



ENVIRONMENTAL MANAGEMENT PLAN:

FOR THE CONSTRUCTION OF ROADS, AND ASSOCIATED INFRASTRUCTURE THROUGH THE FORMALISATION OF ONAWA EXT 1 TO 7 OSHANA REGION

PROPONENT:	CONSULTANT:
OSHAKATI TOWN COUNCIL P/BAG 5530 OSHAKATI NAMIBIA	URBAN DYNAMICS AFRICA P O Box 20837 WINDHOEK NAMIBIA
SUBMISSION: MINISTRY OF ENVIRONMENT FORESTRY AND TOURISM PRIVATE BAG 13306 WINDHOEK NAMIBIA 	Reference: 1328 Enquiries: Heidri Bindemann-Nel TEL: +264-61-240300 EMAIL: heidri@udanam.com

DOCUMENT INFORMATION

Title	Environmental Management Plan for the construction of roads, and associated infrastructure through the formalisation of Onawa Ext 1 to 7 Oshana Region.
Client	Oshakati Town Council
Proponent Contact Person	Tunomukwathi Ashipala-Muma
Proponent Email	Ashipala@oshtc.na
Project Manager	Allison Anderson
Project Manager Email	allison@udanam.com
Author	Jade de Klerk
Reviewer	Heidri Bindemann-Nel
Keywords	Public Roads, Bulk Infrastructure, Environmental Management Plan
Status	Draft
Report No.	1
Company	Urban Dynamics Africa (Pty) Ltd.
MEFT App Ref	APP-006259
UDA Project No.	Onawa 1329

EXECUTIVE SUMMARY

This Environmental Management (EMP) has been prepared for the Onawa Extension 1, 2, 3, 4, 5, 6, and 7 township developments, on the Remainder of Farm Oshakati Town and Townlands No. 880, within Oshakati, Oshana Region, Namibia. The project is initiated by the Oshakati Town Council and will provide for formalisation of 2 150 erven zoned residential, business, institutional, recreational, and public open space.

The EMP forms part of the application for an Environmental Clearance Certificate (ECC) in compliance with the Environmental Management Act, 2007 (Act No. 7 of 2007) and its Regulations. The project involves the phased construction of bulk infrastructure, including roads, water supply pipelines, sewer networks, and electricity reticulation.

The project is expected to contribute positively to the socio-economic development of Oshakati through:

- Provision of serviced land for formal housing and services;
- Job creation during construction;
- Improved access to water, sanitation, electricity, and roads.

Potential environmental and social impacts have been identified, and mitigation measures are outlined in this EMP, including:

- Dust, noise, and traffic disturbances;
- Temporary pressure on access roads;
- Safety for workers and nearby residents;
- Risk of unmanaged construction waste and erosion.

The EMP outlines mitigation strategies, monitoring procedures, and defines the responsibilities of key role players, including the Contractor, Environmental Control Officer (ECO), and the Employer's Representative (ER). It also incorporates training, public engagement, and reporting procedures to ensure compliance and sustainability during both the construction and operational phases.

The EMP is a living document and will be reviewed and updated as the project progresses to reflect changes in scope, site conditions, legislation, or stakeholder input. All amendments must be approved by the Oshakati Town Council and, where applicable, the Ministry of Environment, Forestry and Tourism (MEFT) before implementation.

Key Benefits and Compliance Summary:

The Onawa Extension 1 to 7 project will directly support structured urban growth in Oshakati, create employment opportunities, and improve essential infrastructure. The EMP has been developed in accordance with Namibian legislation and recognised environmental best practice, ensuring that all potential impacts are identified, managed, and monitored effectively. With active stakeholder engagement, transparent reporting, and strict adherence to mitigation measures, the project can proceed in a manner that delivers long-term social and economic benefits while safeguarding environmental integrity.

Table of Contents

1	INTRODUCTION	1
2	PROJECT DESCRIPTION	1
2.1	SUMMARY OF THE SITE	1
2.1.1	Locality	1
2.1.2	Ownership, Size, Shape, and Land Use Activities	2
2.1.3	Road Network and Utility Services	4
2.1.4	Environmental Conditions	4
2.1.5	Socio-Economic Conditions	4
2.2	SUMMARY OF POTENTIAL IMPACTS	5
2.2.1	Benefits of the Project	5
2.2.2	Potential Negative Impacts during Construction	5
3	PROJECT STANDARDS AND LEGAL FRAMEWORK	5
3.1	NATIONAL AND LOCAL LEGISLATION & PERMIT REQUIREMENTS	11
4	PLANNING AND DESIGN PHASE	14
5	PROJECT ACTIVITIES	15
5.1	PLANNED BULK INFRASTRUCTURE INCLUDES	15
5.2	CONSTRUCTION ACTIVITIES WILL INCLUDE	15
5.3	CONSTRUCTION EQUIPMENT WILL INCLUDE	15
5.4	DEVELOPMENT STAKEHOLDERS	16
5.5	RESPONSIBILITIES	16
5.5.1	Employer's Representative (ER)	16
5.5.2	Environmental Control Office (ECO)	17
5.5.3	Contractor	17
6	TRAINING AND AWARENESS	18
7	CONSTRUCTION MITIGATION DETAIL	19
7.1	PLAN COMPONENT 1: WASTE MANAGEMENT	20
7.1.1	Construction Waste Management	20
7.1.2	Operational Waste Management	14
7.2	PLAN COMPONENT 2: HEALTH AND SAFETY	14

7.2.1	Construction Health & Safety	14
7.2.2	Ablutions	15
7.3	PLAN COMPONENT 3: NOISE AND DUST CONTROL	15
7.3.1	Noise Prevention	15
7.3.2	Dust Prevention.....	16
7.4	PLAN COMPONENT 4: TRAFFIC MANAGEMENT	16
7.5	PLAN COMPONENT 5: ENVIRONMENTAL TRAINING & AWARENESS	16
7.6	PLAN COMPONENT 6: ENVIRONMENTAL CONSERVATION.....	16
7.7	PLAN COMPONENT 7: EMPLOYMENT & RECRUITMENT	17
7.8	PLAN COMPONENT 8: STAKEHOLDER COMMUNICATION	17
7.9	PLAN COMPONENT 9: SOCIO-ECONOMIC AND MISCELLANEOUS	18
7.9.1	Chance-Find Heritage Procedures	18
7.9.2	Grievance and Feedback Mechanism.....	18
8	CONCLUSION	19

LIST OF TABLES

TABLE 1: NATIONAL AND ENVIRONMENTAL LEGISLATION	11
TABLE 2: INFRASTRUCTURE AND HAZARDOUS SUBSTANCES	12
TABLE 3: HEALTH, SAFETY, AND SOCIAL LEGISLATION.....	12
TABLE 4: OTHER RELEVANT FRAMEWORKS	12
TABLE 5: MANAGEMENT REQUIREMENTS FOR THE PLANNING FOR THE PLANNING AND DESIGN PHASE	14
TABLE 6: KEY STAKEHOLDERS IN ONAWA EXTENSION 1-7 DEVELOPMENT	16
TABLE 7: TRAINING AND AWARENESS	18
TABLE 8: GENERIC AND SITE-SPECIFIC ENVIRONMENTAL MANAGEMENT ACTIONS.....	19

Figures

FIGURE 1: LOCALITY OF ONAWA EXT 1-7 WITHIN OSHAKATI	2
FIGURE 2: ONAWA EXTENSION 1-7 AND ROAD NETWORK	3

LIST OF ABBREVIATIONS

BID	Background Information Document
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EMP	Environmental Management Plan
ER	Employer's Representative
E&S–	Environmental and Social
GN	Government Notice
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
I&AP–	Interested and Affected Party
ILO	International Labour Organization
MEFT	Ministry of Environment, Forestry and Tourism
NamWater	Namibia Water Corporation
OPE	Oshakati Premier Electric
NSA –	Namibia Statistics Agency
PPE –	Personal Protective Equipment
TB	Tuberculosis
UDA	Urban Dynamics Africa (Pty) Ltd

1 INTRODUCTION

The Oshakati Town Council is formalising the township development project to be known as Onawa Extension 1 to 7. The project site is located on Portions 129 to 135 of the remainder of Farm Oshakati Town and Townlands No. 880, Oshana Region, Namibia. The township comprises 2 150 erven zoned for residential, business, institutional, recreational, and public open space uses. The purpose is structured urban growth, provision of serviced land, improved socio-economic conditions, and inclusive community development.

This Environmental Management Plan (EMP) supports the application for an Environmental Clearance Certificate (ECC) under the Environmental Management Act, 2007 (Act No. 7 of 2007), providing practical mitigation measures and responsibilities during construction and operational phases.

During the construction phase, the appointed contractor (to be appointed) is responsible for implementing the provisions of this EMP under the supervision of the proponent (Oshakati Town Council) Representative and an Environmental Control Officer (ECO). After construction, the Oshakati Town Council will assume responsibility for ensuring compliance with the EMP during the operational phase, including the maintenance of installed infrastructure and services.

2 PROJECT DESCRIPTION

This section outlines the key features of Onawa Extension 1 to 7 the remainder of Farm Oshakati Town and Townlands No. 880 formalisation Project. It includes the location, land ownership, land use planning, planned infrastructure, and the environmental and socio-economic setting. The section also identifies key development stakeholders and summarises the anticipated environmental and social implications. The aim is to provide a well-rounded understanding of the project and the context for environmental management during its implementation.

2.1 SUMMARY OF THE SITE

2.1.1 LOCALITY

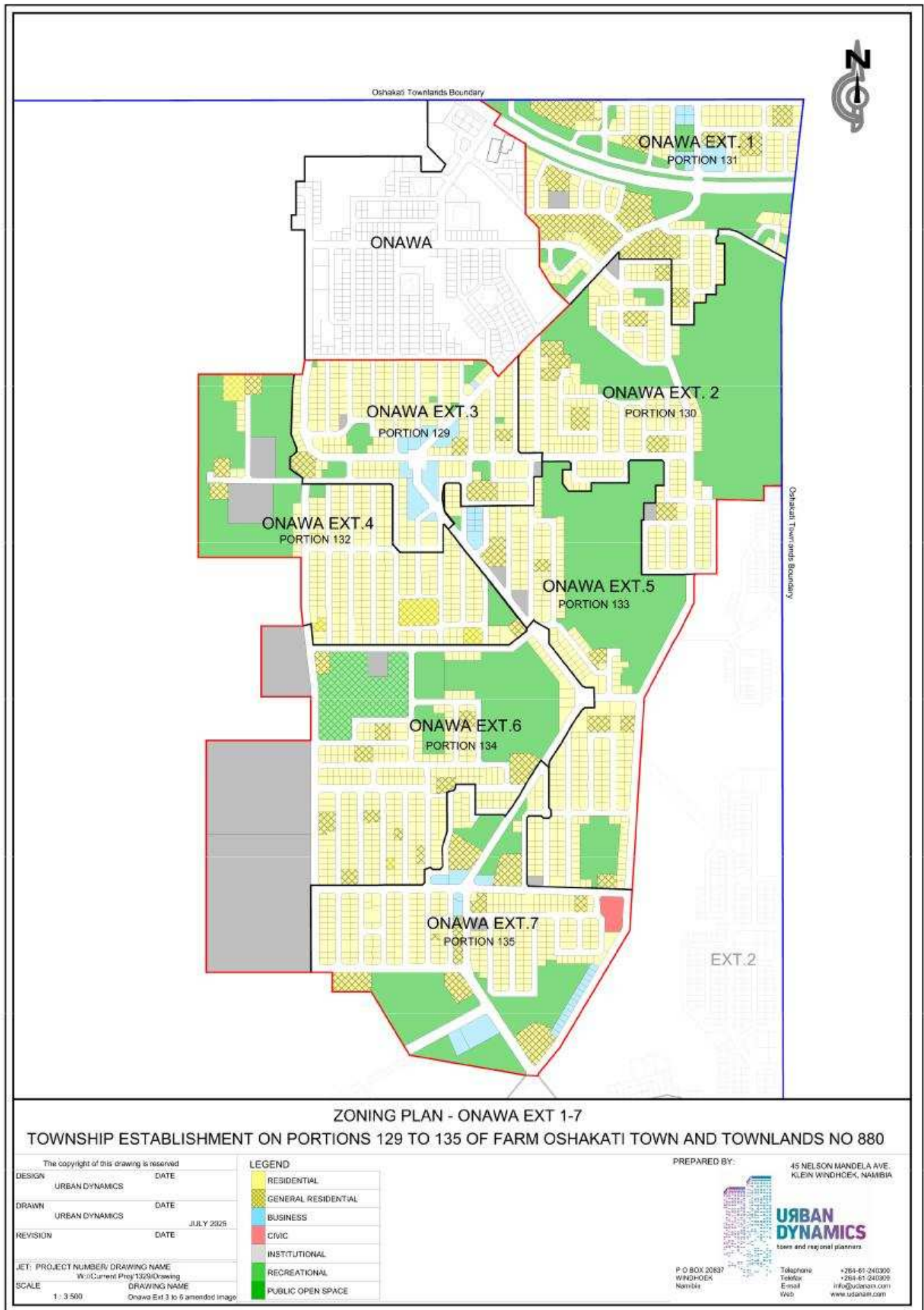
Onawa Extension 1 to 7 is located on Portions 129 to 135 of the remainder of Farm Oshakati Town and Townlands No. 880 (approximate coordinates: -17.761764° S, 15.728186° E), in the Oshana Region, Namibia. The site occupies the land south of the D3671 road leading to Okatana to the west and Ongwediva to the east. The site obtains access through the internal network of Onawa. Figure 1 shows the locality of the sites within Oshakati.

[illegible]

The land is owned and administered by the Oshakati Town Council and measures approximately

It has been subdivided into 2 150 erven designated for residential, business, institutional, recreational and public open space use. Figure 2, shows the layout of the new township. The layout reflects both planned and existing uses on the site and is being formalised as part of the township establishment process. The layout seeks to formalise these uses while enabling structured infrastructure development. The site currently accommodates a number of structures.

Figure 2: Onawa Extension 1-7 and Road Network



2.1.3 ROAD NETWORK AND UTILITY SERVICES

The following road network and utility services are within the site:

- **Road:** The internal road network will consist of road reserves ranging between 13 m and 20 m, designed to accommodate residential access, emergency services, and utility corridors. These roads will connect directly to the existing road system in Onawa and the D3671 road, allowing for seamless integration with the town's transport network.
- **Sewerage:** A sewer pump station and reticulation network will service formalised areas within the development. The system is designed to link with Oshakati's existing wastewater infrastructure. Informal areas without immediate access to sewer lines will continue to rely on septic tanks until phased connections are completed.

2.1.4 ENVIRONMENTAL CONDITIONS

Oshakati experiences a hot, arid climate with low humidity and monthly temperatures ranging from 17°C to 36°C. Mild seasonal winds prevail from the east. The gently sloping topography functions as a rainwater catchment area, the sites also have oshanas/watercourses. The site's vegetation consists of the Oshana-Kalahari Mosaic, as this is a formalisation, the impact on vegetation within these extensions will be minimal.

2.1.5 SOCIO-ECONOMIC CONDITIONS

Oshana Region is one of Namibia's most populous regions, with a recorded population of 230 801 as of the 2023 Census, reflecting rapid population growth and a density due to significant population growth and density of 26.7 people per km². Oshakati is rapidly urbanising, which is experiencing increased demand for serviced land and housing. High unemployment rates persist despite an increase in mean household consumption. This underscores the urgency of economic diversification. There is a demand for improved housing options, and targeted initiatives are essential for enhancing education and health infrastructure in the region.

2.2 SUMMARY OF POTENTIAL IMPACTS

This section identifies the potential environmental and social (E&S) risks associated with the construction phase of the project. The planning and construction of bulk infrastructure may generate both positive and negative impacts. The following impacts were identified through the scoping process:

2.2.1 BENEFITS OF THE PROJECT

- Provision of formalised serviced erven;
- Stimulation of economic development and providing new employment opportunities during construction; and
- Stimulation of the health and wellness of the Onawa and the Oshana Region

2.2.2 POTENTIAL NEGATIVE IMPACTS DURING CONSTRUCTION

- Impact on nearby residential properties due to dust, noise, and traffic;
- Degradation of existing gravel access roads from construction vehicle;
- Impact on the health and safety of workers; and
- Impact of unmanaged waste.

3 PROJECT STANDARDS AND LEGAL FRAMEWORK

Onawa Extension 1 to 7 has undergone a scoping assessment to identify potential environmental and social (E&S) risks associated with the construction phase. To ensure responsible and sustainable project delivery, it will comply with a comprehensive set of national, local, and international standards, guidelines, and regulatory requirements, which apply throughout both the construction and operational phases.

Adherence to this framework ensures the project meets Namibia's legal obligations, aligns with recognised international good practice, supports sustainable development objectives and minimises adverse impacts on the environment and local communities.

3.1 NATIONAL AND LOCAL LEGISLATION & PERMIT REQUIREMENTS

The development will comply with all relevant Namibian national legislation. These frameworks govern a wide range of aspects, including environmental protection, infrastructure development, occupational health and safety, social safeguards, land use planning, and the conservation of heritage resources. Tables 1 to 4 summarise the key legislative provisions and their implications for the project.

Table 1: National and Environmental Legislation

THEME	LEGISLATION	PROVISION	PROJECT IMPLICATIONS
NATIONAL	Constitution of the Republic of Namibia (Amendment Act 34/1998)	Guarantees property rights (Act. 16(1)) and mandates sustainable ecosystem management (Act. 95(i))	Supports land ownership and mandates environmental sustainability.
ENVIRONMENTAL	Environmental Management Act, 7 of 2007	Requires Environmental Impact Assessments (Sec 27); mandates public participation (Sec 2(b-c))	Obtain Environmental Clearance Certificate (ECC) and hold consultations.
	Environmental Impact Assessment Regulations GN 57/2007	Lists activities requiring environmental clearance including roads and pipelines (Sec 10(1))	ECC and consultation processes are compulsory.
	Environmental Management Act, 7 of 2007	Regulates noise, dust control, and land rehabilitation.	Construction must mitigate noise, dust, and restore land.
	Environmental Impact Assessment Regulations GN 57/2007	Requires ECC for activities including construction affecting watercourses, canals, and wetlands (Sec. 10(1)(a)(b))	Must assess and mitigate impacts on watercourses; obtain ECC before commencement of such activities.
	Water Act, 54 of 1956	Regulates abstraction, diversion, and use of water resources.	Obtain water use permits for abstraction, diversion, or discharge; comply with water protection measures.

Table 2: Infrastructure and Hazardous Substances

THEME	LEGISLATION	PROVISION	PROJECT IMPLICATIONS
INFRASTRUCTURE	EIA Regulations GN 57/2007	Covers pipelines and roads (Sec 10.1(a), 10.1(b))	ECC required for pipeline and road works.
HAZARDOUS SUBSTANCES	EIA Regulations GN 57/2007	Regulates hazardous materials handling and waste permits (Sec 9.1, 9.2)	Ensure safe storage, handling, and disposal of hazardous substances.

Table 3: Health, Safety, and Social Legislation

THEME	LEGISLATION	PROVISION	PROJECT IMPLICATIONS
HEALTH & SAFETY	Labour Act, 11 of 2007	Regulates worker rights and prohibits child/forced labour.	Comply with labour laws; promote fair employment.
	Public and Environmental Health Act, 2015	Covers health standards, waste management, and water quality.	Maintain health and safety compliance.
	Health and Safety Regulations, 2011	Requires workplace safety measures, PPE, and accident prevention.	Implement occupational health and safety measures.

Table 4: Other Relevant Frameworks

THEME	LEGISLATION	PROVISION	PROJECT IMPLICATIONS
FORESTRY	Forestry Act, 12 of 2001; Forest Regulations GN 170/2015	Protects trees; requires permits for removal.	Obtain permits before tree removal; implement safeguards.
SOIL CONSERVATION	Soil Conservation Act, 76 of 1969	Regulates erosion prevention and soil protection.	Apply erosion control measures.
WASTE MANAGEMENT	Waste Management and Pollution Control Act	Regulates disposal of solid and hazardous waste.	Comply with waste disposal and effluent discharge standards.

CHILD LABOUR	Labour Act, 11 of 2007; Child Care and Protection Act, 2015	Prohibits child labour; sets employment age limits.	Enforce zero tolerance on child labour.
WORKER RIGHTS	ILO Conventions (29, 87, 98, 100, 111)	Prohibits forced labour; guarantees union rights and equal pay.	Ensure fair and non-discriminatory working conditions.
ARCHAEOLOGY	National Heritage Act, 27 of 2004; Burial Place Ordinance	Protects heritage sites and graves.	Report findings; follow legal procedures for heritage sites.

4 PLANNING AND DESIGN PHASE

This section outlines essential environmental and management provisions that must be incorporated during the planning and design phase of the Onawa Extension 1 to 7 project. These provisions are necessary to ensure the project complies with environmental regulations and supports socio-economic development objectives prior to construction.

Table 5 below summarises the management requirements for material sourcing, EMP integration in tenders, financial provisions for training and mitigation, and inclusive recruitment strategies.

Table 5: Management Requirements for the Planning for the planning and Design Phase

ASPECT	MANAGEMENT REQUIREMENTS
Natural Building Material	All building materials (sand and gravel) must only be sourced from a local registered borrow pit. Road building material (G4, G5, etc.) must be sourced in collaboration from approved borrow pits within the townlands. If suitable material can only be sourced from untouched land to create a new borrow pit, then that is legally subject to an EIA by the Council.
EMP Implementation	Relevant sections of this EMP should be included in the tender documents for all construction so that tenderers can implement the EMP.
Financial Provisions	• Financial provision for the facilitation of an induction programme for senior, temporary construction personnel and subcontractors and associated personnel should be included as a cost item within tenders concerning the construction and/or operation and maintenance of the proposed development. • Financial provision for a Tree Management Plan compilation should be included as a cost item within construction tender documents.
Recruitment	• Provisions designed to maximise the use of local labour should be included within tenders concerning the construction of bulk and reticulation services. • A provision stating that all unskilled labour should be sourced locally should be included in tenders concerning the construction of all development services. • Specific recruitment procedures ensuring local firms enjoy preference during tender adjudication should be included in tenders concerning the construction of the development's bulk services. • Provisions promoting gender equality pertaining to recruitment should be included in tenders concerning the construction of the township services. • Women should be given preference for specific jobs (e.g. those jobs that require relatively less physical strength).

5 PROJECT ACTIVITIES

The development is a phased infrastructure development intervention focused on delivering serviced land for residential, institutional, business, recreational, and public open space use within Oshakati. The Oshakati Town Council is the project proponent and has already undertaken limited informal development at the site. This EMP considers both the existing informal infrastructure and the planned formal infrastructure components.

5.1 PLANNED BULK INFRASTRUCTURE INCLUDES

The planned bulk infrastructure includes:

- ❖ Roads: Construction of a gravel road network with widths between 13 m and 20 m, designed to accommodate light vehicles and service vehicles. Roads will connect to the existing Onawa street network.
- ❖ Sewerage: Construction of a sewer pump station and closed reticulation network to service formal erven. Areas not yet connected will temporarily use septic tanks or dry systems.

5.2 CONSTRUCTION ACTIVITIES WILL INCLUDE

Construction within Onawa Extensions 1 to 7 will include:

- ❖ Light bush clearing and removal of informal waste or debris.
- ❖ Earthworks, such as levelling, trenching, and backfilling for service installation.
- ❖ Installation of roads, water pipelines, sewer lines, and electrical infrastructure.
- ❖ Erection of streetlights, transformer bases, and electrical poles.
- ❖ Connection of infrastructure to the existing municipal systems.
- ❖ Placement of signage, fencing, and temporary traffic barriers to ensure safety.

5.3 CONSTRUCTION EQUIPMENT WILL INCLUDE

Construction equipment needed for the construction will include:

- ❖ Excavators
- ❖ Graders
- ❖ Water trucks
- ❖ Tipper trucks
- ❖ Compacting equipment
- ❖ Trenchers and hand tools

5.4 DEVELOPMENT STAKEHOLDERS

Table 6 summarises the main stakeholders involved in the development, including their roles, engagement activities, and an indicative timeline for involvement.

Table 6: Key Stakeholders in Onawa Extension 1-7 Development

STAKEHOLDER	ROLE
OSHAKATI TOWN COUNCIL	Project proponent and infrastructure owner/operator
ENVIRONMENTAL CONTROL OFFICER (ECO)	On-site environmental monitoring during construction
CONTRACTOR (TBC)	Construction of bulk infrastructure and services
CONSTITUENCY OFFICE	Local governance and coordination with community
SURROUNDING RESIDENTS	Interested and Affected Parties (I&APs)

5.5 RESPONSIBILITIES

The successful implementation of this Environmental Management Plan (EMP) requires clearly defined roles and responsibilities for all parties involved. The Oshakati Town Council, as the project proponent, holds ultimate responsibility. However, day-to-day implementation during construction may be delegated to contractors and environmental professionals. The roles of the Employer's Representative (ER), Environmental Control Officer (ECO), and Contractor are outlined below.

5.5.1 EMPLOYER'S REPRESENTATIVE (ER)

The ER is appointed by the Developer (Oshakati Town Council) to manage all construction contracts. The ER may be an internal staff member or an external consultant with relevant qualifications and experience. The ER will assist in the coordination and enforcement of the EMP.

Key responsibilities:

- ❖ Ensure the Contractor has obtained all required permits and authorisations.
- ❖ Assist the Contractor in resolving environmental issues in collaboration with the ECO.
- ❖ Monitor compliance with the EMP and relevant legal requirements.
- ❖ Issue warnings or remove individuals and/or equipment found non-compliant with EMP provisions.
- ❖ Recommend penalties or fines for transgressions or non-conformances.
- ❖ Contribute to monthly EMP review reports submitted to the Developer.

5.5.2 ENVIRONMENTAL CONTROL OFFICE (ECO)

The ECO is appointed by the ER and must be a competent individual, preferably with training in occupational health and safety in construction environments. If no ECO is appointed, the ER assumes the ECO's responsibilities. The ECO is primarily responsible for ensuring on-site environmental compliance.

Key responsibilities:

- ❖ Assist the ER in confirming that legal permits have been secured before construction starts.
- ❖ Conduct monthly environmental site inspections to assess EMP implementation.
- ❖ Monitor and audit all construction activities for compliance with the EMP.
- ❖ Advise the ER and Contractor on environmentally sound practices and solutions.
- ❖ Maintain open communication between the Developer, Contractor, ER, and Interested and Affected Parties (I&APs).
- ❖ Coordinate and deliver environmental induction and awareness training to all site personnel.
- ❖ Maintain training records and verify that all staff have received appropriate environmental and health and safety training.
- ❖ Enforce "chance-find" procedures in the event of archaeological or heritage discoveries.
- ❖ Recommend the removal of non-compliant workers or equipment in consultation with the ER.
- ❖ Participate in reviewing and updating the EMP monthly during the construction phase.

5.5.3 CONTRACTOR

The appointed Contractor is directly responsible for implementing all on-site environmental management actions during construction. The Contractor must integrate relevant EMP clauses into sub-contractor agreements to ensure legal enforceability across all levels.

Key responsibilities:

- ❖ Fully implement the EMP provisions during all construction activities.
- ❖ Maintain an on-site copy of the EMP for reference by workers and stakeholders.
- ❖ Ensure all personnel attend induction and ongoing environmental and safety training.
- ❖ Keep complete records of training sessions, including participant names, dates, and topics covered.
- ❖ Implement measures to minimise dust, noise, waste, erosion, and risks to worker and public health.
- ❖ Participate in site inspections and audits by the ECO and ER.

- ❖ Cooperate with the ER and ECO in addressing any incidents of non-compliance.
- ❖ Liaise with the Developer and community representatives regarding construction-related issues.

6 TRAINING AND AWARENESS

Effective environmental management requires that all personnel working on the Onawa Extension 1-7 project are properly informed and trained regarding the requirements and provisions of this EMP. Table 7 outlines the training framework:

Table 7: Training and Awareness

TRAINING TYPE	TRAINING CONTENT	RESPONSIBLE PARTY	TARGET AUDIENCE	FREQUENCY
INDUCTION TRAINING	– Purpose and objectives of the EMP; – Environmental risks and mitigation; – Health & safety (PPE use, emergencies); and – Communication channels.	Contractor / ECO	All new employees, subcontractors, visitors	Before work commencement
REFRESHER TRAINING	– Reinforcement of EMP provisions – Updates on emerging environmental issues	Contractor / ECO	All personnel	Quarterly or as needed
TOOLBOX TALKS	– Practical, task-specific topics: dust, noise, waste, hazardous materials, erosion	Contractor	All site workers	Weekly or per activity
HEALTH AWARENESS	– HIV/AIDS education - General health and well-being	Contractor with Ministry of Health	All workers	Periodically (as arranged)
TRAINING DOCUMENTATION	– Attendance registers - Records of content, dates, names	Contractor (monitored by ECO)	All trained personnel	Ongoing throughout project
TRAINING OVERSIGHT	– Ensure training is conducted and evaluated - Address gaps or non-compliance	ECO	Supervises Contractor & site personnel	Continuous oversight

7 CONSTRUCTION MITIGATION DETAIL

This section sets out the environmental and social measures to be implemented during construction and operation of the Onawa Extension 1 to 7 bulk infrastructure. These measures ensure compliance with Namibian legislation, protect health and safety, and support sustainable development.

Table 8 lists the nine Planning Components that address key environmental management themes. Each component is described in detail in the subsections that follow to guide on-site implementation by the Contractor, ECO, and ER.

Table 8: Generic and Site-Specific Environmental Management Actions

THEME:	OBJECTIVE:	MITIGATION DETAIL:	
		GENERIC:	SITE-SPECIFIC
WASTE MANAGEMENT:	Minimise and avoid all waste pollution associated with construction.	PLAN COMPONENT 1	YES
HEALTH AND SAFETY MANAGEMENT:	Focusing on the well-being of the labourers and the community near the construction.	PLAN COMPONENT 2	YES
NOISE AND DUST MANAGEMENT:	Minimise and avoid all noise and dust associated with construction.	PLAN COMPONENT 3	YES
TRAFFIC MANAGEMENT:	Minimise and avoid traffic impacts.	PLAN COMPONENT 4	YES
ENVIRONMENTAL TRAINING AND AWARENESS:	Awareness creation regarding the provisions of the EMP as well as the importance of safeguarding environmental resources.	PLAN COMPONENT 5	YES
ENVIRONMENTAL CONSERVATION:	Minimise the effect of the activity and protect the social environment in which it is happening.	PLAN COMPONENT 6	YES
EMPLOYMENT /RECRUITMENT	Ensure the protection of workers' rights and safety in Namibia.	PLAN COMPONENT 7	YES
STAKEHOLDER COMMUNICATION:	Provide a platform for stakeholders to raise grievances and receive feedback and hence, minimise negative conflict.	PLAN COMPONENT 8	YES
SOCIO-ECONOMIC AND MISCELLANEOUS:	Protecting cultural and general well-being of the affected.	PLAN COMPONENT 9	NA

7.1 PLAN COMPONENT 1: WASTE MANAGEMENT

Objective: Handle, segregate, and dispose of all waste responsibly.

Scope: Covers both construction-phase and operational-phase waste control, with generic and site-specific measures.

At the Onawa Extension 1 to 7 construction site in Oshakati, high importance shall be placed on waste management, and it needs to be performed daily. Solid waste is expected to be the major source of waste, therefore, a Waste Management Plan (WMP) should be compiled. The WMP should address measures for the handling and disposal of general waste and hazardous waste on site, as detailed below:

7.1.1 CONSTRUCTION WASTE MANAGEMENT

General Waste:

- ❖ Keep site tidy; collect all general waste daily.
- ❖ Prohibit burial or burning of waste.
- ❖ Prevent dumping into watercourses.
- ❖ Provide separate labelled bins for general and hazardous waste.
- ❖ Train workers in proper disposal practices.

Hazardous Waste:

- ❖ Equip all machinery with drip trays; clean daily and dispose of residues as hazardous waste.
- ❖ Collect wet concrete, unbound/dry cement, and cement-infused water in hazardous waste containers.
- ❖ Maintain a spill kit with shovels, gloves, bags, drip trays, dust masks, and biodegradable degreaser.
- ❖ Store fuels and chemicals on impermeable surfaces within bounded areas.

Duration: Short-term (construction phase)

Responsible: Contractor (implementation), ECO & ER (monitoring)

7.1.2 OPERATIONAL WASTE MANAGEMENT

- The Oshakati Town Council should provide available waste collection services for households and businesses within Onawa Extension 1 to 7.
- Pump sewerage via a closed pipeline system into Town Council's wastewater network.
- **Note:** The Town Council currently has limited waste management infrastructure and capacity. As part of the township's long-term sustainability, it is recommended that the Council develop a phased Waste Management Plan to improve collection frequency, introduce waste segregation, and identify suitable disposal or recycling options in line with national standards.

Duration: Long-term (operational)

Responsible: Town Council (collection & maintenance)

7.2 PLAN COMPONENT 2: HEALTH AND SAFETY

Objective: Protect workers and the community from health and safety hazards.

Scope: Applies to all personnel and site visitors during construction, covering hazard identification, PPE, medical support, and emergency procedures.

At the construction site, the health and safety of workers and adjacent communities is paramount. Monthly safety briefings and strict adherence to PPE requirements are mandatory. A site-specific Health & Safety Plan must be developed, including emergency contact protocols with Oshakati State Hospital and on-site first-aid facilities:

Objective: Protect workers and the community from health and safety hazards.

7.2.1 CONSTRUCTION HEALTH & SAFETY

The following health and safety regulations are relevant on-site:

- ❖ Comply with Labour Act 11 of 2007 and Regulation 156.
- ❖ Appoint a qualified Health & Safety Officer.
- ❖ Provide PPE, fire extinguishers, and secured fuel storage.
- ❖ Prohibit personnel transport in construction vehicles.
- ❖ Secure loads, demarcate hazards, and display warning signage.
- ❖ Conduct toolbox talks on emergency response and hazard awareness.

HIV/AIDS & TB Training: Partner with Ministry of Health and Social Services for periodic on-site sessions.

Emergency Contact: Oshakati State Hospital

- Phone: +264 65 223 3000
- Location: Sam Nujoma Road, Oshakati

7.2.2 ABLUTIONS

The following measures must be implemented for on-site ablution facilities:

- Provide separate, clearly marked toilets for male and female workers (minimum: 1 per 25 females; 1 per 50 males).
- Ensure toilets are well-ventilated, cleaned daily, and supplied with toilet paper, soap, and handwashing facilities with clean water.
- Arrange regular sewage removal to an approved disposal site in compliance with the Public and Environmental Health Act, 2015.
- Locate ablution facilities at least 50 m away from watercourses and drainage lines to prevent contamination.
- Place facilities on stable, level ground to prevent tipping or leakage.
- Provide adequate lighting for safe use after dark.
- Supply cleaning staff with PPE, including gloves, masks, and disinfectants, and train them in hygienic cleaning procedures.
- Maintain a logbook of cleaning and waste removal schedules for ECO inspection.

Duration: Short-term (construction phase)

Responsible: Contractor (implementation), ECO & ER (monitoring)

7.3 PLAN COMPONENT 3: NOISE AND DUST CONTROL

Objective: Minimise and manage noise and dust impacts on nearby residents, businesses, and workers to protect health, comfort, and environmental quality.

7.3.1 NOISE PREVENTION

- Restrict noisy works to 07:00-17:00 on weekdays and 08:00-13:00 on Saturdays.
- Prohibit noise on Sundays and public holidays.
- Notify receptors within 500 m at least 48 hours before after-hours work.

7.3.2 DUST PREVENTION

- Install dust screens and apply water suppression on roads and stockpiles.
- Cover or moisten stockpiles; limit pile heights.
- Issue dust masks to exposed workers.
- Plan dusty activities aligning with favourable wind conditions.

Duration: Short-term (construction)

Responsible: Contractor (mitigation), ECO & ER (monitoring)

7.4 PLAN COMPONENT 4: TRAFFIC MANAGEMENT

Objective: Ensure safe and efficient movement of vehicles and pedestrians.

- Develop a Traffic Management Plan with ER approval.
- Schedule heavy vehicle movements outside peak hours (07:00-08:00; 17:00-18:30).
- Deploy signage, barriers, and flag personnel at crossings.
- Provide dedicated parking and shuttle services if needed.

Duration: Short-term (construction)

Responsible: Contractor (implementation), ER (oversight)

7.5 PLAN COMPONENT 5: ENVIRONMENTAL TRAINING & AWARENESS

Objective: Equip all personnel with knowledge to implement the EMP.

- Conduct induction covering EMP objectives, roles, and emergency procedures.
- Hold refresher trainings quarterly and toolbox talks weekly.
- Record attendance, topics, and feedback; maintain registers onsite.

Duration: Ongoing (construction)

Responsible: Contractor (delivery), ECO & ER (verification)

7.6 PLAN COMPONENT 6: ENVIRONMENTAL CONSERVATION

Objective: Preserve site integrity and prevent ecological damage.

Scope: Applies to all areas of disturbance, with restoration requirements.

On this site, temporary lay-down areas must avoid the nearby drainage line and be regarded and revegetated post-construction to prevent erosion. A site-specific Conservation Plan will map sensitive zones:

- Materials Camp & Lay-Down Areas
- Locate camps on previously disturbed land; avoid watercourses.
- Demarcate storage zones; contain spill risks.
- Restore areas post-use by clearing debris and re-grading.

Duration: Short-term (construction)

Responsible: Contractor (setup), ER & ECO (approval)

7.7 PLAN COMPONENT 7: EMPLOYMENT & RECRUITMENT

Objective: Maximise local employment while ensuring fair labour practices.

Scope: Relates to all hiring and subcontracting on the site.

Priority will be given to qualified Onawa residents for all labour and support roles. A local recruitment register will be maintained, and all contract terms will be clearly explained in both English and Oshivambo:

- Prioritise Oshakati residents in hiring; outline this in tender documents.
- Require sub-contractors to follow local and gender equity guidelines.
- Clearly communicate contract terms; provide translation where necessary.
- Adhere to Labour Act 11 of 2007 regarding minimum wages, child labour, and SMEs.

Duration: Entire construction

Responsible: Contractor (recruitment), ER (monitoring)

7.8 PLAN COMPONENT 8: STAKEHOLDER COMMUNICATION

Objective: Maintain transparent, ongoing dialogue with affected parties.

Scope: Covers grievances logging, regular updates, and community liaison.

A dedicated notice board at the site entry and monthly community meetings in Oshakati will ensure stakeholder concerns are captured. All grievances will be logged in the site register and addressed within 14 days:

- Draft and implement a Communication Plan identifying I&APs, methods, and frequency.
- Centralise all correspondence through the ECO; log all grievances in a site register.
- Provide monthly public updates via notice boards and community meetings.
- Escalate unresolved issues to the Developer and ER within 7 days.

Duration: Throughout construction

Responsible: ECO (liaison), Contractor (reporting), Developer & ER (resolution)

7.9 PLAN COMPONENT 9: SOCIO-ECONOMIC AND MISCELLANEOUS

Objective: Address cultural heritage, community well-being, and miscellaneous socio-economic risks.

Scope: Includes chance finds, community health, local procurement, and grievance closure.

Given the site's proximity to known heritage areas, a chance-find procedure must be in place.

7.9.1 CHANCE-FIND HERITAGE PROCEDURES

- If suspected archaeological or heritage artefacts are uncovered during excavation, stop work immediately.
- Demarcate the find with danger tape and record GPS coordinates if possible.
- Notify the ECO and ER, and contact the National Heritage Council for guidance and permits.
- Do not remove or disturb the find until authorised; allow a qualified archaeologist to inspect.

7.9.2 GRIEVANCE AND FEEDBACK MECHANISM

- Maintain a dedicated grievance logbook at the site office.
- Acknowledge receipt of complaints within 3 working days and aim for resolution within 14 days.
- Summary of grievances and resolutions to be included in monthly EMP compliance reports.

Duration: Throughout construction and first year of operation

Responsible: Contractor (on-site procedures), ECO & ER (monitoring and reporting), Developer (oversight).

8 CONCLUSION

The successful implementation of this EMP is essential to ensure that the Onawa Extension 1 to 7 Township Development delivers its intended socio-economic benefits while minimising environmental and social impacts.

All stakeholders – including the Oshakati Town Council, the appointed Contractor, the Employer's ER, and the ECO – have clearly defined responsibilities to ensure compliance with Namibian legislation and recognised environmental best practices.

By applying the mitigation measures, monitoring requirements, and communication procedures outlined in this EMP, the project can be implemented in a sustainable manner that benefits the Oshakati community and safeguards the surrounding environment.

Continuous monitoring, transparent reporting, and active engagement with I&APs will promote accountability and adaptability throughout both the construction and operational phases.

This EMP is a living document and must be reviewed and updated as the project progresses. Amendments may be made to address changes in project scope, site conditions, legislation, or stakeholder feedback. All revisions must be approved by the Oshakati Town Council and, where applicable, by the Ministry of Environment, Forestry and Tourism (MEFT) before implementation.