal colony of Cape Cross. Henties Bay falls within Arandis Constituency. Arandis is a constituency in the Erongo Region of central-eastern Namibia. Arandis Constituency includes the towns of Arandis and Henties Bay.

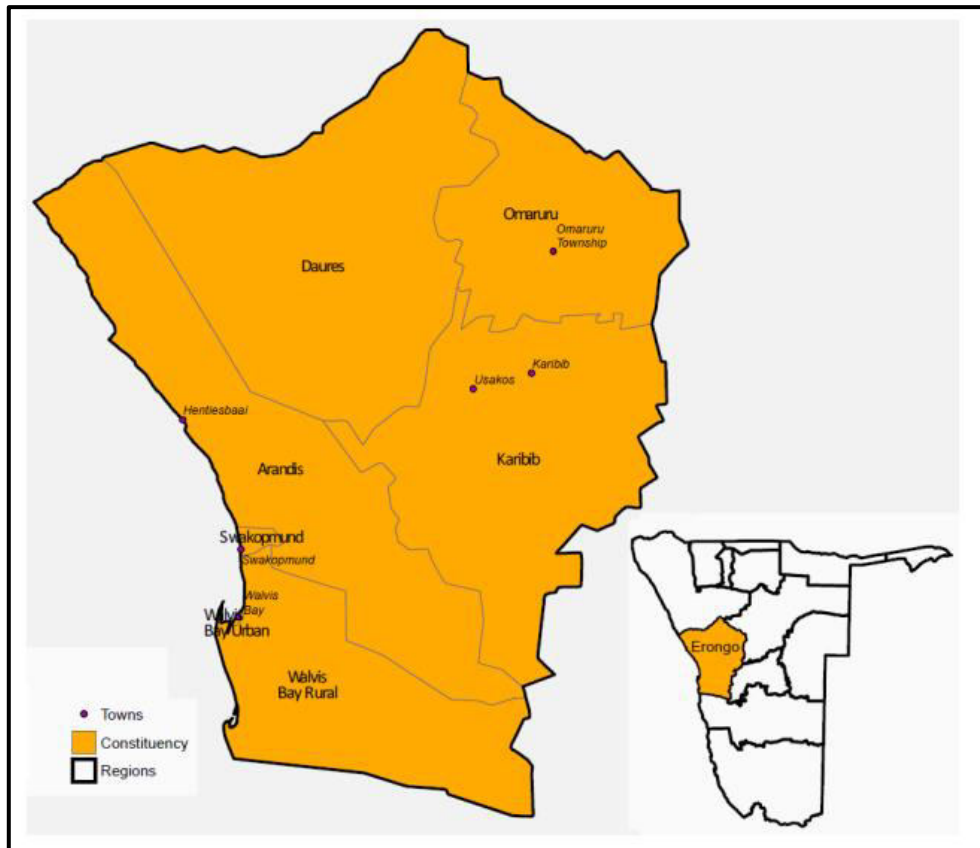


Figure 10: Map of Erongo region

## 4.2.2 Demographic

The statistics are shown in **Table 8** below are derived from the 2011 Namibia Population and Housing Census (Namibia Statistics Agency, 2013), and presented from a local and regional perspective.

Table 3: Statistics of the Arandis Constituency and Erongo Region (Namibia Statistics Agency, 2011)

<b>ARANDIS CONSTITUENCY</b>	
<b>ATTRIBUTE</b>	<b>INDICATOR</b>
Population (Henties Bay)	4 720
Population	10 093
Females	4 852
Males	5 241
Population under 5 years	10%
Population aged 5 to 14 years	64%
Population aged 15 to 59 years	64%
Population aged 60 years and above	8%
Female: male ratio	108:100
Literacy rate of 15 years old and above	98%
People above 15 years who have never attended school	4%
People above 15 years who are currently attending school	13%
People above 15 years who have left school	80%
People aged 15 years and above who belong to the labor force	71%
Population employed	72%
Homemakers	5%
Students	49%
Retired or old age income recipients	46%
Income from pension	10%
Income from business and non-farming activities	6%
Income from farming	1%
Income from cash remittance	3%
Wages and salaries	72%
Main Language (Erongo Region)	Oshiwambo-38.8%
<b>ERONGO REGION</b>	
<b>ATTRIBUTE</b>	<b>INDICATOR</b>
Population	150 809
Population aged 60 years and above	6%
Population aged 5 to 14 years	17%
Population aged 15 to 59 years	64%

### **4.2.3 Socio-economic development**

Henties Bay is predominantly a tourist destination for anglers and 4x4 enthusiasts. Its property market has expanded significantly since the late 1990s, particularly for holiday accommodation.

The town is made of two formal residential township areas namely, Henties Bay and Omdel. The formal townships are made of about 4400 households and are further divided into extensions i.e., Henties Bay proper, Extension 1, etc. There are currently 22 formal township extensions in Henties Bay of which 18 are developed while four are proposed. There is also an informal settlement with about 300 informal houses (Henties Bay Municipality, 2021).

The town is served by a government public clinic, a pharmacy, and private doctors' consulting rooms. In terms of education, the town is served by one government school, a private school, and several private Early Childhood Development Centres. There is a University of Namibia Campus, and a National Youth Centre.

The main economic activities in the town are tourism, angling, sporting, agriculture, accommodation, etc. Being a holiday destination, Henties Bay boasts numerous small pubs and restaurants, a hotel, guesthouses, B&B's. There are also several holiday houses for rent, especially during the festive season.

Although the town's business centre is small, there are several shops and amenities such as supermarkets, bottle stores, banks, and ATMs. The town is well connected to the national road network through the C34 road from Swakopmund and linking the town to tourist hotspot areas of Torra Bay, Mowe Bay, and the prominent Brandberg mountains and Damaraland on the north-east of town (Henties Bay Municipality, 2021).

### **4.2.4 Sanitation**

All properties within the formal residential areas have access to clean drinking water and are connected to the Municipal sewage system. Informal settlements are served with communal taps and common ablution facilities in the form of dry pit latrines.

### **4.2.5 Archaeological and Heritage Context**

The subject sites are not known to be of any historical significance. There are also no significant archaeological and heritage sites that are known to be located within the proposed development area.



## 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

The study was subjected to a public participation process (PPP) as defined in the Environmental Management Act 7 of 2007 and EIA Regulations of February 2012. Potential I&APs were notified through newspaper advertisements in accordance with section 21 (2) of the Environmental Regulations of (GG6 of February 2012). Public notices were advertised twice in two local newspapers: Namib Times 14 & 21 April 2023 and the Confidante newspaper for 06 & 14 April 2023. The public notices will also be placed at the Henties Bay Municipality notice board and at Henties Bay NamPost, Erongo Red offices and at the development site. 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 25 April 2023.



Figure 11: Public Notice

## 5.2 Public meeting

In addition, a public meeting was held on 21 April 2023 at De Duine Hotel, Henties Bay. The meetings as attended mainly by residents of the town and local experts and property developers. During the meeting, several issues were raised, especially on the issue of the proposed development site was converted from the Conversation area as outlined in the Draft UISDF of 2014/15 to a township development. Most of the registered I&APs also submitted objections and are of the opinion that the land should remain a conservation area.



*Figure 12: View of the public meeting in session*



## 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 4: Impact Assessment criteria**

CRITERIA	DESCRIPTION			
<b>EXTENT</b>	<b>National (4)</b> The whole country	<b>Regional (3)</b> Erongo 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 5: 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 6: 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	Loss of vegetation during construction	1	3	2	2	Moderate	<ul style="list-style-type: none"> <li>-Only plants affected by the activities must be cleared.</li> <li>-Vegetation of the site which is mainly consisting of Pencil Bush (<i>Arthroerua leubnitziae</i>) is not endemic to the development site and can be widely found in the surrounding environment including in the conservation area (Dorob National Park).</li> <li>-There is no sensitive flora i.e., lichen within the development site</li> </ul>
	Disturbances to local occurring fauna	1	3	2	2		<ul style="list-style-type: none"> <li>-There are no sensitive habitats within the development site.</li> <li>-There is no fauna that are endemic to the site or require territorial needs</li> <li>-The development site is already disturbed due to informal tracks resulted from quad biking or dune driving (Figure 3).</li> <li>-The land is surrounded by land blocks earmarked for similar developments, hence disturbances to the local occurring fauna will</li> </ul>

							not be restricted to this particular site (Portion 133).
	Possible surface water and groundwater pollution	1	1	1	1	Moderate	-No pollutant must be discharged directly into watercourse or underground. -Underground storage of hazardous goods should not be permitted in the proposed
	Pollution to nearby ocean zone as result of uncontrolled sewerage outflows	1	1	1	1	Low	-The construction camp should be located far from the seashore. -No discharge of sewerage into the sea. Such incident should be regarded as punishable offense. -Avoid littering by enforcing strict waste management at the construction area
	Impact on the natural flow of storm water	1	1	1	1	Low	-There are no major drainage or waterways within the development site -The area hardly receive rainfall
	Loss of topsoil during construction due to erosion by wind or water	1	2	2	2	Moderate	-The area is susceptible to string wind; thus, soil conservation measures should be used on-site to help reduce erosion. -Prevent silting of watercourses by use of silt traps and re-vegetation of disturbed areas -Construction work should cease in case of string wind conditions -Excavated topsoil must be stockpiled and protected for later use.
	Potential damage or destruction to undiscovered heritage or cultural sites in the area	2	3	1	2	Low	-There are no major archaeological or Paleontological grounds to suspend the proposed development. -In case of any 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
	Impacts of temporary construction camps	1	1	2	2	Moderate	-Construction camps (if allowed) should be properly located away from watercourses -Provide potable ablution facilities during construction -The site used for construction camps should be rehabilitated after construction phase
<b>SOCIO- ECONOMIC</b>	Increase in traffic within the area is expected due to construction activities	2	1	1	2	Moderate	-Identify new access road to avoid congestion. -Flagmen and traffic controls should be appointed to regulate traffic flow of construction vehicles. -Appropriate road signs.
	Generation of dust	1	1	1	2	Moderate	-Use dust-suppressing agents -Limit Vehicle speed -Avoid dust generating activities during 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 Personal procurement Equipment (PPE). -Install signage at the construction site.
	Construction activities will increase local water demand	1	2	2	1	Moderate	-Use water sparingly -Use alternative source of water where possible
	New development will attract new criminal activities in the area	1	1	1	1	Low	-All items should be stored in a secured area -Provide site security during the construction period
	Economic development (+ve)	4	2	1	3	High	-Contractors should source materials from local supplier to enhance the local economy as far as possible
	Employment of the local community	4	4	2	3	Moderate	-Local laborers and local contractors (especially SMME's) should be utilized at greater extent. This should also include the youth, women, and people with disability.

**Table 7: 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>	Impact on biodiversity (flora and fauna) +ve	1	4	1	2	Moderate	-Plant vegetation around the site to enhance biodiversity
	Alteration of existing visual perspective +ve	1	4	1	1	Moderate	-Plant vegetation around the area to enhance greenery view
	Possible surface water and groundwater pollution from leaking sewage lines or underground storage of dangerous goods.	2	1	2	2	Moderate	-No pollutant must be discharged directly into sea or underground. -All properties must be connected to the Municipal sewer system -Sewage lines must be maintained frequently to prevent leakages
	Impact on the 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 traffic flows in the area	2	4	1	1	Moderate	-Provide appropriate road signs & markings, sidewalks for pedestrians
	Increased water demand of the area	2	4	4	4	Low	-Consult with the municipality to ensure sufficient provision for water supply to the new development
	Increased electricity demand of the area						-Consider using alternative energy sources Solar for the new development as far as possible
	Provision of housing delivery (+ve)	4	4	4	4	High	-Local people must be given the first priority
	Employment of the local community (+ve)					High	Local laborers and local contractors (especially SMME's) should be utilized at greater extent. This should also include the youth, women and people with disability.

## **7. CONCLUSION AND RECOMMENDATIONS**

---

The key potential impacts associated with the construction, operational and maintenance phases of the proposed project have been adequately assessed and documented in the Scoping Report. The identified impacts can be mitigated to reduce the significance of these impacts to an acceptable level, hence, there is no need for a specialist study. The proposed mitigation measures are described in greater detail in the EMP.

### **7.1 Conclusion**

The following conclusions can be drawn from the Scoping study.

- The public consultation revealed that the proposed development site was part of the proposed Henties Bay Conservation area (Solitude Dune) that was proposed by a group of Henties Bay residents. However, it appears that the said Conservation area was ever registered nor approved by the relevant authority. In addition, the Henties Bay Municipality has approved the alienation of the said conservation land into portions for township development, of which Portion 133 is one of them.
- The Portion allocated to Thytek Investment cc is surrounded by portions allocated to other land developers for similar projects (township development), see Figure 4.
- The proposed development site is compatible with the adjacent land uses and can easily be connected to existing networks (bulk supply services) e.g., water, electricity, etc., on the fully developed Sun Bay township.
- The objections that were received, most of which are related to the alienation of the proposed development site (Portion 133) were attended to as outlined in the Issue Response Report (Appendix D).
- It is also concluded that there are no sensitive cultural or heritage materials on the proposed sites and in case of any such material found at site during construction phase, this should be handled as per the National Heritage Act 27 of 2004.

## 7.2 Recommendations

The EAP is of the opinion that the development should be authorized because it is not expected to generate significant impacts to the affected environment. We further recommend that the Developer.

- Appoint a specialist to conduct a Geotechnical investigation of the proposed development site and submit to the Henties Bay Municipality for approval prior to land servicing/development.
- Observe a sufficient water mark along the coastal line, (approximately 100m or as required by the MURD).
- Consult with Henties Bay Municipality: Technical Division for the provision of sufficient water supply to the proposed development.
- Provide sufficient sewerage reticulation system and associated infrastructure to the satisfactory of the Henties Bay Municipality
- Engage with ERONGO RED 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.
- Provide a Storm Water Management Plan for the site to the satisfactory of the Henties Bay Municipality.
- Appoint a Project Representative and Environmental Control Officer to attend to all issues related to the project and ensure ongoing consultation with the I&APs and relevant stakeholders.
- Implement the proposed mitigation measures as outlined in the Environmental Management Plan (EMP).

To this end, it is therefore recommended that an Environmental Clearance Certificate be granted for the proposed **Township establishment Portion 133 of the Remainder of Henties Bay Townlands No.133, Erongo 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.

## **9. APPENDICES**

---

- 9.1 APPENDIX A: Proof of Consultation**
- 9.2 APPENDIX B: Issue Response Report**
- 9.3 APPENDIX C: Council Approval**
- 9.4 APPENDIX D: EMP**