



DRAFT ENVIRONMENTAL & SOCIAL IMPACT ASSESSMENT REPORT

In terms of the

Environmental Management Act (Act No. 7 of 2007) & Its Regulations

Proposed Mixed -Use Township Development on Portion 117 Of the Farm of Henties Bay Townland No. 133 Situated South of Henties Bay, Namibia

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DRAFT EIA REPORT

in terms of the Environmental Management Act (Act No. 7 of 2007) & Regulation No. 29, Section 21 under the Environmental Management Act (Act No. 7 of 2007)

Proposed Mixed -Use Township Development on Portion 117 Of the Farm of Henties Bay Townland No. 133 Situated South of Henties Bay, Namibia

Submitted for:

Stakeholder Review & Comment

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REPORT DETAILS

Title:	Draft EIA Report
Purpose of this report:	<p>This Draft EIA Report is available to all registered and potential Interested and Affected Parties (I&AP's).</p> <p>This Draft Scoping Report forms part of a series of reports and information sources that are being provided during the Environmental Impact Assessment (EIA) for the proposed Mixed -Use Township Development on Portion 117 Of the Farm of Henties Bay Townland No. 133 Situated South of Henties Bay, Namibia.</p> <p>This is the first report in the series that forms part of the environmental process. Registered I&APs will be given an opportunity to comment on the following reports as part of this environmental process:</p> <ul style="list-style-type: none"> - Draft Scoping Report, - Draft Environmental Impact Assessment Report, and - Draft Environmental Management Programme <p>By the regulations, the objectives of a scoping process is to, through a consultative process:</p> <ol style="list-style-type: none"> a) identify the relevant policies and legislation relevant to the activity; b) motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location; c) identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process; d) identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment; e) identify the key issues to be addressed in the assessment phase; f) agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and g) identify suitable measures to avoid, manage or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored. <p>The Draft EIA Report is available to all stakeholders for a 14-day (plus) review & comment period, 15 November to 6 December, 2024.</p> <p>An application has been submitted to the Department of Environmental Affairs, Ministry of Environment, Forestry and Tourism (MEFT) for the proposed development.</p>
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EXPERT CERTIFICATION

This report was prepared by Erongo Consulting Group, a registered and experienced EIA Lead Expert firm. It complies with the Environmental Management Act, 2007, and the Environmental (Impact Assessment and Audit) Regulations, 2012, and is submitted to the Ministry of Environment & Tourism through the Directorate of Environmental Affairs.

I certify that the report presents an accurate and fair disclosure of information from the proponent, includes feedback from neighboring stakeholders, and provides recommendations for the proponent's actions.

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Date:

December, 2024

PROPONENT CERTIFICATION

I, _____, on behalf of Messrs Shipanga Group Investments CC, submit this Environmental Impact Assessment report for the Proposed Mixed -Use Township Development on Portion 117 Of the Farm of Henties Bay Townland No. 133 Situated South of Henties Bay, Namibia. The information contained in this report is believed to be accurate and an honest representation of the project's findings.

Signature:

Date:

Designation:

ABBREVIATIONS

Abbreviation	Full Form	Explanation
ARAPEM	African Regional Action Plan for Ecosystem Management	A strategy to promote ecosystem-based management and sustainability in Africa.
AU	African Union's Agenda 2063	Africa's strategic framework aimed at achieving inclusive growth and sustainable development by 2063.
BOD	Biochemical Oxygen Demand	A measure of the amount of oxygen that bacteria will consume while decomposing organic matter.
bgl	Below ground level	A measurement term indicating the depth from the earth's surface.
CBD	Convention on Biological Diversity (1992)	An international treaty for the conservation of biodiversity and sustainable use of biological resources.
COD	Chemical Oxygen Demand	A measure of the amount of oxygen required to chemically oxidize organic material in water.
EA	Environmental Auditing	A process to assess environmental performance and compliance.
EC	Environmental Commissioner	An official responsible for environmental oversight and enforcement of environmental regulations.
EAP	Environmental Assessment Practitioner	A qualified professional responsible for conducting environmental assessments.
EIA	Environmental Impact Assessment	A process of evaluating the likely environmental impacts of a proposed project or development.
EMC	Estate Management Company	A company that manages the affairs and services of an estate.
EMA	Environmental Management Act	A law that regulates activities impacting the environment, ensuring sustainable development.
EMP	Environmental Management Plan	A framework outlining how environmental management practices will be implemented.
Ha	Hectare	A unit of area, used in land measurement, equal to 10,000 sq metres.
IFC	International Finance Corporation	A member of the World Bank Group that offers investment, advisory, and asset-management services.
IEA	Initial Environmental Audit	The first step in the assessment of a site's compliance with environmental regulations.
KVA	Kilo Volts Amperes	A unit of apparent power used in electrical systems.
LPG	Liquefied Petroleum Gas	A flammable mixture of hydrocarbon gases used as fuel in heating appliances and vehicles.
m	Metres	Unit of length in the metric system.
NEC	National Environment Council	The governing body responsible for environmental oversight and policy in a country.
NGOs	Non-Governmental Organizations	Independent organizations that are not part of the government and work on social, environmental, or humanitarian issues.
NPEP	National Poverty Eradication Plan	A government initiative aimed at reducing poverty.
PEC	Poverty Eradication Commission	A body responsible for implementing strategies to eliminate poverty.
PPE	Personal Protective Equipment	Equipment worn to minimize exposure to hazards that can cause injury or illness.
Rio Declaration	Rio Declaration on Environment and Development (1992)	A document outlining principles for sustainable development and environmental protection, adopted at the Earth Summit in 1992.
TA	Trading as	Legal designation indicating a business name that differs from the legal owner.
TOR	Terms of Reference	A document that defines the purpose and scope of an environmental audit or assessment.
UNDGs	United Nations Development Goals	A set of global goals adopted by the United Nations to achieve a better and more sustainable future.

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EXECUTIVE SUMMARY

Messrs Shipanga Group Investments CCEndu Property Developers Pty Ltd is the proponent and developer that acquired a portion of land from the Henties bay municipality through sale by way of private treaty. The proponent has proposed to establish and develop a mixed-use township development project on the piece of land acquired. The project is on a 25 Hectares of Land, undeveloped, vacant and not operational.

The development site is located on Portion 117 of farm Henties Bay townland no. 133 is 25 hectares in size and located at the Henties bay South beach front near Jackkalspitz resort area of Henties Bay. Portion is about 117 is located on a very high-water mark above the ocean level. The cadastral boundary of the proposed township development itself is located about 150 meters from the sea.

The development area is part of a growing coastal community with a combination of residential, tourism, and small-scale commercial activity. The site is also positioned close to critical infrastructure such as water, electricity, and waste management services.

Activities will include;

- Construction of houses, middle & high class,
- General Residential zoned ervens with land scaping and parking spaces,
- Students' accommodation and a shopping Convenient mall comprising of several compartments and ablution facilities and office.
- Institutional land use and Business properties
- The flats and the office blocks will have lifts to cater for the upper floors.
- Public open spaces and streets

Other basic services such as water and electricity services will be provided and established by ErongoRED on the facility on the expense of the developer once the clearance is acquired. The site is associated with desert plants, both protected and unprotected plant. The site has no surface watercourse and no wildlife conservation area.

Infrastructure and Environmental Considerations:

- **Electricity:** Sourced from the national grid via ErongoRed.
- **Water Supply:** Municipal and/or NamWater bulk connections.
- **Sewage:** On-site sewage substation plant with effluent disposal to Henties Bay's wastewater facility.

The development incorporates sustainable materials and building practices, prioritizing green building techniques and efficient waste management. It is expected to create **200 jobs** during construction and **500 jobs** during its operational phase, significantly benefiting the local economy.

Potential Environmental Impacts and Mitigation Measures:

The Environmental Impact Assessment (EIA) identified key potential impacts and proposed mitigation strategies to minimize negative outcomes. The table below summarizes these:

Potential Impact	Mitigation Measure
• Dust	Regularly sprinkle water on unpaved areas; control vehicle speed.
• Noise	Limit construction to daytime hours; regularly service machinery.
• Physical Disturbances	Landscape and replant areas post-construction; properly dispose of excavated soil.
• Health & Safety Hazards	Implement emergency response plans; enforce the use of PPE.
• Water Resource Contamination	Provide sanitary facilities and water for workers.
• Traffic Increases	Install traffic signage; create temporary access routes.
• Fire Hazards & Accidents	Install firefighting equipment and conduct safety drills.
• Waste Management	Provide adequate waste containers; engage licensed removal services.

The EIA concluded that with these mitigation measures, the development will have minimal adverse environmental impacts while offering considerable socio-economic benefits to Henties Bay.

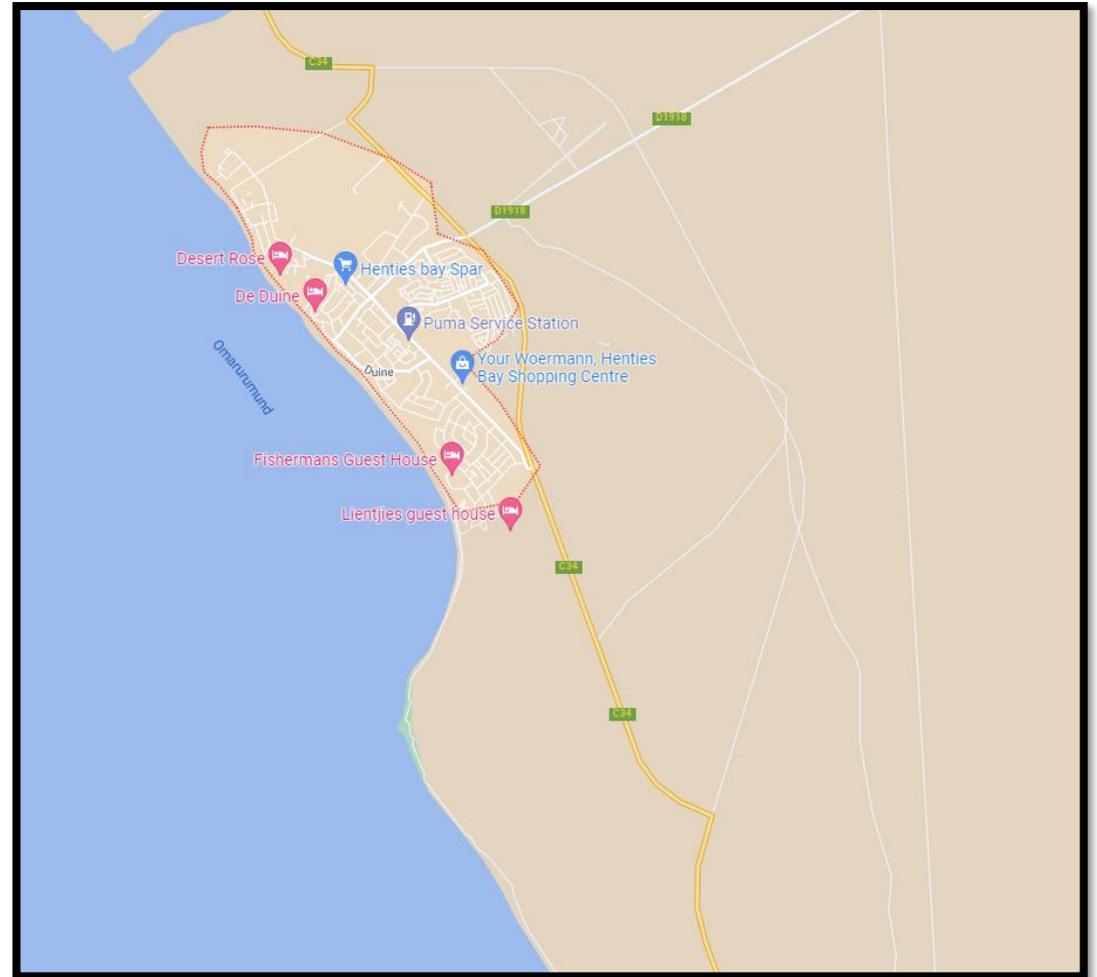
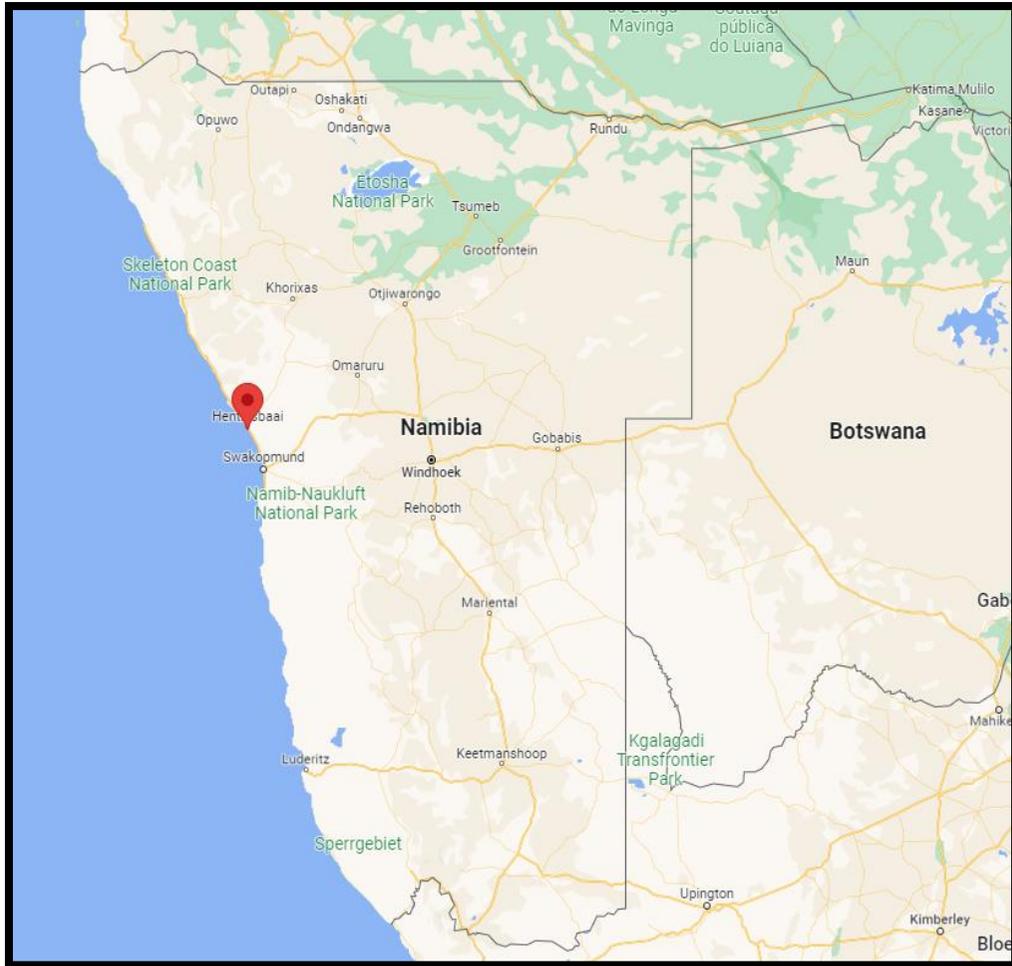


Figure 1: Henties bay town in Erongo region of Namibia & site map

Nature of the Proposed Project

The proponent seeks to undertake a mixed-use township development that aims to utilize the available townland in an environmentally sustainable and responsible manner. The project's design ensures minimal disruption to existing inhabitants while maintaining and protecting the natural green environment.

Legal Requirement

In accordance with Section 27(2) of the Environmental Management Act (EMA) of 2007, and Regulation 2 of the Environmental Management Act, Regulations of 2012 (Legal Notice No. 4878), an Environmental Impact Assessment (EIA) is required for projects classified under the second schedule of EMA 2007.

Purpose of the EIA Study

The Environmental Impact Assessment (EIA) is a critical tool for identifying and managing potential environmental and social impacts of the proposed development. Through scientific analysis and stakeholder engagement, the EIA process enables the identification of key issues associated with the project, allowing for the enhancement of positive impacts while mitigating negative ones.

The primary goal of this EIA is to evaluate the potential effects of the proposed mixed-use township development, ensuring that any adverse impacts are addressed early in the planning process. This approach minimizes potential risks and facilitates harmonious relations with the local community, fostering trust and improving public perception of the project. Conducting an EIA at the pre-construction stage is cost-effective, as it allows for early identification and resolution of issues before significant capital is invested.

During the operational phase, continuous assessments are crucial to identify areas that may require improvement and to explore rehabilitation alternatives. The EIA process also aims to capture the concerns and feedback from relevant authorities and stakeholders. The Environmental Management Plan (EMP) will provide measures to ensure that the proposed development coexists harmoniously with ongoing socio-economic activities in the region.

EIA Methodology

The methodology for conducting this EIA included a combination of physical site inspections, stakeholder consultations, and literature reviews. The following methodologies were employed:

- 1) **Scoping:** Identifying key issues, stakeholders, and environmental components to be considered in the EIA.
- 2) **Baseline Data Collection:** Gathering existing data on the environmental, social, and economic conditions of the project area through field surveys, remote sensing, and existing literature.
- 3) **Impact Assessment:** Evaluating potential environmental impacts using qualitative and quantitative methods, including modeling techniques, risk assessment, and significance criteria.
- 4) **Public Participation:** Engaging stakeholders and local communities through meetings, surveys, and public forums to gather input and address concerns.

- 5) **Mitigation Measures:** Developing strategies to avoid, minimize, or compensate for identified adverse impacts based on best practices and regulatory requirements.
- 6) **Preparation of Environmental Management Plan (EMP):** Outlining the measures to manage and monitor environmental impacts throughout the project lifecycle.

The EIA was conducted in the following sequence:

- Initial consultations between representatives of Erongo Consulting Group and Messrs Shipanga Group Investments CC, the proponent, to discuss the project details.
- Site surveys involving physical observations, site visits, and the use of aerial photography to assess the area of influence.
- Administration of questionnaires and interviews with key stakeholders, including government officials, to gather comments and feedback.
- Desk studies involving the review of relevant legislation, literature, and the design layout for the proposed township development.
- Compilation and submission of the EIA report to the Environmental Commissioner (EC) for review.
- Development of Terms of Reference (ToR), to be approved by the EC.
- Comprehensive assessment of potential environmental impacts and identification of appropriate mitigation measures.
- Stakeholder consultations to engage interested and affected parties.
- Preparation of the EIA study report in accordance with the guidelines outlined by the EMA.

This systematic approach ensures that the EIA is conducted in a manner that adheres to national environmental regulations and contributes to the sustainable development of the proposed township.

1 OBJECTIVES AND SCOPE OF THE EIA STUDY REPORT

1.1 Screening to Determine Whether EIA is Required

The proponent is initiating a Mixed -Use Township Development on Portion 117 Of the Farm of Henties Bay Townland No. 133 Situated South of Henties Bay, Namibia. This project is categorized under categories 1 and 2 of the projects specified in the second schedule of the Environmental Management Act (EMA) of 2007, which delineates projects requiring Environmental Impact Assessments (EIAs).

In accordance with Section 27(2) of the EMA, it is an offence to commence any project that is likely to have adverse environmental impacts, or for which an EIA is mandated, without a duly approved EIA. To ensure compliance with this legislative requirement, Erongo Consulting Group CC has engaged Erongo Consulting Group to conduct a thorough EIA study and prepare a comprehensive report for submission to the Ministry of Environment, specifically to the Environmental Commissioner. The EIA will encompass an evaluation of potential environmental impacts, an analysis of alternative solutions, and the formulation of appropriate mitigation strategies.

1.2 Scoping

The scoping phase of the EIA is a critical step in identifying significant environmental concerns and feasible project alternatives, ensuring that available resources are directed toward the most pertinent issues. The scoping process involved several key activities:

- a) **Stakeholder Identification:** All relevant interested parties, including local residents, government authorities, non-governmental organizations (NGOs), and other stakeholders with a vested interest in the proposed project, were identified.
- b) **Information Dissemination:** Necessary information regarding the resources that may be impacted, potential environmental concerns, and proposed alternatives was disseminated. This included the publication of notices in local media and community forums to solicit public input.
- c) **Engagement with Stakeholders:** The scoping process involved discussions with the proponent, verbal interviews with local residents, and on-site surveillance to gather insights into community concerns and aspirations. Feedback from stakeholders was documented to ensure that their voices are considered in the decision-making process.
- d) **Issue Identification:** Through stakeholder consultations and site assessments, key environmental issues were identified, including land use changes, impacts on local biodiversity, potential pollution sources, and social implications for the community.
- e) **Alternative Evaluation:** Reasonable alternatives to the proposed project were identified for assessment, including variations in project design, layout, and execution methodologies.

The culmination of the scoping process informs the subsequent phases of the EIA, ensuring that the study focuses on the most critical issues and considers stakeholder perspectives.

1.3 Objectives (Purpose and Need) of the Project

The primary objective of the EIA study is to comprehensively evaluate the potential environmental impacts of the proposed mixed-use township development and to ensure that effective measures are in place to mitigate any adverse effects on the environment and local communities. The specific objectives of the EIA include:

- a) **Impact Identification:** To identify existing and potential environmental impacts associated with the proposed development, including but not limited to changes in land use, effects on local ecosystems, water resource management, and socio-economic impacts.
- b) **Stakeholder Concerns:** To document the concerns and aspirations of affected parties and integrate their perspectives into the planning and decision-making processes. This is essential for fostering transparency and building trust between the proponent and the community.
- c) **Mitigation Strategies:** To develop a set of prevention and mitigation measures aimed at minimizing negative impacts on the environment and enhancing positive outcomes associated with the development. This will include recommendations for best practices in construction, operation, and maintenance phases.
- d) **Compliance with Legal Frameworks:** To ensure that the proposed development adheres to national and international environmental regulations, guidelines, and best practices, including alignment with the National Housing Policy for Namibia of 2003.
- e) **Socio-Economic Considerations:** To evaluate the social implications of the proposed development, particularly in terms of housing accessibility, community integration, and economic benefits. The EIA will assess how well-planned housing and infrastructure can contribute to improved living standards, poverty reduction, and community resilience.
- f) **Development of an Environmental Management Plan (EMP):** To formulate a robust EMP that outlines specific actions, timelines, and responsibilities for implementing mitigation measures and monitoring environmental performance throughout the project lifecycle.
- g) **Contribution to National Goals:** The EIA aligns with the overarching goals of the Government of Namibia to improve housing for its population, recognizing that quality housing is integral to social stability and economic development. The National Housing Policy emphasizes that enhancing the housing stock is a strategically important social and economic investment.

The study seeks to demonstrate that well-planned housing and infrastructure can afford dignity, security, and privacy to individuals and families, while also preventing social unrest often associated with inadequate housing. Furthermore, it acknowledges that adequate shelter is not only a social necessity but also an economic asset that contributes directly and indirectly to poverty alleviation through job creation, improved health, and increased productivity (GoK, 2004).

In conclusion, this EIA study aims to create a comprehensive understanding of the potential environmental impacts of the proposed mixed-use township development, ensuring that all stakeholders are heard and that the project contributes positively to the local community and the environment.

2 POLICY, LEGAL, AND ADMINISTRATIVE FRAMEWORK FOR ENVIRONMENTAL MANAGEMENT

2.1 Overview of Namibia's Environmental Management Framework

Namibia has established a comprehensive policy, legal, and administrative framework to guide environmental management, ensuring that development activities proceed sustainably. The Environmental Management Act (EMA) of 2007 is central to this framework, assigning the National Environment Management Authority the responsibility for conducting Environmental Impact Assessments (EIAs) for new projects and environmental audits for existing facilities. These processes are critical for identifying potential positive and negative impacts of proposed projects, enabling the effective harnessing of benefits while developing mitigation strategies for adverse impacts.

The guidelines for EIAs are articulated in Sections 27 to 35 of the EMA, which mandates that the Authority must oversee environmental audits for all activities likely to significantly affect the environment. Environmental Auditing (EA) is recognized as a vital tool for promoting environmental conservation and is a key requirement for ensuring sustainable operations concerning environmental resources and the socio-economic activities surrounding facilities.

In line with these requirements, the government has established a series of regulations to facilitate the EIA and environmental audit processes, documented in the Namibian Gazette No 28/2012. Additionally, a range of national policies and legal statutes have been introduced over the years to enhance environmental conservation and sustainable development. The proponent must adhere to the provisions of these statutes to maintain a clean and healthy environment. The following subsections summarize pertinent policy and legal frameworks. International Frameworks and Principles

The project aligns with various international frameworks that guide environmental management, including:

Table 1: International Frameworks and Principles

International Framework/Principle	Description
United Nations Development Goals (UNDGs)	Outlines 17 goals aimed at addressing global challenges, including poverty, inequality, and environmental degradation. The proposed mixed-use township development aims to contribute to Goal 11 (Sustainable Cities and Communities) by promoting inclusive, safe, resilient, and sustainable urbanization.
International Finance Corporation (IFC) Performance Standards	Established to enhance development outcomes in project financing, emphasizing the importance of stakeholder engagement and environmental sustainability.
Rio Declaration on Environment and Development (1992)	Outlines fundamental principles for sustainable development, including the right to development, public participation in environmental decision-making, and the necessity of environmental impact assessments.

Convention on Biological Diversity (1992)	The project must consider the implications of development on local biodiversity and adhere to the objectives outlined in the Convention to ensure the conservation of biological diversity.
African Regional Action Plan for Ecosystem Management (ARAPEM)	Aligns with the African Union's Agenda 2063, promoting ecosystem-based approaches to development and sustainable management of natural resources.

2.2 National Policies and Legal Statutes

The following table summarizes key legislation, guidelines, and policies relevant to the proposed development:

Table 2: key legislation, guidelines, and policies relevant to the proposed development

LEGISLATION/GUIDELINE/POLICY	APPLICABLE CLAUSE/POLICY	COMMENTS
Namibia's Environmental Assessment Policy (1995)	List of activities that require Environmental Assessment (EA).	Tourism facilities need to be assessed in terms of their impact on the natural and social environment and resources.
Communal Land Reform Act	Activities requiring a clearance certificate: tourism development activities.	Conduct an EA in terms of tourism development and submit to the Ministry of Environment, Forestry and Tourism (MEFT) for clearance certification.
Environmental Management Act No. 7 of 2007	Section 2 outlines the objectives of the Act and means to achieve those objectives.	The development should adhere to the objectives set by the Environmental Management Act (EMA).
	Section 3 details the principles of environmental management.	The principles should guide the development process to ensure sustainable outcomes.
EIA Regulations GN 28, 29, and 30 of EMA (2012)	GR 29 identifies and lists activities that cannot be undertaken without an environmental clearance certificate.	Activity 10.1(a) - Construction of oil, water, gas, and petrochemical pipelines; Activity 10.1(b) - Construction of public roads; Activity 10.2(a) - Route determination of public roads.
Convention on Biological Diversity (1992)	Article 1 lists the conservation of biological diversity among the objectives of the convention.	The project should consider its impact on local biodiversity.
Draft Procedures and Guidelines for Conducting EIAs and Compiling EMPs (2008)	Part 1, Stage 8 states that if a proposal is likely to affect people, specific guidelines should be considered during the scoping process.	The EA process must incorporate the aspects outlined in the guidelines.

Namibia Vision 2030	Vision 2030 emphasizes the importance of Namibia's natural beauty as a valuable asset.	Care must be taken to ensure that development does not degrade the natural beauty of the area.
Water Act No. 54 of 1956	Section 23(1) prohibits the pollution of underground and surface water bodies.	Pollution of water resources should be avoided during construction and operation.
Township and Division of Land Ordinance 11 of 1963	Regulates subdivisions of land in proclaimed Local Authority areas.	Applications must be submitted to the township board as per Section 19.
Local Authorities Act No. 23 of 1992	Prescribes how towns and municipalities should be managed.	The development must comply with provisions regarding water and sewerage management.
Labour Act No. 11 of 2007	Chapter 2 details fundamental rights and protection; Chapter 3 addresses basic employment conditions.	Compliance with labor laws is essential due to employment opportunities presented by the development.
Public Health Act No. 36 of 1919	Section 119 prohibits causing a nuisance.	Compliance with health regulations is required for contractors and residents of the proposed township.
Nature Conservation Ordinance No. 4 of 1975	Chapter 6 addresses the protection of indigenous plants.	Indigenous and protected plants must be managed within legal confines.
Atmospheric Pollution Prevention Ordinance No. 11 of 1976	Aims to prevent atmospheric pollution.	All activities on the site must consider the provisions of this legislation.
Roads Ordinance 17 of 1972	Consolidates laws relating to roads.	Compliance with road access provisions is required for the development site.
Roads Authorities Act, 1999	Section 16(5) places a duty on the road authority to ensure a safe road system.	Functions of the Roads Ordinance 17 of 1972 are assigned to the Roads Authority.

2.3 Environmental Assessment Practitioner (EAP)

Erongo Consulting Group CC is the Environmental Assessment Practitioner engaged for this project. The EAP will ensure that all relevant inputs and considerations are integrated into the EIA process, including stakeholder engagement, data collection, impact assessments, and compliance with national and international environmental standards.

The environmental management framework in Namibia, anchored by the Environmental Management Act of 2007 and reinforced by various national policies and international principles, emphasizes sustainable development practices that prioritize environmental protection. The integration of comprehensive EIAs and environmental audits into project planning enables developers to identify and mitigate potential negative impacts while maximizing benefits. The commitment to adhering to both national legislation and international standards reflects a holistic approach to environmental governance, crucial for ensuring the sustainable development of projects in Namibia, particularly in sensitive areas like Henties Bay.

3 PROJECT PROGRAMME AND TIMELINES

This chapter outlines the key phases, milestones, and estimated durations for the Proposed Mixed-Use Township Development on Portion 117 Of the Farm of Henties Bay Townland No. 133 Situated South of Henties Bay, Namibia. A comprehensive project programme and timeline will be crucial for ensuring efficient project execution and stakeholder communication.

3.1 Project Phases and Timelines

The project lifecycle is divided into distinct phases, each with specific deliverables and milestones.

Table 3: Pre-Development Project Phase Estimated Durations

Phase	Description	Estimated Duration
Pre-Development	This phase lays the groundwork for the project and establishes its feasibility.	
Scoping / EIA Report Finalization	Finalize the EIA Report incorporating social, economic, and environmental data collected during the initial stages.	2-4 weeks
Environmental and Social Impact Assessment (ESIA)	Conduct a comprehensive EIA to identify potential environmental and social impacts and propose mitigation measures based on the finalized EIA Report.	3-6 months
Permitting and Approvals	Obtain all necessary permits and approvals from relevant authorities, such as the Ministry of Environment, Forestry, and Tourism, and Henties Bay Municipality.	3-6 months
Project Design and Engineering	Develop detailed architectural and engineering plans for the township's infrastructure, ensuring adherence to local building codes and environmental regulations.	4-6 months

Table 4: Development Project Phase Estimated Durations

Phase	Description	Estimated Duration
Development	This phase focuses on the physical construction of the township.	
Site Preparation	Prepare the construction site, including land clearing, infrastructure upgrades (if necessary), and securing the perimeter for safety.	2-3 months
Infrastructure Construction	Construction of roads, utilities (water, electricity, sewerage), residential, commercial, and recreational facilities according to approved plans.	18-24 months
Quality Control and Inspection	Implement ongoing quality control and inspection procedures throughout construction to ensure adherence to safety and environmental standards.	Ongoing

Table 5: Post-Construction Project Phase Estimated Durations

Phase	Description	Estimated Duration
Post-Construction	This phase prepares the township for habitation and operation.	
Commissioning and Testing	Test and commission all infrastructure systems (water, electricity, sewerage) to ensure proper functioning.	2-3 months
Equipping and Landscaping	Equip the township with necessary public amenities (lighting, waste management systems), and landscaping of green and recreational spaces.	2-3 months
Sales and Occupancy	Begin marketing, sales, and leasing of residential, commercial, and recreational units while finalizing registration with local authorities.	3-6 months

4 ANALYSIS OF ALTERNATIVES

This chapter explores alternative approaches to achieving the objectives of the Proposed Mixed-Use Township Development. A comprehensive evaluation of these alternatives ensures the chosen path minimizes environmental and social impacts while maximizing project benefits.

4.1 No-Project Alternative

Description: Under the No-Project Alternative, the proposed township would not be developed, and the current state of the land would remain unchanged.

Analysis: While this option avoids potential environmental and social impacts from development, it also forgoes the project's significant benefits:

- **Economic Growth:** Henties Bay's local economy would miss out on economic stimulus through job creation and commercial opportunities.
- **Housing Shortage:** The growing demand for housing in the Erongo Region, particularly in Henties Bay, would remain unmet, exacerbating the local housing crisis.
- **Public Services:** The project's contribution to improving infrastructure and public services in the area would be lost.

4.2 Alternative Locations

Several locations within the Erongo Region were considered during the planning stage. Each location was evaluated based on environmental, social, and technical factors. The chosen site on Portion 115 of the Farm Henties Bay Townland No. 133 emerged as the most favorable option due to the following considerations:

- **Minimal Environmental Impact:** The site offers minimal disruption to existing ecosystems, with manageable impacts on local biodiversity.
- **Proximity to Infrastructure:** The site's proximity to existing infrastructure like roads, water, and electricity connections enhances its viability for development.
- **Social and Economic Considerations:** The location supports Henties Bay's growth strategy and avoids significant cultural or environmental sensitivities.

4.3 Alternative Technologies

The project will adopt sustainable technologies and construction practices to minimize environmental impact. Alternatives considered during the detailed design phase include:

- **Modular Construction:** Prefabricated modules could reduce construction waste and shorten construction timelines, enhancing sustainability.
- **Renewable Energy:** Integration of solar energy and other renewable sources to power communal and commercial spaces, thereby reducing the carbon footprint.

- **Water Conservation:** Use of water-efficient technologies, including rainwater harvesting systems and low-flow plumbing, can reduce water demand by 30%, crucial for the arid climate.

4.4 Comparison of Alternatives

A detailed comparison of alternatives in terms of environmental and social impacts will be presented in the final Environmental Impact Assessment (EIA) report, using the following criteria:

- **Land Use and Habitat Disruption:** The No-Project Alternative avoids habitat disruption, but the selected site minimizes these impacts compared to other alternatives.
- **Water Resource Consumption:** The township will require water resources, but the inclusion of water-efficient technologies will significantly reduce consumption. The No-Project Alternative avoids this demand.
- **Air and Noise Pollution:** Construction activities will cause temporary air and noise pollution. However, mitigation measures, such as dust suppression and controlled construction schedules, will be implemented to minimize impacts.
- **Socioeconomic Impacts:** The No-Project Alternative would forgo the potential benefits of job creation, improved infrastructure, and housing opportunities. The proposed development offers significant economic upliftment to the local community.

By analyzing these alternatives, the township development can be designed to minimize environmental impacts while providing substantial economic and social benefits to the region. The selected site offers the best balance of minimal environmental disruption and significant positive contributions to Henties Bay's development.

5 PROJECT DESCRIPTION

5.1 Introduction

Shipanga Group Investments CC is the proponent and developer behind the proposed mixed-use township development project in Henties Bay. The project will be located on Portion 117 of Farm Henties Bay Townlands No. 133, situated approximately 3 kilometers south of Henties Bay's central business district. The site, covering 25 hectares, is currently undeveloped, barren, and vacant, with no existing utility services, vegetation, or wildlife. It was acquired by the proponent through private treaty from the Henties Bay Municipality, with approval subsequently granted by the Minister of Urban and Rural Development.

The proposed development aims to transform the site into a vibrant, sustainable mixed-use township, contributing to the socio-economic growth of the area.

5.2 Project Location

The project site is positioned on a high-water mark above sea level, approximately 150 meters from the ocean. It is located south of Henties Bay near the Jakkalspitz holiday resort area and is governed by the Henties Bay Local Authority. The site's boundaries are clearly surveyed, with bulk utility services situated on adjacent developed townships.

5.3 Development Components

The mixed-use township development includes a range of facilities, detailed in Table 1 below:

Component	Description
• Residential	Construction of 250 middle- and high-class houses.
• General Residential Zones	Four ervens with landscaping and parking spaces.
• Hospitality	Boutique hotel with landscaped areas and parking facilities.
• Commercial	Business-convenience shopping mall with multiple compartments, offices, and ablution facilities.
• Institutional Land Use	Spaces designated for institutional use and affordable student accommodations.
• Public Open Spaces	Parks, green spaces, and community areas.
• Streets and Roads	Development of access roads and internal street networks.

5.4 Project Objectives

The main objectives of the proposed development are as follows:

- To boost the local socio-economic development of Henties Bay.
- To create a sustainable and eco-friendly township adhering to international standards.
- To enhance local property values and aesthetics.
- To generate employment opportunities, with approximately 80 jobs during the construction phase and about 300 permanent jobs upon completion.

5.5 Infrastructure and Services

Basic infrastructure and utility services, including water, electricity, and sewerage, will be established on the project site at the developer's expense. ERONGO RED, the regional utility provider, will facilitate the connection of these services following the acquisition of the Environmental Clearance Certificate (ECC).

The following infrastructure elements will be implemented:

- **Water Reticulation:** Design and installation of water distribution systems.
- **Electricity Supply:** Establishment of electrical infrastructure for residential, commercial, and public spaces.
- **Sewerage System:** Connection to existing sewerage networks or installation of standalone systems.

5.6 Compliance with Planning Frameworks

The proposed development aligns with the Henties Bay Zoning Scheme (2021) and the draft Henties Structure Plan, both of which prioritize mixed-use township developments as a growth strategy.

5.7 Environmental and Social Significance

This development is expected to serve as a landmark project that elevates the profile of Henties Bay as a prime destination for residential, commercial, and tourism opportunities. It aims to enrich the diversity of land use in the area while promoting sustainable development and improving the well-being of the local community.

Figure 1: Zoning legend: proposed Township establishment



Figure 2: Project area situated top hill of the dunes with access through beach salt road

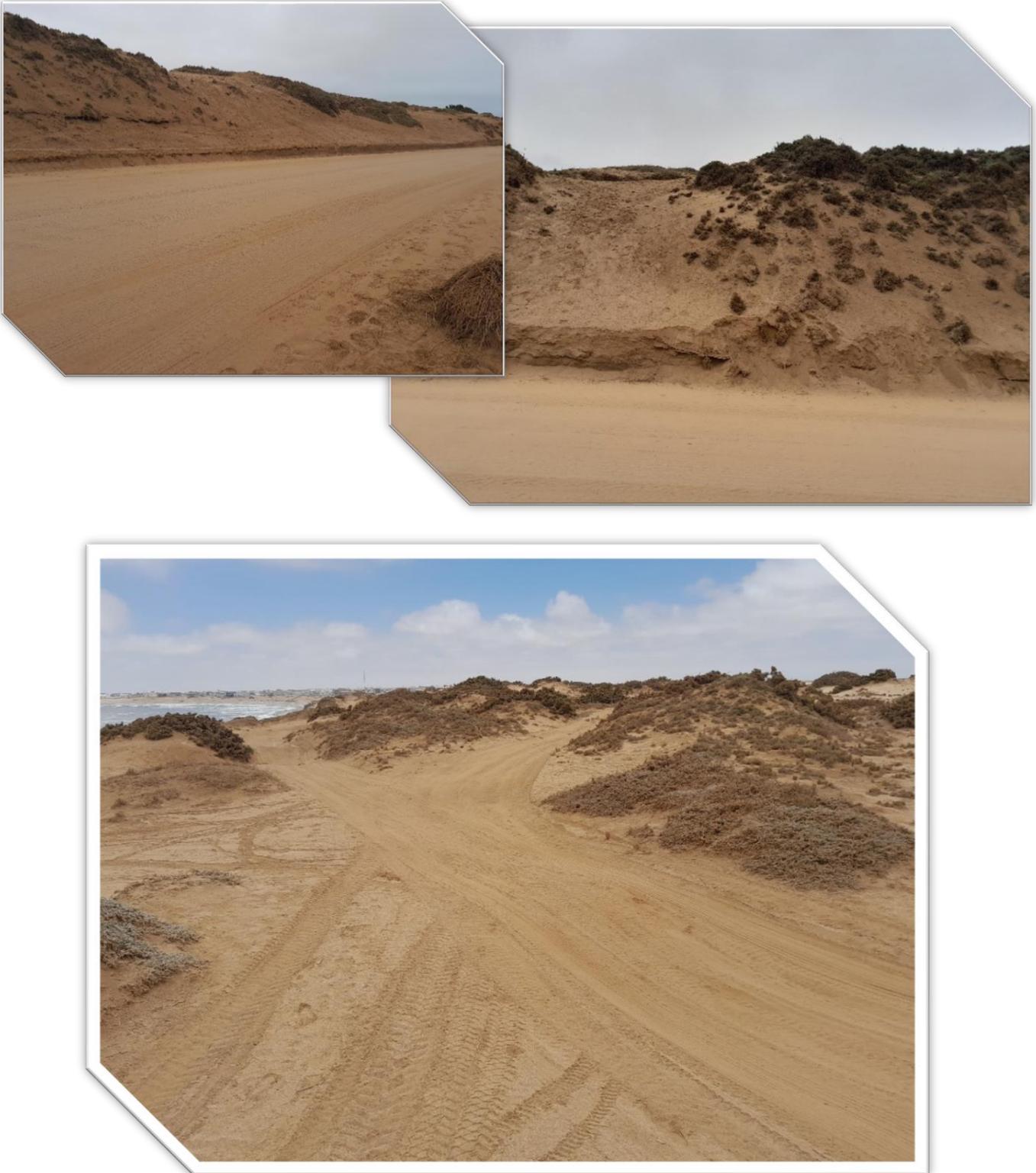


Figure 3: Locality Map of the proposed development

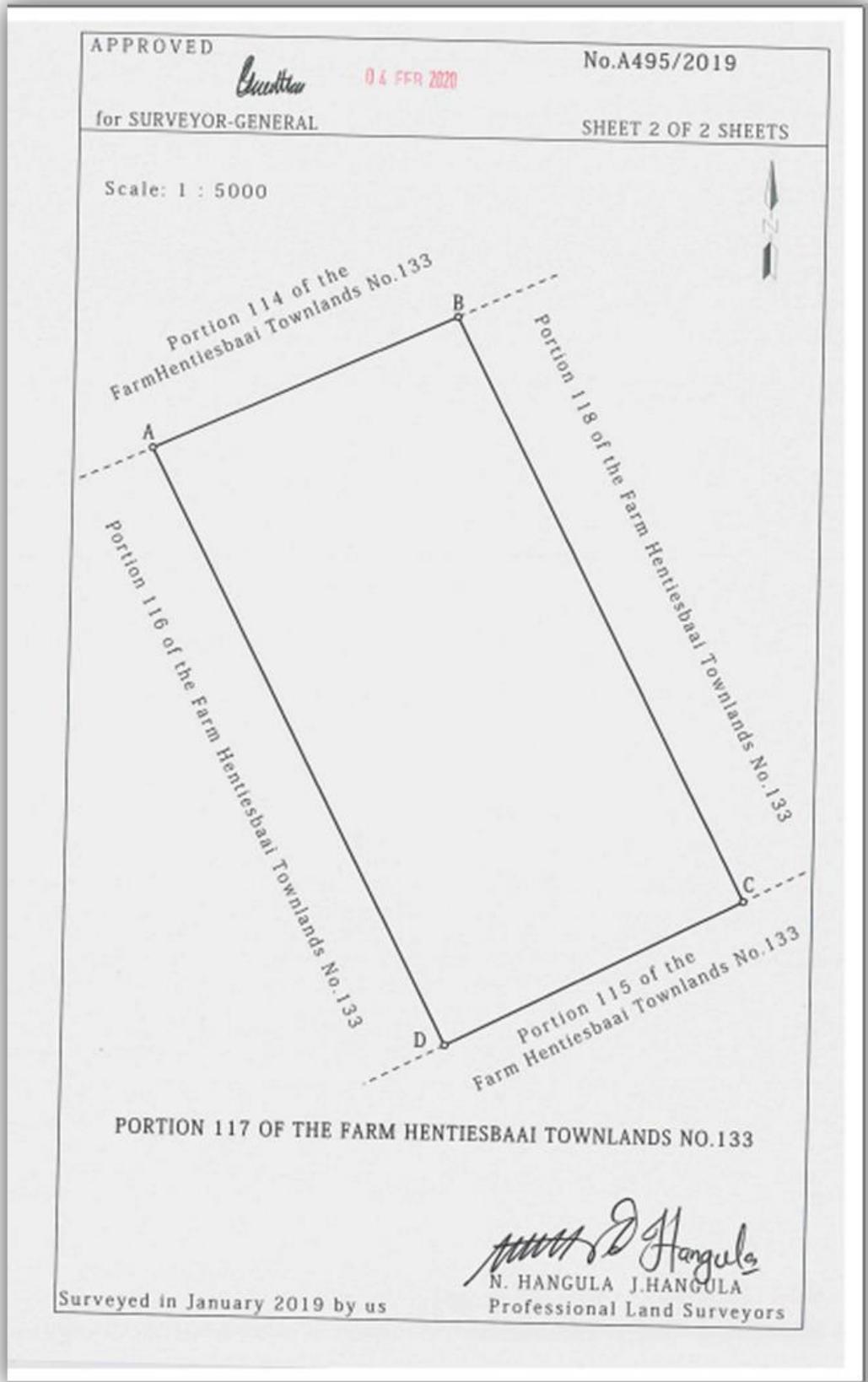
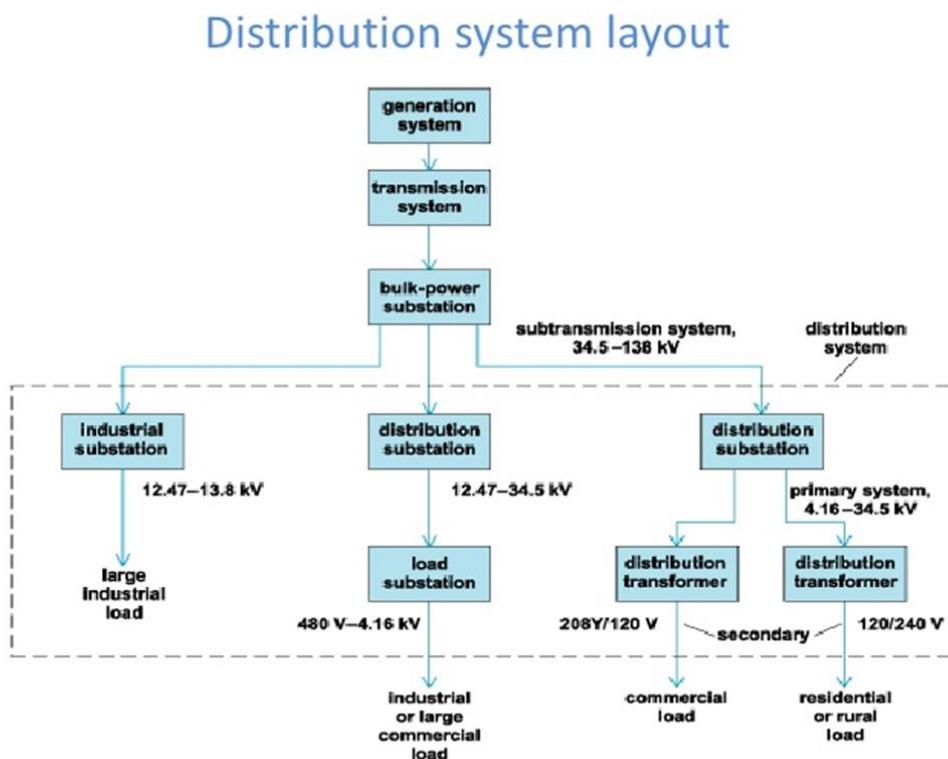


Table 6: Information on the essential infrastructure that will be in place within the township.

Infrastructure	Source	Capacity/Supply
Water Supply	Henties Bay Water and Sewerage facility	150 cubic meters per day
Power Supply	ErongoRED	Sufficient for the development's needs
Sewerage	Henties Bay treatment plant	Adequate capacity for the development
Waste Management	Local waste management services	Sufficient for the development
Roads and Transportation	Existing roads and planned internal roads	Adequate for access and transportation

Figure 4: Electrical distribution layout



6 PROJECT PHASES AND ACTIVITIES

To ensure the successful implementation of the mixed-use township development, the project has been structured into distinct phases, each with clearly defined activities and objectives. The phased approach allows for efficient planning, resource allocation, and environmental management.

6.1 Pre-Construction Phase

The table below outlines the key activities that will be carried out during the pre-construction phase. Each activity has associated environmental and social impacts that will be carefully considered and mitigated.

Table 7: Key activities during the pre-construction phase

Activity	Description	Environmental Impacts	Social Impacts
▪ Site Acquisition	Purchase or lease of the 25-hectare land	Potential land acquisition disputes, habitat disturbance	Minimal social impacts
▪ Project Planning	Development of the detailed project plan, including design, budget, and timeline	Resource consumption	Minimal social impacts
▪ Environmental Impact Assessment (EIA)	Conduct an EIA to assess potential environmental impacts and develop mitigation measures	Resource consumption, potential negative impacts on environment	Community engagement and potential conflicts
▪ Community Engagement	Consult with local communities and stakeholders to address concerns and obtain support	Potential conflicts or misunderstandings	Community involvement and buy-in
▪ Permits and Approvals	Obtain necessary permits and approvals from relevant authorities	Administrative burden, potential delays	Minimal social impacts
▪ Surveying	Conduct a survey of the proposed township site to establish boundaries and property lines	Minimal environmental impacts	Minimal social impacts
▪ Geotechnical Investigation	Assess soil conditions, groundwater levels, and other geological factors to ensure the suitability of the land for construction	Minimal environmental impacts	Minimal social impacts

<ul style="list-style-type: none"> Land Preparation 	Clear the site of existing structures, vegetation, and debris	Habitat disturbance, potential soil erosion	Minimal social impacts
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6.2 Construction Phase

This table outlines the key activities that will be carried out during the construction phase. Each activity has associated environmental and social impacts that will be carefully considered and mitigated.

Table 8: Construction Phase Activities

Activity	Description	Environmental Impacts	Social Impacts
<ul style="list-style-type: none"> Site Clearing and Preparation 	Remove vegetation and debris to prepare the land for construction.	Soil disturbance, habitat loss	Potential noise pollution, dust, and inconvenience to nearby residents
<ul style="list-style-type: none"> Excavation and Foundation Work 	Dig trenches for foundations and backfill with compacted material.	Soil disturbance, noise pollution	Potential noise pollution and traffic congestion
<ul style="list-style-type: none"> Infrastructure Construction 	Build roads, utilities, and other infrastructure.	Noise pollution, air pollution, traffic congestion	Potential traffic disruptions and inconvenience to nearby residents
<ul style="list-style-type: none"> Building Construction 	Construct residential units, commercial buildings, and other facilities.	Noise pollution, air pollution, waste generation	Potential noise pollution and traffic congestion

Figure 5: Illustration of schedule of works

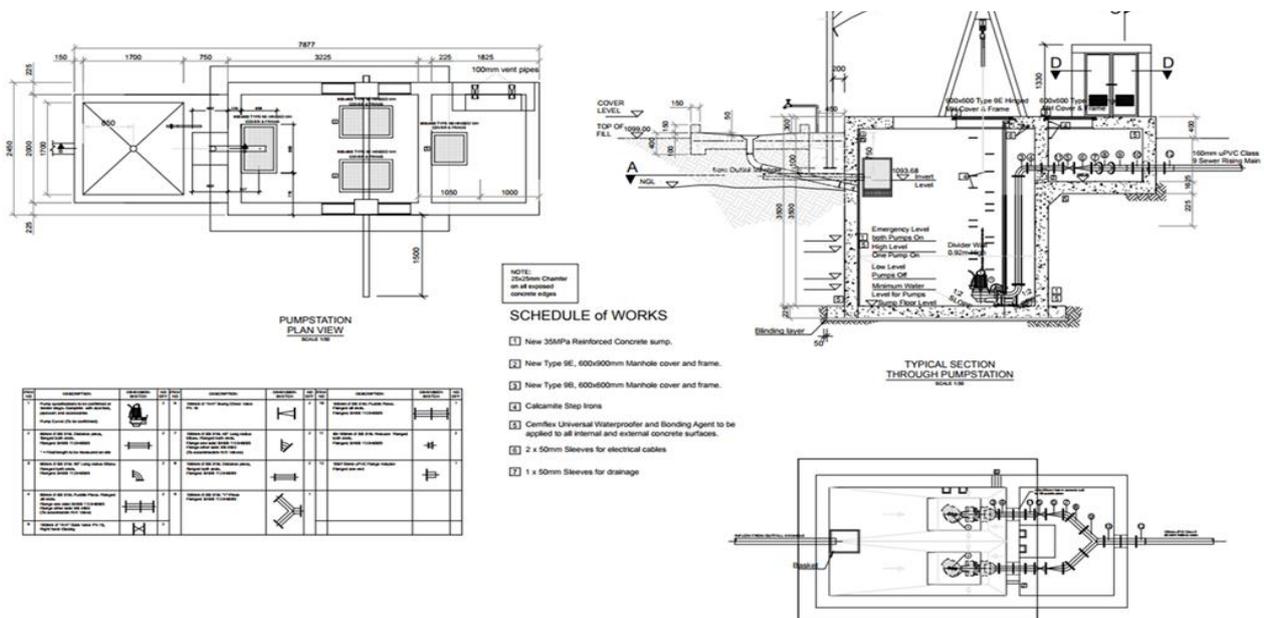
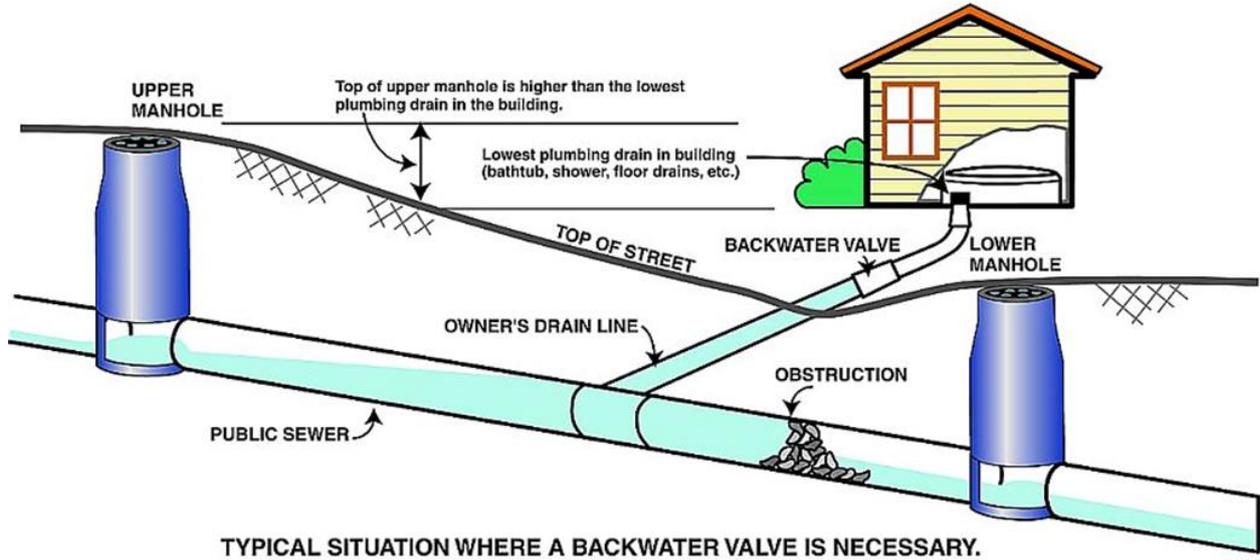


Figure 6: Sanitation & pumpstation connection & flow system



6.3 Operational Phase

The table below outlines the key activities that will occur during the operational phase. The operational phase will primarily involve the day-to-day activities of residents, businesses, and visitors within the township. While the operational phase is generally less disruptive than the construction phase, it may still have some environmental and social impacts.

Table 9: Operational Phase Activities

Activity	Description	Environmental Impacts	Social Impacts
▪ Occupancy and Use	Residents move into homes, businesses operate.	Increased traffic, waste generation, water consumption	Potential noise pollution, increased demand for local services
▪ Maintenance and Repairs	Regular maintenance and repairs of buildings and infrastructure.	Minor noise pollution, waste generation	Minimal social impacts
▪ Community Events and Activities	Organize community events and activities.	Potential noise pollution, waste generation	Positive social impacts, community building

6.4 Decommissioning Phase

The table below outlines the key activities that will take place during the decommissioning phase, which will occur at the end of the project's lifecycle. The decommissioning phase will involve the demolition of buildings and structures, followed by the restoration of the land to its original state. Proper waste

management practices will be implemented to ensure that any waste generated during the decommissioning process is disposed of responsibly.

Table 10: Decommissioning Phase Activities

Activity	Description	Environmental Impacts	Social Impacts
<ul style="list-style-type: none"> ▪ Building Demolition 	Demolish buildings and structures.	Noise pollution, waste generation, soil disturbance	Potential noise pollution and inconvenience to nearby residents
<ul style="list-style-type: none"> ▪ Site Restoration 	Restore the land to its original state or prepare it for future use.	Soil disturbance, habitat loss	Minimal social impacts
<ul style="list-style-type: none"> ▪ Waste Management 	Properly dispose of waste generated during decommissioning.	Waste pollution	Minimal social impacts

7 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

The proposed mixed-use township development has the potential to generate both environmental and social impacts during its various phases. These impacts must be identified, assessed, and addressed through proactive mitigation strategies to ensure the project's sustainability and compliance with environmental regulations.

7.1 Potential Environmental Impacts

- **Air Pollution:** Emissions from construction equipment and vehicles.
- **Noise Pollution:** Noise generated from construction and operational activities.
- **Water Pollution:** Potential contamination of water sources due to construction activities or improper waste disposal.
- **Soil Erosion:** Soil degradation caused by excavation and land leveling.
- **Habitat Loss:** Destruction of natural habitats during site preparation and construction.

7.2 Potential Social Impacts

- **Traffic Congestion:** Increased traffic volumes from construction and operational activities.
- **Community Disruption:** Temporary disruption to local communities due to construction.
- **Job Creation:** Employment opportunities during the construction and operational phases.
- **Economic Development:** Positive economic impacts on the local area, including increased business activity and property value appreciation.

Table 11: Combined Impact and Mitigation Measures Matrix

Potential Impact	Mitigation Measure	Responsible Party	Monitoring Method
Air Pollution	<ul style="list-style-type: none"> - Implement dust suppression techniques (e.g., water spraying). - Use cleaner technologies (e.g., low-emission vehicles). - Regular maintenance of machinery to minimize emissions. 	Construction Manager	Air quality monitoring and periodic reports.
Noise Pollution	<ul style="list-style-type: none"> - Limit construction hours to minimize disturbance. - Use noise barriers and mufflers on equipment. - Conduct noise awareness training for workers. 	Site Supervisor	Noise level assessments, community feedback, and review of construction schedules.
Water Pollution	<ul style="list-style-type: none"> - Implement erosion and sediment control measures (e.g., silt fences). - Use spill containment strategies. - Proper storage and disposal of hazardous materials. 	Environmental Consultant	Regular site inspections, water quality testing, and waste management audits.
Soil Erosion	<ul style="list-style-type: none"> - Establish silt fences and maintain vegetation cover. - Implement soil stabilization techniques (e.g., retaining walls, mulching). - Conduct site grading with care. 	Site Manager	Erosion control effectiveness monitoring, regular checks, and photographic documentation.
Habitat Loss	<ul style="list-style-type: none"> - Conduct a pre-construction survey to identify and protect key habitats. - Create buffer zones around sensitive areas. - Rehabilitate areas post-construction. 	Environmental Specialist	Habitat monitoring, biodiversity assessments, and ecological surveys.

Traffic Congestion	<ul style="list-style-type: none"> - Develop a traffic management plan to mitigate congestion during construction. - Schedule deliveries during off-peak hours. - Provide alternative routes for construction traffic. 	Project Manager	Traffic flow analysis, monitoring reports, and local authority feedback.
Community Disruption	<ul style="list-style-type: none"> - Establish a communication plan to inform residents about construction activities. - Provide a contact point for community concerns. - Ensure access to public spaces is maintained. 	Community Liaison Officer	Community feedback surveys, public meetings, and incident logs.
Job Creation	<ul style="list-style-type: none"> - Prioritize hiring from the local community to boost employment opportunities. - Offer training programs for local workers. - Establish apprenticeship programs. 	HR Manager	Employment records review, training attendance logs, and periodic job impact assessments.
Economic Development	<ul style="list-style-type: none"> - Collaborate with local businesses for supply needs. - Support local initiatives through partnerships. - Encourage community entrepreneurship. 	Project Manager	Economic impact assessments, stakeholder feedback, and local business engagement records.
Visual Impacts	<ul style="list-style-type: none"> - Use landscaping to blend construction with natural surroundings. - Design structures to complement the local environment. - Remove waste and debris promptly. 	Design Manager	Visual inspections, community feedback, and adherence to design plans.
Waste Generation	<ul style="list-style-type: none"> - Develop a waste management plan with clear recycling targets. - Use designated areas for waste disposal. 	Waste Management Supervisor	Waste audit reports, recycling logs, and site cleanliness inspections.

	- Segregate hazardous and non-hazardous waste.		
Occupational Health and Safety Risks	<ul style="list-style-type: none"> - Provide workers with personal protective equipment (PPE). - Conduct regular safety training and drills. - Ensure compliance with OSHA standards. 	Health and Safety Officer	Incident reports, safety audit records, and compliance monitoring.
Cultural Heritage Disturbance	<ul style="list-style-type: none"> - Conduct cultural heritage assessments before construction. - Engage with local communities and authorities for guidance. - Implement preservation measures for significant sites. 	Archaeological Consultant	Regular consultation reports, monitoring of excavation activities, and photographic documentation.
Energy Consumption	<ul style="list-style-type: none"> - Use energy-efficient machinery and equipment. - Schedule construction activities to optimize energy use. - Promote the use of renewable energy sources. 	Energy Manager	Energy usage logs, equipment maintenance records, and sustainability assessments.
Public Safety Risks	<ul style="list-style-type: none"> - Erect proper signage and barriers around construction sites. - Train workers on emergency response protocols. - Maintain open access for emergency services. 	Safety Officer	Incident reports, public feedback, and regular safety inspections.

8 ENVIRONMENTAL SETTING (BASELINE INFORMATION):

This section outlines the current environmental and socio-economic conditions present in Henties Bay and the Erongo Region. This description establishes baseline conditions against which future changes can be measured.

8.1 Climate

8.1.1 Henties Bay Climate

- **Type:** Desert climate characterized by low humidity and minimal rainfall.
- **Average Annual Temperature:** 17.4 °C, providing a temperate environment year-round.
- **Annual Precipitation:** Ranges between 0 to 40 mm, indicating very little moisture throughout the year.
- **Humidity:** The average relative humidity is around 50% during summer, rising to approximately 80% in winter, contributing to a cooler atmosphere during colder months.

8.1.2 Erongo Region Climate

- **Type:** Semi-arid climate, characterized by moderate temperatures and seasonal variations.
- **Temperature Range:** Varies significantly, from about 15 °C in winter to as high as 35 °C in summer, leading to hot summers and mild winters.
- **Rainfall:** The average annual rainfall is about 150 mm, with the majority falling between January and March, supporting seasonal vegetation growth.

Table 12: Climate parameters of Henties Bay and Erongo Region

Parameter	Henties Bay	Erongo Region
Average Temperature (°C)	17.4	15 - 35
Average Annual Precipitation (mm)	0 - 40	150
Humidity	50% (summer)	Varies

8.2 Geology

8.2.1 Henties Bay Geology

- **Composition:** The geological structure primarily consists of ancient crystalline rocks that form the foundation of the area.
- **Significant Layers:** Underlies the Permo-Triassic Karoo Sequence, which is crucial for understanding the area's geological history.
- **Unique Features:** Scattered magmatic complexes that originated approximately 130 million years ago, providing insight into the region's volcanic activity.

8.2.2 Erongo Region Geology

- **Dominant Rocks:** Composed largely of ancient granitic rocks and gneisses that have shaped the region's landscape.
- **Geological Influences:** The area's geology has been significantly shaped by tectonic movements and volcanic events throughout history.
- **Mineral Presence:** Notable deposits of valuable minerals such as uranium, gold, and rare earth elements, making the region economically important.

Table 13: Geology features of Henties Bay and Erongo Region

Geological Feature	Henties Bay	Erongo Region
Dominant Rock Types	Crystalline rocks	Granitic rocks
Major Deposits	None	Uranium, gold
Age of Rocks	130 million years	Varied

8.3 Soils

8.3.1 Henties Bay Soils

- **Characteristics:** The soil exhibits extensive physical weathering and erosion, primarily due to the arid climate.
- **Soil Types:** Predominantly includes Leptosols, Acrisols, and Gypsisols, each with varying degrees of fertility.
- **Erosion Risk:** High erosion potential due to low moisture retention and vegetative cover.

8.3.2 Erongo Region Soils

- **Soil Composition:** Characterized by sandy and rocky soils, with variability in fertility depending on moisture availability.
- **Agricultural Viability:** Some areas are suitable for agriculture, while others remain unsuitable due to low moisture retention and nutrient availability.

Table 14: Soil types

Soil Type	Henties Bay	Erongo Region
Dominant Types	Leptosols, Acrisols	Sandy, rocky soils
Erosion Potential	High	Moderate
Agricultural Suitability	Limited	Variable

8.4 Hydrology

8.4.1 Henties Bay Hydrology

- **Water Sources:** The main source of groundwater is the Omdel Aquifer, crucial for local water supply.

- **Surface Water:** Limited surface water bodies are present due to the region's arid conditions, which restricts water availability.

8.4.2 Erongo Region Hydrology

- **Water availability:** Contains several ephemeral rivers and seasonal streams, which provide water during specific periods of the year.
- **Groundwater Reliance:** Groundwater serves as the primary water source for both agricultural and domestic use across the region.

Table 15: Hydrology of Henties Bya and Erongo Region

Parameter	Henties Bay	Erongo Region
Main Water Source	Omdel Aquifer	Groundwater, rivers
Surface Water Bodies	None	Ephemeral rivers

8.5 Fauna & Flora

8.5.1 Henties Bay Fauna & Flora

- **Plant Diversity:** Limited plant species (fewer than ten), primarily due to the harsh climatic conditions.
- **Dominant Species:** Includes Pencilbush (*Arthroa leubnitzia*), Dollar Bush (*Zygophyllum stapfii*), and the iconic Welwitschia (*Welwitschia mirabilis*).
- **Animal Species:** Fauna includes species adapted to arid conditions, such as gemsbok, springbok, and various bird species.

8.5.2 Erongo Region Fauna & Flora

- **Biodiversity:** The region boasts rich biodiversity, including numerous unique species that have adapted to the semi-arid conditions.
- **Protected Areas:** National parks (e.g., Erongo Mountains) foster a diverse array of fauna and flora, with endemic species contributing to the region's ecological richness.

Table 16: Erongo Region Fauna & Flora

Category	Henties Bay	Erongo Region
Dominant Plant Species	Pencilbush, Dollar Bush	Various endemic species
Animal Species	Gemsbok, springbok	Diverse fauna including elephants
Biodiversity	Low	High

8.6 Land Use & Site Location

8.6.1 Henties Bay Land Use

- **Proposed Site Location:** The site is situated approximately 500 m south of Henties Bay town, indicating potential development proximity to urban areas.
- **Current Developments:** Land has been allocated through alienation to Erongo Consulting Group CC, with existing residential and tourism facilities marking the area.

8.6.2 Erongo Region Land Use

- **Primary Activities:** The land use is predominantly driven by tourism, fishing, and mining activities, which significantly contribute to the regional economy.
- **Agricultural Practices:** Agriculture occurs primarily in regions with suitable soil and water conditions, reflecting the area's ecological diversity.

Table 17: Land use types

Land Use Type	Henties Bay	Erongo Region
Residential	Present	Limited
Tourism	High	Moderate
Agriculture	Limited	Variable

8.7 Socio-Economic Environment

8.7.1 Henties Bay Socio-Economic Status

- **Population:** Approximately 16,000 residents as of the 2011 Census.
- **Economic Drivers:** The local economy is predominantly driven by tourism, fishing, and mining, with limited formal employment opportunities.
- **Employment Landscape:** Many residents engage in informal sectors, highlighting the need for diversified economic activities.

8.7.2 Erongo Region Socio-Economic Status

- **Population Base:** The Erongo region supports a larger population of approximately 150,000 people.
- **Economic Framework:** Mining, tourism, and agriculture serve as the main economic drivers, with a mixed employment structure comprising both formal and informal sectors.
- **Infrastructure Quality:** Infrastructure development and access to services like education and healthcare are present but vary significantly in quality across different areas.

Table 18: Socio-economic parameters of Henties Bay and Erongo Region

Parameter	Henties Bay	Erongo Region
Population	~16,000	~150,000
Major Economic Activities	Tourism, fishing, mining	Mining, tourism, agriculture
Employment Type	Informal employment prevalent	Mixed (formal & informal)

8.8 Transportation

8.8.1 Henties Bay Transportation

- **Access Routes:** The primary access is provided by a municipal salt gravel road that connects the town to other areas.
- **Road Network:** The road network supports local movement and trade, facilitating tourism and local economic activities.

8.8.2 Erongo Region Transportation

- **Infrastructure Quality:** The region has a well-developed road infrastructure connecting various towns and cities, supporting economic and social activities.
- **Public Transport:** While public transport systems exist, their availability is limited in rural areas, impacting mobility for residents.

Figure 7: Access Road to the side (salt road)





Figure 8: Upgraded Swakopmund – Henties Bay – Kamanjab Road

Table 19: Transport and infrastructure

Transportation Infrastructure	Henties Bay	Erongo Region
Road Quality	Good	Varied
Public Transport Availability	Limited	Present in urban areas

8.9 Health and Safety

8.9.1 Henties Bay Health and Safety

- **Healthcare Facilities:** Limited healthcare options with one small private clinic and a state hospital servicing the area.
- **Health Initiatives:** Focus on implementing health and safety measures during project development, acknowledging the need for improved healthcare access.

8.9.2 Erongo Region Health and Safety

- **Healthcare Network:** The region boasts several healthcare facilities, including hospitals and clinics, providing various services.
- **Health Programs:** Regional health initiatives aim to address healthcare challenges, improving overall community health.
-

Table 20: Health facilities and programs

Health Facility Type	Henties Bay	Erongo Region
Hospitals	1 (small private clinic)	Several (including state hospitals)
Health Initiatives	Limited	Various regional programs

8.10 Waste Management and Pollution Prevention

8.10.1 Henties Bay Waste Management

- **Waste Practices:** Waste management practices are in place, but recycling and waste reduction efforts are minimal.
- **Pollution Prevention:** Local authorities are working to implement measures to reduce pollution and promote sustainable waste management.

8.10.2 Erongo Region Waste Management

- **Management Systems:** A structured waste management system exists, with a focus on waste reduction, recycling, and environmental protection.
- **Pollution Control:** Various initiatives are ongoing to monitor pollution and improve waste disposal practices.

Table 21: Waste management practices

Waste Management Practices	Henties Bay	Erongo Region
Recycling Programs	Minimal	Active initiatives
Pollution Prevention Measures	Limited	Comprehensive efforts

This detailed baseline information provides essential context for the EIA process, ensuring all stakeholders understand the environmental and socio-economic conditions in Henties Bay and the surrounding Erongo Region. This foundation will support the evaluation of potential impacts and inform effective management strategies for future developments.

Figure 9:: Pencil bush (*Arthroerualeubnitzia*)



The area is already disturbed, as there are existing developments within the project site surrounding area. See ministerial approval authorizing the proposed sale of land and proposed development

9 EIA METHODOLOGY

The Environmental Impact Assessment (EIA) methodology ensures a systematic approach to identifying, predicting, and evaluating the environmental and social impacts of the proposed project. It integrates stakeholder engagement, scientific analysis, and best practices to address potential impacts comprehensively.

9.1 Scoping

The scoping phase identifies key environmental and social issues relevant to the project. It also defines the scope and terms of reference for the assessment.

Key Activities in Scoping

Activity	Objective	Output
Stakeholder Consultations	Understand concerns and expectations	Issues and Response Register (IRR)
Identification of Key Impacts	Prioritize significant impacts for assessment	Preliminary Impact Matrix
Terms of Reference Development	Define assessment scope and methodologies	Approved Terms of Reference

9.2 Baseline Data Collection

Baseline data provides a reference for assessing potential impacts. This involves gathering information on the existing environmental and social conditions.

Baseline Data Components

Component	Parameters Assessed	Methods Used
Physical Environment	Air and water quality, soil, noise	Field measurements, laboratory tests
Biological Environment	Flora and fauna, habitats	Ecological surveys, GIS mapping
Socio-economic Conditions	Population, livelihoods, infrastructure	Interviews, literature review

9.3 Impact Identification and Evaluation

This step involves systematically identifying and assessing potential impacts, categorized by nature, magnitude, duration, and reversibility.

Table 22: Impact Categorization

Impact Characteristic	Categories
Nature	Positive / Negative

Magnitude	Low / Moderate / High
Duration	Short-term / Long-term
Reversibility	Reversible / Irreversible

Tools and Techniques for Impact Evaluation

- Checklists and matrices.
- GIS and modeling software for predictive analysis.
- Comparative analysis with similar projects.

9.4 Mitigation Planning

Mitigation measures are developed to avoid, minimize, or compensate for adverse impacts and to enhance positive impacts.

Mitigation Strategies

Impact Type	Mitigation Measure	Responsibility
Air Pollution	Dust suppression (e.g., water spraying), low-emission vehicles	Construction Manager
Habitat Loss	Pre-construction surveys, buffer zones	Environmental Specialist
Community Disruption	Communication plans, grievance redress mechanisms	Community Liaison Officer

9.5 Stakeholder Engagement

Inclusive participation of stakeholders is central to the EIA process, ensuring transparency and addressing community concerns.

Table 23: Stakeholder Engagement Activities

Activity	Objective	Tool Used
Public Meetings	Inform and gather feedback from communities	Town halls, presentations
Focus Group Discussions	In-depth discussions on specific issues	Facilitated group sessions
Issue Documentation	Track and address concerns	Issues and Response Register

9.6 Report Compilation

The findings and recommendations are documented in an EIA report, which is submitted for review and approval.

Table 24: Components of the EIA Report

Section	Description
Executive Summary	Key findings and recommendations
Baseline Environment	Description of existing conditions
Impact Assessment	Analysis of potential impacts
Mitigation and EMP	Proposed mitigation measures and management plans

9.7 Submission and Review

The completed EIA Report is submitted to regulatory authorities for evaluation. The review process ensures that the report complies with legal and technical standards.

Submission and Review Steps

Step	Responsibility	Output
Report Submission	EIA Consultant	Submitted EIA Report
Regulatory Review	Environmental Commissioner	Feedback and recommendations
Revisions and Final Submission	EIA Consultant	Approved EIA Report

10 CUMULATIVE ENVIRONMENTAL AND SOCIAL IMPACT ANALYSIS

The Environmental and Social Impact Assessment (ESIA) for the proposed mixed-use township development must encompass not only the direct impacts of the development but also its potential contributions to cumulative environmental and social effects. Cumulative impacts arise from the combined effects of the township development along with other past, present, and reasonably foreseeable future activities in the Erongo region.

10.1 Methodology for Cumulative Impact Assessment'

The ESIA utilizes a systematic approach to assess cumulative impacts, encompassing the following steps:

- **Identify Relevant Projects and Activities**
This step involves outlining existing, planned, and potential future projects in the vicinity of the township development. This may include residential, commercial, industrial, and infrastructural developments within the defined geographical scope, considering ecological boundaries and social/cultural spheres of influence.
- **Characterize Existing Environmental and Social Conditions**
Baseline data will be gathered from existing reports and studies to establish the current state of the environment and the social context in the region. This characterization will provide a foundation for understanding existing conditions prior to the commencement of the proposed development.
- **Evaluate Potential Interactions**
An analysis will be conducted to determine how the proposed development interacts with other projects and activities. This evaluation will consider:
 - **Spatial Overlap:** Assessing whether the development's footprint overlaps with other projects geographically.
 - **Temporal Overlap:** Evaluating if project timelines coincide, potentially amplifying impacts.
 - **Synergistic or Antagonistic Effects:** Analyzing whether the impacts from different projects worsen (synergistic) or lessen (antagonistic) each other.
- **Predict Cumulative Impacts**
Based on the evaluation of interactions, this step forecasts the potential cumulative environmental and social consequences that may arise from the combined activities of the proposed township development and other relevant projects.

Potential Cumulative Impacts and Mitigation Strategies

The ESIA identifies several potential cumulative impacts across various environmental and social components. The following table summarizes key areas of focus, detailing potential impacts and corresponding mitigation strategies:

Table 25: Potential Cumulative Impacts and Mitigation Strategies

Environmental/Social Component	Potential Cumulative Impact	Mitigation Strategies
Water Resources	Increased demand for water from multiple developments could strain local water resources.	<ul style="list-style-type: none"> ▪ Implement water conservation measures (e.g., rainwater harvesting, treated wastewater reuse) across all developments. ▪ Advocate for integrated regional water management plans to ensure sustainable water use.
Biodiversity and Ecosystems	Habitat fragmentation and loss of species due to multiple developments.	<ul style="list-style-type: none"> ▪ Collaborate with other developers to establish ecological corridors and protected areas. ▪ Implement habitat restoration programs to offset impacts from development activities.
Air Quality	Combined emissions from various projects may degrade local air quality.	<ul style="list-style-type: none"> ▪ Advocate for stricter air quality regulations and enforcement across all projects. ▪ Promote sustainable transportation options (e.g., public transport, cycling) to minimize traffic-related emissions.
Social Infrastructure	Increased strain on social services (healthcare, education) due to population growth from multiple projects.	<ul style="list-style-type: none"> ▪ Collaborate with local authorities to expand social services to meet increasing demand. ▪ Partner with developers to contribute to infrastructure projects (schools, healthcare facilities).
Cultural Heritage	Cumulative impacts could threaten local cultural heritage sites and practices.	<ul style="list-style-type: none"> ▪ Conduct comprehensive cultural heritage impact assessments for all relevant projects. ▪ Integrate cultural considerations into project design and planning.
Public Health	Strain on healthcare systems due to combined effects of population growth and pollution.	<ul style="list-style-type: none"> ▪ Collaborate with other developments to improve healthcare infrastructure and services in the region. ▪ Advocate for improved sanitation and waste management practices across all projects.
Livelihoods	Competition for resources and potential displacement of local communities.	<ul style="list-style-type: none"> ▪ Develop inclusive planning processes that account for the needs of existing communities. ▪ Explore livelihood diversification options for residents impacted by development.

Waste Management	Increased waste generation could overwhelm existing waste management systems.	<ul style="list-style-type: none"> ▪ Implement integrated waste management strategies (reduction, reuse, recycling) across all developments. ▪ Encourage investment in waste treatment and disposal facilities.
Traffic and Transportation	Increased traffic congestion from construction activities and population growth.	<ul style="list-style-type: none"> ▪ Develop and implement comprehensive traffic management plans for the region. ▪ Promote and enhance sustainable transportation infrastructure (e.g., public transport, pedestrian pathways).
Soil	Land use changes and construction activities could lead to soil degradation (erosion, compaction).	<ul style="list-style-type: none"> ▪ Implement soil conservation measures across all developments (e.g., erosion control, topsoil management). ▪ Advocate for sustainable land-use planning practices to minimize soil degradation.

11 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FRAMEWORK

This chapter outlines the Environmental and Social Management Plan (ESMP) framework for the proposed development. The ESMP serves as a comprehensive roadmap to ensure that the project adheres to environmental and social safeguards throughout its lifecycle, including construction, operation, and potential decommissioning.

11.1 ESMP Framework

The ESMP framework comprises several key components, presented in the following table for clarity:

Table 26: ESMP Framework

Component	Description
Mitigation Measures	<ul style="list-style-type: none"> Detailed strategies to address environmental and social impacts.
Implementation and Monitoring Plan	<ul style="list-style-type: none"> Plan outlining how mitigation measures will be implemented, monitored, and evaluated.
Institutional Arrangements	<ul style="list-style-type: none"> Defined roles and responsibilities for stakeholders involved in ESMP implementation.
Grievance Redress Mechanism	<ul style="list-style-type: none"> Transparent process for stakeholders to voice concerns and seek resolution.
Budgeting and Financing	<ul style="list-style-type: none"> Allocation of resources to support ESMP implementation.
Training and Capacity Building	<ul style="list-style-type: none"> Programs to equip personnel with skills for effective ESMP implementation.
Reporting	<ul style="list-style-type: none"> Regular reporting on ESMP implementation and effectiveness to stakeholders.
Detailed ESMP	<ul style="list-style-type: none"> A comprehensive document elaborating on mitigation measures, monitoring procedures, and institutional arrangements.
Public Participation and Disclosure	<ul style="list-style-type: none"> Strategies for engaging stakeholders, ensuring transparency, and integrating community feedback throughout the ESMP process.

A detailed Environmental and Social Management Plan (ESMP) is included as Annex 1 of this report, providing further specifics on the actions required to achieve environmental and social sustainability throughout the project lifecycle.

11.2 Roles and Responsibilities

Effective ESMP implementation requires collaboration among various stakeholders. The following table outlines key roles and responsibilities:

Table 27: Roles and Responsibilities

Stakeholder	Responsibility
Project Proponent	<ul style="list-style-type: none"> ▪ Overall responsibility, resource allocation, ensuring compliance.
Project Manager	<ul style="list-style-type: none"> ▪ Day-to-day oversight during construction, coordinating mitigation measures with contractors.
Environmental Consultant	<ul style="list-style-type: none"> ▪ Technical expertise and guidance on environmental mitigation and monitoring.
Social Development Specialist	<ul style="list-style-type: none"> ▪ Supporting social mitigation implementation, community engagement, and grievance redress.
Contractors	<ul style="list-style-type: none"> ▪ Implementing mitigation measures outlined in construction contracts, adhering to safeguards.
Regulatory Authorities	<ul style="list-style-type: none"> ▪ Overseeing project compliance with environmental and social regulations, providing guidance, reviewing ESMP documents.
Community Liaison Committee	<ul style="list-style-type: none"> ▪ Platform for communication and information exchange between the project proponent and the community regarding ESMP implementation.

11.3 Monitoring and Reporting

Regular monitoring and reporting are crucial for ensuring the ESMP's effectiveness. The monitoring and reporting process includes:

- **Monitoring:** Regular evaluation of mitigation measures throughout the project lifecycle to identify any potential issues or unintended consequences, including environmental monitoring, social performance monitoring, and construction site inspections.
- **Reporting:** Preparation of periodic reports summarizing monitoring results, corrective actions taken (if necessary), challenges encountered, and lessons learned. Reports will be submitted to relevant stakeholders, including regulatory authorities, funding agencies, and the Community Liaison Committee.

11.4 Budgeting and Financing

The project proponent will allocate adequate financial resources to support the ESMP, including funding for:

- Mitigation measure implementation costs.
- Monitoring and reporting activities.
- Training programs for relevant personnel.

Funding sources may include the project's budget, financing, or grants specifically designated for environmental and social safeguards.

11.5 Training and Capacity Building

The project will invest in training programs to equip relevant personnel (project staff, contractors) with the knowledge and skills necessary for effective ESMP implementation.

Training may cover:

- Environmental regulations and best practices.
- Social impact assessment and mitigation techniques.
- Community engagement strategies.
- Grievance redress mechanisms.

12 PUBLIC PARTICIPATION AND DISCLOSURE

Public participation and transparent disclosure of information are critical to the ESMP's success. This section outlines strategies for engaging stakeholders and ensuring their concerns are integrated into project planning and implementation.

12.1 Stakeholder Identification

Identifying stakeholders and potentially affected communities is essential for meaningful public engagement. The following table describes key stakeholder groups:

Table 28: potentially affected communities

Stakeholder Group	Description
Government Agencies	<ul style="list-style-type: none"> National and regional authorities with a regulatory interest in the project.
Ministry of Health and Social Services	<ul style="list-style-type: none"> Authority for healthcare service delivery.
Roads Authority	<ul style="list-style-type: none"> Responsible for road infrastructure and potential improvements.
Erongo Regional Electricity Distribution Supplier (Erongo RED)	<ul style="list-style-type: none"> Authority for electricity provision and future energy demands.
Henties Bay Municipality	<ul style="list-style-type: none"> Provides critical infrastructure and local services (water, sanitation, waste management).
Erongo Regional Council	<ul style="list-style-type: none"> Regional government body.
Erongo Region Governor	<ul style="list-style-type: none"> Head of the Erongo Region.
Local Communities	<ul style="list-style-type: none"> Residents potentially affected by the project.
General Public	<ul style="list-style-type: none"> Interested individuals who may not live in the immediate vicinity.

12.2 Consultation Process

The public consultation process has been ongoing throughout the Environmental and Social Impact Assessment (ESIA) and will continue as the project progresses. Key activities include:

Table 29: Public Consultation activities

Activity	Date	Description
Public Notices	Ongoing	Posters displayed at key locations.
Direct Communication	November / December 2024	Letters delivered to nearby residents.
Newspaper Advertisements	November / December 2024	Notices published in local newspapers.
Stakeholder Meeting	no interest from stakeholders	On-site meeting with project proponents, stakeholders, and local authorities.
Public Comment Period (Draft Scoping Report)	2 week period	Opportunity for review and feedback on the report.

Meeting with the Proponent, Funders, and other Project Team	Ongoing	Platform for information sharing and ongoing dialogue.
Additional Stakeholder Engagement (ongoing)	Throughout ESIA process	Ongoing identification and engagement of additional stakeholders based on feedback.

12.3 Key Issues Raised

A summary of concerns and feedback received from stakeholders during consultations will be included in the final ESIA report. Key topics may include:

- Potential impacts on traffic congestion and road infrastructure.
- Adequacy of existing electricity capacity to meet future energy demands.
- Potential strain on local services (water, sanitation, waste management) due to increased population.
- Social and economic impacts on the surrounding community (e.g., job creation, housing demands).

12.4 Response to Stakeholder Feedback

All stakeholder feedback will be carefully considered and addressed as follows:

- Acknowledgment of all comments received.
- Analysis of comments by the EIA team.
- Incorporation of relevant feedback into the EIA process.
- Provision of written responses to significant comments in the final EIA report.
- Revision of the Draft Scoping Report and Draft EIA Report based on public input, if necessary.

A comprehensive response to stakeholder feedback demonstrates transparency and commitment to addressing community concerns.

13 CONCLUSIONS AND RECOMMENDATIONS

13.1 Summary of Impacts and Mitigation

The EIA process has identified a range of potential environmental and social impacts associated with the proposed mixed-use township development. These impacts vary depending on the project phase (construction, operation, decommissioning) and can be categorized as follows:

- **Air Quality:** Dust emissions from construction activities and potential exhaust emissions during operation.
- **Water Resources:** Increased water demand for construction and operation, risk of accidental spills.
- **Biodiversity:** Habitat disturbance for flora and fauna, potential disruption of migration patterns.
- **Socio-economic:** Job creation and economic benefits for local communities, potential disruptions to local traffic patterns and livelihoods.
- **Noise:** Construction noise impacting nearby communities, potential operational noise from machinery.
- **Cultural Heritage:** Potential disturbance of archaeological sites or culturally significant locations.

13.2 Mitigation Measures

A comprehensive Environmental and Social Management Plan (ESMP) will be developed to address these potential impacts. Key mitigation measures proposed include:

- **Air Quality:** Implement dust suppression techniques (e.g., water spraying) during construction; maintain construction vehicles properly.
- **Water Resources:** Implement water conservation practices throughout the project lifecycle; develop spill prevention plans and wastewater treatment systems.
- **Biodiversity:** Conduct pre-construction surveys to identify sensitive habitats; implement habitat restoration plans and restrict construction activities during critical breeding seasons.
- **Socio-economic:** Implement a Local Employment Policy to prioritize hiring local residents; ensure effective communication and coordination with affected communities regarding project schedules and impacts.
- **Noise:** Limit construction hours to minimize disturbance; use noise barriers or sound insulation for noisy machinery.
- **Cultural Heritage:** Conduct archaeological assessments prior to construction; develop protocols for reporting and protecting any discovered artifacts.

13.3 Recommendations for Stakeholders

The following recommendations are directed toward key stakeholders involved in the proposed mixed-use township development:

- **Project Proponent:**

- Commit to transparent communication with stakeholders throughout the project lifecycle.
- Allocate sufficient resources for ESMP implementation, monitoring, and capacity-building efforts.
- Establish a grievance redress mechanism to address community concerns.
- **Regulatory Authorities:**
 - Provide guidance and support to ensure compliance with environmental and social regulations.
 - Facilitate stakeholder engagement processes and public consultations.
- **Local Communities:**
 - Engage actively with project proponents and share concerns, expectations, and recommendations.
 - Participate in public consultation meetings to ensure voices are heard.
- **Consultants and Contractors:**
 - Ensure adherence to mitigation measures outlined in the ESMP.
 - Foster collaboration and communication between project teams and local stakeholders.

13.4 Final Thoughts

The proposed mixed-use township development on Portion 117 Of the Farm of Henties Bay Townland No. 133 Situated South of Henties Bay, Namibia represents an opportunity to enhance local economic growth and community development while adhering to sustainable practices. By prioritizing environmental and social considerations through effective planning and stakeholder engagement, the project can serve as a model for future developments in the Erongo region.

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ANNEXURES

1. EAP Company Profile
2. Newspaper Adverts
3. Background Information Documents (BID)
4. Notices
5. Minutes of Public Meeting
6. Attendance Register
7. Attendance register
8. MC & Council Minutes & Ministerial approval
9. Other – Locality Maps