







“Balancing Growth with Resilience”

EIA SCOPING REPORT

Fisherman’s Village: Affordable Housing Project of ±660 dwelling units: 5ha Portion of Erf 5757 Kuisebmond, Walvis Bay, Erongo Region of Namibia

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“To waste, to destroy our natural resources, to skin and exhaust the land instead of using it so as to increase its usefulness, will result in undermining in the days of our children the very prosperity which we ought by right to hand down to them amplified and developed”. — Theodore Roosevelt



“Balancing growth with resilience”

DOCUMENT STATUS

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PROJECT TITLE	Fisherman’s Village: Affordable Housing Project of ±660 dwelling units: 5ha Portion of Erf 5757 Kuisebmond, Walvis Bay, Erongo Region of Namibia
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COMPETENT AUTHORITY	Environmental Commissioner: Ministry of Environment, Forestry and Tourism Directorate of Environmental Affairs Private Bag 13306, Windhoek, Namibia Tel: (+264-61) 2842111, Fax: (+264-61) 229936
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“Sooner or later, we will have to recognise that the Earth has rights, too, to live without pollution. What mankind must know is that human beings cannot live without Mother Earth, but the planet can live without humans.” – Evo Morales

“We don’t have to sacrifice a strong economy for a healthy environment.” – Dennis Weaver

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SCOPING REPORT

“The only way forward, if we are going to improve the quality of the environment, is to get everybody involved”. – **Richard Rogers**

1. EXECUTIVE SUMMARY

1.1 Introduction

As a social responsibility to ensure the provision of reliable and affordable housing, Venmar Fishing (Pty) intends to partially develop Erf 5757 for affordable housing.

The Walvis Bay Council approved to sell a 5-hectare portion of Erf 5757 Kuisebmond for the affordable housing project in Kuisebmond. The plan is to establish 330 units on 2.5 ha portion as the first phase. The second phase will be another 330 units on 2.5 ha so about 660 units in total.

Other related infrastructure includes recreational open space, a private clinic and a pre-primary school, which will complement the apartment blocks. The proposed site is situated on the northern edge of Kuisebmond along Independence Avenue. The development would be a block of flats under sectional title as opposed to single residential plots.

Considering the magnitude of the project – the proposed development and its related infrastructure will likely trigger some negative impacts on the surrounding or immediate environment, therefore an EIA has to be carried out. It was also a requirement of the Walvis Bay Municipality Council’s conditions of sale for an EIA and ECC. The Proponent, Venmar Fishing Group (Pty) Ltd has therefore appointed Erongo Consulting Group to carry out an Environmental Impact Assessment (EIA) and undertake the necessary activities to enable an application for an Environmental Clearance with the Environmental Commissioner as prescribed by the Environmental Management Act (No. 7 of 2007)¹ and Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012)².

The proposed development is meant to improve the standards of the living conditions of the Walvis Bay community in line with Namibia’s Vision 2030. The layouts of the proposed development are based on the environmental parameters, economic restraints, availability of land and connection points of existing bulk services infrastructure. The proponent and Council has considered four sites in total: (1) Erf 7812 Kuisebmond, (2) A portion of Erf 5774 Kuisebmond (3) A portion of Erf 5757 Kuisebmond, and (4) land at the Green Valley Township (Farm 38).

Option (1) was already allocated to the Namibian Police and Option (2) was earmarked for municipal purpose and were not available. Option (4) was considered too far out of town and not within walking

¹ <https://www.elaw.org/eialaw/namibia>

² <https://www.loc.gov/law/>

distance to places of employment. Therefore, Option (3) was considered the best alternative as it was available and is situated relatively close to Kuisebmond and working sites.

A no-go alternative was considered not feasible because if the sites remain undeveloped, they will attract illegal dumping and informal settlements. At the same time, the Walvis Bay Municipality is facing a massive housing backlog – which the proposed project seeks to address.

From the Public Participation Process undertaken, no objections were received.

1.2 Aim of the study

On behalf of the proponent, Erongo Consulting Group, duly registered in Namibia, has been appointed to attend to and complete a Scoping Report and Draft Management Plan (DMP) for the proposed development. The proposed development seeks to realistically support acceleration of MDG 1, as well as the Presidential Infrastructure Initiative. The proposed development is an activity that requires an Environmental Clearance Certificate (ECC), as promulgated under the Environmental Management Act 7 of 2007 and its regulations. The aim of the Scoping exercise is to:

- Assess and evaluate the suitability of the proposed subdivision of Erf 5757 Kuisebmond and rezoning from “Single Residential” to “Mixed Land Use”, with a density of 1 dwelling unit per 50m² in terms of the Walvis Bay Zoning Scheme, and subsequent development of affordable housing units and related infrastructure against the biophysical and socio-economic sensitivities of the area;
- Minimize the negative environmental impacts brought about by the proposed development and the supporting infrastructure during construction and operational phases;
- Consult all Interested and Affected Parties (I&AP's), with specific emphasis on the communities in the affected area to ensure that their needs and concerns are taken into account and above all;
- Conform to and meet the stipulated Namibian Environmental legislation requirements (EMA, 2007)

As part of the EIA application for the proposed development, a scoping phase has to be exercised. The scoping exercise therefore identified the issues that the Environmental Impact Assessment will examine and the scope of the assessment required to ensure that the EIA will conform to the requirements of the Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012).

1.3 Legal Requirements

This EIA exercise was undertaken in terms of section 58 of this Act, the Environmental Management Act, which came into force on the 6th of February 2012, as determined by the Minister of Environment and Tourism (Government Notice No. 28 of 2012)³.

³ <https://www.elaw.org/eialaw/namibia>

Under section 56 of the Environmental Management Act, 2007 (Act No.7 of 2007), the Minister has made the regulations for Environmental Impact Assessment as set out in the Schedule of Government Notice No. 30 (2012)⁴. These regulations require that all projects, plans, programmes and policies that have a detrimental effect on the environment must be accompanied by an EIA.

Under section 27 of the Environmental Management Act, 2007 (Act No. 7 of 2007), and after following the consultative process referred to in section 44 of that Act, the proposed development and its related activities may not be undertaken without an environmental clearance certificate (Government Notice No. 29 of 2012).

The most important provisions in terms of guiding this Environmental Assessment process are those contained in the Urban and Regional Planning Act (No.5 of 2018), Walvis Bay Zoning Scheme, the Water Act and the Forestry Act.

As such, the proposed project will likely have an impact on sensitive aspects of the receiving environment, both biophysical and socio-economic. Key environmental sensitivities include those pertaining to municipal service provision⁵⁶.

1.4 Public Consultation

Public participation was carried out in accordance with the EIA Regulations. Various I&APs at local level were identified and their input solicited. Particular effort was exerted to involve I&APs at a local level – those living in Kuisebmond and Walvis Bay and the Greater Erongo Region at large.

The following impacts were identified and evaluated during the Scoping Phase:

- Solid waste management
- Potential impact of Sewage reticulation system
- Potential impact Potable water infrastructure
- Borrow pits
- Biodiversity and Aesthetics
- Potential impact Road infrastructure
- Maintenance of services infrastructure
- Dust and Noise
- The proposed site needs additional soil to make it level with adjacent streets.
- Strong winds
- Job creation - looking at employment of local community;

⁴ Ibid.

⁵ <https://www.etu.org.za/toolbox/docs/localgov/munservice.html>

⁶ Municipal services or city services refer to basic services that residents of a city expect the city government / local authority to provide in exchange for the taxes, which citizens pay.

- Excessive noise generation during construction;
- Potential damage or destruction to undiscovered heritage sites of the area;
- Traffic congestion during construction;

1.5 Impact Assessment

The issues identified by Erongo Consulting Group and along with those identified during the public consultation process were assessed using a range of assessment criteria. The application of these criteria involves a balanced consideration of duration, extent, and intensity/magnitude, modified by probability, cumulative effects, and confidence in order to determine significance. Mitigation measures are outlined for each impact.

The identified impacts were assessed using the **Significance Assessment Methodology**⁷, which have the severity rating, extent rating, frequency, probability and the duration. The extents of the above impacts after mitigation are mostly site specific and local. Mitigation measures were outlined to reduce the impacts to a greater extent and a draft environmental management plan compiled to ensure contractor operates his construction activities in environmental sensitive manner.

1.6. Need and Desirability

Namibia’s housing backlog currently stands at 110 000 housing units and grows at an annual rate of nearly 3 700. Urban land and housing shortage is a reality today in most major cities/towns throughout Namibia. This multifaceted problem is characterised by various aspects such as the lack of serviced land in urban townships, limited financial resources and excess housing demand⁸.

Namibia is experiencing a housing crisis. Strategies currently employed to reduce the backlog are proving ineffective. Increasing demand escalates prices, meanwhile the country’s rapid urbanization maintains a steady influx of low wage earners from rural areas seeking better opportunities in urban areas. The newcomers are greeted by too few rental offers, at too high a cost, resulting in the majority of rural-urban migrants living in shacks on the outskirts of cities.

Figure 1.1: New Era Newspaper screenshot, 21 August 2019, detailing the national housing backlog



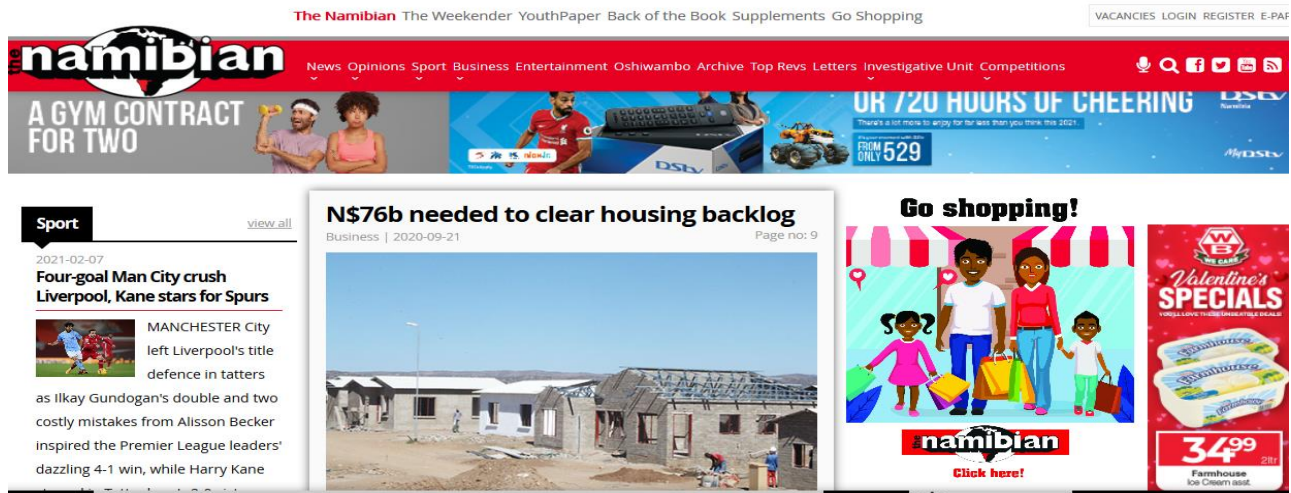
⁷ Determining the significance of predicted impacts is one of the most important decisions in the environmental impact assessment (EIA) process. Good EIA should focus on the impacts that matter most, and, as a result, EIA systems involve systematic steps to determine whether the likely adverse impacts of proposed projects are significant (Ehrlich & Ross 2015)

⁸ <https://neweralive.na/posts/housing-backlog-stands-at-110-000>

Figure 1.2: Namibian Sun Newspaper of 11 August 2020 depicting huge housing backlog in Windhoek and beyond



Figure 1.3: The Namibian newspaper of 21 September 2020 detailing the resources needed to address the housing crisis



Housing policies in Namibia favour single storey detached housing sitting on a minimum 300 sqm plot of land, requiring a great deal of land to be levelled and serviced at high cost, but benefiting few. Additionally, zoning practices keep residential and commercial uses separate, resulting in an urban sprawl which forces people to either live hours of commute from jobs and job opportunities, or to rent informal shacks in the underused gardens of those living closer to urban centres. Within these informal settlements however, the highly entrepreneurial residents have created a second, informal job market, so that one finds several businesses at every junction.⁹

The proposed design seeks to provide a model for provision of housing that reverses the trend of unaffordable and unsustainable development, by reducing the costs involved in the construction of

⁹ https://graftlab.com/portfolio_page/namibia-affordable-housing/

housing and providing a structure for future growth and activity within the new neighbourhoods. We identified three key design elements for achieving this:

- **Densification:** reducing the plot size of the houses, to reduce the amount of serviced land and related costs for each unit, as well as reducing construction material by using housing typologies which have shared construction elements (i.e. attached housing and apartments).
- **Mixed-Use:** to provide a hybrid architecture which facilitates using the home for business at varying scales.
- **Incremental housing:** using modular elements that allow a compact core to extend vertically and/or horizontally in a cost efficient manner.

These key elements, Densification, Mixed-Use, and Incremental housing, as well as the particular climate of Namibia, led to the development of three typologies: Townhouses, Courtyard houses and Apartments. The typologies are designed so that they can be combined to create an urban scape as vibrant and inviting as the community that grows within it.

The prime objective of this project is not profit driven. In fact, the proponent will need to subsidise the housing units to make it affordable. Therefore, the objective is to provide housing to employees as part of their social responsibility.

1.7 Planning Principle

The proposed development aims to provide much needed affordable housing for employees of the fishing companies with the purpose of improving the general quality of life of individuals and families alike. The aim is not merely to provide affordable housing but also to create a community where basic lifestyle and medical needs are provided within walking distance.

Therefore, a private clinic, pre-primary/day care centre and a training size soccer field will be provided within the development to support and uplift the community living within and around these units. The project will also assist in the decongestion exercise in Kuisebmond in light of the pandemic.

1.8 Conclusions and Recommendations

With the information provided, the Scoping Exercise is of the opinion that the proposed subdivision of Erf 5757 Kuisebmond and rezoning from “Single Residential” to “Mixed Land Use”, with a density of 1 dwelling unit per 50m² in terms of the Walvis Bay Zoning Scheme, and subsequent development of affordable housing units and related infrastructure - should be duly authorised by the Environmental Commissioner in the Ministry of Environment, Forestry and Tourism.

“We have forgotten how to be good guests, how to walk lightly on the earth as its other creatures do.”

– Barbara Ward

2. PROJECT DESCRIPTION

2.1 Introduction

The proposed project will cover an area of 5.0 hectares of the ±15-hectare Erf 5757 Kuisebmond and will include the construction of ±660 units including a pre- Primary School and Clinic. The proposed development entails subdivision of Erf 5757 Kuisebmond and rezoning from “Single Residential” to “Mixed Land Use”, and subsequent development of affordable housing units and related infrastructure:

- 330 units on 2.5 ha portion as the first phase.
- The second phase will be another 330 units on 2.5 ha so about 660 units in total.
- Other related infrastructure to be establish / complement the housing units include recreational open space, a private clinic and a pre-primary school which will complement the apartment blocks.

Condition 4 of the Council’s approval letter, requires that the proponent submits an Environmental Impact Assessment (EIA) to obtain an Environmental Clearance Certificate (ECC) for the development in terms of the Environmental Management Act (No.7 of 2007), as amended.

The coordinate of the area are as follows: 22°55'0.13"S and 14°32'13.43"E.

Two block portions, each 2.5 ha will be subdivided from Erf 5757 Kuisebmond and will be rezoned from “Single Residential” to “Mixed Land Use” with a density of 1 dwelling unit per 50m² in terms of the Walvis Bay Zoning Scheme. This residential density will permit the expected goal of ±660 units on a total site size of 5.0 ha. Apartment blocks, not higher than three storeys, will be developed on the periphery with a central courtyard containing hard and soft open spaces, a pre-primary school and a clinic. The project is aimed to provide affordable housing to employees of the fishing companies.

In addition to the establishment of the two portions, services such as bulk water supply, electricity, storm water drainage, sanitation and waste management services will also be provided for the affordable housing units.

Please note that this project is not a “township establishment” but rather a high density residential development as you call “Fisherman’s Village” on a 5 ha portion of Erf 5757 Kuisebmond. For your information, the total size of Erf 5757 Kuisebmond is about 15 ha, so “Fisherman’s Village” will effectively cover about a third of the area.

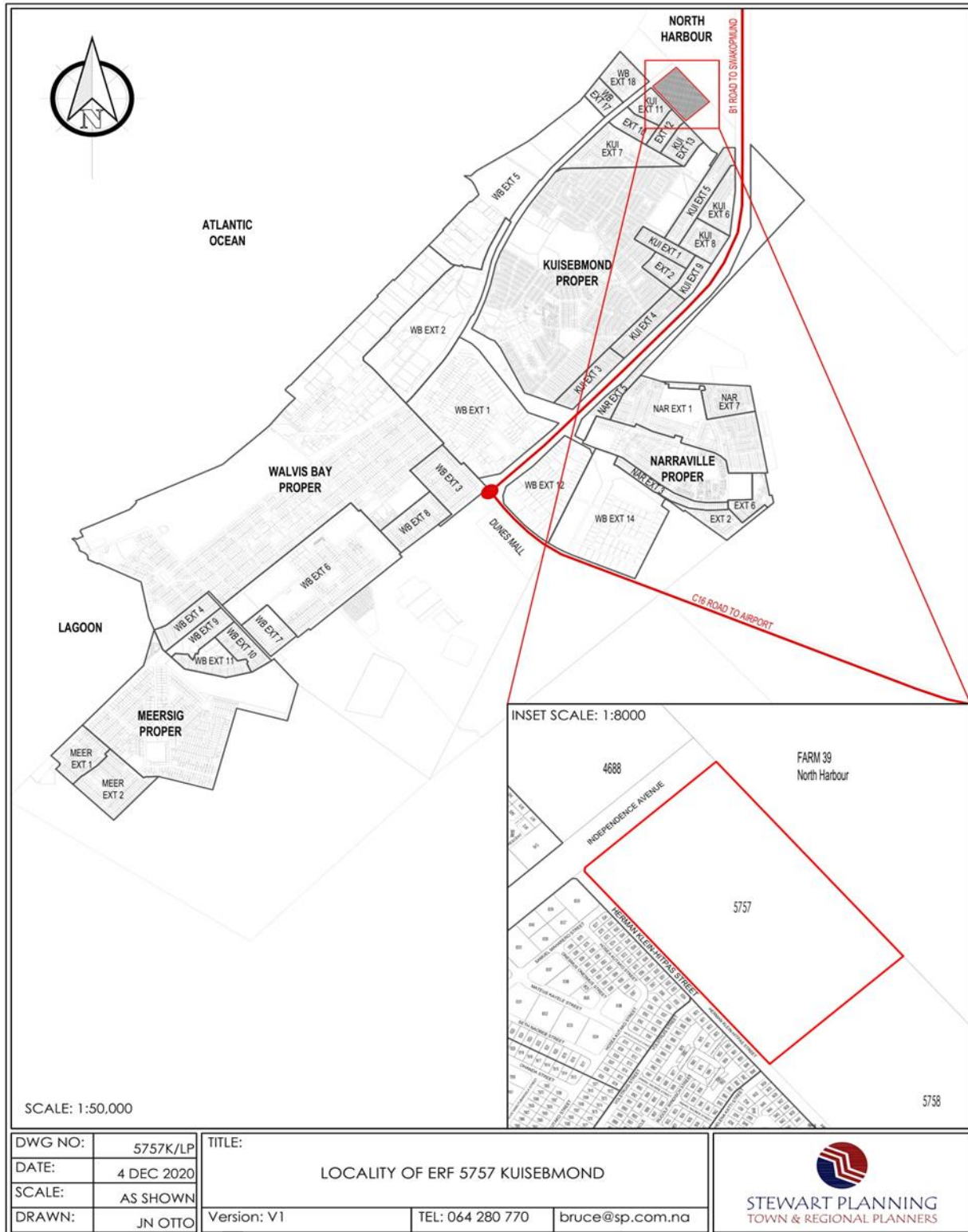


Figure 2.1: Locality of 5757, Kuisebmond, Walvis Bay (Courtesy: Stewart Planning, 2020)

Figure 2.2: Proposed Amendment to Draft Layout of Proposed Township on Erf 5757 Kuisebmond, Walvis Bay (Courtesy: Stewart Planning, 2020)

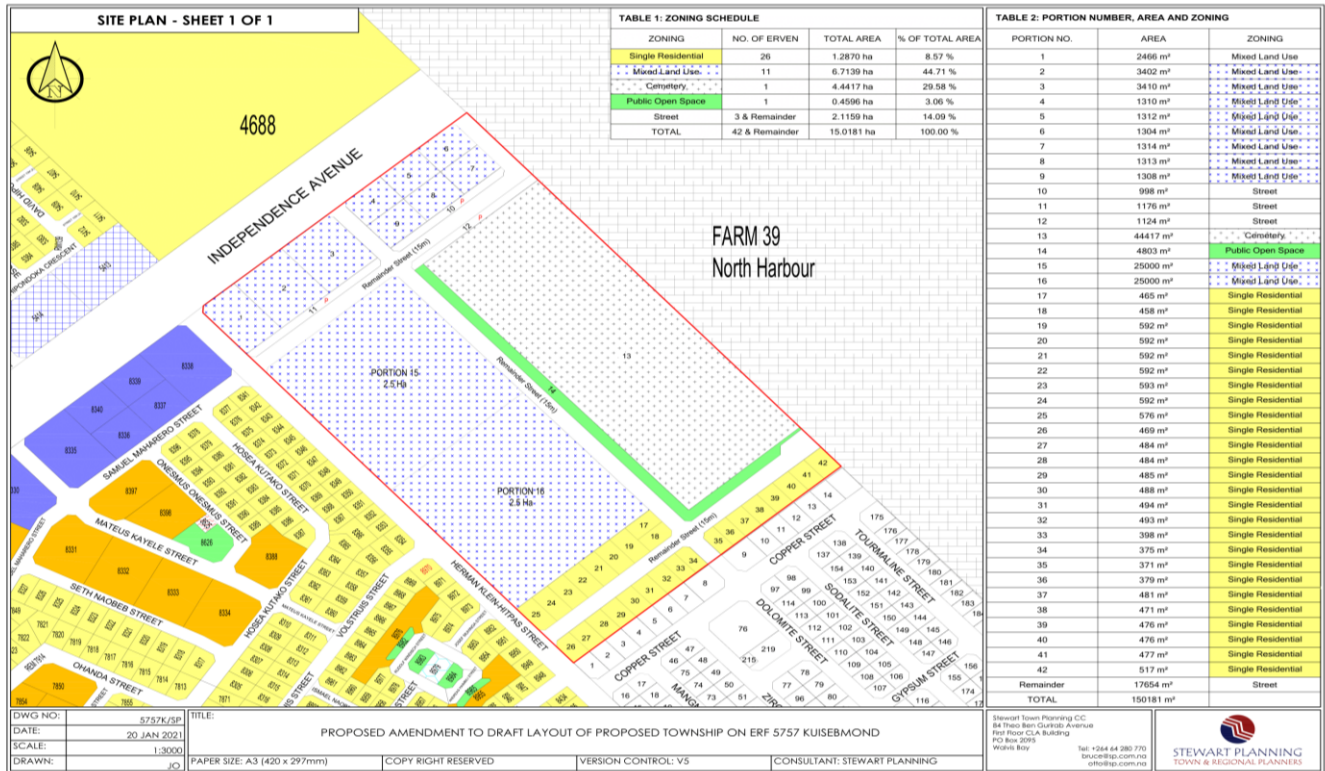
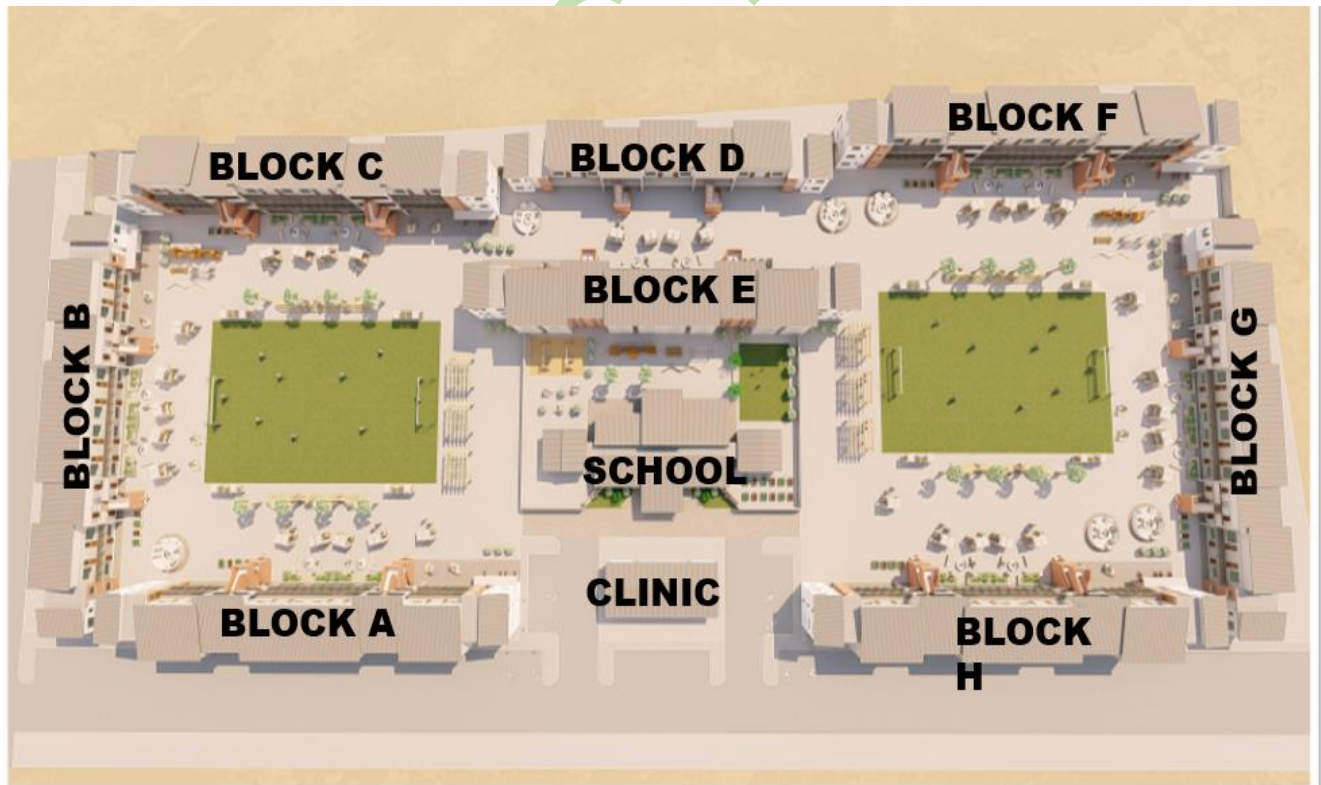


Figure 2.3: The Concept depicts the proposed development and includes the triple storey units including a pre-primary school and clinic. (Credit / Courtesy: Lötter Krogh Architects, 2020)

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Figure 12:4: The Concept depicts an Aerial view of the proposed development (credit: Lötter Krogh Architects, 2020)



2.2 Proposed Infrastructure Development

2.2.1 Proposed Fisherman's Village Pre- Primary School

Pre-primary education is defined as the initial stage of organised instruction, designed primarily to introduce very young children to a school-type environment, that is, to provide a bridge between home and a **school**-based atmosphere¹⁰.

Pre Primary school programmes should be centre or school-based, be designed to meet the educational and developmental needs of children at least three years of age, and have staff that are adequately trained (i.e., qualified) to provide an educational programme for the children.

The proposed pre-primary school will provide a safe, nurturing environment where children from 3 years to 6 years (Grade R) are cared for and engaged in play-based developmental activities. The classes are divided by age groups and each class has one or more assistants depending on the number of children. Our classrooms are designed to encourage educational curiosity, while the playgrounds will be equipped with play structures that inspire physical development through movement and play

2.2.1 Proposed Fisherman's Village Clinic

Patients drawn from the proposed Clinic will call the proposed Clinic their "medical home". The clinic will be a unique and tested model for medical care, a true safety net for Fisherman's Village and Kuisebmond residents at large. Anticipated health programs are as follows:

- **Adolescent**

Adolescence is a period of great transition as children undergo rapid biological and developmental changes. Establishing positive behavioural patterns during this period is important to set them on course for a lifetime of good health. People's adolescent health department offers robust services for this population from family planning and social support for young families to chronic illness care and behavioural health programs.

- **Adult**

Adult patients will come to the proposed Fisherman's Clinic for attention on complex medical issues and chronic diseases that are best dealt with by having a medical home.

- **Pediatrics**

Caring for young children takes a village. Fisherman's Clinic will offer comprehensive, coordinated care for infants, toddlers, and young children. The care team will provides evaluation of new-borns and anticipatory guidance for parents, immunizations, health and developmental screening, well-child

¹⁰ <https://stats.oecd.org/glossary/detail.asp?ID=5409>

examinations, medical assessment and treatment for chronic and acute conditions. The clinic will serve as a medical home that is family-centred, compassionate, and culturally sensitive.

- **Prenatal & Family Planning**

Women's health and wellness services have always been a key component of care at Fisherman's Clinic.

- **Other Programs & Services**

Fisherman's Clinic will have a whole host of programs and services.

2.3 Recreational Spaces

The phenomenon of 'beautifying' and 'refining' public spaces in cities (including recreational spaces) has become more and more common in recent years. This is mainly related to investments in architectural tissue and elements of small architecture, the arrangement of urban greenery and the introduction of public art. The background for these activities is formed by the social, economic and cultural changes taking place in the globalizing world. Direct interpersonal contact, along with the exchange of ideas and values, are undoubtedly important functions of modern cities with recreational spaces that should be open and accessible to everyone, thanks to which they become valuable themselves. It is in these spaces that the everyday life of city inhabitants takes place; they provide the possibility for various forms of recreation¹¹, hence the option to have recreational spaces at the proposed Fisherman's Village.

Recreational spaces are a human product that uses geographical and recreational infrastructure for leisure purposes. Thus, every area where a phenomenon of recreation (physical, social or cultural/entertainment) takes place is a recreational space. ... Recreation means "*rest, relaxation, entertainment*"¹².

2.3.1 Urban recreational spaces in terms of various forms of recreation

Recreational phenomena have a spatial character – they take place in recreational spaces, which constitute a part of leisure time spaces. Having features that are beneficial to leisure time activities, such spaces are characterized by the existence of recreational processes in socially and spatially significant dimensions (Toczek-Werner 2007). Recreational spaces are a human product that uses geographical and recreational infrastructure for leisure purposes. Thus, every area where a phenomenon of recreation (physical, social or cultural/entertainment) takes place is a recreational space¹³.

¹¹ <https://doi.org/10.2478/mgrsd-2018-0017>

¹² <https://content.sciendo.com/view/journals/mgrsd/22/4/article-p219.xml?language=en>

¹³ Napierała, M, Muszkieta, R (2011), Wstęp do teorii rekreacji ['Introduction to the theory of recreation'], Uniwersytet Kazimierza Wielkiego Publishing, Bydgoszcz.

2.4 Municipal Services

Since the plan is to establish 330 units on 2.5 ha portion as the first phase, followed by another 330 units on 2.5 ha during the second phase, it is advocated that the identified site be rezoned from “Single Residential” to “Mixed Land Use” with a density of 1 dwelling unit per 50m² in terms of the Walvis Bay Zoning Scheme. The identified piece of land is strategically located and easily accessible to the suburb of Kuisebmond, and it can be easily connected to the existing municipal services / infrastructure like roads, electricity, sewer and electricity and other amenities.

- **Infrastructure and Services**

Municipal Infrastructure means the roadbed and road area, street and sidewalk paving, curbing, associated drainage Facilities, bike paths and other construction or improvements pertaining to public travel¹⁴.

- **Roads**

Access to the site will be through Herman Klein-Hitpas Road (see Figures 21 and 2.2. No external road will be constructed to get to the site, but internal road network. All the roads will be constructed according to the Walvis Bay Council engineering standards and specifications. This will be complemented with relevant road / traffic signs and markings.

- **Storm water drainage system**

The Storm water drainage system is defined as a “network of structures, channels and underground pipes that carry storm water (rainwater) to ponds, lakes, streams and rivers”¹⁵. This will be an integral part of the system that will be designed to control the quantity, quality, timing and distribution of storm runoff. This will help address potential waterlogging, flooding of the proposed development

- **Water Reticulation**

A water reticulation system helps water move from the original source to the consumer. Considering the volume of water required is another factor when planning and designing the system. The water moves with the help of energy and must overcome any resistance it encounters when changing elevations¹⁶.

The proposed development internal water reticulation network will be directly connected to the existing Kuisebmond suburb Bay municipal network. The water reticulation design will be done in close consultation with the Walvis Bay Municipality relevant departments including the Engineering Department

¹⁴ <https://www.lawinsider.com/dictionary/municipal-infrastructure>

¹⁵ <https://www.platinumlakemanagement.com/blog/what-is-a-stormwater-drainage-system>

¹⁶ <https://www.hydroserv.com.au/water-reticulation/>

- **Sanitation**

Sanitation refers to public health conditions related to clean drinking water and adequate treatment and disposal of human excreta and sewage. The proposed development will be directly connected to the Walvis Bay Municipality Public Sewerage System Network (PSSN). The entire network of sewer pipes, manholes, pumping stations, force mains, inverted siphons, and other appurtenances is called a sewerage system

- **Electricity Distribution Network**

Electricity distribution networks carry electricity from the high voltage transmission grid to industrial, commercial and domestic users¹⁷. The proposed site boasts of existing Erongo Red electricity kiosks and lines passing through the area, thereby making connection to the site easier. The core business of Erongo RED is to distribute and supply safe, reliable, sustainable and accessible electricity. Erongo RED received a distribution and supply license, which is valid until 2030¹⁸.

- **Municipal Waste**

Municipal waste is defined as waste collected and treated by or for municipalities¹⁹. It covers waste from households, including bulky waste, similar waste from commerce and trade, office buildings, institutions and small businesses, as well as yard and garden waste, street sweepings, the contents of litter containers, and market cleansing waste if managed as household waste. The definition excludes waste from municipal sewage networks and treatment, as well as waste from construction and demolition activities. This indicator is measured in thousand tonnes and in kilograms per capita. The proponent will directly work with the Walvis Bay Municipality for waste collection.

2.5 Baseline Information

Baseline data collection required for EIA

Collection of baseline information serves two purposes: It provides a description of the status and trends of environmental factors (e.g., air pollutant concentrations) against which predicted changes can be compared and evaluated in terms of importance.

A baseline study is essential in order to be able to determine the level of impact expected and to enable the monitoring of impacts after the development has occurred. In some cases, baseline information will need to be gathered in the field, and in others it will already be available and need only be collated. Where a project has a number of alternative sites, each of the sites should undergo a baseline study so that the relative severity of the impacts for each alternative can be assessed²⁰.

¹⁷ <https://www.ofgem.gov.uk/electricity/distribution-networks/gb-electricity-distribution-network>

¹⁸ <https://www.erongored.com/about-us/>

¹⁹ <https://data.oecd.org/waste/municipal-waste.htm>

²⁰ https://www.soas.ac.uk/cedep-demos/000_P507_EA_K3736-Demo/unit1/page_19.htm

It is essential that the baseline information which is collected represents both the temporal and spatial trends of the parameters in question (Proposed Fisherman’s Village). Understanding how the baseline environment may change in the absence of the proposed project is therefore important in order to understand what difference the project will make. This obviously becomes more difficult the longer the timescale over which you are considering impacts, as issues like climate change may become important in altering the baseline state of the environment.

2.5.1 Climate of Walvis Bay in General

Walvis Bay is considered to have a desert climate. During the year, there is virtually no rainfall. The Köppen-Geiger climate classification is BWk. In Walvis Bay, the average annual temperature is 16.6 °C. In a year, the average rainfall is 11 mm.

The least amount of rainfall occurs in May. The average in this month is 0 mm. Most precipitation falls in March, with an average of 5 mm. The temperatures are highest on average in February, at around 19.2 °C. In September, the average temperature is 13.7 °C. It is the lowest average temperature of the whole year.

The variation in the precipitation between the driest and wettest months is 5 mm. The average temperatures vary during the year by 5.5 °C.

Table 2.1: Summary of Walvis Bay Climatic data

Element of Climate	Description
Average annual rainfall (mm/a)	0-50
Variation in annual rainfall (%)	< 100
Average annual evaporation (mm/a)	2400 – 2600
Water deficit (mm/a)	1701 - 1900
Temperature	Average maximum: Between 24 °C in March/April and 19.3 °C in September Average minimum: Between 16.5 °C in February and 9.1 °C in August Average annual >16 °C
Fog	Approximately 900 hours of fog per year
Wind	Prevailing wind is average to strong south westerly

2.5.2 Topography and Vegetation

Compound transverse sand dunes is present in a north-south band, east of main road B2 connecting Walvis Bay and Swakopmund. East these dunes is a gravel plain with some inselbergs. To the west of the dunes is a relative flat area with a mainly gentle slope towards the ocean.

Walvis Bay is located in a very corrosive environment, which may be attributed to the frequent salt-laden fog, periodic winds and abundance of aggressive salts (dominantly sodium chloride and sulphates) in the soil. The periodic release of hydrogen sulphide (H2S) from the ocean is expected to contribute to corrosion. The combination of high moisture and salt content of the surface soil can lead to rapid deterioration of metal and concrete structures.

2.5 Need for the development

Erongo is a commercial and industrial region. A lot of people look at Erongo as a region of opportunities. Most come here in search of jobs and that is a challenge in itself. The region has a very high unemployment rate. The influx of people puts pressure on schools, and it is not keeping pace with the development of schools and hospitals. Swakopmund and Walvis Bay are under pressure in terms of services²¹.

As uranium prices go up, the mines have started working again. Housing in the region has become an issue²². Walvis Bay, being the biggest town in the region, is battling with housing shortages. Shacks are sprouting all over the town adding to eye sore and social ills. The biggest challenge being that Walvis Bay (and Swakopmund) is failing to meet the demand for land unless they have an injection from central government to service land. The municipalities do not have that capacity. There is a backlog (Namibian Newspaper, 2015).

Walvis Bay needs at least 20 000 serviced erven (Namibian, 2015), with current shortage of serviced land for township establishment and building of houses, private development must complement the current efforts of the central government in provision of service land.²³. Venmar Fishing Company, in response to the call for serviced land, is proposing the development of the Fisherman’s Village in the town of Walvis Bay.

“Plans to protect air and water, wilderness and wildlife are in fact plans to protect man.”
Stewart Udall

3 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

The Government of the Republic of Namibia wants to ensure that the aims and objectives of sustainable development are achieved and maintained. Policies and statutes, and structures within Ministries, such as the Directorate of Environmental Affairs in the Ministry of the Environment, Forestry and Tourism, have been established to deal with environmental issues.

The environmental legislation, provisions and implications are summarised below:

Table 3.1: Namibian Legislation relevant to the project

LEGISLATION/ GUIDELINE	RELEVANT PROVISIONS	IMPLICATIONS FOR THIS PROJECT
Namibian Constitution First Amendment Act 34 of 1998	- “The State shall actively promote... maintenance of ecosystems, essential	- Ecological sustainability should inform and guide this EA and

²¹ <https://nsa.org.na/page/publications>

²² <https://neweralive.na/posts/moderate-growth-and-subdued-supply-to-gradually-increase-uranium-prices>

²³ Ibid.

LEGISLATION/ GUIDELINE	RELEVANT PROVISIONS	IMPLICATIONS FOR THIS PROJECT
	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 95(I)).	the proposed development.
Environmental Management Act EMA (No 7 of 2007)	<ul style="list-style-type: none"> - Requires that projects with significant environmental impact are subject to an environmental assessment process (Section 27). - Details principles that are to guide all EAs. 	<ul style="list-style-type: none"> - The EMA and its regulations should inform and guide this EA process.
Environmental Impact Assessment (EIA) Regulations GN 28-30 (GG 4878)	<ul style="list-style-type: none"> - Details requirements for public consultation within a given environmental assessment process (GN 30 S21). - Details the requirements for what should be included in a Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15). 	
Forestry Act 12 of 2001 Nature Conservation Ordinance 4 of 1975	<ul style="list-style-type: none"> - Prohibits the removal of any vegetation within 100 m from a watercourse (Forestry Act S22(1)). - Prohibits the removal of and transport of various protected plant species. 	<ul style="list-style-type: none"> - Even though the Directorate of Forestry has no jurisdiction within townlands, these provisions will be used as a guideline for conservation of vegetation.
Labour Act 11 of 2007	<ul style="list-style-type: none"> - Details requirements regarding minimum wage and working conditions (S39-47). 	<ul style="list-style-type: none"> - The Walvis Bay Municipality and Venmar Fishing should ensure that all contractors involved during the construction, operation and maintenance of the proposed project comply with the provisions of these legal instruments.
Health and Safety Regulations GN 156/1997 (GG 1617)	Details various requirements regarding health and safety of labourers.	
Public Health Act 36 of 1919	Section 119 states that “no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.”	
National Heritage Act 27 of 2004	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 object”.	Any heritage resources (e.g. human remains etc.) discovered during construction requires a permit from the NHC for relocation.
Burial Place Ordinance 27 of 1966	Prohibits the desecration or disturbance of graves and regulates how bodies may be	Regulates the exhumation of graves.

LEGISLATION/ GUIDELINE	RELEVANT PROVISIONS	IMPLICATIONS FOR THIS PROJECT
	unearthed or dug up.	
Water Resources Management Act 11 of 2013.	To provide for the management, protection, development, use and conservation of water resources; to provide for the regulation and monitoring of water services and to provide for incidental matters.	The protection of ground and surface water resources should be a priority. The main threats will most likely be concrete and hydrocarbon spills during construction and hydrocarbon spills during operation and maintenance.
Namibia Water Corporation Act 12 of 1997	To establish the Namibia Water Corporation Limited; to regulate its powers, duties and functions; to provide for a more efficient use and control of water resources; and to provide for incidental matters.	
Urban and Regional Planning Act (No. 5 of 2018).	- For the subdivision and rezoning, the relevant provisions is Section 105, which deals with the procedure of subdivision and rezoning applications. Applications must also broadly conform with Section 3 being the principles and standards of spatial planning	- The proposed use of the project site must be consistent with the Walvis Bay Town Planning Scheme and the provisions of the new "Urban and Regional Planning Board".
	- 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.
Road Ordinance 1972 (Ordinance 17 Of 1972)	<ul style="list-style-type: none"> - Width of proclaimed roads and road reserve boundaries (S3.1) - Control of traffic on urban trunk and main roads (S27.1) - Rails, tracks, bridges, wires, cables, subways or culverts across or under proclaimed roads (S36.1) - Infringements and obstructions on and interference with proclaimed roads. (S37.1) - Distance from proclaimed roads at which fences are erected (S38) 	- The limitations applicable on RA proclaimed roads should inform the proposed layout and zonings where applicable.
Walvis Bay Zoning Scheme	This statutory document provides land use regulations and development.	Land uses and developments should be in accordance with the TPS.
Integrated Urban Spatial Development Framework (IUSDF) of Walvis Bay	Provides future land use planning within the Walvis Bay district.	The IUSDF was utilised to see if the proposed activity is in accordance with the future planning of Walvis Bay.
Walvis Bay Climate Strategic Action Plan	Provides action plans on how Town Planning can help mitigate climate change	To promote two-storey developments, reduce urban sprawl and land competition. Encourage EIA studies with regards to rezoning.
Walvis Bay Biodiversity Report of 2008. (WBBR:2008)	Provides a comprehensive summary and map of sensitive Biodiversity Areas and	To ensure that the proposed activity is not located close to any

LEGISLATION/ GUIDELINE	RELEVANT PROVISIONS	IMPLICATIONS FOR THIS PROJECT
	Zoning in the Walvis Bay district.	Biodiversity Area or Zoning.
Sustainable Urban Energy Planning: A handbook for cities and towns in developing countries (SUEP:2004)	Provides a comprehensive list and case studies to implement energy saving measures.	Implementing energy-efficiency and carbon mitigation measures. Conserve natural resources with city planning.
Walvis Bay Public Open Space Policy	Sets criteria of parameters for development of parks (POS) in Walvis Bay	

SCOPING REPORT

“It is our collective and individual responsibility ... to preserve and tend to the world in which we all live.” — Dalai Lama

4 THE RECEIVING ENVIRONMENT

The receiving environment is defined as “the environment upon which a proposed activity might have effects”.²⁴

4.1 Biophysical Environment

The biophysical environment is the biotic and abiotic surrounding of an organism or population, and consequently includes the factors that have an influence in their survival, development and evolution²⁵. The biophysical environment can vary in scale from microscopic to global in extent. It can also be subdivided according to its attributes. Examples include the marine environment, the atmospheric environment and the terrestrial environment. The number of biophysical environments is countless, given that each living organism has its own environment²⁶.

4.1.1 Geography

The Erongo Region covers an area of 63,586 km², which comprises 7.7 per cent of Namibia’s total area of about 823,680 km².²⁷

Figure 4.1: Sociopolitical Map of Erongo Region, Courtesy: Erongo Regional Council, 2021



The political regions of Kunene (to its north), Otjozondjupa (northeast), Khomas (southeast) and Hardap (south) surround the Erongo Region.

The Erongo Region stretches from the Central Plateau westwards across the Central-Western Plains and Escarpment to the Central Namibian coast, roughly over a distance between 200 and 350 km. Northwards the stretches from the Ugab River in the north to the Kuiseb River in the south over a distance of up to 300 km. On the west it is flanked by the Atlantic Ocean.

The Central-Western Plains were largely formed by erosion cutting eastwards into the higher ground, thereby forming the catchment area of several major

²⁴ <https://www.qualityplanning.org.nz/index.php/search/node?keys=receiving+environment>

²⁵ <https://www.tandfonline.com/action/showCitFormats?doi=10.1080%2F08941929809381114>

²⁶ <http://nwrn.eu/concept/3944>

²⁷ <http://www.erc.com.na/maps/erongo-region/>

ephemeral rivers such as the Khan, Omaruru, Swakop and Ugab, which waters would all reach the sea when in full flood during a good rainy season.

On its southern border the Kuiseb River, distinctively divides the large sea of dunes to the south and gravel plains to the north. Interestingly, this river does not reach the sea when in flood but the water disappears into the sand at the Kuiseb Delta, from which Walvis Bay extracts underground water supplies

The Brandberg, with its tallest peak Königstein at 2,606 m above sea level, is Namibia's highest mountain. It is composed of a single mass of granite that rose through the earth's crust some 120 million years ago. The Brandberg has one of the richest selections of rock paintings, including the world-famous 'White Lady'. The Damara>Nama name for the mountain is Dâures, which means 'burning mountain', and Otjiherero name, 'Omukuruvaro' means 'mountain of the Gods'.

The Region was named after the Erongo Mountain range, of which the western peaks rise 2,302 m above sea level. The mountain is an eroded relic of a volcano that was active some 140 – 150 million years ago. It dominates the flat plains west of Omaruru is flanked by the Namib Desert to the west and a mixed, woodland savannah to the east.

The Namib Desert covers the whole Namibian coastline of 1,570 km. It is 55-80 million years old and considered to be the oldest desert in the world. Namib in Damara>Nama means 'vast place'.

The desert geology consists of sand seas near the coast, while gravel plains and scattered mountain outcrops occur further inland. Here some of the highest sand dunes can be found, of which some are 300 m high.

The hyper-arid Namibian coastal ecosystem, which encompasses Walvis Bay, is home to a significant and unique array of biological and ecological diversity, including uniquely adapted plants and animals, rich estuarine fauna and a high diversity of migratory shore and seabirds. Namibia's coastal zones are considered as refuge for a number of endangered species.

The waters of the Namibian coast, with its icy and nutrient-rich Benguela current, support some of the greatest concentrations of marine life found anywhere in the world. It is one of the world's most productive marine environments, not only in terms of fishery resources but also mineral deposits.

4.2 Socio Economic Environment

Social and environmental determinants are the full set of social and physical conditions in which people live and work, including socioeconomic, demographic, environmental and cultural factors, along with the health system.²⁸

²⁸ <https://www.healthandenvironment.org/environmental-health/environmental-risks/socioeconomic-environment>

4.2.1 Demographics

A total 150,400 people were counted in the Erongo Region during the 2011 National Census, which is 7.1 percent of the total population of Namibia of 2,104,900. During the 2001 National Census the Erongo Region had 107,656 people, accounting for 5.9 percent of the total population of 1,830,293²⁹.

Figure 4.2: Population distribution by Sex and Area by Constituency

Constituency	Total Population	Total Male	Total Female	Area in km ²	Population density
Arandis	10,200	4,900	5,300	13,490	0.8
Daures	11,300	5,300	6,000	17,752	0.6
Karibib	13,300	6,400	6,900	14,521	0.9
Omaruru	8,500	4,100	4,400	8,425	1.0
Swakopmund	44,700	21,000	23,700	196	228.0
Walvis Bay Rural	26,900	12,700	14,200	9,134	2.9
Walvis Bay Urban	35,500	16,300	19,200	19	1886.2
TOTAL	150,400	70,700	79,700	63,539	2.4

The Erongo Region counted 44,900 households in 2011 at an average size of 2.6 people per household, while in 2001 the region had 27,496 households at an average size of 3.8.

Figure 4.3: Erongo Region: Population by major municipalities and towns

Urban Locality	Total Population	Total Male	Total Female	Area in km ²	Population density
Arandis	5,100	2,400	2,700	33.4	152.6
Henties Bay	4,800	2,400	2,400	133.5	36.0
Karibib	5,100	2,500	2,600	103.6	49.2
Usakos	3,600	1,900	1,700	60.8	59.2
Omaruru	6,000	3,000	3,000	206.6	29.0
Swakopmund	44,700	21,000	23,700	213.0	209.9
Walvis Bay	61,300	28,600	32,700	32.5	1,889.1
TOTAL	130,600	61,800	68,800		

According to the 2011 Census the population density was 2.1 persons per km², compared to 1.7 persons per km² in 2001.

In 2001 the Erongo Region had 50,040 females and 57,616 males, or 115 males for every 100 females, growing at an annual rate of 1.3 percent. The fertility rate was 3.2 children per woman. Then 80 percent of the population lived in urban areas while 20 percent lived in rural areas. The figures for 2011 are not available as yet.

In 2001 by age, 11 percent of the population was under 5 years old, 18 percent between 5-14 years, 64 percent between 15-59 years, and 6 percent 60 years and older. The most commonly spoken

²⁹ <http://www.erc.com.na/maps/population/>

languages at home in 2001 were Oshiwambo (37 percent of households), Afrikaans (22 percent), and Damara>Nama (21 percent).

For those 15 years and older, in 2001 the literacy rate was 92 percent. In terms of education, 89 percent of girls and 86 percent of boys between the ages of 6 -15 were attending school, and of those older than 15, 79 percent had left school, 9 percent were currently at school, and 8 percent had never attended.

The employment rate for the labour force (71 percent of those 15+) was 66 percent employed and 34 percent unemployed. For those 15+ years old and not in the labour force (24 percent), 35 percent were students, 34 percent homemakers, and 31 percent retired.

Walvis Bay town is the most populous with 26% of the total regional population. About 20% of the population in the Erongo region were born in other regions; 65% of these are male, indicating the migration of mainly male workers from the other regions to the coast in search of employment. Employment in Erongo The economy of the region is mainly based on natural resources and is slowly becoming more diversified due to expansion in the mining industry. The largest industry in the region is the fishing industry, mostly based at Walvis Bay, followed by the mining and exploration industry. The third biggest income generating activity of the Erongo Region is tourism.

The proportion of employed females is 58 % compared to 72% for males. Over the same period, wages and salaries decreased by 6 % but business activities increased by 5 %. This indicates that more people in the region are establishing their own businesses, with the economy slowly diversifying.

4.3 Economy

4.3.1 Infrastructure

The port of **Walvis Bay** in the Erongo Region is the at the start and the end of four transport corridors, serving as a transport hub for regional and international trade between Southern African Development Community (SADC) countries, Europe, the Americas, and the rest of the world³⁰.

Namport manages the **Walvis Bay** harbour as well as the harbour of Lüderitz, on the southern Namibia coast. The **Walvis Bay Corridor Group**, a public-private partnership, promotes the utilization of the transport corridors. The Trans-Kalahari Corridor is a tarred road linking **Walvis Bay** via Windhoek over 1,900 km with Botswana and Gauteng Province in South Africa. A railway line connects **Walvis Bay** via Windhoek with Gobabis, where goods can be transhipped further by road to Lobatse in Botswana. The Maputo Corridor on the east coast of Africa extends the Trans Kalahari Corridor, forming a transport corridor over the breadth of Southern Africa.

³⁰ <https://www.namport.com.na/ports/39/>

4.3.2 National Road System

The Trans-Caprivi Corridor links **Walvis Bay** with Zambia, the southern Democratic Republic of Congo (DRC) and Zimbabwe. The road of this corridor runs easterly to central Namibia, then north and then easterly via the Caprivi Region to link up with Zambia via the Katima Mulilo Bridge. The corridor stretches over 2,500 km, and is supported by a railway line between Walvis Bay and Grootfontein, with transshipment facilities. The railway line resumes in Livingstone, Zambia³¹.

The Trans-Cunene Corridor links the Port of **Walvis Bay** with southern Angola up to Lubango, over a distance of 1,600 km. The Corridor road infrastructure is supported by the northern railway line, which presently extends from the Port of Walvis Bay to Ondangwa, with a further planned extension to the border post of Oshikango.

The Trans-Oranje Corridor is a tarred road linking the Ports of **Walvis Bay** and Lüderitz with the Northern Cape Province of South Africa. Walvis Bay is also connected by railroad via Windhoek with South Africa. The port of **Walvis Bay** is one of Africa's most efficient and best equipped and can handle more than eight million tonnes of cargo per annum. It consists of two sections: the commercial harbour, which is managed by Namport, and the fishing harbour, which is owned by the fishing industry. The commercial harbour offers a range of terminal facilities that can handle bulk, containerised, frozen and dry cargo³².

4.3.3 Walvis Bay International Airport

The port is further supported by the **Walvis Bay** International Airport, which was recently upgraded by the Namibia Airports Company to accommodate the biggest airliners and transport planes. From here fresh fish can be flown directly to countries such as in Europe.

4.3.4 Power Supply

NamPower is the national power utility of Namibia, specialising in the generation and transmission of electricity. The Erongo Region is connected to the well-developed national power grid. The Erongo Regional Electrical Distributor is tasked with the supply and distribution of electricity to the region, combining the electricity distribution departments of the Local Authorities, Regional Councils and NamPower.

4.3.5 Power lines at Walvis-Bay Municipality

NamPower's main sources of power are the thermal, coal-fired Van Eck Power Station outside Windhoek, the hydroelectric plant at the Ruacana Falls in the Kunene Region, and the standby diesel-driven Paratus Power Station at Walvis Bay. A coal-fired station is planned for **Walvis Bay**.

³¹ <http://www.ra.org.na/Pages/network.aspx>

³² Ibid

4.3.6 Water Supplies through NamWater

Namwater is the national entity that supplies water in bulk to industries, municipalities and the Directorate of Rural Water Supply in the Ministry of Agriculture, Water and Forestry. The latter supplies water to rural communities.

NamWater extracts water from the large Kuiseb river aquifers, which is then pumped to a number of reservoirs that provide water to Walvis Bay, Swakopmund and the mining industry. A desalination plant was erected by private initiative just north of Wlotzasbaken on the coast to supply a Uranium mine with water. Namwater has been considering another desalination plant along the coast.

Telecom Namibia, the national communications operator, serves more than 145,360 customers, while two cellphone operators, MTC and Cell One, have more than two million users. Various private companies in Namibia provide Internet and Communication Technology services.

4.4 Mining

The Mining Sector in the Erongo Region has been characterised by the establishment and expansion of a number of Uranium mines over the past decade due to an increased demand for this energy source. The Erongo Region also accommodates the mining of commodities such as gold, marble, granite, salt and semi-precious stones³³.

Mining and quarrying contributes about 8,8 percent to national GDP, 51 percent to foreign exchange earnings, of which diamonds, ores and minerals are the most important.

4.4.1 Uranium

In 2011, Namibia delivered 6.9 percent of the world's primary produced uranium, after Kazakhstan, Canada, Australia, Russia and Niger. The uranium oxide extracted from deposits is one of Namibia's key exports and makes the country the sixth largest exporter of uranium in the world. Namibia currently has two significant uranium mines capable of providing 10 percent of world mining output. The other mines are busy setting up their operations although some are experiencing setbacks due to the recent uranium price fluctuations.

If the Uranium industry would develop as initially expected, it could employ 5,483 people, which would cause an influx to towns such as Walvis Bay, Swakopmund, Karibib and Arandis. These towns act as dormitory towns to the mining sector.

³³ <https://neweralive.na/posts/moderate-growth-and-subdued-supply-to-gradually-increase-uranium-prices>

Other mining activities are tabulated below:

Salt	Salt is a direct product from the extraction by evaporation of seawater in natural pans or ponds. The salt works at Walvis Bay produces about 700,000 tonnes a year. A further salt producer, just north of Swakopmund, delivers about 75,000 tonnes and at Cape Cross 30,000 tonnes per year. The bulk of the salt is exported to South Africa while West Africa is a growing market.
Petroleum	Petroleum exploration companies have obtained the rights to drill holes along the Namibian coast. The four sedimentary basins off the coast ,that developed during the breaking up of the Gondwana continent, seem to hold the promise of oil reserves. HRT from Brazil are preparing to drill holes in two prospecting blocks on the northern fringe of the so-called Orange basin. Thus far, Chariot Oil, listed on the London Stocks Exchange, drilled two holes without success.
Small-scale Mining	<p>Small-scale mining, as a sub-sector of the mining sector, provides a livelihood to a quite number of people and their dependents, alleviating poverty.</p> <p>It is estimated that there are about 2,000 small-scale miners in the Erongo Region, operating in cooperatives of about ten people each. These cooperatives can be found mining semi-precious stones at Omatjete, Uis, Okombahe, Omaruru, Tsubusis, Otjimbingwe, Usakos and Walvis Bay.</p>

4.5 Fishing

Along the Namibian coast the nutrient-rich cold Benguela Current and its upwelling system in the Atlantic Ocean supports a vibrant fishing industry. Namibia’s fishing grounds is one of the most productive and stretches along the total coastline of 1,570 km and 200 nautical miles westwards into the sea.

More than 20 species of fish, lobsters and crabs are commercially harvested in these waters. The fishing industry is the third largest economic sector, and contributed about 6.6 percent cent to the Gross Domestic Product (GDP). The value of fishing, onshore and offshore processing accounted for N\$3,410 million in 2008.

It is also the largest employer at the coast. The industry at **Walvis Bay**, and Lüderitz in the Karas Region, employs about 14,000 workers, of which about 43 percent work on vessels at sea while 57 percent are involved in onshore processing. Namibia’s fishing industry is the country’s second biggest export earner of foreign currency after mining. In total, 90 percent of the national output is exported.

Mariculture³⁴³⁵ has become another sustainable way of creating employment and increase economic growth. This includes the cultivation of oysters in the sheltered Walvis Bay as well as ponds north of Swakopmund. Namibian oysters have become a sought-after, locally and abroad.

4.6 Tourism

³⁴ Mariculture is the farming of marine organisms for food and other products such as pharmaceuticals, food additives, jewelry (e.g., cultured pearls), nutraceuticals, and cosmetics, either in the natural marine environment, or in land- or sea-based enclosures, such as cages, ponds, or raceways. (Encyclopedia of Ocean Sciences (Second Edition), 2009)

³⁵ <https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/mariculture>

The Erongo Region offers some of the most spectacular and popular tourist destinations as well as a variety eco-, wildlife, cultural and adventure tourism opportunities.

Erongo Region is home to the Dorob National Park between the Kuiseb Delta, south of Walvis Bay, and the Ugab River in the north. A part of the Namib-Naukluft Park covers its southern border, where one also finds the ephemeral Kuiseb River and the Topnaar people, who make their living off from what the Namib Desert offers.

Some of the most unique flora such as the Welwitschia plant that can become as old as two thousand years, and a huge variety of lichens, living fossil plants that live from the coastal fog. Various other creatures, large and small are also living in the desert near the coast. The small ones include the Palmato Gecko, Fitzsimons burrowing skink, Shovel-snouted lizard, Fog basking beetle, White lady spider and the Namaqua chameleon. Larger animals such as Oryx, Zebra, Springbok and Ostriches can be found at the coast, and the occasional Desert elephant and lion at places such as the Messum Crater.

At the port town of Walvis Bay, 40 km south of Swakopmund, one finds the two RAMSAR birds sites of Walvis Bay Lagoon and about 30 km further south, Sandwich Harbour. Marine boat tours are undertaken from Walvis Bay and the Benguela Dolphin, Seals, Pelicans, Sunfish and the occasional Southern Right Whale can be spotted.

4.7 Walvis Bay in detail

The town of Walvis Bay is geographically and internationally well situated. Located in the South West Coast of Africa (Central Coast of Namibia) along the Atlantic Ocean, the city is about 700 nautical miles from Cape Town, South Africa and 900 nautical miles from Luanda, Angola. The expansive Walvis Bay Municipal area covers 1,124km² which includes some 60km of coastline³⁶.

With more than 80,000 inhabitants (African Development Bank Group 2020), Walvis Bay has always been a drawing car for job seekers and investors alike. Although its economy revolves around its internationally renowned fishing industry, other industries are emerging as strong income generating sectors. This includes the budding tourism industry, engineering, cargo handling and property development

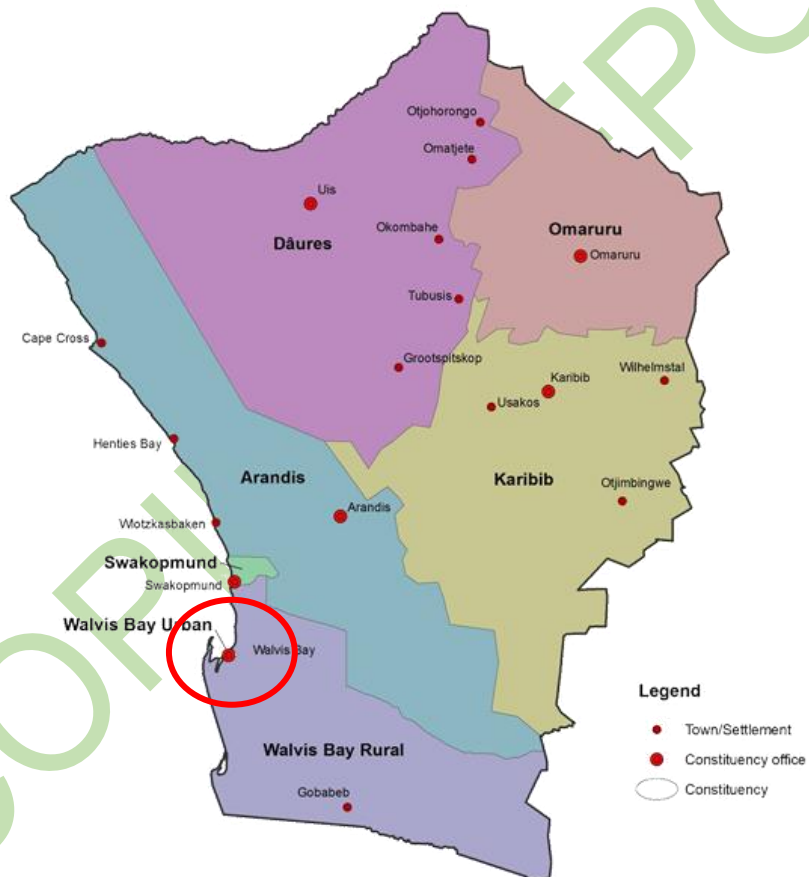
Walvis Bay is a thriving city with a rapidly growing economy. Boasting one of the busiest ports in Africa, it is has established itself as the gateway for trade, imports and exports between America, Europe, Far East and landlocked countries in Africa (Namport, 2015).

³⁶ <https://www.afdb.org/en/success-stories/namibia-walvis-bay-port-now-regional-logistic-hub-new-container-terminal-fully-operational-37779>

The town of Walvis Bay is situated just north of the Tropic of Capricorn in the Kuiseb River delta and lies at the end of the TransNamib Railway to Windhoek, and on the B2 road. Walvis Bay, with its large bay and sand dunes, is an important centre of tourism activity in Namibia. Attractions include the artificial Bird Island, centre of a guano collection industry, the Dune 7 sand dune, the salt works, the abundant birdlife, and a museum. The beach resort of Langstrand lies just a few kilometres north. The Walvis Bay Export Processing Zone is an important facet of the local economy.

Kuisebmond is a township of Walvis Bay, Namibia, named after the Kuiseb River. With a population of 80,000, most residents of Walvis Bay live in the area.

Figure 4.4: Erongo Region Constituencies



“To cherish what remains of the Earth and to foster its renewal is our only legitimate hope of survival.”

– **Wendell Berry**

5. PUBLIC CONSULTATION

Even a cursory glance at the literature on environmental impact assessment (EIA) reveals that public participation is being considered as an integral part of the assessment procedure. Public participation in EIA is commonly deemed to foster democratic policy-making and to render EIA more effective³⁷.

5.1 Interested and Affected Persons (I&APs)

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 required³⁸.

In addition, the public consultation process also granted I&APs an opportunity to review and comment on all the documents produced throughout the EA process. This is done in accordance with both the Environmental Management Act's EIA Regulations, as well as international best practice principles.

Stakeholders' involvement was formalised by scheduling public hearings, and periodically distributing information / notices in the daily newspapers concerning the proposed development. Stakeholders' involvement in the EIA process gave all interested and affected parties such as local communities and individuals a voice in issues that bear directly on their health, welfare, and quality of life.

An open flow of environmental information fostered objective consideration of the full range of issues involved in project planning and can allow communities and citizens to make reasoned choices about the benefits and risks of proposed actions.

Figure 5.1: EIA Consultations Timeline

Date	Stakeholder Consulted	Notes / Comments
9 December 2020	Venmar Fishing (Pty) Ltd	Induction
10 December 2020	Stewart Planning	Technical Overview of the proposed development
14 December 2020	Inquiry email with the Ministry of Environment, Forestry & Tourism	Comments received
12 January 2021	Registration with Ministry of Environment, Forestry & Tourism.	Accepted: Application Number: APP-002251
15 & 22 January 2021	Newspaper Adverts calling for I&APS to participate in the EIA process	Adverts appeared in both the New Era and Namib Times Newspapers

³⁷ <https://www.sciencedirect.com/science/article/abs/pii/S0195925513000711>

³⁸ Ibid.

MET APPLICATION NUMBER: APP-002251

15 January 2021	Putting up of Site Notice and Other Notices in Walvis Bay	The EAP put up the Site between 15 and 26 January 2021
25 January 2021	BID shared with the Walvis Bay Municipality Environmental Section for their input	BID received and acknowledged
25 January 2021	BID shared with the Urban And Regional Planning Board	Awaiting official comments
25 January 2021	BID shared with the Erongo Regional Council	BID not returned despite telephonic follow up
26 January 2021	Public Meeting	See Attached Minutes
4 February 2021	BID Shared with the Walvis Bay Municipality Town Planning Section for their acquaintance and input	BID received and acknowledged
23 February 2021	Formal Meeting with the Walvis Bay Municipality Officials	DONE

Table 5.1: Summary of Comments / Issues Received

Theme	Issue Raised by IAPs
Economic	<ul style="list-style-type: none"> - Creation of jobs and local people being employed - Benefitting from the housing initiatives
Infrastructure	<ul style="list-style-type: none"> - Waste Management in the area - Type of housing to be built in the area
Environmental	<ul style="list-style-type: none"> - Flooding (Tsunamis) - Strong Winds - Dust





Meeting with the Walvis Bay Municipality Staff, 23rd February 2021

SCOPING REPORT

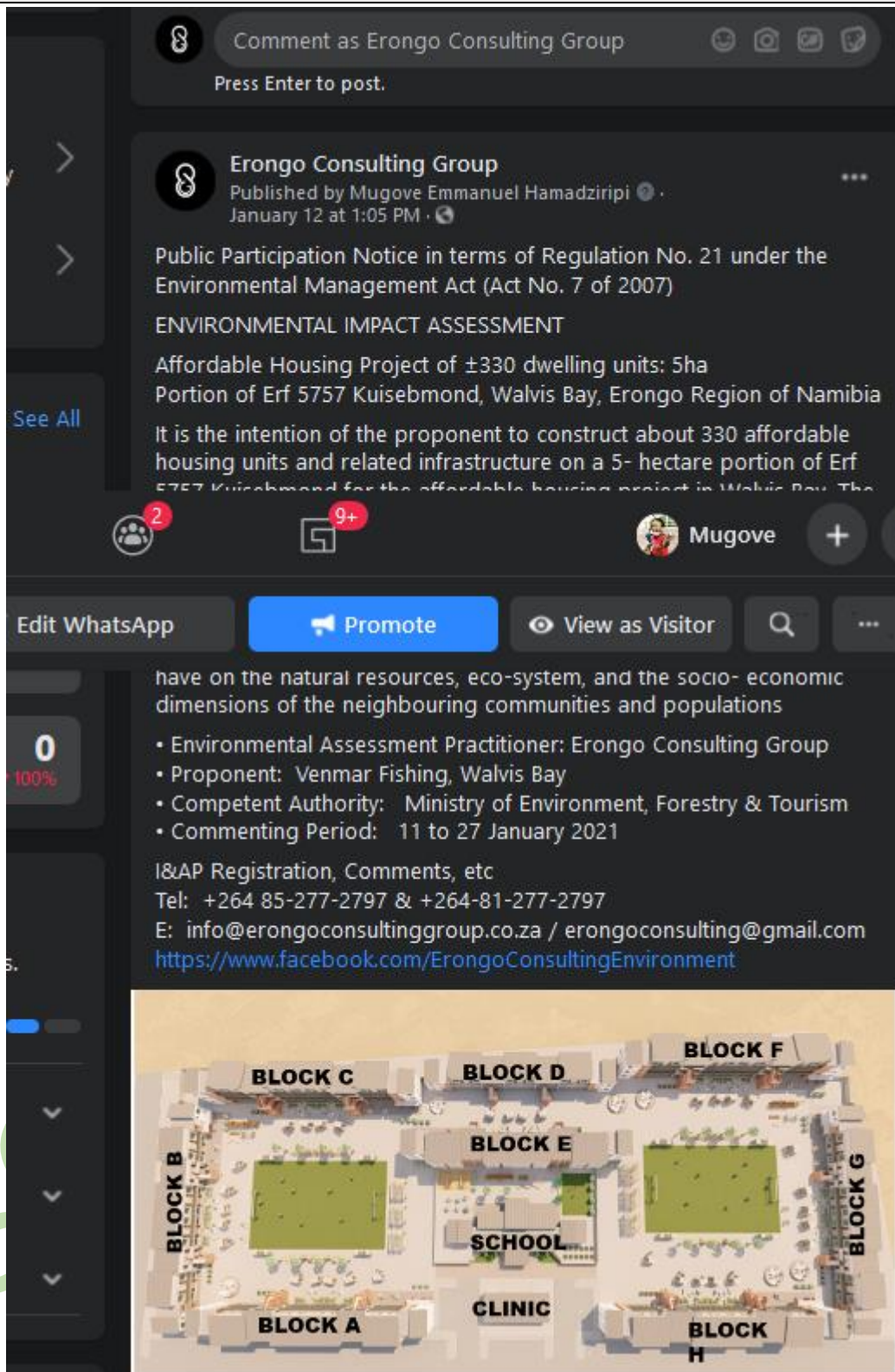


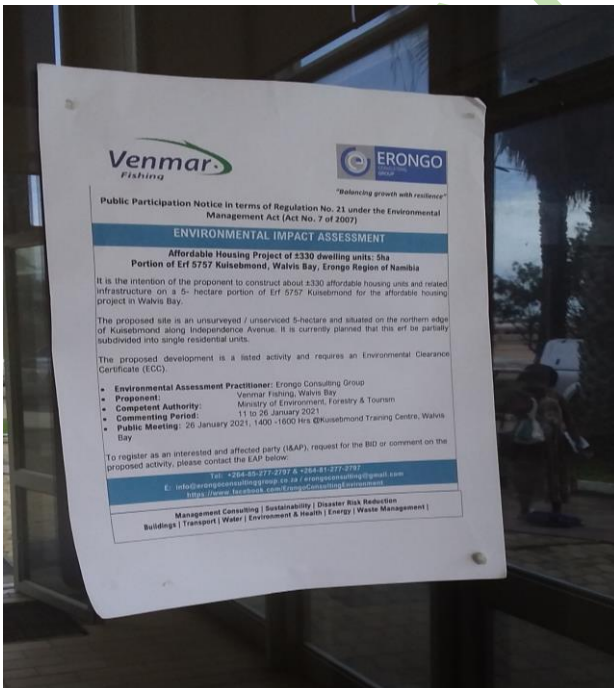
Figure 5.2: Facebook Advert



Picture 1: Team Erongo talking to I&AP



Picture 2: Notices at the FNB Kusebmond Centre



Picture 3: Notice @Kuseb Training Centre



Picture 4: Notice @Woermann Brock Supermarket

“The Earth does not belong to us: we belong to the Earth.”

– **Marlee Matlin**

6. ALTERNATIVES

The proponent and Council has considered four sites in total: (1) Erf 7812 Kuisebmond, (2) A portion of Erf 5774 Kuisebmond (3) A portion of Erf 5757 Kuisebmond, and (4) land at the Green Valley Township (Farm 37).

(1) Was already allocated to the Namibian Police and (2) was earmarked for municipal purpose and were not available. (4) Was considered too far out of town and not within walking distance to places of employment. Therefore, (3) was considered the best alternative as it was available and is situated relatively close to Kuisebmond and working sites.

In the planning process of the proposed project, the proponent and other project consultants had several consultation meetings with the Walvis Bay Local Authority in order to determine the best sites for the proposed development.

6.1 No-Go Alternative (Do Nothing Alternative)

Should the proposed development not take place, serious consequences can be expected, as there will be a backlog in housing, which may lead to service protests as the community’s needs are not addressed or met. Due to the location of the proposed sites to the existing residential development, it could attract undesirable land use, e.g. become a hub for criminals, and there could be establishment of informal settlements.

6.2 Technology Alternative 1:

Due to the type of project, no alternative technology can be considered.

6.3 Selection Process

Consultation meeting has been held with the Local Municipality and relevant role-players to determine the most suitable area available for the establishment of residential townships. Economic restraints, existing infrastructure and available land were major constraints on the selection process.

“If we do not permit the earth to produce beauty and joy, it will in the end not produce food, either.”

– Joseph Wood Krutch

7. IMPACT ASSESSMENT

7.1 Methodology employed for assessment

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”. In order to determine significance each of the potential impacts identified have been subjected to the following questions displayed graphically below.

Table 7:1 Impact Assessment Criteria

Impact Assessment Criteria	
NATURE	Reviews the type of effect that the proposed activity will have on the relevant component of the environment and includes “what will be affected and how?”
EXTENT	Geographic area: Indicates whether the impact will be within a limited area: <ul style="list-style-type: none"> - Immediate area (on site where construction is to take place); - local (limited to within 25km of the area); - regional (limited to ~200km radius); - national (limited to the coastline of Namibia); or - International (extending beyond Namibia’s borders).
DURATION	Whether the impact will be: <ul style="list-style-type: none"> - temporary (during construction only), - short term (1-5 years), medium term (5-10 years), - long term (longer than 10 years, but will cease after operation) or permanent.
INTENSITY	Establishes whether the magnitude of the impact is destructive or innocuous and whether or not it exceeds set standards, and is described as: <ul style="list-style-type: none"> - none (no impact); - low (where natural/ social environmental functions and processes are negligibly affected); - medium (where the environment continues to function but in a noticeably modified manner); or - high (where environmental functions and processes are altered such that they temporarily or permanently cease and/or exceed legal standards/requirements).
PROBABILITY	Considers the likelihood of the impact occurring and is described as: <ul style="list-style-type: none"> - uncertain, - improbable (low likelihood), - probable (distinct possibility), - highly probable (most likely) or - definite (impact will occur regardless of prevention measures).
SIGNIFICANCE	Significance is given before and after mitigation. <ul style="list-style-type: none"> - <u>Low</u> if the impact will not have an influence on the decision or require to be significantly accommodated in the project design, - <u>Medium</u> if the impact could have an influence on the environment which will require

	<p>modification of the project design or alternative mitigation (the project components can be used, but with deviations or mitigation).</p> <ul style="list-style-type: none"> - <i>High</i> where it could have a “no-go” implication regardless of any possible mitigation (an alternative should be used).
STATUS OF THE IMPACT	<p>A statement of whether the impact is:</p> <ul style="list-style-type: none"> - positive (a benefit), - negative (a cost), or - neutral <p>Indicate in each case who is likely to benefit and who is likely to bear the costs of each impact.</p>
DEGREE OF CONFIDENCE IN PREDICTIONS	<p>Is based on the availability of specialist knowledge and other information.</p>

Table 7.2: Screening and Assessment Criteria

SIGNIFICANCE RATING	CRITERIA
LOW	<ul style="list-style-type: none"> - Where the impact will have a negligible influence on the environment and no modifications or mitigations are necessary for the given development description. This would be allocated to impacts of any intensity/ magnitude, if at a local scale/ extent and of temporary duration/time.
MEDIUM	<ul style="list-style-type: none"> - Where the impact could have an influence on the environment, which will require modification of the development design and/or alternative mitigation. This would be allocated to impacts of medium intensity/magnitude, locally to regionally, and in the short term.
HIGH :	<ul style="list-style-type: none"> - Where the impact could have a significant influence on the environment and, in the event of a negative impact the activity(ies) causing it, should not be permitted (i.e. there could be a ‘no-go’ implication for the development, regardless of any possible mitigation). This would be allocated to impacts of high intensity, locally for longer than a month, and/or of high intensity regionally and beyond.

Figure 7.3: Screening and Assessment of Impacts

The impacts are tabulated below:

POTENTIAL IMPACT	DESCRIPTION	EXTENT	DURATION	INTENSITY	PROBABILITY	CONFIDENCE/ SUFFICIENT INFORMATION AVAILABLE?	SIGNIFICANCE	SIGNIFICANT MITIGATION DEEMED POSSIBLE?	NEXT STEP
Aesthetic issues	The change in the existing landscape may be an eye sour to existing residents due to blockage of open views.	Immediate area	Temporary	Low	Improbable	Yes	Low	Yes	EMP
Employment creation	The construction activities associated with the project is due to create local employment opportunities.	Local	Temporary	Medium	Definite	Yes	Low	Yes	EMP
Noise (construction phase)	Construction activities can create noise for local nearby residents (Kuissebmond).	Local	Temporary	Low	Highly probable	Yes	Low	Yes	EMP
Dust (construction phase)	The ingress and egress of construction vehicles can create dust.	Local	Temporary	Low	Highly probable	Yes	Low	Yes	EMP
Traffic (Operational phase)	Increase in traffic in the area is expected due to construction activities and establishment of a township, clinic and other amenities.	Local	Permanent	Medium	Definite	Yes	Low	Yes	EMP
Effluent generation	Once the township & its related infrastructure are established, effluent will be generated from the households	Local	Long-term	Medium	Definite	Yes	Low	Yes	EMP

POTENTIAL IMPACT	DESCRIPTION	EXTENT	DURATION	INTENSITY	PROBABILITY	CONFIDENCE/ SUFFICIENT INFORMATION AVAILABLE?	SIGNIFICANCE	SIGNIFICANT MITIGATION DEEMED POSSIBLE?	NEXT STEP
Impact on scarce water resources	The Municipality has to make provision for providing additional water to the newly formed township	Local	Long-term	Low	Improbable	Yes	Low	Yes	EMP
Increase generation of domestic waste	The Fisherman's Village development will generate domestic waste.	Local	Long-term	Medium	Definite	Yes	Medium	Yes	EMP
Impact on existing properties	The proposed development (The Fisherman's Village) is believed to impact on existing property values in the area.	Local	Long-term	Low	Probable	Yes	Low	Yes	EMP
Flooding	Flooding is expected during abnormal high tides and high seas.	Local	Temporary	Medium	Definite	Yes	Medium	Yes	EMP
Public open space encroachment	Erf 5757 Kuisebmond is close to the beach but is not adjacent to it. Encroachment on the beach is impossible	Local	Temporary	Low	Probable	Yes	Low	Yes	EMP



“We learned that economic growth and environmental protection can and should go hand in hand.”

– Christopher Dodd

8. ASSUMPTIONS, UNCERTAINTIES OR GAPS IN KNOWLEDGE

8.1 Assumptions:

- The scope is limited to assessing the potential impacts associated with the proposed development; therefore the effect on the surrounding environment is based on the current land use.
- All information provided by Erongo Consulting Group as the EAP and other parties involved are deemed valid and correct at the time it was provided.
- Since during the public participation process, no indigenous local knowledge came forth, it is assumed that there are no sensitive cultural, e.g. initiation schools sites on the proposed site.

8.2 Assumptions from Specialists:

- The Outline Scheme Report is based on the bulk services information received from the Walvis Bay Municipality.

8.3 Limitations/Gaps in Knowledge: None

“Human subtlety will never devise an invention more beautiful, more simple or more direct than does nature because in her inventions nothing is lacking, and nothing is superfluous.”

– **Leonardo da Vinci**

9. EIA / SCOPING RECOMMENDATION

The EIA / Scoping is of the opinion that the development should be authorized because the negative impacts can be mitigated to a satisfactory level. However, the following recommendations should be considered:

1. The proponent should consider planting of grasses and trees, especially at the park erven to promote greening and to minimize soil exposure, which could result in accelerated soil erosion process.
2. Proper maintenance of roads and streets.
3. Proper management procedures and mitigation measures must be implemented as outlined in the EMP.
4. Environmental Officer should be appointed for monthly environmental compliance monitoring during the construction phase.
5. Recommendations from specialists should be considered and adhered to.

“The good man is the friend of all living things.”
– Mahatma Gandhi

10. ENVIRONMENTAL MANAGEMENT PLAN OR STATEMENT

It should be recognized that no development could be completed without impacting in some way on the environment; therefore, it is imperative that negative impacts are minimized to a greater extent.

During the scoping phase of the EIA process, the environmental issues that were identified were for both the construction and operation phase.

The identified impacts are summarized below:

1. Potential habitat of the infrastructure on the socio-economic structure of the area.
2. Job creation looking at employment of local community;
3. Excessive noise generation during construction;
4. Potential damage or destruction to undiscovered heritage sites of the area;
5. Traffic congestion during construction;
6. Potential impact of sensitive habitat destruction; and
7. Potential impact of destruction on red data plants.

From the evaluation identified impacts using the assessment methodology, the significance ratings of negative impacts were reduced to low with outlined mitigation measures and the positive impacts were accentuated. The extent with mitigation ranged between site specific and local. Adherence to the draft EMP will also ensure that impacts occurring due to the development will be reduced to a greater extent.

To determine the ability of the municipality to provide basic services to the proposed development, a Consent Letter is herewith attached (See Appendix Motivation Report and Bulk Services Report are attached hereto and recommendations were made so as to promote sustainable development. In terms of the findings, the municipality has the ability to accommodate the proposed site provided the outfall sewer is upgraded.

Specialists' studies that were undertaken as part of the EIA process included a **Heritage Impact Assessment** to inspect the site for any possible archaeological and historical material and Paleontological Investigation to determine the likelihood of fossil preservation in the area. The site has no major paleontological and archaeological grounds to suspend the proposed development,

therefore no mitigation measures are required but mitigation is provided in the EMP in case there is unearthing of fossils, grave sites, etc during earthmoving activities.

The proposed site is suitable for a residential development because it is compatible with the surrounding area, easily accessible and availability of connection points to services, e.g. water, electricity. The development will enable the municipality to decrease their housing development backlog and minimize the formation of illegal settlements on areas not considered for residential planning and to provide basic amenities, e.g. church, sport ground, and parks. The future residents will have proper shelter and access to basic services and in turn their livelihood and wellbeing will be improved.

During the public participation, no objections were received.

A no-go option for this project is not feasible because the site has been earmarked for residential development and it is an extension of existing residential areas therefore connections to basic amenities like water and sewerage are economically feasible.

It is therefore recommended that Environmental Clearance be granted for the proposed Fisherman's Village on a 5 ha portion of Erf 5757 Kuisebmond.

The Environmental Management Plan (EMP) identifies possible impacts of the project on the environment and the mitigation thereof. It gives guidelines to the responsible person(s) to follow appropriate contingency plans in the case of various possible impacts, thus the copy of the EMP should be given to the contractor to ensure adherence. The Draft EMP is attached hereto and should it be approved, it will serve as the final EMP.

“Our observation of nature must be diligent, our reflection profound, and our experiments exact. We rarely see these three means combined; and for this reason, creative geniuses are not common.”

– Denis Diderot

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