

**ENVIRONMENTAL SCOPING ASSESSMENT (ESA) FOR THE  
SUBDIVISION, REZONING AND CONSOLIDATION OF PORTION 1 WITH PORTION 8 & 9 OF  
LANGSTRAND FARM 42 IN WALVISBAY, ERONGO REGION, NAMIBIA**

**ECC Application Reference: APP- 006796**

<b>Author(s): Ms Aili lipinge</b> <b>Company: Excel Dynamic Solutions (Pty)</b> <b>Telephone: +264 (0) 61 259 530</b> <b>Fax2email: +264 (0) 886 560 836</b> <b>Email: info@edsnamibia.com</b>	<b>Client: Mr Gunther Heimstädt of Sports Village Number Thirty-Eight CC</b>
--	--

## **EXECUTIVE SUMMARY**

Mr Gunther Heimstadt of Sports Village Number Thirty-Eight CC (hereinafter referred to as *the Proponent*) intends to continue with the construction and establishment of the Ocean Key Hotel on Portion 8 and part of Portion 1 of Portion 9, Farm 42, in Long Beach, Walvis Bay. The Proponent owns Portion 8 and has obtained Walvis Municipality's approval to purchase Portion 9. Portion 9 (where Portion 1, targeted for consolidation with Portion 8, is located) is zoned public open space, hence statutory town planning procedures must be applied and necessary permits acquired as follows:

- Subdivision of Portion 9 Farm Langstrand No. 42 into Portion 1 (1000m<sup>2</sup>) and the Remainder.
- Closure of the subdivided Portion 1 (a portion of Portion 9 Farm Langstrand No.42) as Public Open Space.
- Rezoning of the subdivided Portion 1 (a portion of Portion 9 Farm Langstrand No.42) from Public Open Space to General Business.
- Consolidation of the subdivided Portion 1 (a portion of Portion 9 Farm Langstrand No.42) with Portion 8 Farm Langstrand, No. 42 into Portion X.

The proposed development and associated changes fall under the listed activities under the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012). They are considered capable of causing environmental and socio-economic impacts. As such, the proponent appointed Excel Dynamic Solutions (Pty) to undertake an independent Environmental Assessment (EA) to obtain an Environmental Clearance Certificate (ECC) for the above activities. The competent authority is the Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs and Forestry (MEFT: DEAF).

### **Brief Project Description**

Portion 8 of Langstrand Farm No. 48 is zoned as a General Business Area, within which the construction of a hotel is permitted in terms of the Walvis Bay Zoning Scheme. Construction of the Ocean Key Hotel was previously initiated but halted midway. The proponent now intends to resume construction of the hotel.

In addition, the proponent seeks to incorporate a 1,000 m<sup>2</sup> portion of Portion 9 of Langstrand Farm No. 48 for use as:

- the vehicle access route to the basement parking area,

- the location of an electrical substation, and
- the refuse storage area to support hotel operations.

### **Public Consultation Activities**

Regulation 21 of the EIA Regulations outlines steps to be taken during a public consultation process, and these have been used to guide this process. The public consultation process assisted the Environmental Consultant in identifying all potential impacts and in identifying possible mitigation measures and alternatives to certain project activities. The communication with I&APs about the proposed project was done through the following means and in this order to ensure that the public is notified and allowed to comment on the proposed project:

- A Background Information Document (BID) containing brief information about the proposed facility was compiled and distributed by means of email to relevant Authorities, and upon request to all newly registered Interested and Affected parties (I&APs).
- Project Environmental Assessment notices were published in The Namibian and Namib Times Newspaper on 16 and 23 May 2025, briefly explaining the activity and its locality, inviting members of the public to register as I&APs and submit their comments/concerns. The publication was facilitated by Stewart Planning Town & Regional Planners.
- A consultation meeting was scheduled and held with the I&APs on Tuesday, 10 June 2025, at Erik's Cove (10h00) next to the project site. The evening session scheduled for the Narraville Community Hall (18h00) could not go ahead as planned due to low turnout.
- The consultation meeting minutes were recorded.

### **CONCLUSIONS AND RECOMMENDATIONS**

The anticipated impacts of the proposed development were identified, described, and assessed. For the significant adverse (negative) impacts with a medium rating, appropriate management and mitigation measures were recommended for implementation by the Proponent, their contractors and project-related employees.

The public was consulted as required by the EMA and its 2012 EIA Regulations (Sections 21-24). This was done via the two local newspapers (New Era and The Namibian) used for this environmental assessment. A consultation through face-to-face meetings with the I&APs at Erik's Cove (10h00) next to the project site, during which stakeholders raised comments and concerns

about the proposed development. The evening session scheduled for the Narraville Community Hall (18h00) could not go ahead as planned due to low turnout.

The issues and concerns raised by the registered I&APs formed the basis for this Report and the Draft EMP. The issues were addressed and incorporated into this Report, whereby mitigation measures have been provided to avoid and/or minimise their significance on the environmental and social components. Most of the potential impacts were found to be of medium significance.

It is acknowledged that the project details will evolve during the construction and operational phases. However, these are unlikely to change the overall environmental acceptability of the proposed project.

The effective implementation of the recommended management and mitigation measures will particularly lead to a reduction in the significance of adverse impacts that cannot be avoided entirely (from medium to low). To maintain the desirable rating, the Proponent should directly monitor the implementation of management and mitigation measures; if not, it is highly recommended that the Environmental Control Officer (ECO) be involved. The monitoring of this implementation will not only be used to maintain the reduced impacts rating or a low rating, but also to ensure that all potential impacts identified in this study and any that might arise during implementation are promptly identified and addressed.

**On this basis, the Consultant's opinion is that an ECC should be issued, subject to the management and mitigation measures specified in the Environmental Management Plan (EMP) being implemented and adhered to.**

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	i
LIST OF FIGURES.....	v
LIST OF TABLES.....	v
LIST OF APPENDICES.....	vi
LIST OF ABBREVIATIONS .....	vii
1 INTRODUCTION.....	1
1.1 Project Background .....	1
1.2 Terms of Reference and Scope of Works .....	3
1.3 Appointed Environmental Assessment Practitioner .....	3
1.5 Other Services and Infrastructure.....	10
1.5.2 Accessibility to Site .....	10
1.6 Construction Closure Phase.....	11
2 PROJECT ALTERNATIVES.....	12
2.1 No Go or No Action .....	12
2.2 Land Availability and Landuse Options.....	12
3 LEGAL FRAMEWORK: LEGISLATION, POLICIES AND GUIDELINES .....	13
3.1 Namibia Tourism Board Act (No. 21 of 2000).....	13
3.2 The Environmental Management Act (No. 7 of 2007) .....	13
4 ENVIRONMENTAL BASELINE.....	20
4.1 Biophysical Environment .....	20
4.2 Climate.....	20
4.3 Topography and overview of the area .....	20
4.4 Soil and Geology .....	22
4.5 Flora and Fauna .....	22
5 PUBLIC CONSULTATION PROCESS .....	23
5.1 Pre-identified and Registered Interested and Affected Parties (I&APs).....	23
5.2 Communication with I&APs .....	24
6 IMPACT IDENTIFICATION, ASSESSMENT AND MITIGATION MEASURES.....	30
6.1 Impact Identification .....	30
6.2 Impact Assessment Methodology .....	30
6.2.1 Extent (spatial scale) .....	31
6.2.2 Duration .....	31

6.2.3	Intensity, Magnitude/severity .....	32
6.2.4	Probability of occurrence .....	32
6.2.5	Significance.....	33
6.3	Assessment of Potential Negative Impacts.....	35
6.3.1	Generation of Dust (Air Quality).....	35
6.3.2	Soil and Water Resources Pollution .....	35
6.3.3	Waste Generation .....	36
6.3.4	Occupational Health and Safety Risks.....	36
6.3.5	Vehicular Traffic Use and Safety .....	37
6.3.6	Noise and vibrations.....	37
6.3.7	Social Nuisance: Local Property Intrusion and Disturbance or Damage .....	38
6.3.8	Disturbance to Archaeological and Heritage resources .....	39
6.4	Mitigations and Recommendations for Construction Closure phase .....	39
7	CONCLUSIONS AND RECOMMENDATIONS .....	40
8	REFERENCES .....	41

## LIST OF FIGURES

Figure 1:	The locality map of the proposed project.....	2
Figure 2:	Existing development of portions 8 and 9.....	6
Figure 3	Ocean Key Hotel development proposals on the proposed consolidated Portion X (Stewart Planning Town & Regional Planners, 2025). .....	6
Figure 4	The current and proposed zonation of the site (Stewart Planning Town & Regional Planners, 2025).....	7
Figure 5	Consolidation plan for the proposed portion (Stewart Planning Town & Regional Planners, 2025).....	8
Figure 6:	The subdivision plan of portion 9 (Stewart Planning Town & Regional Planners, 2025) .....	9
Figure 7:	The general overview of the proposed sites .....	21
Figure 8:	The overview of the proposed site.....	23
Figure 9:	Public notices placed at a local Cucca shop around the proposed .....	25
Figure 10:	Public meeting held at Erik's Cove .....	26

## LIST OF TABLES

Table 1:	Applicable local, national and international standards, policies and guidelines governing the development.....	13
Table 3:	Summary of Interested and Affected Parties (I&APs) .....	23
Table 4:	Extent or spatial impact rating .....	31
Table 5:	Duration impact rating .....	31

Table 6: Intensity, magnitude or severity impact rating .....	32
Table 7: Probability of occurrence impact rating .....	32
Table 8: Significance rating scale .....	33
Table 10: Assessment of the impacts of the project on air quality .....	35
Table 11: Assessment of the project impact on soils and water resources (pollution).....	35
Table 12: Assessment of waste generation impact .....	36
Table 13: Assessment of the impacts of construction activities on health and safety .....	37
Table 14: Assessment of the impacts of construction activities on road use (vehicular traffic)...	37
Table 15: Assessment of the impacts of noise and vibrations .....	38
Table 16: Assessment of the social impact of community property damage or disturbance .....	38

## **LIST OF APPENDICES**

**Appendix A:** Copy of the Environmental Clearance Certificate (ECC) Application Form 1

**Appendix B:** Draft Environmental Management Plan (EMP)

**Appendix C:** Curricula Vitae (CV) for the Environmental Assessment Practitioner (EAP)

**Appendix D:** Proof of Public Consultation plus Issues and Response Trail

**Appendix E:** Consent letter from the relevant authority

**Appendix F:** List of plant species that will be in the botanical garden

**Appendix G:** Copy of Town Planning Application Package

## LIST OF ABBREVIATIONS

Abbreviation	Meaning
BID	Background Information Document
CV	Curriculum Vitae
DEA	Department of Environmental Affairs
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EDS	Excel Dynamic Solutions
ESA	Environmental Scoping Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
I&Aps	Interested and Affected Parties
MEFT	Ministry of Environment, Forestry and Tourism
PPE	Personal Protective Equipment
Reg	Regulation
S	Section
TOR	Terms of Reference

## DEFINITION OF TERMS

<b>Accommodation</b>	Facilities for overnight stay and the services commonly associated therewith, including facilities provided on any premises where camping in caravans, tents or similar devices is allowed.
----------------------	---



<b>Alternative</b>	A possible course of action, in place of another that would meet the same purpose and need of the proposal.
<b>Baseline</b>	Work done to collect and interpret information on the condition/trends of the existing environment.
<b>Botanical Garden</b>	A collection of living plants for scientific research, conservation, display, and education.
<b>Biophysical</b>	That part of the environment that does not originate with human activities (e.g. biological, physical and chemical processes).
<b>Cumulative Impacts/Effects Assessment</b>	In relation to an activity, it means the impact of an activity that may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
<b>Ecological Processes</b>	Processes play an essential part in maintaining ecosystem integrity. Four fundamental ecological processes are the cycling of water, the cycling of nutrients, the flow of energy and biological diversity (as an expression of evolution).
<b>Environmentally Sustainable Tourism</b>	The development and operation of the tourism industry in such a manner that the assets and attractions on which the sector depends are protected, and in particular, the safeguarding and maintaining of ecological processes, biodiversity, aesthetic and cultural qualities for the long-term benefit of the tourism industry and Namibia's people.
<b>Environment</b>	As defined in Environmental Management Act - the complex of natural and anthropogenic factors and elements that are mutually interrelated and affect the ecological equilibrium and the quality of life, including – (a) the natural environment that is land, water and air; all organic and inorganic matter and living organisms and (b) the human environment that is the landscape and natural, cultural, historical, aesthetic, economic and social heritage and values.

<b>Environmental Management Plan</b>	As defined in the EIA Regulations (Section 8(j)), a plan that describes how activities that may have significant environmental effects are to be mitigated, controlled and monitored.
<b>Interested and Affected Party (I&amp;AP)</b>	In relation to the assessment of a listed activity, it includes - (a) any person, group of persons or organisation interested in or affected by an activity; and (b) any organ of state that may have jurisdiction over any aspect of the activity. Mitigate - practical measures to reduce adverse impacts. Proponent – as defined in the Environmental Management Act, a person who proposes to undertake a listed activity. Significant impact - means an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment.
<b>Fauna</b>	All of the animals found in a given area.
<b>Flora</b>	All of the plants found in a given area.
<b>Mitigation</b>	The purposeful implementation of decisions or activities that are designed to reduce the undesirable impacts of a proposed action on the affected environment.
<b>Monitoring</b>	Activity involving repeated observation, according to a pre-determined schedule, of one or more elements of the environment to detect their characteristics (status and trends).
<b>Nomadic Pastoralism</b>	Nomadic pastoralists live in societies in which the husbandry of grazing animals is viewed as an ideal way of making a living, and the regular movement of all or part of the society is considered a normal and natural part of life. Pastoral nomadism is commonly found where climatic conditions produce seasonal pastures but cannot support sustained agriculture.
<b>Proponent</b>	Organisation (private or public sector) or individual intending to implement a development proposal.
<b>Public Consultation/Involvement</b>	A range of techniques that can be used to inform, consult or interact with stakeholders affected by the proposed activities.

<b>Scoping</b>	An early and open activity to identify the impacts that are most likely to be significant and require specialised investigation during the EIA work. It can also be used to identify alternative project designs/sites to be assessed, to obtain local knowledge of the site and surroundings, and to prepare a plan for public involvement. The results of scoping are frequently used to prepare Terms of Reference for specialised input into the full EIA.
<b>Rezoning</b>	The process of changing the land-use designation of a particular property or portion of land under a municipal or local zoning scheme. It involves amending the legal zoning classification to permit a different type of development or land use than what is currently allowed. Local planning authorities usually govern rezoning and require compliance with municipal regulations, environmental considerations, and public participation processes.
<b>Terms of Reference (ToR)</b>	Written requirements governing full EIA input and implementation, consultations to be held, data to be produced and form/contents of the EIA report. Often made as an output from scoping.
<b>Tourism</b>	The activities of foreign visitors and Namibian residents travelling to and staying at places outside of their usual environment for not more than one year for the purposes of visiting, experiencing and enjoying Namibia's natural, social and self-constructed amenities, and for business and other purposes.
<b>Tourist</b>	Any person who travels to a destination away from their usual place of residence for recreational or business purposes.

# **1 INTRODUCTION**

## **1.1 Project Background**

Mr Gunther Heimstadt of Sports Village Number Thirty-Eight CC (hereinafter referred to as the Proponent) intends to continue with the construction and establishment of the Ocean Key Hotel on Portion 8 and part of Portion 1 of Portion 9, in Long Beach, Walvis Bay. The Proponent owns Portion 8 and has obtained Walvis Municipality's approval to purchase Portion 9. Portion 9 (where Portion 1, targeted for consolidation with Portion 8, is located) is zoned Public Open Space (Figure 1), hence statutory town planning procedures must be applied and necessary permits acquired as follows:

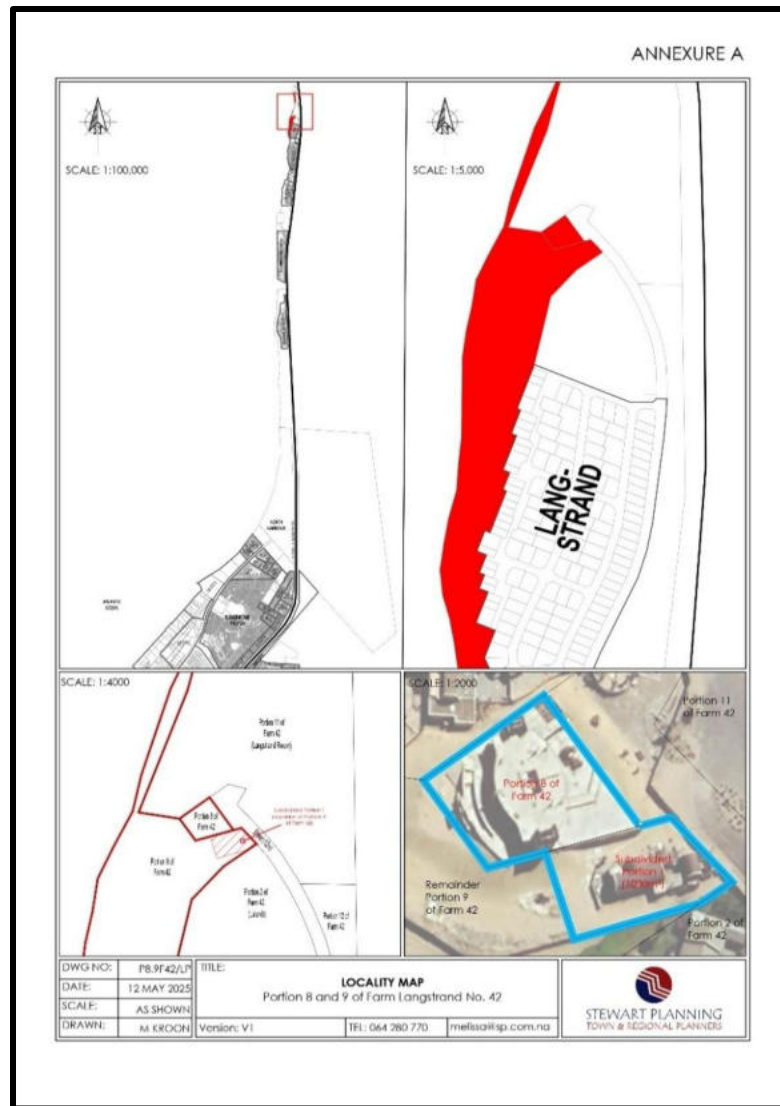
- Subdivision of Portion 9 Farm Langstrand No. 42 into Portion 1 (1000m<sup>2</sup>) and the Remainder.
- Closure of the subdivided Portion 1 (a portion of Portion 9 Farm Langstrand No.42) as Public Open Space.
- Rezoning of the subdivided Portion 1 (a portion of Portion 9 Farm Langstrand No.42) from Public Open Space to General Business.
- Consolidation of the subdivided Portion 1 (a portion of Portion 9 Farm Langstrand No.42) with Portion 8 Farm Langstrand No. 42 into Portion X.

The proposed development and associated changes fall under the listed activities under the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012). The activities are considered to have the potential to cause environmental and socio-economic impacts. As such, the proponent appointed Excel Dynamic Solutions (Pty) to undertake an independent Environmental Assessment (EA) to obtain an Environmental Clearance Certificate (ECC) for the above activities. The competent authority is the Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs and Forestry (MEFT: DEAF).

In terms of the Environmental Management Act (EMA) No. 07 of 2007, Section 27(2j), Government Notice No. 29, Section 6, and Government Notice No. 30, the proposed project constitutes several listed activities that require an ECC from the Department of Environmental Affairs (DEAF) of MEFT. The relevant activities listed as per EIA regulations are:

### **LAND USE AND DEVELOPMENT ACTIVITIES**

The rezoning of land for commercial use



**Figure 1: The locality map of the proposed project**

## 1.2 Terms of Reference and Scope of Works

The Proponent has appointed Excel Dynamic Solutions (Pty) Ltd (EDS) to undertake an environmental assessment (EA) and, thereafter, to apply for an ECC for the proposed development. There were no formal Terms of Reference (ToR) provided to EDS by the Proponent. The consultant, instead, relied on the requirements of the Environmental Management Act (No. 7 of 2007) (EMA) and its Environmental Impact Assessment (EIA) Regulations (GN. No. 30 of 2012) to conduct the study.

The application for the ECC was compiled and submitted to the Competent Authority (Ministry of Environment, Forestry and Tourism (MEFT)) (**Appendix A**) as the environmental custodian for project registration purposes. Upon submission of an Environmental Scoping Assessment (ESA) Report and Draft Environmental Management Plan (EMP), an ECC for the proposed development will be considered by the Environmental Commissioner at the MEFT's Department of Environmental Affairs and Forestry (DEAF).

## 1.3 Appointed Environmental Assessment Practitioner

To satisfy the requirements of the EMA and its 2012 EIA Regulations, the Proponent appointed EDS to conduct the required EA process on its (Proponent's) behalf. The findings of the EA are incorporated into this report and the draft EMP (**Appendix B**). These documents will be submitted to the Environmental Commissioner at the DEAF as part of the ECC application.

The EIA process is led by Ms Aili lipinge, with consultation by Mr Nerson Tjelos and reporting by Ms Aili lipinge. Ms lipinge's CV is presented in **Appendix C**.

## 1.4 Project Description

As stated in the introductory section of this report, Mr Gunther Heimstadt of Sports Village Number Thirty-Eight CC (Proprietary) Limited (hereinafter referred to as the proponent) intends to resume with the construction for the establishment of the Ocean Key Hotel in Long Beach, Walvis Bay, as shown in Figure 2. Accordingly, the proponent seeks to undertake the following activities, as illustrated in the locality map in Figure 1 above:

- **Subdivision** of Portion 9 of Farm Langstrand No. 42 into Portion 1 (measuring 1,000 m<sup>2</sup>) and the Remainder as shown in Figure 3.
- **Closure** of Portion 1 (a portion of Portion 9, Farm Langstrand No. 42) as Public Open Space.

- **Rezoning** of Portion 1 (a portion of Portion 9, Farm Langstrand No. 42) from *Public Open Space* to *General Business*.
- **Consolidation** of Portion 1 (a portion of Portion 9, Farm Langstrand No. 42) with Portion 8 of Farm Langstrand No. 42 into a new consolidated Portion X.

The proponent has obtained the right to continue constructing, operating, managing and maintaining the proposed Ocean Key Hotel. The proposed methods and development approach for the project are outlined below and in accordance with the details provided by Stewart Planning Town & Regional Planners (2025):

Portion 8 is earmarked for the development of the Ocean Key Hotel, where construction commenced previously but was halted. The proponent now intends to resume construction and seeks to incorporate a 1,000 m<sup>2</sup> portion of Portion 9 of Farm Langstrand No. 48 to be used for:

- vehicular access to the basement parking,
- the installation of an electrical substation, and
- a refuse storage area required for hotel operations.

The intent of this application is therefore to complete the necessary statutory processes to incorporate the 1,000 m<sup>2</sup> portion of Portion 9 into Portion 8. Portion 8 is zoned General Business, where a hotel is permitted as a primary land use in terms of the Walvis Bay Zoning Scheme. As such, the 1,000 m<sup>2</sup> portion must first be subdivided from Portion 9, closed as Public Open Space, rezoned to General Business, and then consolidated with Portion 8.

The incorporation of the 1,000 m<sup>2</sup> portion of Portion 9 is considered essential for the efficient and proper functioning of the Ocean Key Hotel development for the following reasons:

1. Proximity: The portion is situated directly adjacent to Portion 8.
2. Landlocked nature: The portion is effectively “landlocked” between two private properties and a public street, rendering it of limited standalone use.
3. Vacant infrastructure: The existing municipal buildings on the portion are vacant and unused.
4. Optimal land use: Incorporating the portion into the Ocean Key development represents the optimal land use option, as no other viable or beneficial alternative land uses exist.
5. Developer investment: All costs associated with the proposed electrical substation on the portion will be covered by the developer.

6. Municipal benefit: The proposed substation will not only benefit Erongo RED and the Walvis Bay Municipality but will also support future land development in the surrounding area.

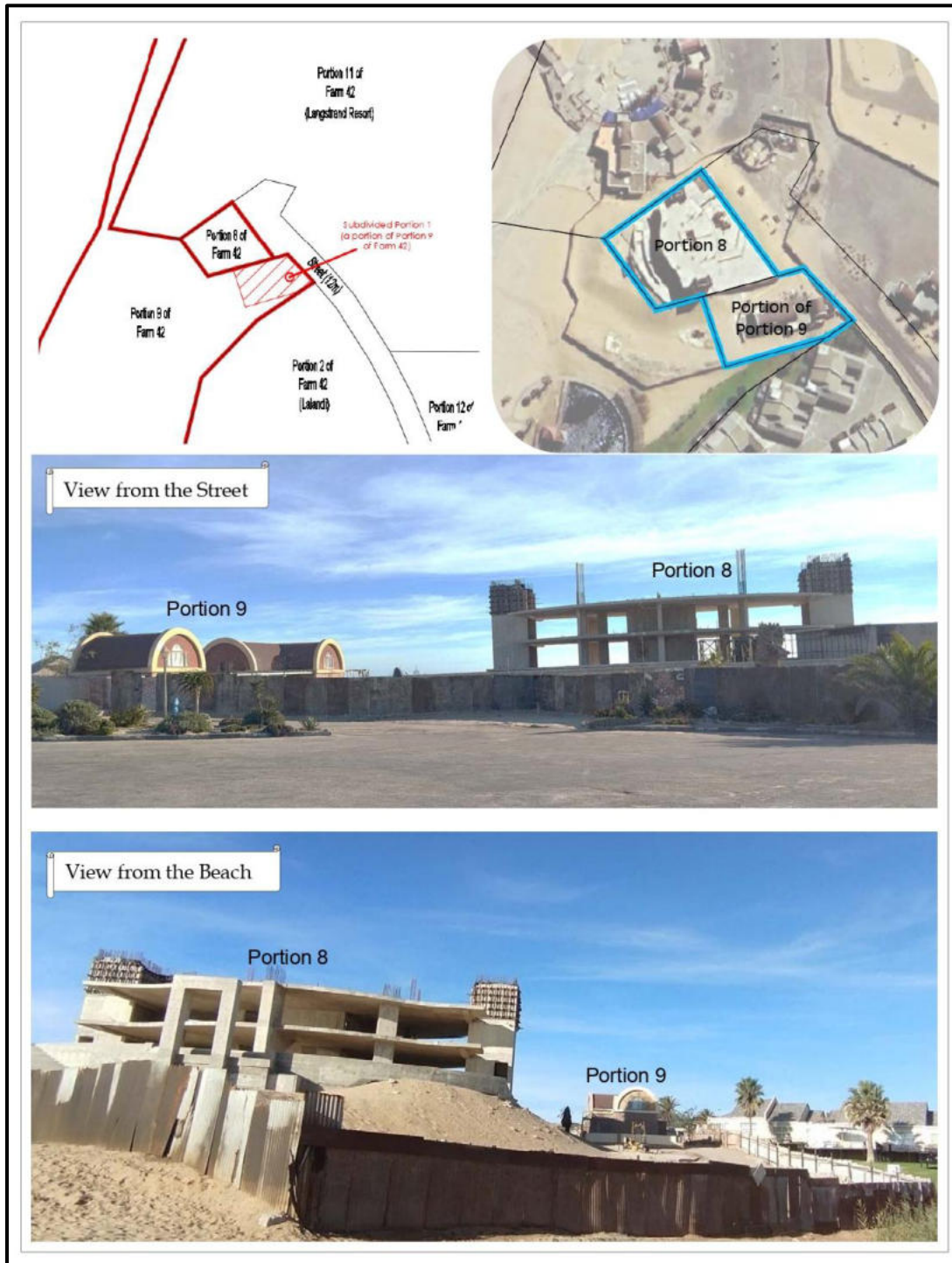
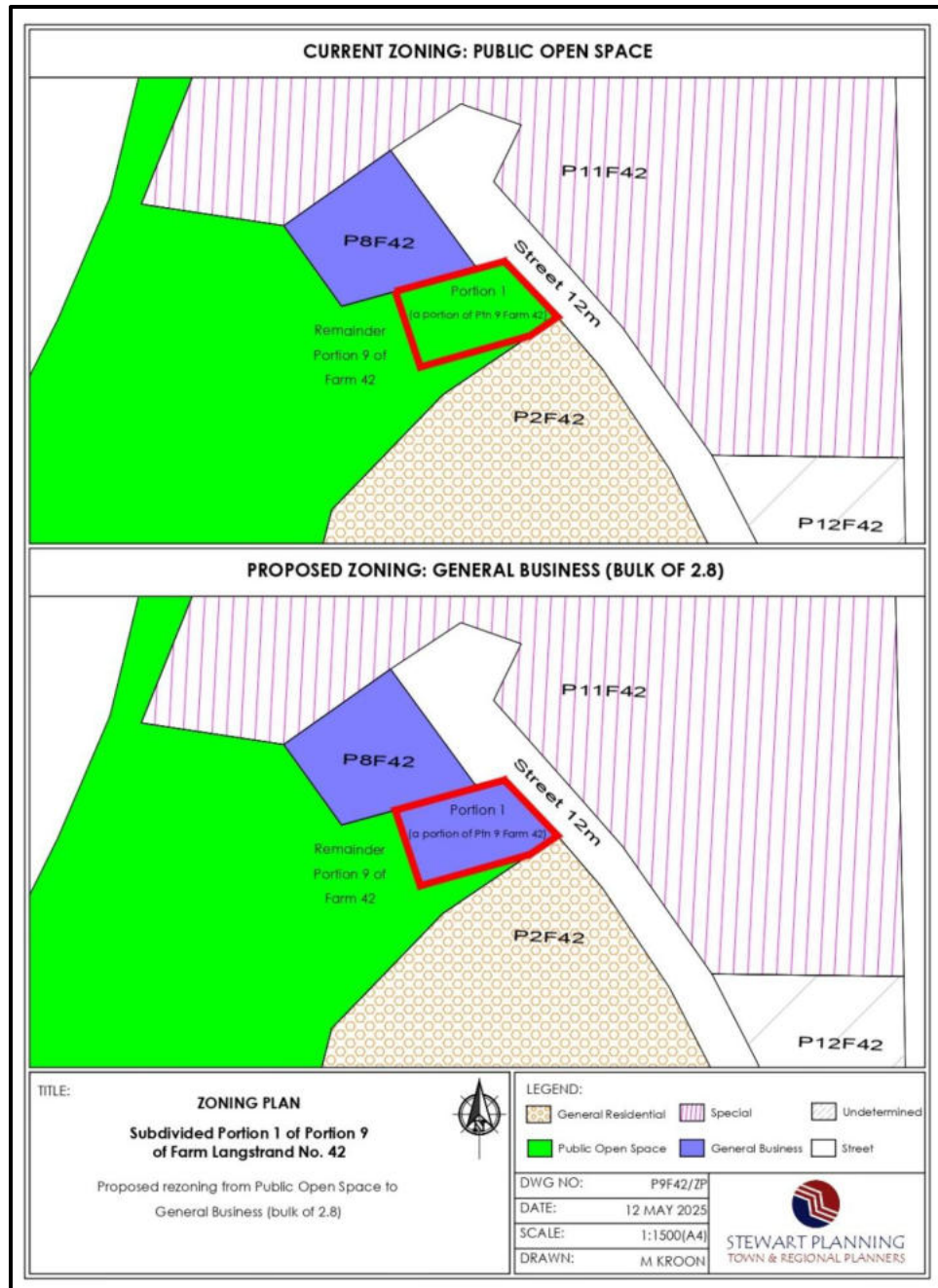




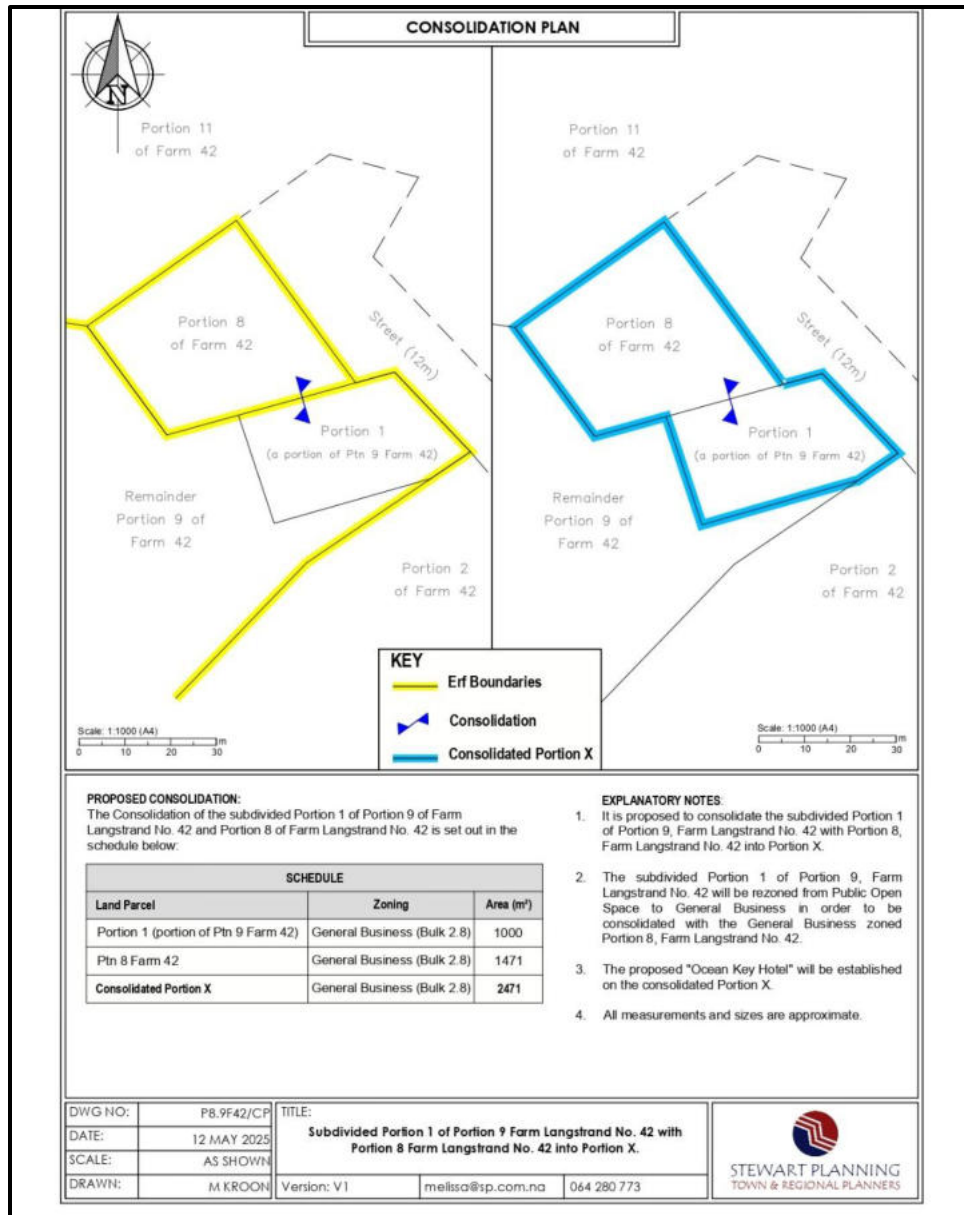
Figure 2 existing development of portions 8 and 9



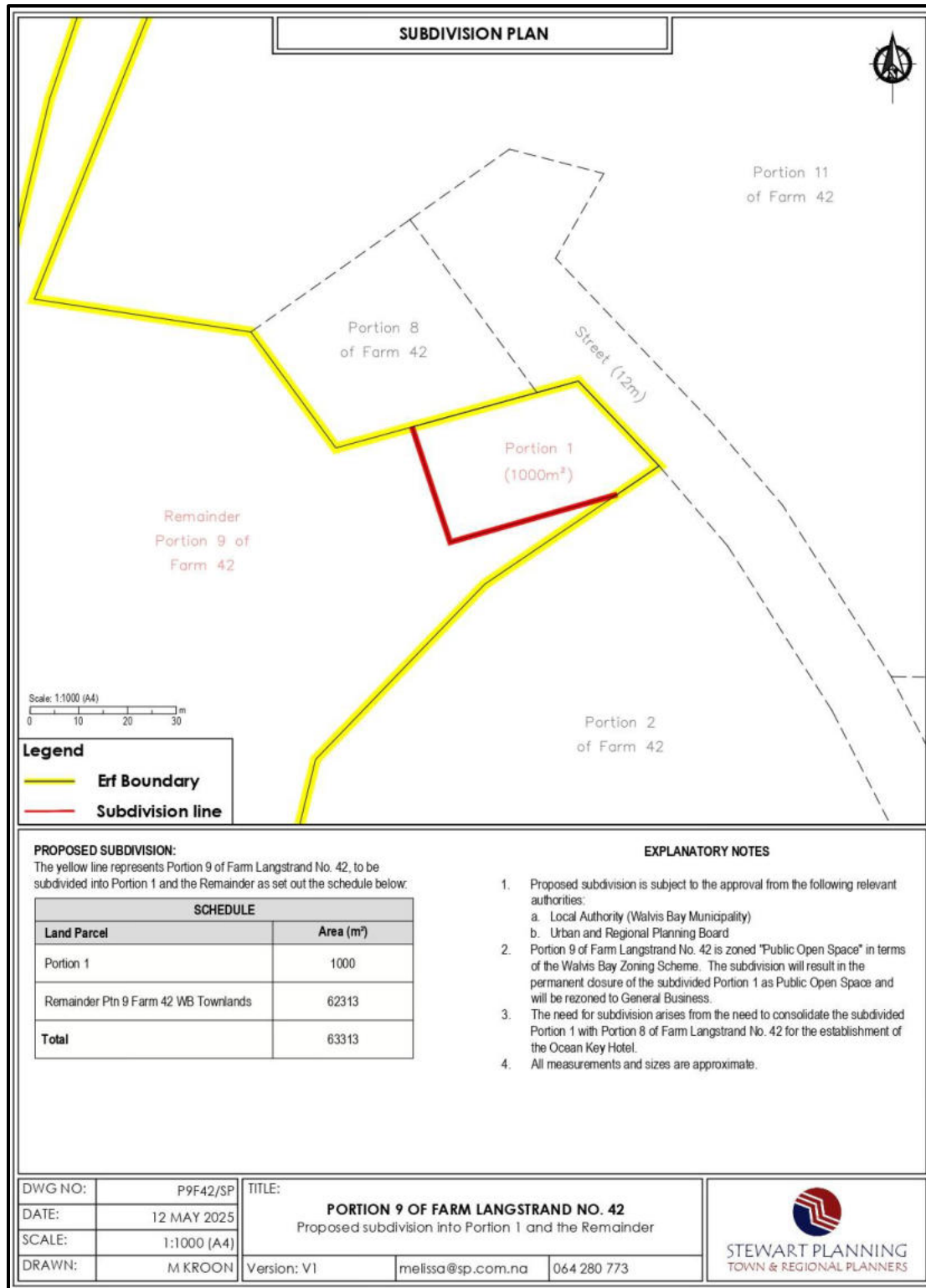
Figure 3 Ocean Key Hotel development proposals on the proposed consolidated Portion X (Stewart Planning Town & Regional Planners, 2025).



**Figure 4 The current and proposed zonation of the site (Stewart Planning Town & Regional Planners, 2025)**



**Figure 5 Consolidation plan for the proposed portion (Stewart Planning Town & Regional Planners, 2025)**



**Figure 6 The subdivision plan of portion 9 (Stewart Planning Town & Regional Planners, 2025)**

## **1.5 Other Services and Infrastructure**

### **1.5.1 Water, sewer and electricity:**

The proposed hotel development is to be connected to the municipal infrastructure of the Walvis Bay Municipality, including water, electricity, and sewer connections. The connection is to be made in accordance with the engineering standards and requirements of the Walvis Bay Municipality.

### **1.5.2 Accessibility to Site**

Portions 8 and 9 are situated in Langstrand, along the First Street service road leading to the Langstrand Resort, near Erik's Cove Restaurant and the Langstrand Caravan Park. Therefore, all project-related vehicles will use these existing roads to access the site. The Proponent may need to upgrade the site access road to ensure it is fit to accommodate project-related vehicles, such as heavy trucks supplying building equipment and materials during the operation (SP, 2025).

### **1.5.3 Waste Management**

The site will be equipped with secure waste bins (during construction and operational phases) for each type of waste (i.e., domestic, hazardous, and recyclable). Depending on the amount generated, waste will be sorted and collected weekly or monthly and taken to the nearest certified landfill site. An agreement will need to be reached with different waste management facility operators/owners, and authorisation or permits will be obtained before utilising these facilities.

**Solid Waste Management:** Solid waste for the proposed development will be managed in accordance with the hierarchy of waste prevention, re-use, and recycling, with waste minimisation and recycling preferred over waste treatment and disposal.

**Hazardous waste:** All vehicles, machinery and fuel-consuming equipment onsite will be provided with drip trays to capture potential fuel spills and waste oils. The waste fuel/oils will be carefully stored in a standardised container and disposed of at the nearest approved hazardous waste management facility in the country.

### **1.5.4 Health and Safety**

Adequate and appropriate Personal Protective Equipment (PPE) will be provided to every project personnel while on and working at the site. A minimum of 5 first-aid kits will be readily available on-site to treat potential minor injuries during construction.

**Fire management:** A minimum of basic firefighting equipment, i.e., six fire extinguishers, will be readily available in vehicles, at working sites and camps, and during hotel operations.

**On-site Workers' Safety:** Adequate and appropriate Personal Protective Equipment (PPE) will be provided to all project personnel while on site and working. A minimum of 5 first aid kits will be readily available on-site to treat minor injuries.

### **1.6 Construction Closure Phase**

Once the construction phase of the proposed project is completed, the proponent will be required to dismantle and remove all temporary site offices and construction camps established during the construction period. This phase will also include dismantling and removing all construction-related equipment and safely disposing of any leftover building materials associated with the development.

## **2 PROJECT ALTERNATIVES**

Alternatives are defined as the “different means of meeting the general purpose and requirements of the activity” (EMA, 2007). This section will highlight the different ways the project can be undertaken and identify the alternative that is most practical but least damaging to the environment.

Once the alternatives have been established, these are examined by asking the following three questions:

- What alternatives are technically and economically feasible?
- What are the environmental effects associated with the feasible alternatives?
- What is the rationale for selecting the preferred alternative?

### **2.1 No Go or No Action**

The “No-Go or No-Action” option implies that no hotel or associated infrastructure will be developed. This option will not be ideal because the intended activities aim to improve current land use and generate economic benefits.

### **2.2 Land Availability and Landuse Options**

The proposed Portions, as presented in Figure 1 above, were all considered ideal and in accordance with the Townships and Division of Land Ordinance 11 of 1963, and were approved by the Walvis Municipality, also taking terrain and environmental constraints.

The alternatives considered for the proposed development are discussed in the following subsections. The alternatives are reviewed whilst cognizant of possible limitations:

- Assumes the information provided by the proponent and the contracted town planner is accurate and discloses all information available.
- The limitation that no alternative except for the preferred Portions and the ‘no-go’ option was considered during this assessment. The unique character and appeal of the development area and neighbourhood were, however, taken into consideration in the design.



### 3 LEGAL FRAMEWORK: LEGISLATION, POLICIES AND GUIDELINES

This Chapter outlines the regulatory framework applicable to the proposed project. **Table 1** lists appropriate and relevant frameworks for the project.

#### 3.1 Namibia Tourism Board Act (No. 21 of 2000)

The core objective of this act is to establish the Namibia Tourism Board and to provide for its functions, to provide for the registration and grading of accommodation establishments, to provide for the declaration of any sector of the tourism industry as a regulated sector and for the registration of businesses falling within a regulated sector; and to provide for matters incidental thereto.

#### 3.2 The Environmental Management Act (No. 7 of 2007)

This EIA was carried out in accordance with the Environmental Management Act (EMA) and its Environmental Impact Assessment (EIA) Regulations (GG No. 4878, GN No. 30).

The EMA has stipulated requirements for completing the documentation to obtain an Environmental Clearance Certificate (ECC) for permission to undertake certain listed activities. These activities are listed under the following Regulations:

- *Tourism Development Activities- The construction of resorts, lodges, hotels or other tourism and hospitality facilities.*
- *Other activities- Construction of cemeteries, camping, leisure and recreation sites.*
- *The clearance of forest areas, deforestation, afforestation, timber harvesting, or any other related activity that requires authorisation in terms of the Forest Act, 2001 (Act No. 12 of 2001) or any other law.*

The Environmental Impact Assessment (EIA) Regulations, GN 28-30 (GG 4878), detail requirements for public consultation within an environmental assessment process (GN 30 S21). The EIA regulations also outline the required details of a Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15).

Other relevant legal obligations for the proposed activities are presented in Table 1 below. Error! Reference source not found..

**Table 1: Applicable local, national and international standards, policies and guidelines governing the development**



Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
The Constitution of the Republic of Namibia, 1990, as amended	<p>The Constitution of the Republic of Namibia (1990, as amended) addresses environmental protection and sustainable development. Article 91(c) defines the functions of the Ombudsman to include:</p> <p>“...the duty to investigate complaints concerning the over-utilisation 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...”</p>	<p>By implementing the environmental management plan, the establishment will comply with the constitution in terms of environmental management and sustainability.</p> <p>Ecological sustainability will be the main priority for the proposed development.</p>
Health & Safety Regulations, 10th Draft	<p>Makes provision for the health and safety of persons employed or otherwise present in the development area. These deal with, among other matters, clothing and devices, design, use, operation, supervision and control of machinery, fencing and guards, and safety measures during repairs and maintenance.</p>	<p>The Proponent should comply with all these regulations regarding their employees.</p>
Petroleum Products and Energy Act (No. 13 of 1990) Regulations (2001)	<p>Regulation 3(2)(b) states that “No person shall possess [sic] or store any fuel except under authority of a license or a certificate, excluding a person who possesses or stores such fuel in a quantity of 600 litres or less in any container kept at a place outside a local authority area”</p>	<p>The Proponent should obtain the necessary authorisation from the Ministry of Mines and Energy for on-site fuel storage.</p>

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Urban and Regional Planning Act No 5 of 2018	approved townships, to provide for the disestablishment of approved townships; to provide for the change of name of approved townships; to provide for the subdivision and consolidation of land; to provide for the alteration, suspension and deletion of conditions relating to land; and to provide for incidental matters.	The proposed development must comply with the provisions governing land subdivision and rezoning.
The Regional Councils Act (No. 22 of 1992)	This Act sets out the conditions under which Regional Councils must be elected and administer each delineated region. From a land use and project planning point of view, their duties include, as described in section 28 “to undertake the planning of the development of the region for which it has been established with a view to physical, social and economic characteristics, urbanisation patterns, natural resources, economic development potential, infrastructure, land utilisation pattern and sensitivity of the natural environment.	The development must comply with the provisions of the Local Authorities Act.
Local Authorities Act No. 23 of 1992	To provide for the determination, for purposes of traditional government, of traditional authority councils; and to provide for incidental matters.	The Walvis Bay Urban Constituency is the responsible local authority for the area; therefore, they should be consulted regarding any development on the site.

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Water Act 54 of 1956	<p>The Water Resources Management Act 11 of 2013 is presently without regulations; therefore, the Water Act No 54 of 1956 is still in force:</p> <p>Prohibits the pollution of water and implements the principle that a person disposing of effluent or waste has a duty of care to prevent pollution (S3 (k)).</p> <p>Provides for control and protection of groundwater (S66 (1), (d (ii))).</p> <p>Liability of clean-up costs after closure/abandonment of an activity (S3 (l)). (l)).</p>	The protection of water resources (both quality and quantity/abstraction) should be a priority.
Water Resources Management Act (No 11 of 2013)	<p>The Act provides for the management, protection, development, use, and conservation of water resources; the regulation and monitoring of water services; and incidental matters. The objects of this Act are to:</p> <p>Ensure that the water resources of Namibia are managed, developed, used, conserved and protected in a manner consistent with, or conducive to, the fundamental principles set out in Section 66 - protection of aquifers, Subsection 1 (d) (iii), which provides for preventing the contamination of the aquifer and water pollution control (Section 68).</p>	

<b>Legislation/Policy/ Guideline</b>	<b>Relevant Provisions</b>	<b>Implications for this project</b>
National Heritage Act No. 27 of 2004	To provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects; to establish a National Heritage Council; to establish a National Heritage Register; and to provide for incidental matters.	The Proponent should ensure compliance with the requirements of these Acts. The necessary management measures and related permitting requirements must be taken. This was done by consulting with the National Heritage Council of Namibia.
The National Monuments Act (No. 28 of 1969)	The Act enables the proclamation of national monuments and protects archaeological sites.	
Soil Conservation Act (No 76 of 1969)	The Act provides for the prevention and control of soil erosion and the protection, improvement, and conservation of soil, vegetation, and water supply sources and resources, through directives issued by the Minister.	Duty of care must be applied to soil conservation, and management measures must be included in the EMP.
Public Health Act (No. 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.”	The Proponent and all its employees should ensure compliance with the provisions of these legal instruments.
Health and Safety Regulations GN 156/1997 (GG 1617)	Details various requirements regarding the health and safety of labourers.	

Legislation/Policy/ Guideline	Relevant Provisions	Implications for this project
Road Traffic and Transport Act, No. 22 of 1999	The Act provides for the establishment of the Transportation Commission of Namibia; for the control of traffic on public roads; for the licensing of drivers; for the registration and licensing of vehicles; for the control and regulation of road transport across Namibia's borders; and for matters incidental thereto. Should the Proponent wish to undertake activities involving road transportation or access onto existing roads, the relevant permits will be required.	Mitigation measures should be provided; if the roads and traffic impacts cannot be avoided, the relevant permits must be applied for.
Labour Act (No. 6 of 1992)	The Ministry of Labour (MOL) aims to ensure harmonious labour relations by promoting social justice, occupational health and safety, and enhanced labour market services for the benefit of all Namibians. This ministry provides the effective implementation of the Labour Act no. 6 of 1992.	The Proponent should ensure that the development does not compromise the safety and welfare of workers.

<b>Legislation/Policy/ Guideline</b>	<b>Relevant Provisions</b>	<b>Implications for this project</b>
Urban and Regional Planning Act 5 of 2018	The Act provides to consolidate the laws relating to urban and regional planning; to provide for a legal framework for spatial planning in Namibia; to provide for principles and standards of spatial planning; to establish the urban and regional planning board; to decentralise some matters regarding spatial planning; to provide for the preparation, approval and review of the national spatial development framework, regional structure plans and urban structure plans; to provide for the preparation, approval, review and amendment of zoning schemes; to provide for the establishment of townships; to provide for the alteration of boundaries of approved townships, to provide for the disestablishment of approved townships; to provide for the change of name of approved townships; to provide for the subdivision and consolidation of land; to provide for the alteration, suspension and deletion of conditions relating to land; and to provide for incidental matters.	The subdivision and consolidation of land, as well as the establishment of townships, are to be done in accordance with the act.
Local Authorities Act No. 23 of 1992	The Local Authorities Act prescribes the manner in which a town or municipality should be managed by the Town or Municipal Council.	The development must comply with the provisions of the Local Authorities Act.

## **4 ENVIRONMENTAL BASELINE**

The proposed activities will be undertaken in specific environmental and social conditions. Understanding the pre-project environmental conditions will provide background information on the status quo and future projections of environmental conditions after proposed works on the site are completed. This also helps the EAP identify sensitive environmental features that may need to be protected through the recommendations and the effective implementation of the provided mitigation measures.

The baseline information presented below is sourced from various sources, including reports of studies conducted in the Erongo Region. The Consultant obtained further details during the public consultation meeting and during the site visit.

### **4.1 Biophysical Environment**

#### **4.2 Climate**

Despite its location within the tropics, Walvis Bay features a rare mild variant of the cold desert climate (BWk) according to the Köppen climate classification. It is caused by the rain shadow of the Naukluft Mountains and the cooling effect of the coastal sea temperature by the Benguela Current<sup>6</sup>. Walvis Bay receives only 13.2 millimetres (0.52 in) of average precipitation per year, making it one of the driest cities on Earth. Despite its dry climate, the city is relatively humid. Average relative humidity throughout the year remains above 80%.

The warmest month is February, with an average temperature of 17.9 °C (64.2 °F), while the coolest months are August and September, with an average temperature of 13.2 °C (55.8 °F). The diurnal temperature range is also low, averaging only 5.7 °C (10.3 °F). As one effect of anthropogenic climate change, there has been considerable warming at the airport in recent years. On 17 May 2015, the temperature at Rooikop near Walvis Bay International Airport reached 37.4 °C (99.3 °F).

#### **4.3 Topography and overview of the area**

The proposed site is located in Walvis Bay, on Farm Langstrand No. 48, along Namibia's central coastline, where the Namib Desert meets the Atlantic Ocean. The Central Namib is characterised by an essentially flat plain with a gradual gradient of approximately 1% from the coast to the foot of the escarpment. Although the region contains several river valleys, inselbergs, and dune formations, there are no major landscape features that significantly influence the macroclimate between the ocean and the escarpment. This relatively featureless plain is one of the characteristics that make the Namib unique among the world's deserts (Taljaard, 1979). The flat topography allows steady gradients to develop from west to east, which influence rainfall, fog, humidity, temperature, and wind patterns, as well as the daily variability of these climatic parameters. Figure 7 below shows the general overview of the proposed site.



**Figure 7 The general overview of the proposed sites**



#### **4.4 Soil and Geology**

The coastal zone is underlain by the Proterozoic Damara Orogen in large parts of northwestern and central Namibia, with stable platform carbonates in the north and a variety of metasedimentary rocks, indicating more variable depositional conditions further south. Along the south-western coast, the volcanic sedimentary Gariep Belt is assumed to be the southern extension of the Damara Orogen. Volcanic rock of the Permian to Jurassic Karoo Sequence occur in the Aranos, Huab and Waterberg Basins, and are extensively intruded by dolerite sills and dykes, which in collusion with mainly basaltic volcanism and several alkaline sub volcanic intrusions (e.g, Brandberg, Spitzkoppe, Erongo), mark the break-up of Gondwana, and formation of the South Atlantic Ocean during the Cretaceous period.

#### **4.5 Flora and Fauna**

The site is within the already established industrial area. The habitat is therefore fragmented. There is no noteworthy fauna or flora present at the site, as shown in Figure 8.



## Figure 8 The overview of the proposed site

### 5 PUBLIC CONSULTATION PROCESS

Public consultation forms an essential component of an Environmental Assessment (EA) process. It provides potential Interested and Affected Parties (I&APs) with an opportunity to comment on and raise any issues relevant to the project for consideration as part of the assessment process, thus assisting the Environmental Assessment Practitioner (EAP) in identifying all potential impacts and determining the extent of further investigations necessary. Public consultation can also help identify potential mitigation measures. Public consultation for this scoping study has been done in accordance with the EMA and its EIA Regulations.

#### 5.1 Pre-identified and Registered Interested and Affected Parties (I&APs)

Relevant and applicable national, regional, and local authorities, local leaders, and other interested members of the public were identified. Pre-identified I&APs were contacted directly, while other parties who contacted the Consultant after project advertisement notices in the newspapers were registered as I&APs upon their request. Newspaper advertisements for the proposed development were placed in two widely read national newspapers in the region (The Namibian and New Era). The project advertisement/announcement ran for two consecutive weeks, inviting members of the public to register as I&APs and submit their comments. The summary of pre-identified and registered I&APs is listed in **Table 3** below, and the complete list of I&APs is provided in **Appendix D**.

**Table 2: Summary of Interested and Affected Parties (I&APs)**

<b>National (Ministries and State-Owned Enterprises)</b>
Ministry of Environment, Forestry and Tourism
Ministry of Urban and Rural Development
Ministry of Health and Social Services
<b>Regional, Local and Traditional Authorities</b>
Erongo Regional Council
Walvisbay Municipality
<b>General Public</b>

## 5.2 Communication with I&APs

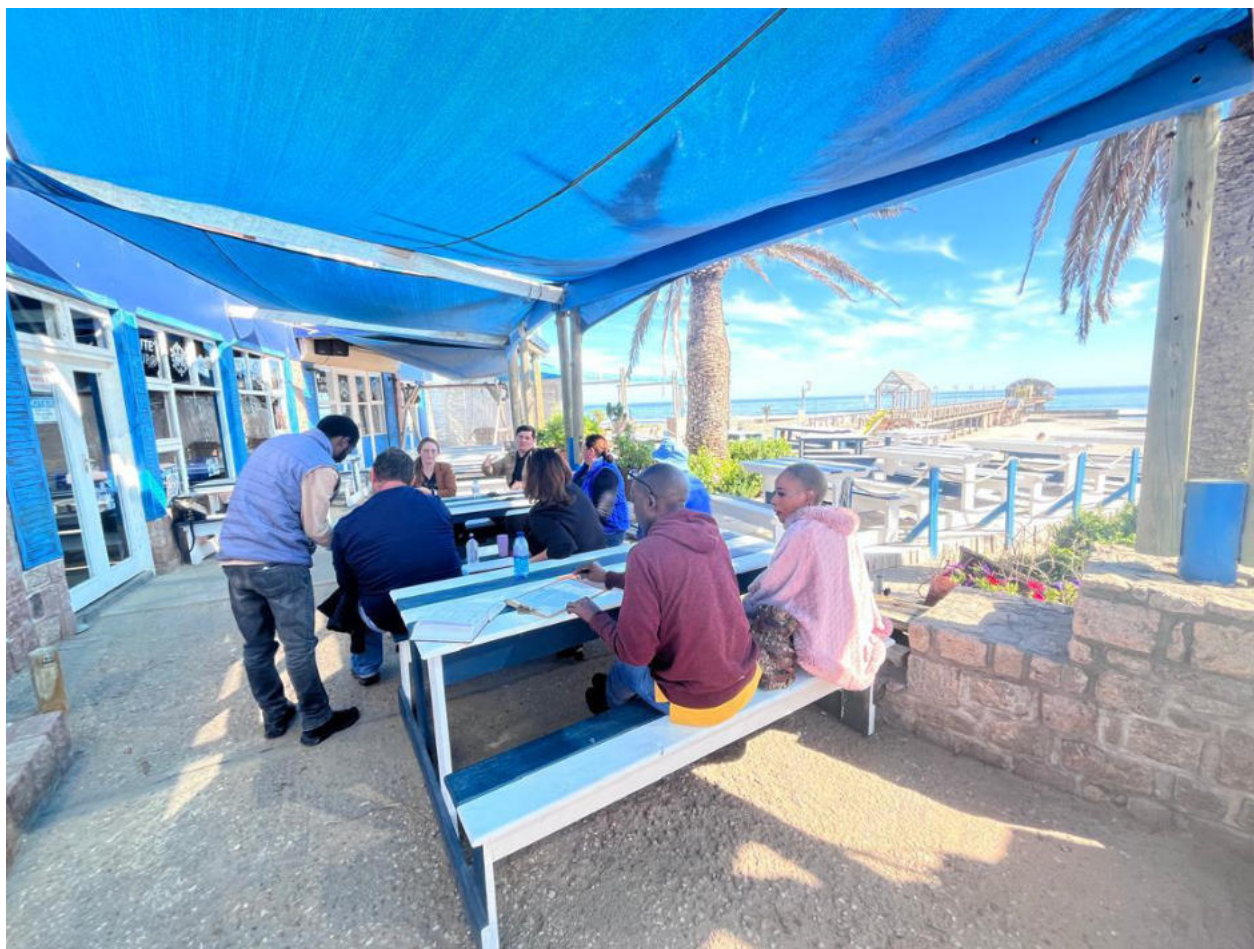
Regulation 21 of the EIA Regulations sets out the steps to be taken during a public consultation process, and these have been used to guide this process. Communication with I&APs about the proposed development was facilitated through the following means and in this order:

- A Background Information Document (BID) containing brief information about the proposed facility was compiled (**Appendix E**) and emailed to relevant Authoritative Ministries, and upon request, to all new registered Interested and Affected Parties (I&APs);
- The environmental assessment project public invitation notices were published in The Namibian and Namib Times Newspaper on 16 and 23 May 2025, briefly explaining the activity and its locality, inviting members of the public to register as I&APs and submit their comments/concerns. The publication was facilitated by Stewart Planning Town & Regional Planners.
- A consultation meeting was scheduled and held with the I&APs on Tuesday, 10 June 2025, at Erik's Cove Restaurant (10h00). The planned evening session at the Narraville Community Hall (18h00) could not proceed due to a no-show by stakeholders.
- The consultation meeting minutes were recorded for the Erik's Cove Restaurant session.
- The issues and concerns raised were noted and used to form a basis for the ESA Report and EMP.



**Figure 9:** Public notices placed at a local Cucca shop around the proposed










**Figure 10: Public meeting held at Erik's Cove**

Issues raised by affected and interested parties have been recorded and incorporated into the environmental report and EMP. The summarised matters raised during the public meeting are presented below, and the same formed part of the town planning application by Stewart Planning Town & Regional Planners (lodged in September 2025).

Concerns and comments	Photographic illustration
The Public Open Space portion was not part of the original Ocean Key Hotel application; questions arise about why additional land is now needed and how previous building plans were approved.	
The portion of Public Open Space is not "landlocked". It offers Public Open Space	

amenities to residents of the adjacent Lalandi complex and serves as an access point to the beach, with street access. Lalandi was built up to the border because it is adjacent to a Public Open Space, which acts as a buffer.	
Lalandi residents previously opposed rezoning Portion 8 to General Business and remain concerned about increased building bulk and height, as well as <u>impacts on views</u> and residential character.	
Any new construction must consider working hours, noise, safety, and security; construction workers should not reside on-site.	None
Existing Long Beach services already face issues (sewer blockages, water pressure), and the new development may strain them further; concerns have also been raised about locating the substation on private rather than municipal land.	None
Concerns about what happens if approvals are granted, but the project halts again due to financial or other issues.  “What happens if all necessary approvals are obtained and the developers own the consolidated site, and the needed investment for the project is no longer available, or if anything happens that halts the project again?”	None
Concerns about security during the construction and operation phase of the proposed development	None

Residents are not opposed to development but request a buffer or no-building servitude along the shared boundary.	None
Are the Ocean Key Hotel developers going to maintain the portion of <b><u>Public Open Space in front</u></b> of the development? Furthermore, how will gardens be irrigated? Could the Lalandi complex benefit from shared use to maintain gardens?	
The proposed refuse area in Portion of Portion 9 will attract unwanted smells and flies, negatively impacting Lalandi residents.	None
The contractor for the Ocean Key Hotel was issued a 24/7 building permit for construction in 2011. Any new construction work should consider the adjacent neighbours regarding working hours, noise, safety, and <b><u>security measures</u></b> . Furthermore, construction workers should not be allowed to stay on the site during construction.	
What is the current status of Portion 8's Municipal account - are there any outstanding rates/taxes or penalties, and if so, can development proceed if there are outstanding accounts?	None
The maintenance of the " <b><u>dam</u></b> " (which should be the responsibility of the Walvis Bay Municipality) is currently undertaken by the Lalandi residents. The dam needs ongoing maintenance and	

<p>rehabilitation. Will the developers assist with the dam's maintenance and rehabilitation?</p>	
<p>The services in the greater Long Beach area are already a problem, with frequent sewerage blockages, water pressure issues, and more. The proposed development will add pressure to already existing service problems in the area. The Ocean Key Hotel's load on services will be almost the same as the entire Lalandi complex. Furthermore, why will the proposed substation be located on private land? Is it not a better option to have it on municipal-zoned land to benefit the greater community?</p>	<p>None</p>
<p>There is a lack of communication from the developers to the Lalandi complex residents, and residents feel they are not being informed of all relevant information. Reference is explicitly made to the land sale application, in which residents were not informed of the recent application. Furthermore, in the public meetings of the original application, it was indicated that the portion was to be used for parking.</p>	<p>None</p>
<p>Concern about the impact on current economic activities (<b><u>e.g., restaurants, beach visitors</u></b>) and landuse in the surrounding</p>	 <p>Parking behind Erik's Cove, north of uncompleted building structure</p>



## **6 IMPACT IDENTIFICATION, ASSESSMENT AND MITIGATION MEASURES**

### **6.1 Impact Identification**

Proposed development activities are usually associated with different potential positive and/or negative impacts. In an environmental assessment, the focus is mainly on negative impacts. This is done to ensure that these impacts are addressed by providing adequate mitigation measures that bring each impact's significance under control, while maximising the positive impacts of the development. The potential positive and negative impacts that have been identified from the proposed development activities are listed as follows:

#### **Impacts:**

- Impact on the neighbourhood (smell, dust, noise, sea view)
- Impact on services such as water, sewerage, and refuse removal
- Impact of increased traffic on roads
- Impact of parking and access
- Impact of environmental, archaeological and heritage features

### **6.2 Impact Assessment Methodology**

The Environmental Assessment process primarily ensures that potential impacts from project activity are identified and addressed with environmentally cautious approaches and legal compliance. The impact assessment method used for this project is in accordance with Namibia's Environmental Management Act (No. 7 of 2007) and its Regulations of 2012, as well as the International Finance Corporation (IFC) Performance Standards.

The identified impacts were assessed in terms of scale/extent (spatial scale), duration (temporal scale), magnitude (severity), and probability (likelihood of occurrence), as presented in Tables 5, 6, 7, and 8, respectively.

To enable a scientific approach to determining environmental significance, a numerical value is assigned to each rating scale. This methodology ensures uniformity and allows potential impacts to be addressed consistently, enabling a wide range of impacts to be comparable. It is assumed that an assessment of the potential impact's significance is a good indicator of the risk associated with it. The following process will be applied to each potential impact:

- Provision of a brief explanation of the impact;
- Assessment of the pre-mitigation significance of the impact; and
- Description of recommended mitigation measures.

The recommended mitigation measures for each potential impact contribute to achieving environmentally sustainable operational conditions for the project across various aspects of the biophysical and social environment. The following criteria were applied in this impact assessment:

### 6.2.1 Extent (spatial scale)

Extent indicates the physical and spatial scale of the impact. **Table 5** shows the ratings of effects by spatial scale.

**Table 3: Extent or spatial impact rating**

Low (1)	Low/Medium (2)	Medium (3)	Medium/High (4)	High (5)
Impact is localised within the site boundary: Site only	Impact is beyond the site boundary: Local	Impacts felt within adjacent biophysical and social environments: Regional	Impact widespread far beyond the site boundary: Regional	Impact extends beyond national or international boundaries

### 6.2.2 Duration

Duration refers to the timeframe over which the impact is expected to occur, measured relative to the project's lifetime. **Table 6** shows the rating of impact by duration.

**Table 4: Duration impact rating**

Low (1)	Low/Medium (2)	Medium (3)	Medium/High (4)	High (5)
Immediate mitigating measures, immediate progress	Impact is quickly reversible, short-term impacts (0-5 years)	Reversible over time; medium term (5-15 years)	Impact is long-term	Long term, beyond closure; permanent; irreplaceable or irretrievable commitment of resources

### 6.2.3 Intensity, Magnitude/severity

Intensity refers to the degree or magnitude to which the impact alters the functioning of an element of the environment. The magnitude of the alteration can be either positive or negative. These ratings were also taken into account during the severity assessment. **Table 7** shows the rating of impact in terms of intensity, magnitude or severity.

**Table 5: Intensity, magnitude or severity impact rating**

Type of criteria	Negative				
	H- (10)	M/H- (8)	M- (6)	M/L- (4)	L- (2)
<b>Qualitative</b>	Very high deterioration, high quantity of deaths, injury or illness / total loss of habitat, total alteration of ecological processes, extinction of rare species	Substantial deterioration, death, illness or injury, loss of habitat/diversity or resource, severe alteration or disturbance of critical processes	Moderate deterioration, discomfort, partial loss of habitat/biodiversity or resource, moderate alteration	Low deterioration, slight noticeable alteration in habitat and biodiversity. Little loss in species numbers	Minor deterioration, nuisance or irritation, minor change in species/habitat/diversity or resource, no or very little quality deterioration.

### 6.2.4 Probability of occurrence

Probability describes the likelihood that the impacts will actually occur. This determination is based on previous experience with similar projects and/or based on professional judgment. **Table 8** shows the impact rating in terms of the probability of occurrence.

**Table 6: Probability of occurrence impact rating**

Low (1)	Medium/Low (2)	Medium (3)	Medium/High (4)	High (5)
Improbable; low likelihood; seldom. No known risk or vulnerability to natural or induced hazards.	Likely to occur from time to time. Low risk or vulnerability to natural or induced hazards	Possible, distinct possibility, frequent. Low to medium risk or vulnerability to natural or induced hazards.	Probable if mitigating measures are not implemented. Medium risk of vulnerability to natural or induced hazards.	Definite (regardless of preventative measures), highly likely, continuous. High risk or vulnerability to natural or induced hazards.

### 6.2.5 Significance

Impact significance is determined through a synthesis of the above impact characteristics. The significance of the impact “without mitigation” is the primary determinant of the nature and degree of mitigation required. As stated in the introduction to this section, this assessment measures the impact in the absence of prescribed mitigation actions.

Once the above factors (**Table 4**, **Table 5**, **Table 6** and **Table 7**) have been ranked for each potential impact, the impact significance of each is assessed using the following formula:

$$\text{SIGNIFICANCE POINTS (SP)} = (\text{MAGNITUDE} + \text{DURATION} + \text{SCALE}) \times \text{PROBABILITY}$$

The maximum value per potential impact is 100 significance points (SP). Potential impacts were rated as high, moderate, or low significance, based on the following scale (**Table 9**).

**Table 7: Significance rating scale**

<b>Significance</b>	<b>Environmental Significance Points</b>	<b>Colour Code</b>
High (positive)	>60	H
Medium (positive)	30 to 60	M
Low (positive)	1 to 30	L
Neutral	0	N

<b>Significance</b>	<b>Environmental Significance Points</b>	<b>Colour Code</b>
Low (negative)	-1 to -30	L
Medium (negative)	-30 to -60	M
High (negative)	<-60	H

**Positive (+)** – Beneficial impact

**Negative (-)** – Deleterious/ adverse+ Impact

**Neutral** – Impacts are neither beneficial nor adverse

For an impact with a high (-ve) significance rating, mitigation measures are recommended to reduce it to a medium (-ve) or low (-ve) significance rating, provided the impact with a medium (-ve) significance rating can be sufficiently controlled with the recommended mitigation measures. To maintain a low or medium significance rating, monitoring is recommended for a period to confirm that the impact is low or medium and under control.

The assessment of the development phases is done for pre-mitigation and post-mitigation.

Three factors drive the risk/impact assessment:

**Source:** The cause or source of the contamination.

**Pathway:** The route taken by the source to reach a given receptor

**Receptor:** A person, animal, plant, ecosystem, property, or a controlled water source. If contamination is to cause harm or impact, it must reach a receptor.

A pollutant linkage occurs when a source, a pathway, and a receptor coexist. Mitigation measures aim, first, to avoid risk; if this is not possible, they are recommended to minimise the impact. Once mitigation measures have been applied, the identified risk would be reduced to lower significance (Booth, 2011).

The potential negative impacts stemming from the proposed project are described, assessed, and mitigation measures, in the form of management action plans, are provided in the Draft Environmental Management Plan.

### 6.3 Assessment of Potential Negative Impacts

The main potential negative impacts associated with the operation and maintenance phase are identified and assessed below:

#### 6.3.1 Generation of Dust (Air Quality)

Dust generated by construction activities would contribute to air dust levels. The medium significance of this impact can be reduced to a low significance rating by properly implementing mitigation measures. The impact is assessed in **Table 10** below.

**Table 8: Assessment of the impacts of the project on air quality**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M: -3	M: -3	M/L: -4	M/H: 4	M: -40
Post mitigation	L - 1	L - 1	L- 2	L - 1	L - 4

#### 6.3.2 Soil and Water Resources Pollution

The proposed project activities are associated with a variety of potential pollution sources (i.e., lubricants, fuel, and wastewater) that may contaminate soils and, eventually, groundwater. The anticipated sources of pollution to water resources from the project activities include hydrocarbons (oil) from project vehicles, machinery, and equipment, as well as potential wastewater/effluent from construction-related activities.

The spills (depending on the volumes spilt onto the soils) from this machinery, vehicles, and equipment could infiltrate into the ground and pollute the fractured or faulted aquifers on site, and, over time, reach further groundwater systems in the area. However, it should be noted that the scale and extent/footprint of the activities where potential sources of pollution will be handled is relatively small. Therefore, the impact will be moderately low.

Pre-mitigation measure implementation, the impact significance is low to moderate, and upon implementation, the importance will be reduced to low. The impact is assessed in **Table 9** below.

**Table 9: Assessment of the project impact on soils and water resources (pollution)**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
-------------------	--------	----------	-----------	-------------	--------------

<b>Pre mitigation</b>	M - 3	M/H - 4	M - 6	M - 3	<b>M - 39</b>
<b>Post mitigation</b>	L - 1	L - 1	L - 2	L/M - 2	<b>L - 8</b>

### 6.3.3 Waste Generation

Domestic and general waste may be produced on-site during construction and operation. To prevent these issues, biodegradable and non-biodegradable waste must be stored in separate containers and collected regularly for disposal at a recognised landfill/dump site (Walvisbay Landfill). Any hazardous waste generated during the construction and operation phases that may impact water resources and the general environment should be handled carefully and disposed of properly. Without any mitigation measures, the overall impact of waste generation is of medium significance. The impact will reduce to low significance upon implementing the mitigation measures. The assessment of this impact is given in **Table 10**.

**Table 10: Assessment of waste generation impact**

<b>Mitigation Status</b>	<b>Extent</b>	<b>Duration</b>	<b>Intensity</b>	<b>Probability</b>	<b>Significance</b>
<b>Pre mitigation</b>	L/M - 2	L/M - 2	M - 6	M - 3	<b>M - 30</b>
<b>Post mitigation</b>	L - 1	L - 1	L - 2	L/M - 2	<b>L - 8</b>

### 6.3.4 Occupational Health and Safety Risks

Project personnel (workers) involved in the proposed construction activities may be exposed to health and safety risks. These are in terms of accidental injury, whether minor (i.e., superficial physical injury) or significant (i.e., involving heavy machinery or vehicles). The site safety of all personnel will be the Proponent's responsibility and should be adhered to as per the requirements of the Labour Act (No. 11 of 2007) and the Public Health Act (No. 36 of 1919). The heavy vehicle, equipment and fuel storage area should be adequately secured to prevent any harm or injury to the Proponent's personnel. If machinery and equipment are not properly stored and packed, the safety risk may concern project workers.

The impact is probable and has a medium significance rating. However, with adequate mitigation measures, the impact rating will be reduced to low. This impact is assessed in **Table 11** Below are the mitigation measures provided.

**Table 11: Assessment of the impacts of construction activities on health and safety**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M - 3	M - 6	M/H - 4	M - 48
Post mitigation	L/M - 2	L/M - 2	L - 2	L/M - 2	L - 12

### 6.3.5 Vehicular Traffic Use and Safety

Depending on project needs, trucks and medium- and small-sized vehicles will frequent the area to and from sites. This would potentially increase slow-moving heavy vehicular traffic along these roads. The impact would not only be felt by the district road users but also by the local road users. This would add additional pressure on the streets.

However, only so many times a week, or even monthly, will construction-related heavy trucks be transporting materials and equipment to the site. Therefore, the risk is anticipated to be short-term, infrequent, and of medium significance. Pre-mitigation, the impact can be rated medium, and with the implementation of mitigation measures, the significance will be low, as assessed in **Table 12** below.

**Table 12: Assessment of the impacts of construction activities on road use (vehicular traffic)**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M/H - 4	L/M - 4	M/H - 4	M - 44
Post mitigation	L/M - 2	L/M - 2	L - 2	L/M - 2	L - 12

### 6.3.6 Noise and vibrations

Construction activities for the proposed project may be a nuisance to surrounding communities due to the noise generated. Excessive noise and vibrations can be a health risk to workers on site. Equipment used on site will be medium-sized, and the noise level will be limited to the site;



therefore, the impact likelihood is minimal. Without any mitigation, the impact is rated as of medium significance. To change the impact significance from the pre-mitigation importance to a low rating, the mitigation measures should be implemented. This impact is assessed in **Table 13** below.

**Table 13: Assessment of the impacts of noise and vibrations**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	L/M - 2	L/M – 2	M - 6	M/H - 3	M – 30
Post mitigation	L - 1	L/M – 2	L - 2	L/M -2	L - 10

### 6.3.7 Social Nuisance: Local Property Intrusion and Disturbance or Damage

The presence of some workers who are not from the area may lead to social annoyance to the local community. This could be particularly concerning when they, or some of those workers, enter or damage the properties of locals, including houses, fences, vegetation, or any other property of economic or cultural value to the landowners or occupiers of the land. Damage or disturbance to properties may not only be private but also local public properties. Unpermitted and unauthorised entry into private properties may lead to conflicts between affected landowners and the Proponent.

Before the implementation of mitigation measures, the impact was rated as medium in significance. However, upon mitigation (post-mitigation), the significance will change from a medium rating to a low rating. The impact is assessed below (**Table 14**).

**Table 14: Assessment of the social impact of community property damage or disturbance**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M – 3	M - 6	M/H - 4	M – 48
Post mitigation	L - 1	L – 1	M/L - 4	M/L -2	L - 12

### 6.3.8 Disturbance to Archaeological and Heritage resources

There is a possibility of unveiling/discovering new archaeological and/or cultural materials in the proposed project area. If such materials are found, the areas must be mapped, coordinates taken to establish “No-Go-Areas” due to their sensitivity, and the documented regions. They may be protected either by fencing or demarcation for preservation purposes, or by excluding them from any development; i.e., no development activities should be conducted near these recorded areas through the establishment of buffer zones.

This impact can be rated as medium in significance if no mitigation measures are in place. Upon implementation of the necessary measures, the impact significance will be reduced to a lower rating. The impact is assessed in **Table 19**.

**Table 19: Assessment of impacts of development on archaeology & heritage resources**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 5	M/H – 4	M - 4	M/H - 5	M – 52
Post mitigation	L/M - 2	L/M – 2	L - 2	L/M - 2	L - 12

### 6.4 Mitigations and Recommendations for Construction Closure phase

- The construction closure of the project will include, but not be limited to, the following:
- All the management and mitigation measures provided in the EMP are effectively and progressively implemented.
- All required permits and approvals for the proposed activities should be obtained as needed.
- The Proponent and all project workers and contractors must comply with the legal requirements governing the project and ensure that all required permits and or approvals are obtained and renewed as stipulated by the issuing authorities.
- Site areas where construction activities have ceased are rehabilitated, as far as practicable, to their pre-used state.

## 7 CONCLUSIONS AND RECOMMENDATIONS

The potential impacts that are anticipated from the proposed project activities were identified, described, and assessed. For the significant adverse (negative) impacts with a medium rating, appropriate management and mitigation measures were recommended for implementation by the Proponent, their contractors and project-related employees.

The public was consulted as required by the EMA and its 2012 EIA Regulations (Sections 21-24). This was done via the two newspapers (New Era and The Namibian) used for this environmental assessment. A consultation through a face-to-face meeting with I&APs was conducted, during which they raised comments and concerns about the proposed project activities.

The issues and concerns raised by the registered I&APs formed the basis for this Report and the Draft EMP. The issues were addressed and incorporated into this Report, with mitigation measures provided to avoid and/or minimise their impact on the environmental and social components. Most of the potential impacts were found to be of medium significance. It is acknowledged that the project details will evolve during the detailed design and construction phases. However, these are unlikely to change the overall environmental acceptability of the proposed project.

The effective implementation of the recommended management and mitigation measures will particularly lead to a reduction in the significance of adverse impacts that cannot be avoided altogether (from medium to low). To maintain the desirable rating, the Proponent should directly monitor the implementation of management and mitigation measures; if not, it is highly recommended that the Environmental Control Officer (ECO) be involved. The monitoring of this implementation will not only be used to maintain the reduced impacts rating or a low rating, but also to ensure that all potential impacts identified in this study, and any that might arise during implementation, are correctly identified in a timely manner and addressed immediately.

**On this basis, the Consultant's opinion is that an ECC should be issued, subject to the management and mitigation measures specified in the Environmental Management Plan (EMP) being implemented and adhered to.**

## 8 REFERENCES

- Booth, P. (2011). Environmental Conceptual Site Model Exercise: Source – pathway – receptor. WSP Global: Semantic Scholar.
- Manheimer (2018). Retrieved from Tree Atlas of Namibia:  
<http://treeatlas.biodiversity.org.na/viewspec.php?nr=20>
- Mendelsohn. (2006). A digest of information on key aspects of the Erongo region and the geography. Namibia: Research and Information Services of Namibia.
- Ali, S.H., Cartier, L.E., Lawson, L., Syvrud, P., and Altingoz, M. (Undated). *Gemstones and Sustainable Development Knowledge Hub*. Retrieved from Sustainable Gemstones: <https://www.sustainablegemstones.org/gemstones/tourmaline/>
- Angula, S. E. (2007). *The Environmental Impacts of Small-Scale Mining in Namibia: A Case Study of Uis Small-Scale Mining Site - Erongo Region*. Windhoek: University of Namibia.
- Ansaah, L. H. (2008). *Kwame Nkrumah University of Science & Technology*. Retrieved from Theses: Rehabilitation of Small-Scale Mined-Out Areas: <http://ir.knust.edu.gh/xmlui/handle/123456789/1520>
- Author, Unknown. (1999). *Coastal Profile of Erongo Region*. Windhoek: Environmental Information Service Namibia.
- Bender, K., Braby, R. and Korrubel, J (editors). (1999). *Coastal Profile of the Erongo Region*. Windhoek: Environmental Information Service Namibia.
- Benito, G., Rohde, R., Seely, M., Külls, C., Dahan, O., Enzel, Y., Roberts, C. (2009). Management of Alluvial Aquifers in Two Southern African Ephemeral Rivers: Implications for IWRM. Water Resources Management. *Water Resources Management: Springer Link*, 641-667.
- Booth, P. (2011). *Environmental Conceptual Site Model Exercise: Source – pathway – receptor*. WSP Global: Semantic Scholar.
- Cermak, J. (2012). *Low clouds and fog along the South-Western African coast—Satellite-based retrieval and spatial patterns*. *Atmospheric Research*, 116, 15–21.
- Christelis, G. and Struckmeier, F. (editors). (2001). *Groundwater in Namibia: An Explanation of the Hydrogeological Map*. Windhoek: Ministry of Agriculture, Water and Forestry.
- Christelis, G. and Struckmeier, W. (eds). (2001). *Groundwater in Namibia: An Explanation of the Hydrogeological Map*. Windhoek: Ministry of Agriculture, Water and Forestry.
- Correia, R. I. (1976). The Main Vegetation Types of Kaokoland, Northern Damaraland and A Description of some transects of Owambo, Etosha and North-western South-west. 6.
- Dhanuka, S. (2016, March 9). *Gemstone Mining Methods*. Retrieved from Jewelinfo4U: <https://www.jewelinfo4u.com/gemstone-mining-methods>

- Eckhardt, F. D., Seely, M. K., & von Holdt, J. (2013). The Surface Geology and Geomorphology Around Gobabeb, Namib Desert, Namibia. *ResearchGate*, 271–284.
- Environment Agency (UK). (2002, May). Retrieved July 16, 2019, from Scoping the environmental impacts of cemeteries and crematoria: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/297117/geho0112bvzy-e-e.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/297117/geho0112bvzy-e-e.pdf)
- Environmental Management Consultants (Caribbean) Ltd. (2007). *Environmental Impact Assessment for the Proposed Cemetery Development, Burnt Ground, Hanover*. Ocho Rios: National Environment and Planning Agency (NEPA).
- Erongo Regional Council. (2015). *Erongo Regional Council*. Retrieved July 15, 2019, from Economy: Infrastructure, Mining, Fishing, Agriculture and Tourism: <http://www.erc.com.na/economy/infrastructure/>
- Erongo Regional Council. (2015). *Erongo Regional Council*. Retrieved from Infrastructure, Economy and Development: <http://www.erc.com.na/economy/infrastructure/>
- GCS Water & Environmental Consultants. (2018). *Updating of the Numerical Groundwater Flow Model for the Lower Kuiseb River Aquifers*. Windhoek: Unpublished.
- Gorge, P. (2012, February 25). *Tree Atlas of Namibia*. Retrieved from Tree Atlas: <http://treeatlas.biodiversity.org.na/viewspec.php?nr=27>
- Grassi, L.R. (2014). *A Geochemical Investigation of the Usakos Gem Tourmaline Pegmatite, Namibia*. New Orleans: University of New Orleans.
- Heath, R. G. M. (2006). *Small-Scale Mines, Their Cumulative Environmental Impacts, and Best-Practice Guidelines for Water Management in Developing Countries*. Auckland Park: Pulles Howard & de Lange.
- J., T. (2020). *Cultural Survival*. Retrieved from Cultural Survival Quarterly Magazine: <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/introduction>
- Kinahan, J. (2009). *Central Namib Uranium Rush: Strategic Environmental Assessment - Archaeological Specialist Report*. Windhoek: Environmental Information Service Namibia.
- Klaus, J., Kulls, C., and Dahan, O. (2008). Evaluating the recharge mechanism of the Lower Kuiseb Dune area using mixing cell modelling and residence time data. *Journal of Hydrology: Science Direct*, 304-316.
- Mendelsohn. (2007). *The Atlas of Namibia: A Portrait of the land and its people*. Windhoek.
- Mendelsohn, E. A. (2002). *Atlas of Namibia*. Cape Town: David Philip Publishers.
- Minerals Council of Australia. (1998). *Mine Rehabilitation: Handbook*. Dickson, Canberra: Minerals Council of Australia.
- Municipality of Walvis Bay. (2019). *City of Walvis Bay*. Retrieved July 16, 2019, from Services: Sanitation and Waste Management: [http://www.walvisbaycc.org.na/?page\\_id=65](http://www.walvisbaycc.org.na/?page_id=65)

- Mweemba, M. S. (2014). Small-Scale Mining in Namibia: An Overview. *Theme: "Earth Sciences and Climate Change: Challenges to Development in Africa": 7th conference of the African Association of Women in Geosciences, Sub-theme: Earth Sciences and the Community* (p. 4). Windhoek: Ministry of Mines and Energy.
- Namibia Statistics Agency. (2011). *2011 Population and Housing Census Regional Profile, Erongo Region*. Windhoek: Namibia Statistics Agency.
- Namibia Statistics Agency. (2011). *Namibia 2011: Population and Housing Census Main Report*. Windhoek: Namibia Statistics Agency.
- NamWater. (2001). *Re-Assessment of the Long-term Sustainable Yield of Lower Kuiseb Aquifers*. Windhoek: Unpublished.
- Seely, M. K., Klintonberg, P., & Henschel, J. R. (2008). Learning from the desert 19. *Journal of Arid Land Studies*, 1–3.
- Staden. (2020, August 26). *Feedipedia*. Retrieved from Feedipedia: <https://www.feedipedia.org/node/100>
- STORNOWAY . (2019, 09 25). Retrieved from Stornoway Diamonds Website: <http://www.stornowaydiamonds.com>
- Stubenrauch Planning Consultants. (2016). *Karibib Urban Structure Plan: 2016 to 2030 - Draft February 2016*. Windhoek: Stubenrauch Planning Consultants.
- The Cardboard Box Travel. (2019). *Namibia: The Cardboard Box Travel*. Retrieved July 16, 2019, from Religion: <http://www.namibian.org/travel/info/religion.html>
- Van Hinsberg, V., Henry, D. J., and Merschall, H. (2011). Tourmaline: An ideal indicator of its host environment. *The Canadian Mineralogist (CAN MINERAL)*, 4.
- Water Associates Namibi Pty. (2019). *Hydrogeological Report & Risk Assessment: Environmental Impact Assessment for Proposed Cemetery at Narraville, Walvis Bay*. Windhoek: Unpublished.
- World Population Review. (2019). *World Population Review: United Nations population estimates and projections - Namibia Population*. Retrieved July 16, 2019, from World Population Review: <http://worldpopulationreview.com/countries/namibia-population/>
- Mendelsohn, J. (2003). *Atlas of Namibia: A Portrait of the Land and its People*. Windhoek: The Ministry of Environment and Tourism of Namibia.
- Miller, R. McG. 1983a. The Pan-African Damara Orogen of South West Africa/Namibia, 431-515. In: Miller, R.McG. (Ed.) *Evolution of the Damara Orogen of South West Africa/Namibia*. Spec. Publ. geol. Soc. S. Afr., 11, 515 pp.
- NSA. (2011). Retrieved from <https://digitalnamibia.nsa.org.na/>

NSA. (2011). Digital Namibia: Namibia statistics. Retrieved February 17, 2021, from <https://digitalnamibia.nsa.org.na/>

SASSCAL WeatherNet, 2020. [http://www.sasscalweathernet.org/weatherstat\\_monthly\\_we.php](http://www.sasscalweathernet.org/weatherstat_monthly_we.php)

Vigne. P (2000). Options for Livelihoods Diversification in Erongo Region. A Report on a semi-structured interview Survey conducted by Oxfam Canada in Collaboration with the Ministry of Agriculture, Water and Rural Development. Windhoek: Oxfam Canada