URBAN DYNAMICS
town and regional planners

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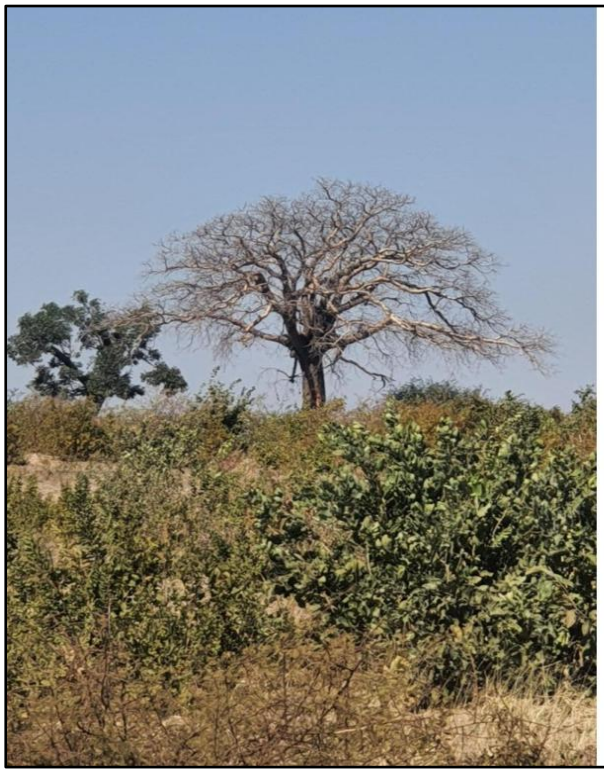
ENVIRONMENTAL SCOPING ASSESSMENT

FOR THE CONSTRUCTION OF ROADS AND BULK INFRASTRUCTURE THROUGH THE TOWNSHIP ESTABLISHMENT ON PORTIONS 157 AND 158, OF THE REMAINDER OF FARM RUNDU TOWN AND TOWNLANDS NO. 1329 (TO BE KNOWN AS SIKANDUKO PROPER AND EXTENSION 1)



PROPONENT:

DEVELOPMENT WORKSHOP NAMIBIA
P O BOX 40723
AUSSPANNPLATZ
WINDHOEK
NAMIBIA

CONSULTANT:

URBAN DYNAMICS AFRICA
P O BOX 20837
WINDHOEK
NAMIBIA

SUBMISSION TO:

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM
PRIVATE BAG 13306
WINDHOEK
NAMIBIA

REFERENCE: 1288
ENQUIRIES: HEIDRI BINDEMANN-NEL
TEL: +264-61-240300
FAX: +264-61-240309

DOCUMENT INFORMATION

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Client	Rundu Town Council & Development Workshop Namibia
Project Manager	Erastus Kashuupulwa
Project Manager Email	e.kashuupulwa@dw-namibia.org
UDA Project Manager	Tresia Amwaalwa
UDA Project Manager Email	treisia@udanam.com
Author	Jade de Klerk
Reviewer	Heidri Bindemann-Nel
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Acronym / Abbreviation	Description
BID	Background Information Document
BMZ	Federal Ministry for Economic Cooperation and Development (Germany)
B+	Environmental and Social Risk Category (Moderate to Medium-High Risk)
CSIR	Council for Scientific and Industrial Research
DEA	Department of Environmental Affairs
DWN	Development Workshop Namibia
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EIA Regulations	Environmental Impact Assessment Regulations, 2012
EMA	Environmental Management Act, 2007 (Act No. 7 of 2007)
EMP	Environmental Management Plan
ESA	Environmental Scoping Assessment
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESS	Environmental and Social Standards
FC	Financial Cooperation
FRMP	Flood Risk Management Plan
GBV	Gender-Based Violence
GG	Government Gazette
GRM	Grievance Redress Mechanism
I&APs	Interested and Affected Parties
ILO	International Labour Organization
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
KM	Kilometre
LMP	Labour Management Procedures
M	Metre
MEFT	Ministry of Environment, Forestry and Tourism
MM	Millimetre
M²	Square Metres
MURD	Ministry of Urban and Rural Development
NBD	Namibia Biodiversity Database
NCA	National Heritage Council
NORED	Northern Regional Electricity Distributor
POS	Public Open Space
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
TRRP	Tree Removal and Replacement Plan
UDA	Urban Dynamics Africa (Pty) Ltd
URPB	Urban and Regional Planning Board
WMP	Waste Management Plan
WRP	Waste Removal Plan

1 INTRODUCTION

1.1 BACKGROUND

The Rundu Town Council, in partnership with Development Workshop Namibia (DWN), proposes the establishment of Sikanduko Proper and Extension 1, a formal township development within the town of Rundu, Kavango East Region, Namibia. The proposed development forms part of the Town Council's broader strategy to provide serviced land, guide orderly urban expansion, and respond to increasing demand for residential and mixed-use erven.

Urban Dynamics Africa (Pty) Ltd (UDA) was appointed as the independent Environmental Assessment Practitioner to undertake an Environmental Scoping Assessment (ESA) in accordance with the Environmental Management Act, 2007 (Act No. 7 of 2007) and the Environmental Impact Assessment Regulations, 2012.

1.2 PURPOSE OF THE REPORT

The proposed project includes infrastructure-related activities, such as the construction of public roads and the installation of bulk services, which are listed activities in terms of the Environmental Management Act and the Environmental Impact Assessment Regulations.

The scoping process aims to:

- Identify the nature and extent of potential impacts;
- Determine whether any impacts are likely to be significant;
- Consider reasonable alternatives, including the No-Go alternative; and
- Establish whether a full Environmental and Social Impact Assessment (ESIA) is required, or whether identified impacts can be adequately managed through the preparation and implementation of an Environmental Management Plan (EMP).

1.3 ENVIRONMENTAL ASSESSMENT TEAM

The environmental assessment process was undertaken by UDA as the appointed Environmental Assessment Practitioner.

The assessment was led by Ms Heidri Bindemann-Nel, Environmental Assessment Practitioner, with technical support provided by Ms Salmi Neshila, DWN Technical Manager (Infrastructure, Environment and Social).

Planning input and coordination were provided by Ms Tresia Amwaalwa, Town and Regional Planner.

1.4 REGULATORY CONTEXT

An Environmental Clearance Certificate (ECC) is required for the proposed infrastructure-related activities prior to implementation. This Environmental Scoping Assessment forms part of the supporting documentation for the ECC application to the Ministry of Environment, Forestry and Tourism (MEFT).

2 PROJECT DESCRIPTION

This section provides a summary of the proposed project, its location, main components, and associated infrastructure activities, for the purposes of identifying potential environmental and social issues at a scoping level.

2.1 PROJECT OVERVIEW

This subsection provides a brief overview of the proposed Sikanduko Proper and Extension 1 township establishment, including the nature of the development and its purpose within the broader context of urban growth in Rundu.

The proposed project entails the establishment of Sikanduko Proper and Extension 1, a formal township development within the Rundu townlands, Kavango East Region, Namibia. The project is proposed by the Rundu Town Council, in partnership with Development Workshop Namibia (DWN), to address the growing demand for serviced land and to guide orderly urban expansion within the town.

The project involves the subdivision of land within the townlands to enable township establishment and the provision of associated infrastructure. While township establishment and land subdivision are statutory planning processes and are not listed activities, the project includes infrastructure-related activities that require environmental authorisation in terms of the Environmental Management Act, 2007 and the Environmental Impact Assessment Regulations, 2012.

The development is limited to township establishment and servicing activities and does not include the construction of buildings. Further details regarding the layout design and integration with site conditions are provided in Section 2.

2.2 PROJECT COMPONENTS AND ASSOCIATED ACTIVITIES

For the purposes of this Environmental Scoping Assessment, the project comprises the following components and associated activities:

- Subdivision of land for township establishment;

- Construction of public roads within the township area;
- Installation of bulk and internal water supply pipelines;
- Installation of sewer reticulation infrastructure;
- Installation of electricity distribution infrastructure; and
- Construction of water storage infrastructure.

The construction of roads and service infrastructure, together with the handling and storage of hazardous substances during construction, constitute the listed activities that trigger the requirement for an Environmental Clearance Certificate (ECC).

2.3 LOCATION AND EXTENT OF THE PROJECT SITE

The project site is located within the Rundu townlands, south of the C45 road, within the administrative boundaries of the town of Rundu in the Kavango East Region. The site falls under Registration Division B.

The project area comprises Portions 157 and 158 of the Remainder of Farm Rundu Town and Townlands No. 1329, with a combined extent of approximately 339,308 m², currently zoned as "Undetermined".

The approximate central coordinates of the project area are 17.573120° South and 19.453718° East. The regional and local context of the project site is illustrated in Figure 1.

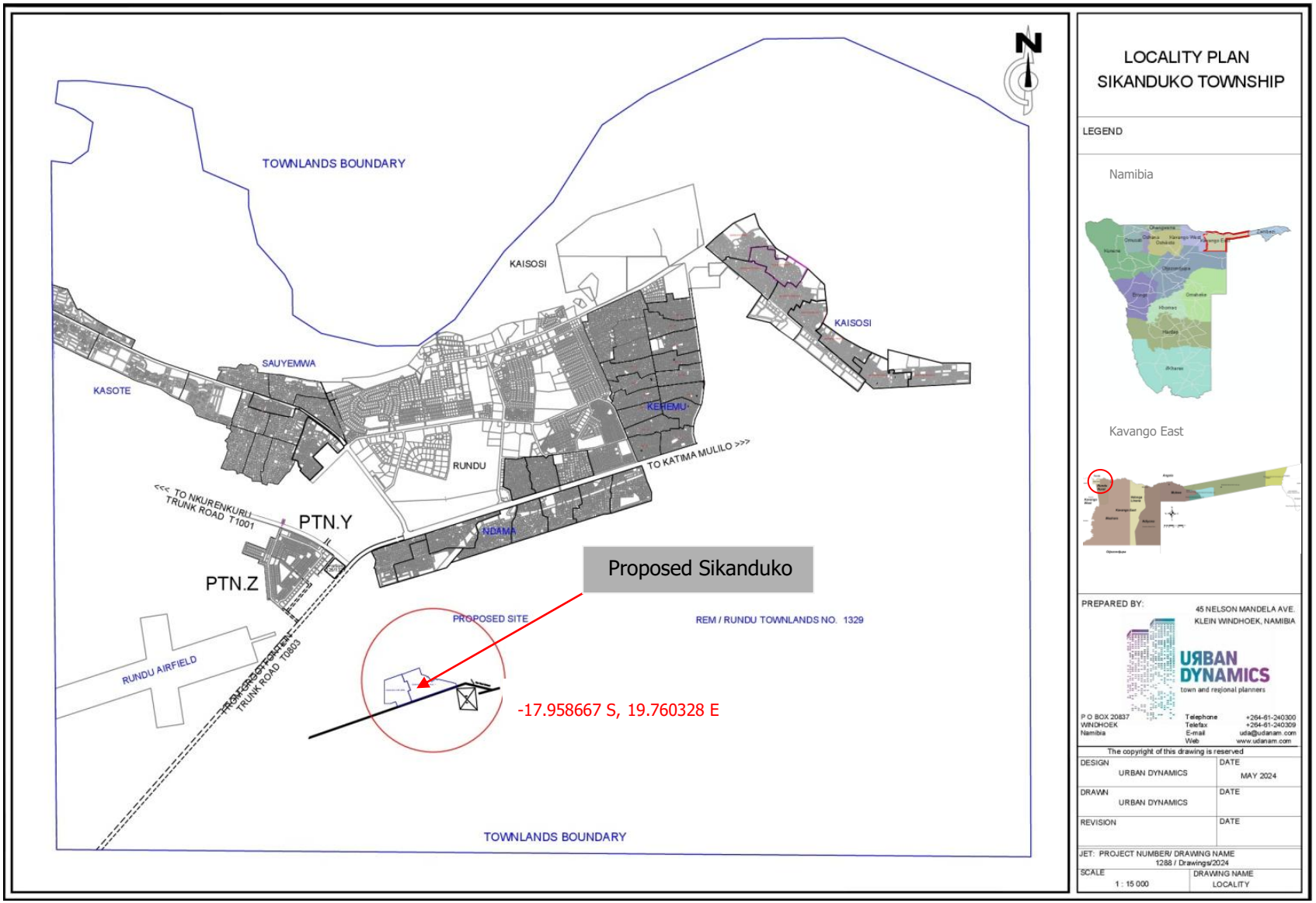

Figure 1: The Locality of Rundu

2.4 OVERVIEW

The proposed township layout provides for a mix of residential, business, institutional, local authority, public open space (POS), and road reserve land uses. The layout is intended to support orderly urban development and the provision of serviced land within the Rundu townlands.

A total of 567 erven are proposed within Sikanduko Proper and Extension 1. The distribution of erven by zoning category and land use is summarised in Table 1.

The township layout is illustrated in Figure 2,

Table 1: Erf Sizes and Zonings – Sikanduko Proper and Extension 1

SIKANDUKO PROPER AND EXTENSION 1				
ZONING	**NO. ERVEN**	**TOTAL AREA SQM**	**AVE ERF SIZE**	**%**
Residential	529	1 67 326	316	49.3
General Residential	8	14 696	1 837	4.3
Business	9	7 909	878	2.3
Local Business	3	2 362	787	0.7
Institutional	2	3 337	1 668	1.0
Local Authority	1	233	233	0.1
POS	15	33 591	2 239	9.9
Street		1 09 854		32.4
Total Area	567	3 39 308		

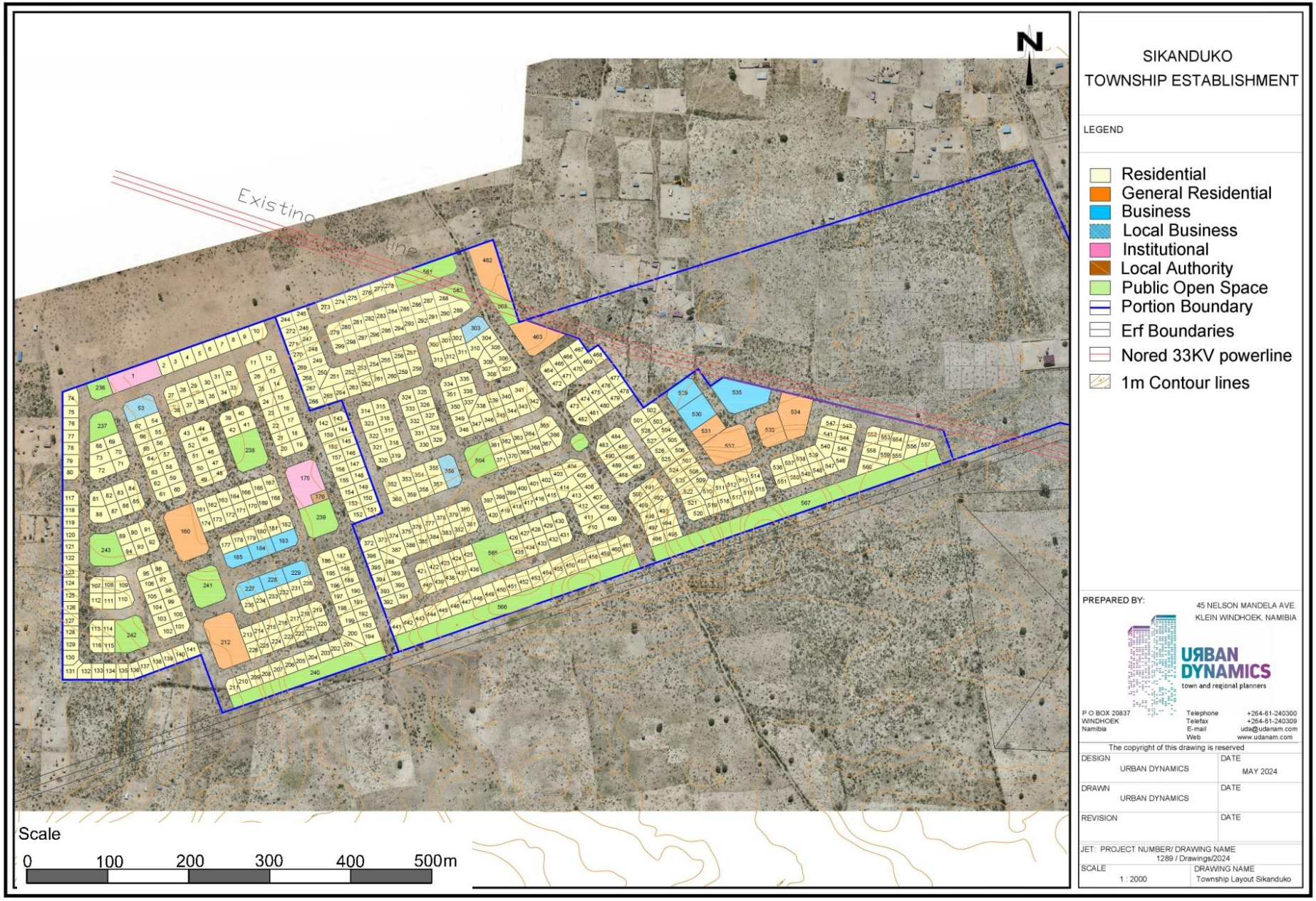

Figure 2: Sikanduko Proper and Extension 1 – Proposed Township Layout

2.5 ROAD NETWORK AND INFRASTRUCTURE LAYOUT

The proposed township layout incorporates a hierarchical road network designed to support access, circulation, and connectivity within the development area. The road hierarchy includes:

- **Distributor Roads (20 m reserves):** Primary roads intended to accommodate higher traffic volumes and provide connections to surrounding areas.
- **Access Roads (15 m reserves):** Secondary roads linking residential, business, and institutional erven to the distributor road network.
- **Local Roads (13 m reserves):** Neighbourhood-level roads providing direct access to individual erven.

The arrangement of the road network and its integration with the overall township layout are illustrated in **Figure** 3.

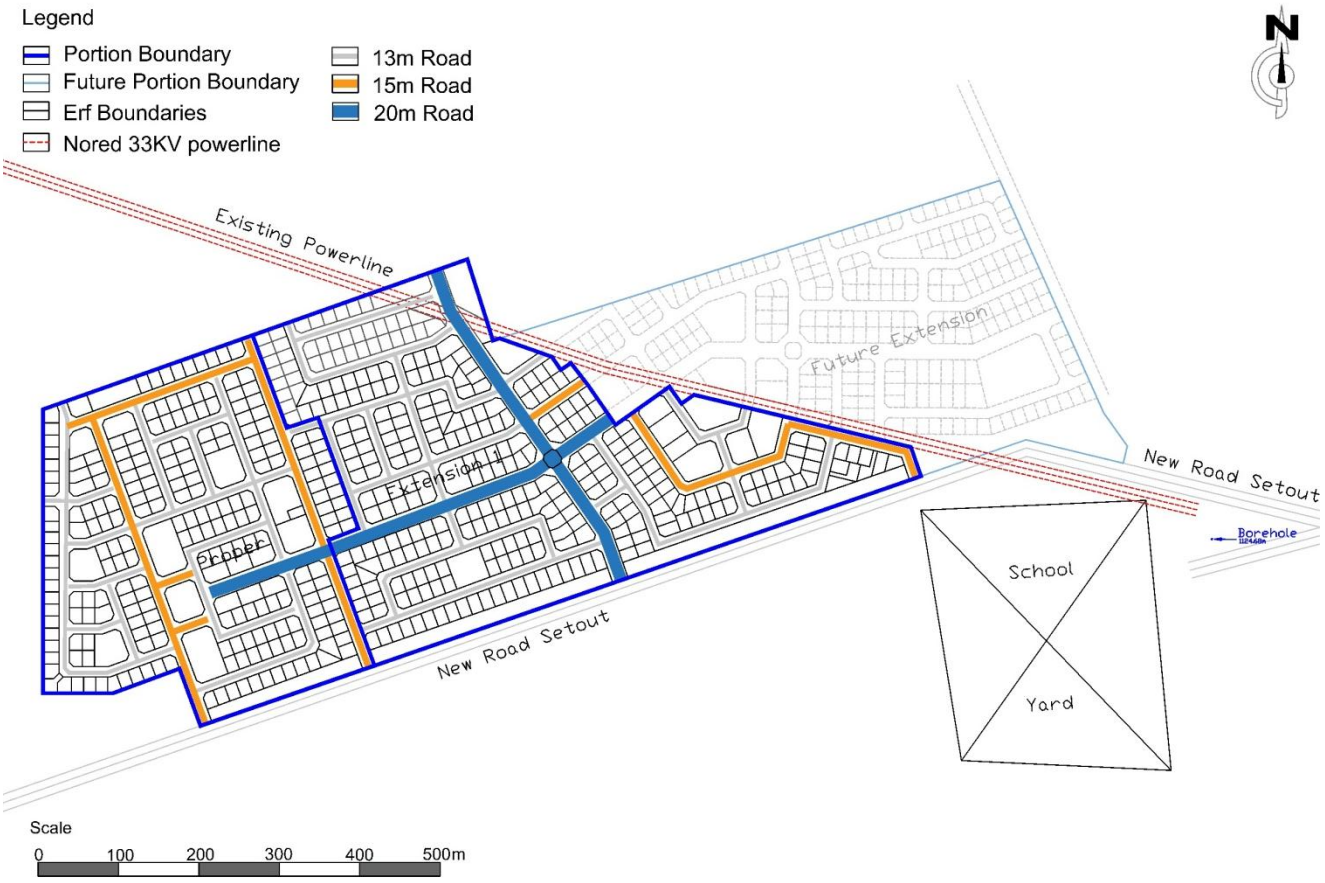

Figure 3: Sikanduko Road Network

2.6 LAYOUT DESIGN RESPONSE TO SITE CONDITIONS

The township layout was informed by site observations undertaken during the planning process, available planning information, and existing land use patterns within the Rundu townlands. The site is generally flat, with gentle slopes and observable surface drainage patterns typical of the area.

Areas observed to be lower-lying or associated with natural surface drainage were incorporated into public open spaces and road reserves within the layout. Existing infrastructure constraints, including power line servitudes and established access routes, were taken into account during the preparation of the layout.

At the time of layout preparation, existing structures and land uses within the project area were identified and considered, and the layout was prepared to accommodate these conditions where possible. The layout further reflects surrounding land uses, including nearby schools and informal residential areas, through the provision of defined access points and a clear road hierarchy.

This approach reflects planning-level consideration of existing on-site conditions and forms part of the overall project design.

2.7 TYPES OF CONSTRUCTION ACTIVITIES

The construction phase activities for the proposed development will proceed through various phases, each involving specific key activities aimed at facilitating the successful completion of the project. Below is a breakdown of these activities:

2.7.1 Site Preparation and Clearance

This phase involves preparing the site for construction. Key activities include:

- **Clearing of vegetation and debris** – Removal of trees and obstructions to prepare the area for development.
- **Excavation** – Earthworks to level the land and ensure that infrastructure, such as roads, is built to the correct elevation and gradient.
- **Material stockpiling** – Temporary storage of excavated material that can be reused during construction.

2.7.2 Road and Infrastructure Construction

This phase includes the development of essential infrastructure to support the site and surrounding areas. Key activities include:

- **Road Construction:**
    - **20m Distributor Roads** – Construction of arterial routes for high-capacity traffic flow**.**
    - **15m Access Roads** – Development of secondary roads linking distributor roads to residential and commercial areas.
    - **13m Local Roads** – Construction of neighbourhood-level roads for internal circulation.
- **Water Supply Infrastructure:** Installation of bulk water supply pipelines, including a 1 km pipeline connecting to existing borehole sources and an additional 2.5 km pipeline supplying the Ndama area.
- **Electricity Supply Infrastructure:** Installation of a 1 km underground bulk electricity line and the construction of two substations to provide reliable power to the area.

2.7.3 Reservoir Construction

Water storage and distribution are crucial components of the project. This phase includes:

- **Ground Steel Reservoir** – Construction of a 50 m³ ground steel reservoir for water storage.
- **Elevated Tank –** Installation of a 250 m³ elevated water tank to improve water distribution.
- **Water Sourcing –** Water for the reservoirs will be sourced from existing boreholes**,** with additional boreholes planned to ensure long-term sustainability**.**

These construction activities are critical to the successful development of the project, ensuring access to infrastructure, essential services, and environmental safeguards.

3 ALTERNATIVES

If this portion of land remains undeveloped, it is likely to be occupied by informal settlements, as seen in the surrounding areas. The Rundu Town Council had identified an alternative portion of land near the site for potential development. However, this area has already been occupied by informal housing, making structured development increasingly challenging.

Unplanned settlements often lack essential services such as water supply, sanitation, and waste management, leading to environmental degradation, health risks, and poor living conditions. Additionally, the encroachment of informal settlements into designated development areas can hinder long-term urban planning efforts.

In contrast, proceeding with a properly serviced and formalised township layout would:

- Provide structured development with essential infrastructure.
- Ensure sustainable land use, preventing further uncontrolled expansion.
- Improve access to services, reducing environmental and public health risks.
- Enhance long-term economic and social benefits for the community.

Thus, the alternative of not developing the site presents significant risks to urban planning efforts and environmental sustainability.

4 PROJECT STANDARDS

Section 4 provides a review of the Namibian legislation, policies, and guidelines that directly apply to the proposed development. The main objective of this review is to disseminate essential information to the Rundu Town Council, the DWN, Interested and Affected Parties, and the decision-makers at the DEA. The focus is on clarifying the requirements and expectations outlined within these regulatory instruments.

4.1 NAMIBIA ENVIRONMENTAL LEGISLATION

The Constitution of the Republic of Namibia (1990) establishes the foundational principles governing Namibia. Article 95 commits the state to endorse sustainable development by preserving ecosystems, essential ecological processes, and biological diversity in Namibia. It underscores the sustainable utilisation of natural resources for the collective benefit of all Namibians, both present and future.

Namibia's Environmental Impact Assessment Policy of 1995 plays a crucial role in fostering accountability and informed decision-making. It mandates the necessity of EIAs for specified programs and projects (activities). This policy is enforced through the Environmental Management Act (No. 7 of 2007) and the EIA Regulations.

The EMA, enacted in December 2007 and effective from January 2012, delineates various rights and obligations for citizens and the government. Key aspects of the EMA include:

- Defining the environment.
- Promoting the sustainable management of the environment and the responsible use of natural resources.
- Establishing a process for assessing and controlling activities that may significantly affect the environment.

Part 2 of the EMA outlines several principles of environmental management aligning with the Constitution's provisions for integrated environmental management. Decision-makers must consider these principles when determining whether to grant environmental clearance for listed activities.

The EIA Regulations, promulgated in January 2012, provide the framework for the control of listed activities (GN No. 29). These activities are prohibited until an ECC is issued by the office of the Environmental Commissioner in the MEFT. ECC applications, subject to specific conditions, are considered by the MEFT only after compliance with the EIA process detailed in the EIA Regulations 2012 (GN No. 30).

4.2 REGULATORY FRAMEWORK

Table 2: Regulatory Framework

THEME	LEGISLATION	PROVISION	PROJECT IMPLICATIONS
NATIONAL	The Constitution of the Republic of Namibia First Amendment Act. 34 of 1998	Article 16 (1) guarantees the right to acquire, own, and dispose of property, and Article 95 (i) mandates the state to manage ecosystems sustainably.	The project supports freehold title ownership and commits to preserving ecological integrity.
ENVIRONMENTAL	Environmental Management Act 7 of 2007	Section 27 mandates an environmental assessment for projects with significant impacts, and Section 2(b-c) requires public participation. - Details principles which are to guide all EIAs	Procedures for authorisation, including an Environmental Clearance certificate, will be followed.
	EIA Regulations GN 30 of 2012, not GN 30 of 2012	Section 10(1), construction of (b) public roads and Section 10.2 route determination of roads and design of associate physical infrastructure (a) public road whereby the Minister of Environment, Forestry and Tourism or in a manner prescribed by the Minister. Section 21 outlines public consultation requirements for the environmental assessment process. Prescribes the procedures to be followed for authorisation of the project (i.e. Environmental clearance certificate).	
FORESTRY	Forestry Act 12 of 2001	Section 22(1) states that tree species and any vegetation within 100m of a Watercourse may not be removed without a permit. Provision for the protection of various plant species.	Environmental Protection for Plant Species: Planning Phase: During the planning

Table 2: Regulatory Framework

THEME	LEGISLATION	PROVISION	PROJECT IMPLICATIONS
	Forest Regulations GN 170/ 2015 (GG 5801)	Section 13.2 states that no protected species should be removed unless special permission is granted. The plant or species declared protected species are listed in Annexure A of the Regulations.	stage, it is important to safeguard plant species listed under Annexure A of the Regulations. This protection is achieved through planning in the layout. Construction Phase: Prior to commencing construction, a comprehensive Tree Management Plan must be developed for the site. This plan should identify and ensures the protection of these plant species. Exceptional Circumstances: In cases where it becomes impossible to preserve protected plant species during the planning and construction phase, permits must be sought from the Ministry of Environment, Forestry, and Tourism (Department of Forestry) to authorise their removal. This ensures compliance with regulations and responsible environmental management.
WATER	Water Resources Management Act No. 11 of 2013 (GG 5740)	Section 102(e) excavations may not expose the roots of or destroy native trees in any watercourse. Section 102(f) the area where activities relating to the use of a wetland or a dam takes place must be left rehabilitated so that the view of the watercourse concerned is not blemished at any time.	During the project's construction phase, it is vital to have necessary measures in place to prevent the pollution of water resources, especially in the water catchment area at the site.

Table 2: Regulatory Framework

THEME	LEGISLATION	PROVISION	PROJECT IMPLICATIONS
HEALTH AND SAFETY	Labour Act 11 of 2007	Chapter 2.6 details the fundamental rights and protections of employees. Chapter 3 deals with the basic conditions of employment.	The project's environmental management plan should underscore the importance of ensuring compliance with labour laws, maximizing employment opportunities, and making additional efforts to allocate jobs to local residents, with a particular emphasis on providing opportunities for women in the local community.
	Public and Environmental Health Act of 2015 (GG 5740)	This Act provides a framework for Namibia's structured, uniform public and environmental health system. It covers notification, prevention and control of diseases and sexually transmitted infections; maternal, ante-natal and neo-natal care; water and food supplies; infant nutrition; waste management; health nuisances; public and environmental health planning and reporting.	Development contractors should adhere to the legal requirements of the Act, specifically by preventing activities that could impact the health and safety of the public and employees.
ATMOSPHERIC POLLUTION	Atmospheric Pollution Prevention Ordinance No 45 of 1965	Part II - control of noxious or offensive gases. Part III - atmospheric pollution by smoke. Part IV - dust control, and Part V - air pollution by fumes emitted by vehicles.	The development should consider the provisions outlined in the Atmospheric Pollution Prevention Ordinance No. 45 of 1965. The proponent is required to apply for an Air Emissions permit from the Ministry of Health and Social Services if deemed necessary.
ARCHAEOLOGY	National Heritage Act 27 of 2004	Section 48(1) states that " A person may apply to the (Heritage) Council for a permit to carry out works or activities concerning a protected place protected object"	When archaeological material (e.g., graves) is discovered, the National Heritage Council should be informed immediately.

Table 2: Regulatory Framework

THEME	LEGISLATION	PROVISION	PROJECT IMPLICATIONS
	Burial Place Ordinance 27 of 1966	The Ordinance prohibits the desecration or disturbance of graves and regulates matters relating to the removal or disposal of dead bodies.	The Ordinance regulates the exhumation of graves.
SOIL	Soil Conservation Act 76 of 1969	The Act regulates combating and preventing soil erosion, the conservation, improvement, and manner of use of the soil and vegetation and the protection of the water sources.	Measures should be in place to ensure that soil erosion and pollution are avoided during the construction and operational phases.
LAND USE	The Urban and Regional Planning Act 7 of 2018	The Act regulates the establishment of townships, amendment of layout, subdivisions and consolidation, and land rezoning.	The proposed township and layout should be approved by the Ministry of Urban and Rural Development in accordance with the Act.
	Rundu Amended Town Planning Scheme No. 2 (GG 5076)	The Rundu Town Planning Scheme provides for various land use and activities allowed within the Rundu Town Council's jurisdiction.	The development should adhere to the Rundu Town Planning Scheme.
SERVICES AND INFRASTRUCTURE	Road Ordinance 17 of 1979	Section 3(1) the width of proclaimed roads and roads receive boundaries. Section 27(1) the control of traffic during construction activities on the trunk and main roads. Section 37(1) infringement, obstructions on, and interference with proclaimed roads. Section 38 distances from proclaimed roads at which fences are erected.	The proponent should ensure that the construction of public roads and infrastructure through township development and the operational phase do not affect major nearby roads.

4.3 INTERNATIONAL LENDER STANDARDS

The Proposed program's development is funded by official development assistance from the Government of the Federal Republic of Germany. Consequently, the program must adhere to the regulations set forth by the Federal Ministry for Economic Cooperation and Development and the Kreditanstalt für Wiederaufbau (KfW) Development Bank. KfW aligns with the principles outlined in the Environmental and Social Standards (ESS) of the World Bank Group. The following sections detail the pertinent international criteria and standards that must be followed throughout the Program.

4.3.1 KfW's Sustainability Guideline

All the Financial Cooperation measures financed by KfW must be subject to assessment and implementation in terms of KfW's Sustainability Guideline 2021, or its successor. The guideline describes the principles and procedures to assess the environmental, social and climate impacts during the preparation and implementation of FC measure financed by KfW.

The KfW Sustainability Guideline (2021) sets out that the relevant national law and legal requirements as well as the ESS of the World Bank Group are compulsory during the identification and assessment of environmental, social and climate risks and impacts. Additionally, the World Bank's General and sector-specific Environmental, Health and Safety (EHS) Guidelines and the core labour standards of the International Labour Organization (ILO) must be applied. During the assessment, the requirements of the Human Rights Guidelines of the BMZ must be taken into account.

4.3.2 World Bank Environmental and Social Framework

The World Bank's Environmental and Social Framework (ESF) is aimed at enabling the World Bank and Borrowers to manage environmental and social risks of projects and to improve development outcomes. The ESF offers broad and systematic coverage of environmental and social risks. The ESF sets out the World Bank Group's commitment to sustainable development, through a Vision for Sustainable Development, a Policy for Investment Project Financing, and a set of ESS.

KfW's Sustainability Guideline (2021) requires the application of the World Bank's ESS to their projects, but not the overall ESF.

4.3.3 World Bank Environmental and Social Standards (2018)

The World Bank's ESS consists of ten standards as summarised below. Application of the standards intends to: (a) support Borrowers in achieving good international practice relating to environmental and social sustainability; (b) assist Borrowers in fulfilling their national and international environmental and social obligations; (c) enhance non-discrimination, transparency, participation,

accountability, and governance; and (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

KfW's Sustainability Guideline (2021) requires the application of the relevant ESS. The likely applicability of each standard to the DWN Programme is indicated. A review must be undertaken for each intervention to confirm (based on scope, locality, and site specifics) the applicability of the ESS.

5 THE APPROACH AND METHODOLOGY

The following section discusses the methodology used by DWN and UDA in assessing the site in terms of its strengths, weaknesses, opportunities, and threats and to then formulate a planning approach to prepare a layout that harnesses the strengths, accommodate the weaknesses, utilise the opportunities and avoid the threats identified. These also include the natural and social environment within which the project is set.

5.1 SITE INFORMATION AND TOPOGRAPHY

The site is classified under Category B+ following DWN's 2023 screening assessment, which identified environmental and social risks. In response, Urban Dynamics Africa (UDA) conducted an ESA. As part of the assessment, UDA conducted a site visit in June 2024 to document existing structures, infrastructure, topography, and land uses, ensuring effective risk management through detailed evaluations and management plans.

To ensure accurate topographical mapping, DWN appointed Herman Strydom, a registered land surveyor, to survey the newly identified site portions. These steps are crucial for addressing all environmental, social, and infrastructural considerations for the successful implementation of the project.

5.2 NATURAL AND SOCIAL RECEIVING ENVIRONMENT

The assessment of the natural receiving environment involved orthophoto analysis, site visits, literature surveys, and leveraging extensive regional experience.

Data sources included:

- The Atlas of Namibia (Atlas of Namibia Team, 2022),
- Atlas of Namibia (Mendelsohn et al., 2002),
- Northern Region's Flood Risk Management Plan (Tamayo et al., 2011),

5.3 PUBLIC CONSULTATION

Public consultation was conducted to ensure thorough engagement with all relevant stakeholders. Notices were published in two newspapers over consecutive weeks, as outlined in Appendix C. In June 2024, a community meeting was held at the initial project site, with representatives from UDA, the Rundu Town Council, and DWN in attendance. Following this public meeting, further discussions were held

with the traditional authority, resulting in the allocation of a new site with their support. To address community concerns, an additional meeting was held in October 2024.

6 BASELINE ENVIRONMENTAL CONDITIONS

This section describes the existing environmental and social conditions of the project site and its immediate surroundings. The baseline information provides an overview of the receiving environment against which potential impacts associated with the proposed development are identified at a scoping level.

6.1 DESCRIPTION OF THE PROJECT SITE

6.1.1 Locality

The proposed development is on proposed Portions 157 and 158, of the Remainder of Farm Rundu Town and Townlands No. 1329. The project falls within the Kavango East Region under Registration Division B. The portion is south of the C45 Road, at -17,573120 S, 19,453718 E as indicated on the image below.

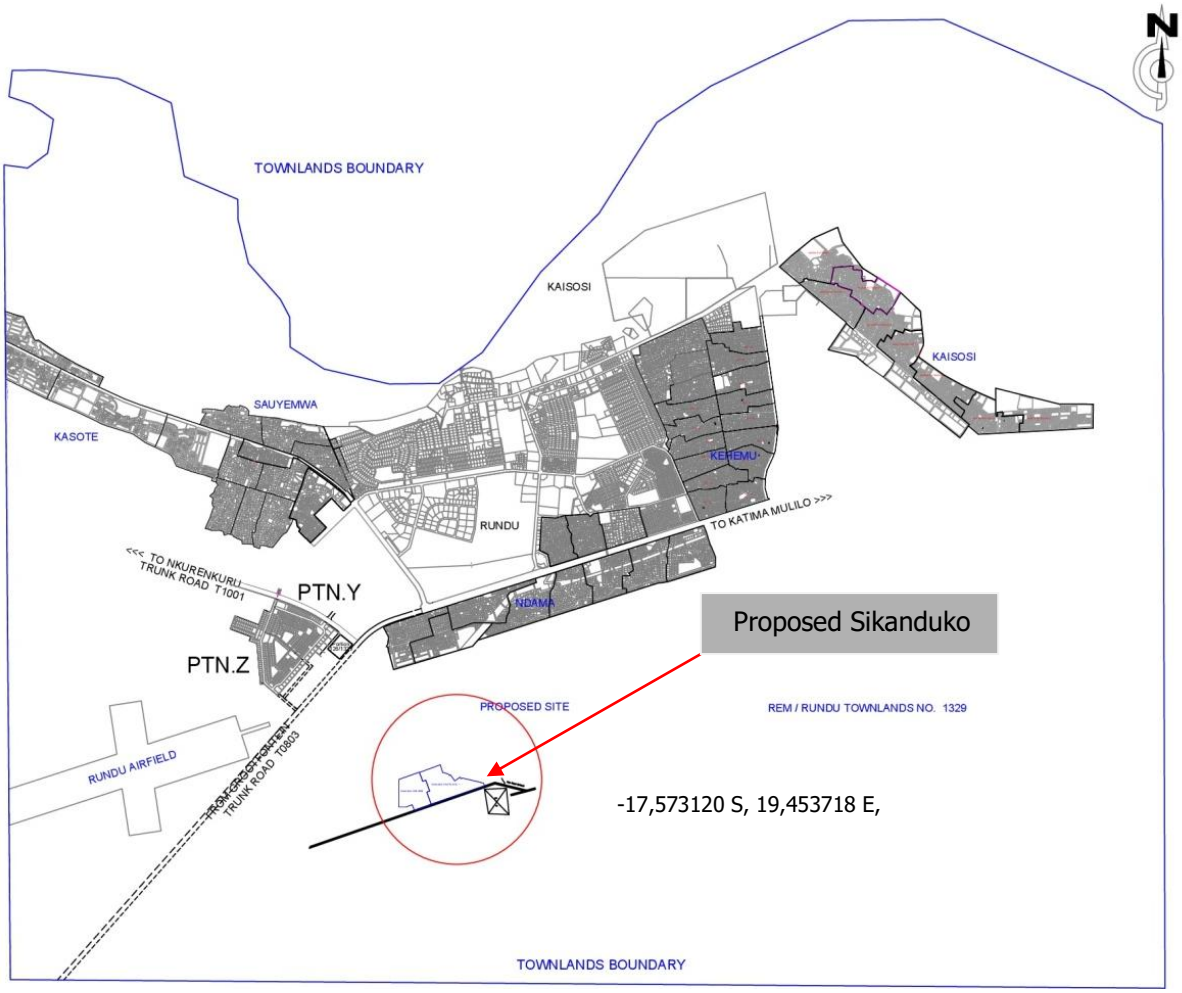

Figure 4: Locality of the Project Area

6.1.2 Ownership, Size, Shape, and Land Use Activities

The project site falls within the Rundu townlands and is under the jurisdiction of the Rundu Town Council. The site comprises Portions 157 and 158 of the Remainder of Farm Rundu Town and Townlands, with a combined extent of approximately 339,308 m². At the time of the assessment, the land was zoned as "Undetermined". The sizes of the respective portions are presented in Table 3.

Several individuals were observed to hold registered land rights within parts of the project area.

Table 3: Portions Sizes

PORTIONS 157 AND 158		
PORTIONS	**Total Area(Sqm)**	**Zoning**
Portion 157	146,155	Undetermined
Portion 158	193,153	Undetermined

As of June 2024, the site was largely vacant but showed evidence of ongoing informal land use activities, including subsistence crop cultivation and livestock grazing. Vegetation clearance was observed in parts of the site, associated with the expansion of cultivated areas and wood harvesting. Figure 5 illustrate the surrounding land use.

An electricity servitude and power line installed by NORED traverses the northern portion of the site and supplies electricity to a nearby school. Informal sand access tracks were observed across the site, facilitating local movement. Since the initiation of this assessment, additional informal structures have been established within the area, indicating ongoing development pressure.

The current land use within and surrounding the project site is illustrated in Figure 5.

Figure 5: Current Land Use Activities

6.1.3 Surrounding Activities

The surrounding land uses comprise informal residential homesteads, cleared agricultural fields, grazing areas, and two schools located in close proximity to the project site. Existing infrastructure associated with these land uses includes water supply infrastructure and electricity power lines servicing the schools and surrounding areas. Surrounding activities and infrastructure are illustrated in Figure 6.

Figure 6: Utility Services

6.2 ACCESS AND UTILITY SERVICES

Existing access and utility services within Rundu and the site are as follows:

6.2.1 Road Access

Access to the project site is currently provided via informal sand tracks that connect to existing access roads in the area. These tracks facilitate local movement but are not formalised roads. The site is located within an area identified for future road infrastructure development by the Rundu Town Council.

6.2.2 Water Connection

The town of Rundu receives its bulk water supply from NamWater, which distributes water through a reticulated municipal network serving formal residential and business areas. Informal settlements in the area primarily access water through communal taps.

A solar-powered borehole is located approximately 1,000 metres from the project site near a school and provides a localised water source. Areas have been identified within the wider area for the potential development of additional boreholes as part of future council water supply planning (Rundu Town Council, internal planning information).

6.2.3 Electrical Supply

Electricity supply to Rundu is provided through a reticulated network supplied by NamPower and distributed by NORED. The existing electrical infrastructure serves formal residential and commercial areas within the town.

A substation and associated power line infrastructure are located near the project site and supply electricity to a nearby school.

6.2.4 Sewerage

Formal areas of Rundu are served by a sewer reticulation network and associated pump stations. Informal settlement areas in the vicinity of the project site primarily rely on septic tanks and pit latrines for sanitation. These sanitation practices form part of the baseline environmental conditions of the area.

6.2.5 Communication

The town of Rundu has access to standard communication services, including television, radio, newspapers, fixed-line telephones, and mobile cellular networks.

6.3 BIOPHYSICAL ENVIRONMENT

This subsection describes the physical and biological characteristics of the project site and its immediate surroundings. It provides an overview of the natural receiving environment, including topography and drainage, climatic conditions, soils, vegetation, and habitat characteristics, against which potential environmental impacts associated with the proposed development are identified at a scoping level.

6.4 TOPOGRAPHY AND DRAINAGE

The topography of the project area is generally flat, with a gentle slope toward the Ndonga River. The site is located at an elevation of approximately 1,103 m above sea level. The distance between the project site and the Ndonga River is approximately 1.7 km.

Although Rundu experiences seasonal flooding in areas closer to the Okavango River, the project site is not located within a known flood-prone area. Site elevation and the general slope of the area are illustrated Figure 7.

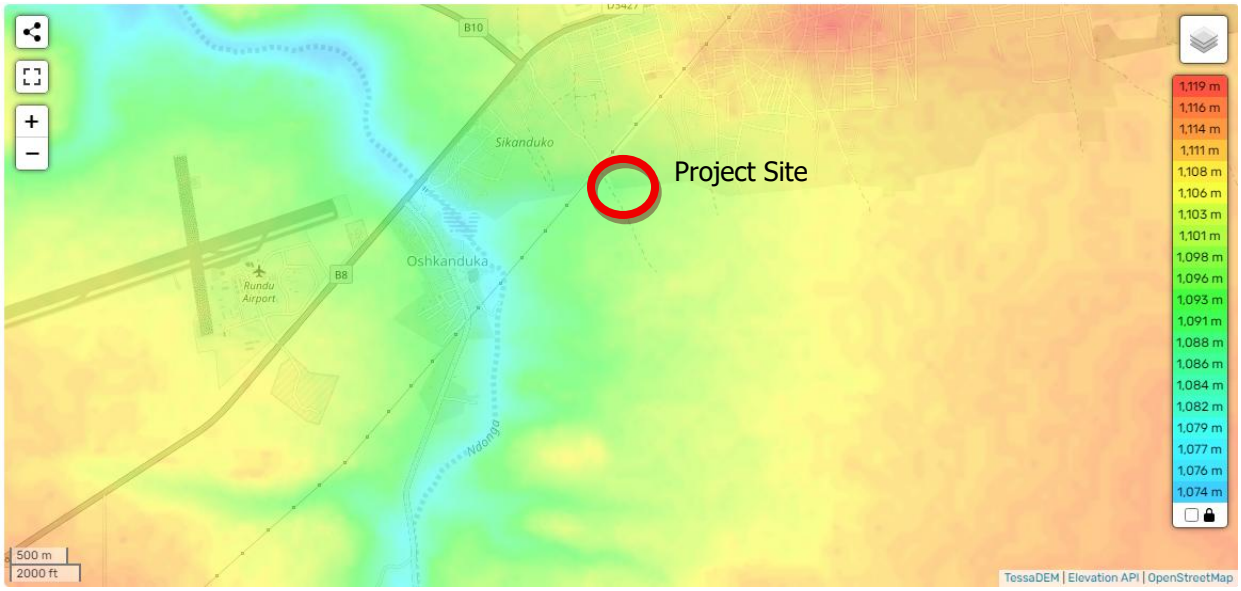

Figure 7: Site Elevation
Source: Google Maps, 2024

6.5 CLIMATIC CONDITIONS

The Kavango East Region experiences a tropical climate characterised by distinct wet and dry seasons. Rainfall occurs predominantly between November and March, with an average annual rainfall of approximately 600 mm. Average annual temperatures in Rundu are approximately 22°C, with seasonal variation typical of the region.

Prevailing wind conditions vary seasonally, with generally moderate winds during the dry season and more variable wind patterns during the wet season due to localised storm events (Meteoblue, 2024). Seasonal wind patterns are influenced by regional weather systems, as illustrated in Figure 8.

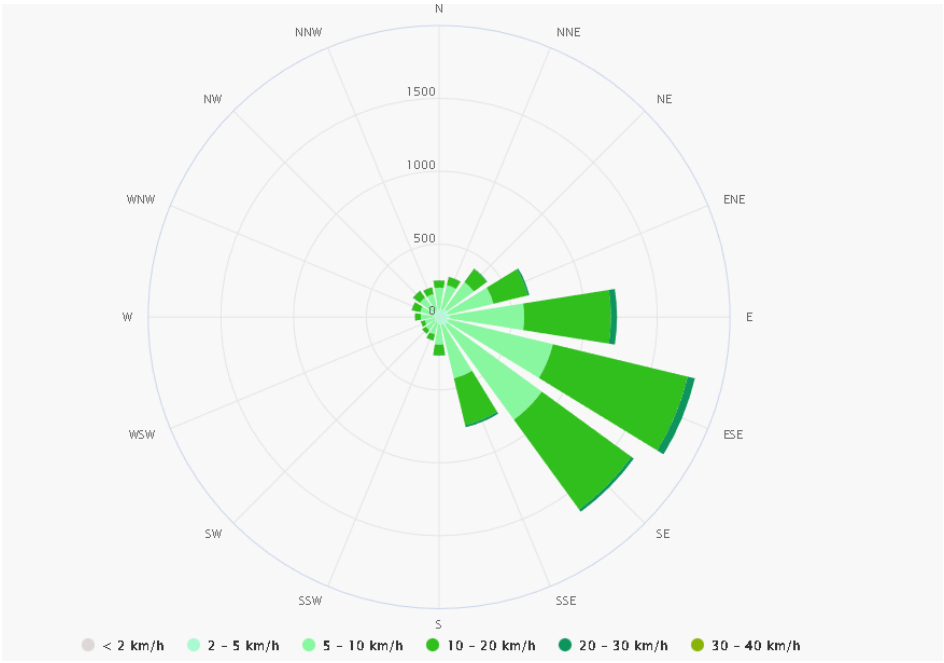

Figure 8: Wind Speed and Direction at Rundu
Source: Meteoblue, 2024

6.5.1 Soil Conditions

Soils within the project site are predominantly sandy and loosely structured, consistent with the broader Kavango East Region. These soils have limited nutrient retention and are susceptible to wind erosion when disturbed.

Site observations confirmed exposed sandy surfaces across cleared areas of the site. Examples of on-site soil conditions are shown in Figure 9.

Figure 9: Soil Condition

6.5.2 Vegetation Conditions

The project site falls within the Broadleaved Tree and Shrub Savanna biome, specifically the north-eastern Kalahari woodland vegetation type (Namibia Atlas (2022). Vegetation within the site consists of scattered indigenous trees and shrubs typical of the Rundu townlands.

Common indigenous species observed during the site visit include fruit-bearing woodland species typical of the area, such as *Strychnos cocculoides* (monkey orange), as well as other broadleaved deciduous tree species. Vegetation within the site shows evidence of disturbance resulting from grazing, wood harvesting, and land clearing activities.

Examples of vegetation observed within the project site are shown in Figure 10.

Figure 10: On Site Vegetation

6.5.3 Habitats on Site

Due to historical and ongoing land use activities, the project site represents an impacted environment rather than a pristine natural system. Habitat conditions reflect altered ecological functionality typical of townland areas undergoing development pressure.

6.5.4 Status of Protected Area

The project site does not fall within any formally protected areas, conservancies, or national parks. No legally protected areas occur within the project footprint.

6.6 KEY SENSITIVITIES:

The key environmental and social sensitivities identified within the project site and its immediate surroundings, based on the baseline assessment, are summarised in Table 4**.**

Table 4: Biophysical Environmental Key Sensitivities

Aspect	Description	Sensitivity	Relevance to Project
Soils	Predominantly sandy and loosely structured soils typical of the Kavango East Region.	Medium	Soils are susceptible to erosion and dust generation when disturbed during construction activities.
Vegetation	Scattered indigenous trees and shrubs typical of the north-eastern Kalahari woodland vegetation type.	Medium	Vegetation clearance associated with infrastructure development may affect local tree cover.
Habitats	Site represents an impacted environment due to historical grazing, land clearing, and informal land use.	Low to Medium	Habitat conditions are already modified, but further disturbance may occur.
Water Resources	Reliance on groundwater as an important water source for surrounding communities.	Medium	Water availability and protection of groundwater quality are important considerations.
Topography and Drainage	Generally flat terrain with gentle slope towards the Ndonga River; site not located in a known flood-prone area.	Low	Drainage patterns should be considered during infrastructure planning.
Surrounding Land Uses	Proximity to informal residential areas, schools, and grazing areas.	High	Nearby sensitive receptors may be affected by construction-related activities.
Existing	Presence of power line servitudes and	Medium	Infrastructure constraints influence layout planning and construction

Aspect	Description	Sensitivity	Relevance to Project
Infrastructure	informal access routes across the site.		activities.
Land Use Pressure	Ongoing informal settlement and development pressure within the townlands.	High	Uncontrolled development may continue if the site is not formally planned and serviced.

These sensitivities provide the context against which potential environmental and social impacts associated with the proposed township establishment and associated bulk infrastructure are identified at a scoping level in Section 8.

7 STAKEHOLDER ENGAGEMENT

Public consultation is a vital aspect of the Environmental Scoping Assessment (ESA) process, enabling Interested and Affected Parties (I&APs) to express their perspectives and concerns about the project. This practice ensures compliance with the Environmental Management Act (EMA) and its Environmental Impact Assessment (EIA) Regulations. It fosters collaboration and assists the Environmental Assessment Practitioner (EAP) in thoroughly assessing potential impacts, the necessity for further investigations, and potential mitigation measures.

According to the Environmental Management Act (Act No. 7 of 2007) of Namibia, the environmental practitioner is responsible for overseeing the evaluation of social and environmental impacts, finalising the application process, and facilitating public engagement with I&APs. To meet these obligations, the EIA process involves establishing an I&AP database, maintaining an issue and response register, and disseminating all draft and final documents to registered stakeholders.

7.1 METHODS

The methods used during the public consultation to communication with I&APs are as follows:

7.1.1 Newspaper Notices

Newspaper notices were placed in two separate newspapers simultaneously for two successive weeks. They were published in, The Namibian and The New Era, with publication dates of 6 and 13 June 2024.

The notices provided a brief explanation of the proposed activity and its location. They also invited members of the public to attend the meeting and register as I&APs. Notices, which were placed, are attached as **Appendix C.1.**

7.1.2 Background Information Document (BID)

A Background Information Document (BID) was prepared and distributed. This document contains descriptive information about the proposed township activities.

7.1.3 Site Notice

A notice was put up at the project site to inform the local community and passersby about the proposed development. This notice makes the public aware of the project and the ongoing public consultation process.

7.1.4 Town Council Notice Board

Notices regarding the intended development and the scheduled public meeting were posted on the Town Councils Notice board.

7.1.5 Public Meeting

Representatives from Urban Dynamics, the Rundu Town Council, and DWN held a community meeting on 17 June 2024 at 17:30 at the project site. The meeting was conducted in English and RuKwangali, providing an opportunity for I&APs and the general public to engage directly, ask questions, and express their concerns or opinions regarding the proposed development (see Appendix C.3).

A follow-up meeting was held 19 October 2024 at the site to address additional community concerns. This meeting included representatives from Urban Dynamics, DWN, and the Rundu Town Council, with the Mayor and CEO in attendance.

Figure 11: Public Consultation

7.2 SUMMARY OF KEY ISSUES RAISED

Table 5: Key Community Issues Raided

SUMMARY OF KEY ISSUES RAISED DURING THE FIRST MEETING	
THEME	**ISSUE**
Relocation Concerns	Community members expressed concerns about relocation due to existing structures on the first allocated site.
Land Allocation	Community raised questions and concerns regarding the process and fairness of land allocation.
Land Rights	Certain individuals still hold registered land rights within the area
Traditional Authority –Council Conflict	Some traditional authorities claim they have not been compensated for land.

The issues raised during the stakeholder engagement process informed the identification of potential environmental and social impacts discussed in Section 8.

8 IMPACT ASSESSMENT

This section identifies the potential environmental and social impacts associated with the proposed township establishment and the construction of associated bulk infrastructure. The assessment is undertaken at a scoping level, based on the project description (Section 2), baseline environmental conditions (Section 6), and stakeholder engagement outcomes (Section 7).

The purpose of this section is to identify potential impacts, determine their likely nature and significance, and establish whether further detailed assessment is required.

8.1 SUMMARY OF POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

Table 6 summarises the potential environmental and social impacts associated with the proposed development, identified at a scoping level. The assessment reflects the nature of the proposed activities, baseline conditions within the project area, and issues raised during stakeholder engagement. Impacts are described qualitatively to determine whether any are likely to be significant or require further detailed assessment.

Table 6: Scoping-Level Impact Identification and Assessment

Project Phase	Aspect	Potential Impact	Nature	Extent	Duration	Reversibility	Significance
Construction	Land use	Disturbance of land during earthworks and installation of services	Negative	Site-specific	Short-term	Reversible	Low–Medium
Construction	Soils	Disturbance of sandy soils and increased susceptibility to dust	Negative	Site-specific	Short-term	Reversible	Low–Medium
Construction	Air quality	Generation of dust affecting nearby receptors, including schools	Negative	Local	Short-term	Reversible	Low–Medium
Construction	Noise	Temporary increase in noise levels affecting nearby receptors, including schools	Negative	Local	Short-term	Reversible	Low
Construction	Vegetation	Removal of limited scattered indigenous trees and shrubs	Negative	Site-specific	Long-term	Partially reversible	Low–Medium
Construction	Traffic	Potential increase in construction traffic affecting local access routes and surrounding communities	Negative	Local	Short-term	Reversible	Medium
Construction	Waste	Generation of construction-related waste	Negative	Site-specific	Short-term	Reversible	Low
Construction	Water resources	Increased water demand and potential pressure on nearby boreholes	Negative	Local	Short-term	Reversible	Low–Medium

Project Phase	Aspect	Potential Impact	Nature	Extent	Duration	Reversibility	Significance
Construction	Health & safety	Health and safety risks to workers and surrounding communities	Negative	Local	Short-term	Reversible	Medium
Construction	Employment	Temporary employment opportunities for local labour during construction	Positive	Local	Short-term	Reversible	Positive
Construction	Local economy	Increased demand for goods and services, creating opportunities for local businesses and service providers	Positive	Local	Short-term	Reversible	Positive
Operation	Land delivery	Provision of formal serviced erven for allocation through a land tender process	Positive	Local	Long-term	Not applicable	Positive
Operation	Land use	Provision of business erven enabling future commercial development	Positive	Local	Long-term	Not applicable	Positive
Operation	Infrastructure	Improved access to formal roads and basic municipal services	Positive	Local	Long-term	Not applicable	Positive
Operation	Services	Increased demand on municipal services	Negative	Local	Long-term	Partially reversible	Medium
Operation	Waste	Generation of household and operational waste	Negative	Local	Long-term	Reversible	Medium

8.2 NO-GO ALTERNATIVE

Under the No-Go alternative, the proposed township establishment and associated infrastructure development would not proceed. The project area would likely remain subject to informal land use and unplanned settlement expansion, with limited access to formal services. This scenario may result in continued environmental degradation and ongoing social and service-delivery challenges within the Rundu townlands.

8.3 RESIDUAL IMPACTS

At the scoping stage, residual impacts cannot be conclusively determined, as detailed mitigation and management measures are addressed through the Environmental Management Plan (EMP). Residual impacts will therefore be managed through the implementation of the approved EMP following environmental authorisation.

8.4 SECTION CONCLUSION

The scoping-level assessment indicates that the proposed development may result in a range of localised and largely reversible environmental and social impacts that are typical of township establishment and bulk infrastructure projects in an urbanising environment. No impacts were identified at this stage that would preclude the proposed development from proceeding, subject to environmental authorisation and implementation of the EMP.

9 SUMMARY AND APPLICATION

9.1 SUMMARY OF FINDINGS

This Environmental Scoping Assessment was undertaken to identify potential environmental and social impacts associated with the proposed establishment of Sikanduko Proper and Extension 1 and the construction of associated bulk infrastructure within the Rundu townlands.

The assessment considered the nature and scale of the proposed development, baseline environmental and social conditions, and issues raised during stakeholder engagement. The project area is located within an urbanising environment and is already disturbed due to existing land use activities.

The scoping process identified a range of localised environmental and social impacts, primarily associated with construction activities, including dust generation, noise, traffic movement, soil disturbance, and increased demand on services. These impacts are generally temporary, reversible, and typical of township establishment and bulk infrastructure development.

The project is also expected to result in positive outcomes, including:

- The provision of formal serviced erven through a structured land allocation process;
- The creation of business erven enabling future commercial development;
- Temporary employment opportunities and local business opportunities during construction; and
- Improved access to formal infrastructure and municipal services.

9.2 APPLICATION AND RECOMMENDATION

Based on the findings of this Environmental Scoping Assessment, no fatal flaws were identified that would prevent the proposed development from proceeding. The potential impacts identified at scoping level are considered manageable through the implementation of an EMP.

It is therefore recommended that the proposed project be considered for environmental authorisation, subject to compliance with the conditions of an ECC and the implementation of the approved EMP.

10 APPLICATION FOR ENVIRONMENTAL CLEARANCE

This Environmental Scoping Assessment has been prepared in support of an application for an ECC in terms of the Environmental Management Act, 2007 (Act No. 7 of 2007), and the Environmental Impact Assessment Regulations, 2012. The application relates to the construction of public roads and bulk infrastructure associated with township establishment within the Rundu townlands. This report will be submitted to the MEFT together with the required application documentation and the EMP.