



**URBAN
DYNAMICS**

town and regional planners

SEPTEMBER 2023
REPORT NUMBER: APP-1900

ENVIRONMENTAL SCOPING ASSESSMENT

FOR THE CLOSURE AND REALIGNMENT OF ERF 2284, NOMTSOUB EXTENSION 1 (STREET); AND
THE CLOSURE AND REALIGNMENT OF ERF 2278, NOMTSOUB EXTENSION 1 (PUBLIC OPEN
SPACE) THROUGH THE CONSOLIDATION AND SUBDIVISION OF VARIOUS ERVEN IN NOMTSOUB
EXTENSION 1, TSUMEB



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GENERAL LOCATION DESCRIPTION OF THE DEVELOPMENT AREA:

DESCRIPTOR:	LOCATION SPECIFICS:
NATURE OF ACTIVITIES:	Construction of public roads, infrastructure through township establishments.
REGION:	Region
LOCAL AUTHORITY:	Tsumeb Municipality
FALL WITHIN:	Tsumeb Townlands
NEAREST TOWNS / CITY:	Tsumeb
ERF	Erf 2278 (Public Open Space) Nomtsoub Extension 1
	Erf 2284 (Street) Nomtsoub Extension 1
LAND USE:	<ul style="list-style-type: none"> • Public Open Space • Street
STRUCTURES:	No Structures
HISTORICAL RESOURCES:	No Historical Resources
CEMETERY:	No Cemetery
FLOODLINES:	No Floodlines
LATITUDE:	-19.241434 S,
LONGITUDE:	17.701618 E

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ABBREVIATION:	DESCRIPTION:
am	ANTE MERIDIEM / BEFORE MIDDAY
Av	AVENUE
BID	BACKGROUND INFORMATION DOCUMENT
DEM	DIGITAL ELAVATION MODEL
ER	EMPLOYERS REPRESENTATIVE
EA	ENVIRONMENTAL ASSESSMENT
EC	ENVIRONMENTAL COMMISSIONER
ECO	ENVIRONMENTAL CONTROL OFFICER
EMP	ENVIRONMENTAL MANAGEMENT PLAN
Etc.	ET CETERA / OTHER SIMILAR THINGS
e.g.	EXEMPLI GRATIA
FRMP	FLOOD RISK MANAGEMENT PLAN
HIV	HUMAN IMMUNODEFICIENCY VIRUS
i.e.	ID EST. / IN OTHER WORDS
I&APs	INTERESTED AND AFFECTED PARTIES
NBD	THE NAMIBIA BIODIVERSITY DATABASE
NHC	NAMIBIAN HEALTH CARE
NORED	NORTHERN REGIONAL ELECTRICITY DISTRIBUTOR
pm	POST MERIDIEM / AFTER MIDDAY
SME	SMALL-AND-MEDIUM-SIZED ENTERPRISE
TRRP	TREE REMOVAL AND REPLACEMENT PLAN
TB	TUBERCULOSIS
URPB	URBAN AND REGIONAL PLANNING BOARD
WMP	WASTE MANAGEMENT PLAN
UNIT SYMBOL:	UNIT DESCRIPTION:
0°	DEGREES CELSIUS
E	EAST
ha	HECTARES
Km	KILOMETRE
m	METER
mm	MILLIMETRE
S	SOUTH
m ²	SQUARE METERS
%	PERCENTAGE

1 APPOINTMENT

Urban Dynamics Africa Pty (Ltd) has been appointed by the Tsumeb Municipality, the owner of Erven 2278 and 2284, Nomtsoub Extension 1, to obtain Environmental Clearance on their behalf for the closure and realignment of Erf 2278 (Public Open Space) and Erf 2284 (Street) Nomtsoub Extension 1, Tsumeb.

The relevant documentation are included in support of our application to the Environmental Commissioner; please refer to the appendices attached hereto.

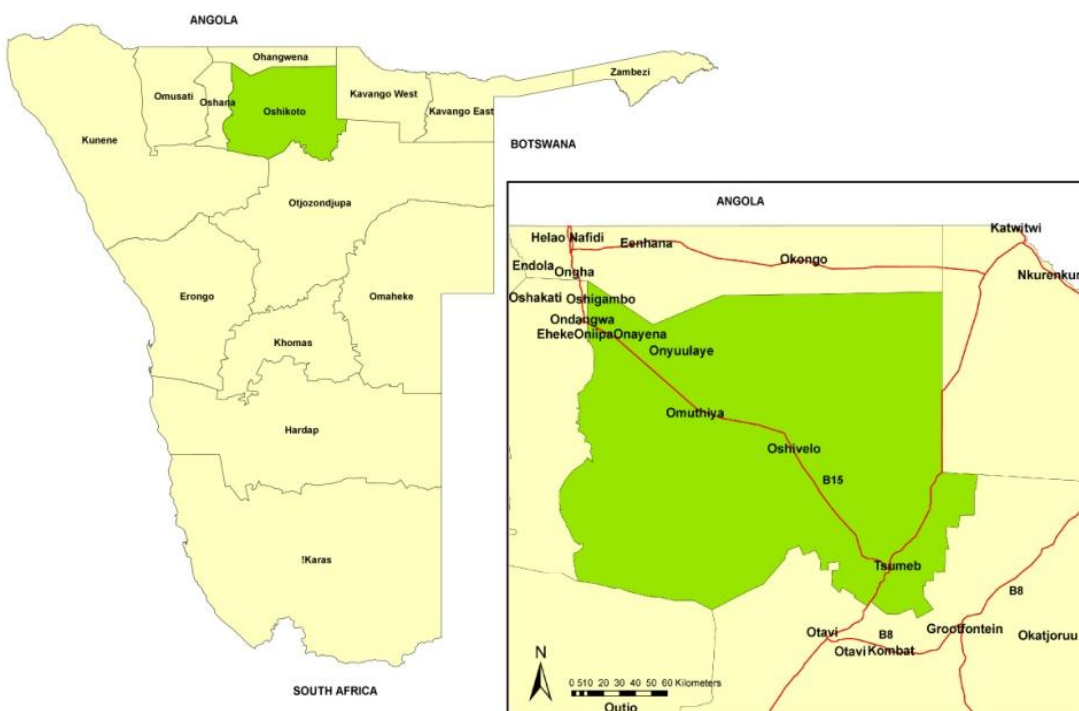
1 BACKGROUND

The Tsumeb Municipality relocated residents within the current boundaries of Nomtsoub Extension 1 between 2021 and 2022. Notably, residents in this area have not yet established their homes in compliance with officially approved cadastral boundaries. Consequently, existing dwellings have encroached upon multiple cadastral boundaries.

A series of planning measures are essential to address this misalignment between cadastral boundaries and the present ground reality. These measures encompass street closures, adjustments to public open spaces, property consolidations, subdivisions, and rezoning of land parcels. Implementing these actions will enable the occupants to attain legal ownership of their current land.

The project site is within the Tsumeb Townlands, approximately 432km from Windhoek and 286km southeast of Oshakati. Tsumeb serves as the district capital for the Tsumeb Constituency and extends essential services to nearby settlements.

Figure 1: The Locality of Tsumeb



In order to secure approval from the Ministry of Urban and Rural Development, facilitated through the Urban and Regional Planning Board, it is imperative to obtain an Environmental Clearance Certificate from the Ministry of Environment, Forestry, and Tourism as the initial step in the regulatory process.

2 NATURE OF THE ACTIVITY

The primary objective of this application is to secure approval from the Ministry of Environment, Forestry, and Tourism, in accordance with the provisions of the Environmental Management Act (Act 7 of 2007), specifically Section 10.1 and Section 10.2. This approval pertains to the following aspects:

Section 10.1: Approval is sought for the construction of the following:

- (a) Infrastructure related to oil, water, gas, petrochemical, and other bulk supply pipelines.
- (b) Public roads.

Section 10.2: Approval for route determination of roads and design of associated physical infrastructure where it is a:

- (a) Public road.

This report serves as a comprehensive documentation of essential baseline information. Its purpose is to enable the Environmental Commissioner (EC) to assess and screen the proposed project. Ultimately, it aims to facilitate the issuance of an Environmental Clearance Certificate as per Section 33 of the Environmental Management Act (Act 7 of 2007).

The report delves into the intrinsic nature of the project, identifies potential environmental impacts that may arise, and outlines the mitigation measures that will be implemented to effectively address these impacts. This holistic approach ensures compliance with regulatory requirements and promotes environmentally responsible project execution.

3 LEGISLATION

The following table provides the legislative framework against which the application should be assessed:

THEME	LEGISLATION	PROVISION	PROJECT IMPLICATIONS
	The Constitution of the Republic of Namibia First Amendment Act 34 of 1998	<p>These two articles within the Constitution, highlight essential rights and responsibilities in Namibia:</p> <ul style="list-style-type: none"> ❖ Article 16 (1) ensures every person's right to own and manage property individually or in collaboration with others. ❖ Article 95 (i) emphasizes the state's duty to actively safeguard the people's welfare by implementing policies that manage Namibia's ecosystems, ecological processes, and biodiversity while utilizing natural resources sustainably for the benefit of all. 	The project includes freehold title ownership options and emphasizes the importance of preserving the ecological and social integrity of the area.
Environmental	Environmental Management Act 7 of 2007	<ul style="list-style-type: none"> ❖ Section 27 requires that projects with significant environmental impacts are subject to an environmental assessment process. ❖ Section 2(b-c)) requires adequate public participation during the environmental assessment process for interested and affected parties to voice their opinions about a project. ❖ 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. ❖ - Details principles which are to guide all EIAs 	This Act and its regulations should inform and guide this EIA process to ensure that Environmental Clearance is obtained.

	EIA Regulations GN 57/2007 (GG 3812)	<ul style="list-style-type: none"> ❖ Section 21 details the requirement for public consultation within a given 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	<p>Under the Forestry Act 12 of 2001, there are provisions aimed at conserving and protecting vegetation and plant species:</p> <ul style="list-style-type: none"> ❖ Section 22(1) prohibits the removal of tree species and any vegetation within 100 meters of a watercourse without obtaining a permit. This regulation helps safeguard the vegetation and ecosystems near watercourses, which are often sensitive areas crucial for biodiversity and environmental stability. ❖ The Act contains additional provisions or measures for the protection of various plant species. These measures may include safeguards against overharvesting, habitat destruction, or illegal trade in endangered or protected plant species. 	<p>The project must prioritize protecting plant species listed in Annexure A of the regulations through responsible layout planning and construction.</p> <p>A Tree Management Plan is required before construction starts to identify and protect these species.</p> <p>Permits from the Ministry of Environment, Forestry, and Tourism are needed to remove protected species when protection is not feasible.</p> <p>Non-compliance may result in legal consequences, so strict adherence is crucial for responsible and legal project execution.</p>
	Forest Regulations GN 170/ 2015 (GG 5801)	<p>Under the Forest Regulations GN 170/2015:</p> <ul style="list-style-type: none"> ❖ Section 13.2 strictly prohibits the removal of any protected species without obtaining special permission. The list of protected species can be found in Annexure A of the Regulations. 	
Water	Water Act No. 54 of 1956	<p>Under the Water Act No. 54 of 1956:</p> <ul style="list-style-type: none"> ❖ Section 23(1) addresses the prohibition of pollution in both underground and surface 	<p>Measures must be implemented to prevent water pollution during the construction phase. These steps</p>

		<p>water bodies. This regulation is aimed at safeguarding water resources from contamination and maintaining their quality.</p>	<p>are vital for safeguarding water resources and ensuring compliance with regulations.</p>
<p>Health and Safety</p>	<p>Labour Act 11 of 2007</p>	<ul style="list-style-type: none"> ❖ Chapter 2 details the fundamental rights and protections of employees. ❖ Chapter 3 deals with the basic conditions of employment. 	<p>Employment opportunities presented by the development and compliance with labour law are essential.</p>
	<p>Public and Environmental Health Act of 2015 (GG 5740)</p>	<ul style="list-style-type: none"> ❖ 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. 	<p>Development contractors must comply with these legal requirements of the Act. by preventing activities that can impact the health and safety of the public and employees.</p>
<p>Atmospheric Pollution</p>	<p>Atmospheric Pollution Prevention Ordinance No 45 of 1965</p>	<p>Under the Atmospheric Pollution Prevention Ordinance No. 45 of 1965, there are several critical aspects to consider:</p> <ul style="list-style-type: none"> ❖ Part II: This section addresses the control of noxious or offensive gases, emphasizing the importance of managing and reducing emissions that can harm air quality and public health. ❖ Part III: It focuses on atmospheric pollution caused by smoke. This section likely outlines regulations and measures to control and minimize smoke emissions, which can be harmful and detrimental to the environment and public well-being. ❖ Part IV: Dust control is the main concern in this part. It likely sets forth rules and 	<p>The development should consider the provisions outlined in the Act. The proponent should apply for an Air Emissions permit from the Ministry of Health and Social Services (if needed).</p>

		<p>guidelines for managing and mitigating dust emissions, which can have adverse effects on air quality and health.</p> <ul style="list-style-type: none"> ❖ Part V: This section deals with air pollution caused by fumes emitted by vehicles. It likely outlines regulations related to vehicle emissions and their impact on atmospheric pollution, promoting measures to reduce such emissions. 	
Archaeology	National Heritage Act 27 of 2004	<ul style="list-style-type: none"> ❖ 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.
	Burial Place Ordinance 27 of 1966	<ul style="list-style-type: none"> ❖ 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	<ul style="list-style-type: none"> ❖ 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	<ul style="list-style-type: none"> ❖ 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.
	Tsumeb Zoning Scheme	<ul style="list-style-type: none"> ❖ The Tsumeb Zoning Scheme provides for various land use and activities allowed within the Tsumeb Municipality's jurisdiction. 	The development should be in accordance with the Zoning Scheme.

<p>Services and Infrastructure</p>	<p>Road Ordinance 17 of 1979</p>	<ul style="list-style-type: none"> ❖ 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 and obstructions on and interference with proclaimed roads. ❖ Section 38 distances from proclaimed roads at which fences are erected. 	<p>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.</p>
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4 METHODOLOGY

This section outlines the methodology employed by Urban Dynamics Africa (UDA) to assess the project site, analyze its strengths, weaknesses, opportunities, and threats (SWOT), and develop a strategic planning approach. Our goal is to create a layout that maximizes strengths, mitigates weaknesses, capitalizes on opportunities, and minimizes threats within the natural and social environment of the project.

4.1 SITE INFORMATION AND TOPOGRAPHY

In 2023, Urban Dynamics conducted comprehensive site visits to gather crucial data about the project area. These site visits enabled us to identify existing structures, assess infrastructure, analyze topographical features, understand land uses, and evaluate the current functioning of the settlement.

4.2 NATURAL RECEIVING ENVIRONMENT

In July 2023, the Urban Dynamics team conducted a thorough environmental screening of the affected area. Our approach involved a multi-faceted methodology that incorporated:

- **Site Visits:** Conducting on-site visits for firsthand observations.
- **Literature Surveys:** Reviewing relevant literature sources.
- **Regional Experience:** Leveraging our extensive regional experience.

We sourced data from reputable references, including:

- **Atlas of Namibia** (Atlas of Namibia Team, 2022)
- **Atlas of Namibia** (Mendelsohn et. al, 2002)
- **Redbook for Human Settlement Making** (Council Scientific and Industrial Research)

4.3 PUBLIC CONSULTATION

Urban Dynamics proactively initiated a comprehensive public consultation campaign in strict adherence to the provisions of the Environmental Management Act 7 of 2007 and the Local Authorities Act. Our aim was to ensure that all concerned parties and stakeholders had the opportunity to engage in the project.

To facilitate this, we published notices in two prominent newspapers concurrently over two consecutive weeks, inviting interested parties to register their involvement (**Appendix "C.1"**).

Furthermore, we meticulously followed the regulations outlined in the Local Authorities Act to officially close Erf 2284 as a street. To inform the public, we published advertisements in the

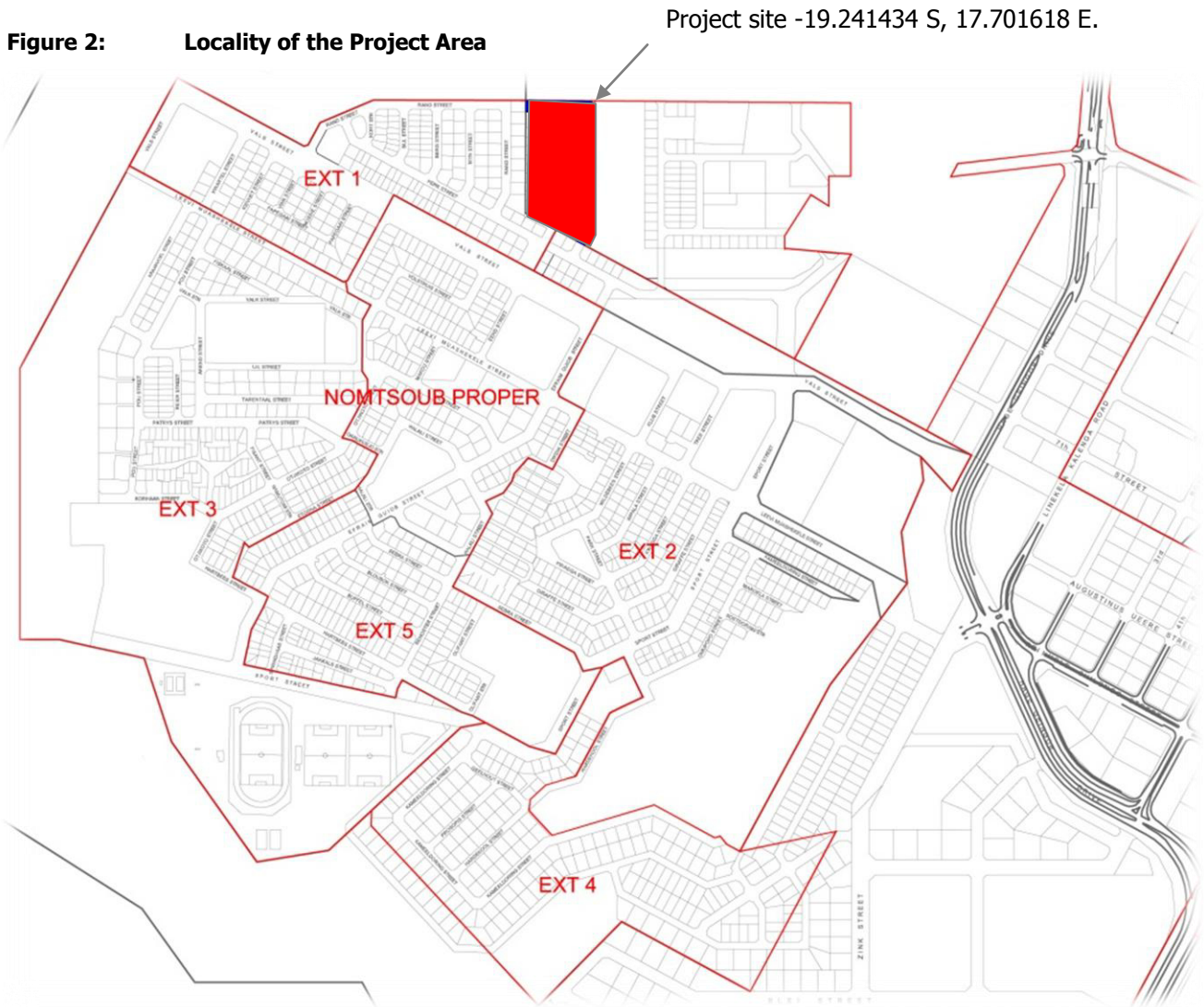
Namibian and New Era newspapers on the 16th and 23rd of August 2023 and in the Government Gazette on 1st September 2023 (refer to **Annexure "C"**). The objection period concluded on the 15th of September 2023, ensuring transparency and public participation in the project's decision-making process.

5 DESCRIPTION OF THE SITE

This section provides a description of the proposed project site relative to the surrounding urban areas, existing use and settlement, services and other infrastructure, topography, and other site features.

5.1 LOCATION OF THE SITES

The projects are situated on Erven 2279 and 2284 in Nomtsoub Extension 1, with coordinates at approximately -19.241434 S, 17.701618 E. Access to the project sites are primarily via Rand Street. A locality plan is attached as **Appendix "B"**.



5.2 OWNERSHIP, SIZE AND SHAPE OF THE ERVEN

Tsumeb Municipality is the registered owner of the two erven. Erf 2279, Nomtsoub Extension 1 measures 398 sqm and is currently zoned Public Open Space. Erf 2284, Nomtsoub Extension 1 is currently reserve as street and measures 9 272 sqm. **Figure 3** illustrates the shape of the erven, and **Table 1** provides the erven’s size and current zoning and reservation.

LEGEND:

- ERF 2284 STREET
- ERF 2279 PUBLIC OPEN SPACE




Figure 3: The Portion Shape

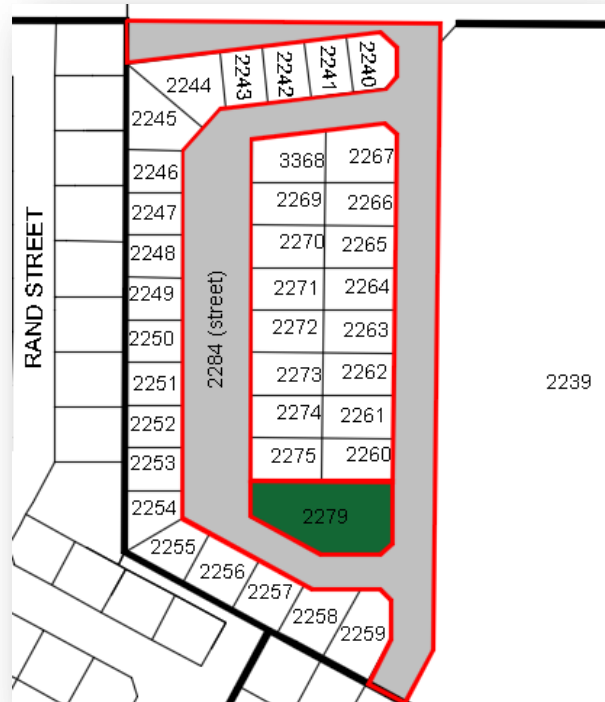


Table 1: Erf Size

Erf	Erf size (Sq m)	Zoning / Reservation
Erf 2279, Nomtsoub Ext 1	398	Public Open Space
Erf 2284, Nomtsoub Ext 1	2284	Street

5.3 LAND USE ACTIVITIES

As indicated in **Figure 4**, Erf 2279, Nomtsoub Extension 1 is used for an informal sport grounds and Erf 2284, Nomtsoub Extension 1 is as street.

Figure 4: Land Use Activities



5.4 UTILITY SERVICES AND ACCESS

5.4.1 Water Connection:

NamWater serves as the supplier of bulk water to the Tsumeb Municipality's bulk water network. The proposed development site will be integrated into the town's water-reticulated network, which caters to the water needs of formal residents and businesses in the area.

5.4.2 Electrical Supply:

The development site will be connected to the Municipality's electrical reticulated network, utilizing the nearby power network to provide the required electrical supply.

5.4.3 Sewerage:

A sewerage reticulation network and pump station serve the formal Tsumeb Municipality's. Informal areas make use of septic tanks and pit latrines.

5.4.4 Road Access:

Access to the project site is primarily via Rand Street.

5.4.5 Communication:

The town has accessibility to selected services, including television, radio, newspaper, telephone, and cell phone.

5.5 CULTURAL RESOURCES

No items of historical or cultural significance were identified within the boundaries of the development site. This absence of historically valuable artefacts or sites within the project area ensures that there are no cultural preservation considerations to be addressed in this context.

5.6 TOPOGRAPHY AND ENVIRONMENTAL CHARACTERISTICS

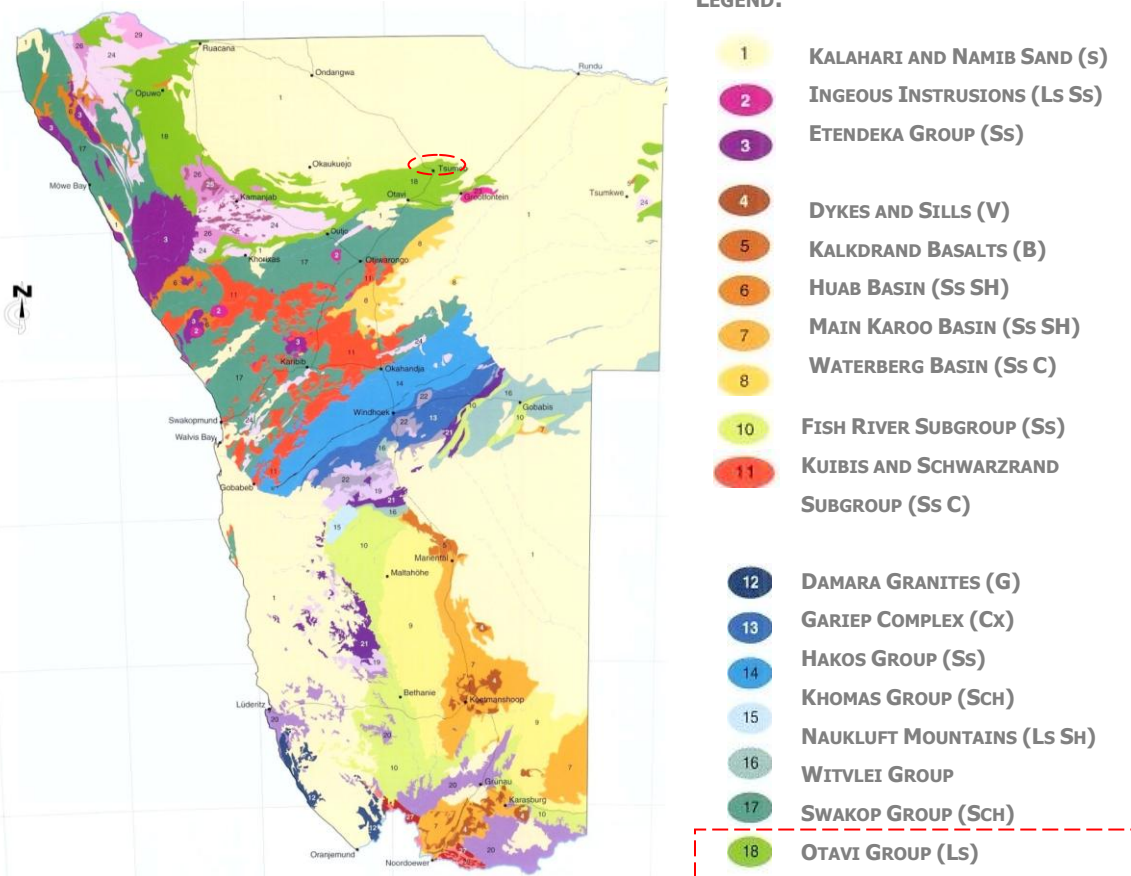
5.6.1 Topography & Flooding:

The site's flat terrain and lack of flood, infill, or erosion risks make it suitable for development. It's nestled within an existing residential area and won't disrupt the natural environment's character since it accommodates existing dwellings.

5.6.2 Soil Conditions:

As depicted in **Figure 5**, the soil conditions in the vicinity of Tsumeb, Grootfontein, and Otavi are prominently linked to the Otavi Group geological formation, as confirmed by to the Namibia Atlas of 2022. This designation underscores the significant influence of the Otavi Group on the local soil composition in these areas.

Figure 5: Soil types in Namibia



Source Mendelsohn et al., 2002

The geological characteristics of the Otavi Group, such as its karst topography and limestone formations, can create geological hazards. Sinkholes, subsidence, and ground instability may occur, potentially affecting infrastructure and urban development.

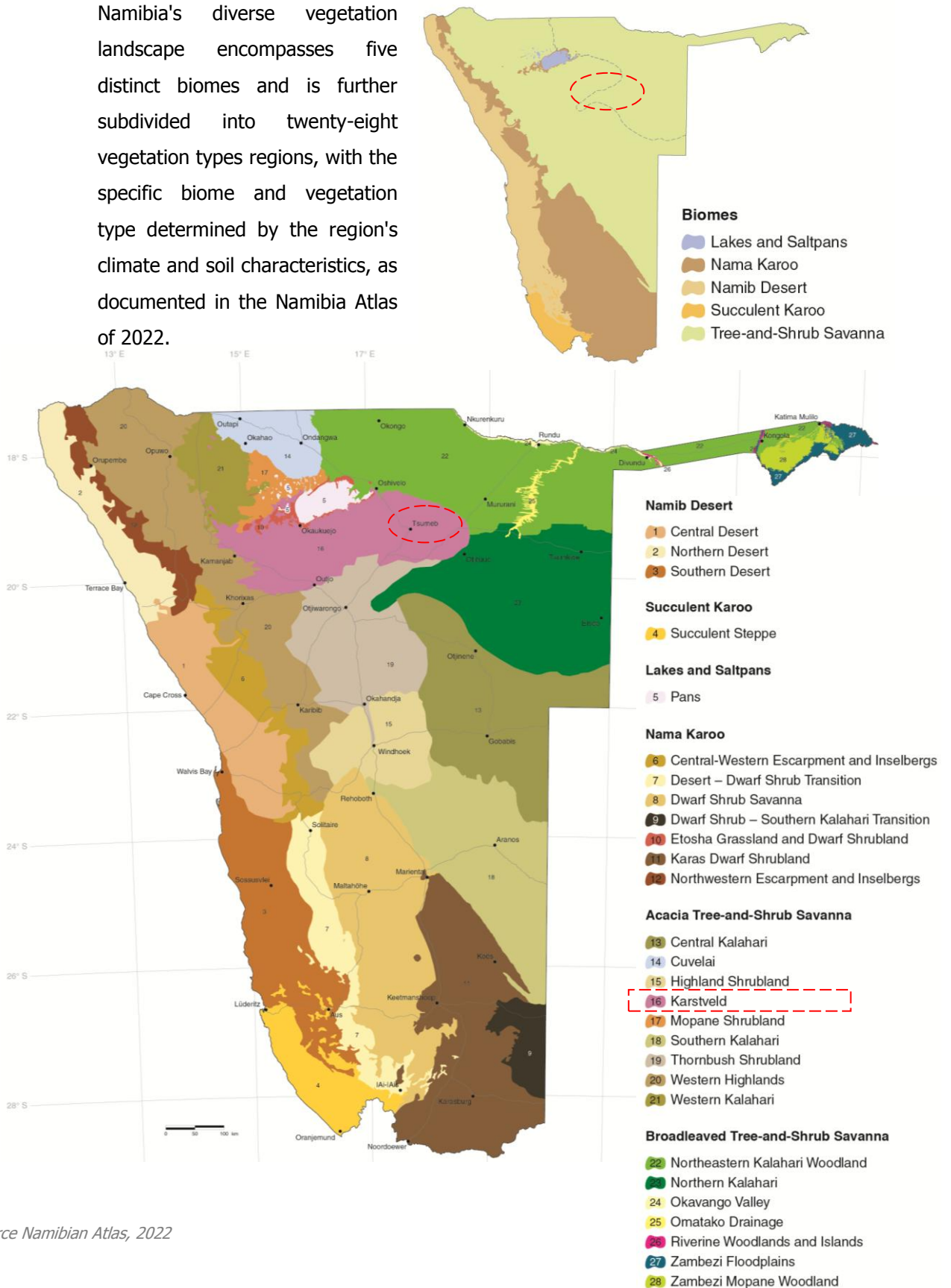
Figure 6: Soil condition



5.6.3 Vegetation Conditions:

Namibia's diverse vegetation landscape encompasses five distinct biomes and is further subdivided into twenty-eight vegetation types regions, with the specific biome and vegetation type determined by the region's climate and soil characteristics, as documented in the Namibia Atlas of 2022.

Figure 7: Namibia biomes and vegetation types



Source Namibian Atlas, 2022

As **Figure 7** illustrates, the Tsumeb region is situated within the (Acacia) Trees and Shrub Savanna biome, specifically falling under vegetation type 16 known as Karstveld, according to the Namibia Atlas of 2022.

It's important to note that little natural vegetation remains at the development site, as indicated in the image below. This suggests that the local vegetation has been significantly affected by previous land use or development activities.

Figure 8: Vegetation at the site



5.6.4 Habitats on Site:

Due to previous habitat alterations and human activities, the area can be characterized as ecologically degraded and is no longer in a pristine state. It is best described as an impacted ecosystem. The presence of little natural vegetation beyond small shrubs and grasslands at the project site indicates significant changes to the natural landscape. Moreover, it is highly likely that there are no large wild mammals residing in the area due to these ecological changes and the human presence.

5.6.5 Climate, Wind Directions, and Rainfall:

Rainfall in Namibia is primarily driven by north-easterly winds that bring rain-bearing clouds into the country. However, the arid terrain often blocks these clouds, resulting in limited precipitation. The average monthly humidity levels vary throughout the year, with the highest humidity at midday being around 50% in March, dropping to a mere 17% in September. Rainfall is concentrated in the period from October to April, with January typically receiving the highest amount.

Annual rainfall across the north-central regions of Namibia increases from west to East. In these regions, it generally ranges from less than 300 mm to not more than 550 mm, as reported by Mendelsohn in 2002.

Winds in Tsumeb are infrequent, with the area experiencing wind-calm conditions approximately 57% of the time. When winds occur, they mainly blow from the East and rarely exceed 10 km per hour speeds. The windiest months tend to be from January to April.

In Namibia's hot and dry conditions, understanding the local climate and weather patterns is crucial for various aspects of life, including agriculture, construction, and environmental planning.

5.7 STATUS OF PROTECTED AREA

The site itself has no protected status.

5.8 SUMMARY OF THE HABITATION ON SITE

The comprehensive screening process undertaken for the current development has revealed that the project site is ecologically impacted, no longer in a pristine state, and not fully functional at the ecosystem level. Extensive habitat alterations and the influence of various human activities over time have led to the degradation of the local ecosystem.

Key environmentally relevant features show that:

- The project is situated on Erven 2279 and 2284 in Nomtsoub Extension 1, with coordinates at approximately -19.241434 S, 17.701618 E.
- Access to the project sites is primarily via Rand Street.
- Tsumeb Municipality is the registered owner of both Erven. Erf 2279 measures 398 sqm and is currently zoned as Public Open Space. Erf 2284 measures 9,272 sqm and is currently reserved as a street.
- Erf 2279 is used as an informal sports ground.
- Erf 2284 serves as a street.
- No historical or culturally significant items were found within the project boundaries, and there are no cultural preservation considerations.
- The site has a flat terrain with no flood, infill, or erosion risks, making it suitable for development within an existing residential area.
- Soil conditions are influenced by the Otavi Group geological formation, which may pose geological hazards such as sinkholes and ground instability.

- The project site falls within the (Acacia) Trees and Shrub Savanna biome, specifically vegetation type 16 known as Karstveld, according to the Namibia Atlas of 2022.
- Little natural vegetation remains at the site, indicating prior land use or development.
- Due to habitat alterations and human activities, the area is ecologically degraded and lacks large wild mammals.
- The local climate in Tsumeb is characterized by limited rainfall, infrequent winds, and high temperatures, with rainfall concentrated from October to April.

The comprehensive screening process undertaken for the current development has revealed no significant biodiversity-related issues or concerns that would necessitate further investigation. It is evident that the project site is suitable for the proposed development.

Given the findings of the environmental screening and in accordance with the provisions of Articles 33 and 34 of the Environmental Management Act, it is recommended that the development proceed without the need for further assessment. This recommendation aligns with the absence of significant environmental concerns and underscores the project's feasibility within the current environmental context.

6 THE REALIGNMENT OF THE LAYOUT

The client intends to align cadastral boundaries with the current on-ground situation. This entails several steps, including formally closing a street and public open space. Additionally, the process involves the consolidation of neighbouring erven, the subdivision of the land into new smaller erven, and the rezoning of the new erven.

6.1 LAYOUT DETAIL

As depicted in **Figure 9**, the first step in this process involves the formal closure of Erven 2279 (Public Open Space) and 2284 (Street). After these closures, Erven 2240 to 2245, Erven 2260 to 2279, and Erf 2287 within Nomtsoub Extension 1 will be consolidated into Portion X and subdivided into 39 new erven and a Remainder.

Subsequently, within this transformation, the newly created Erf 20 will be zoned for institutional land use, New Erf 39 will be zoned as a public open space, and the remaining portion will be reserved as a street. **Table 2** provides Erf 39 and the remainder’s size and current zoning or reservation. The remainder of the existing erven will retain their single residential zoning status.

Figure 9: Realignment Process

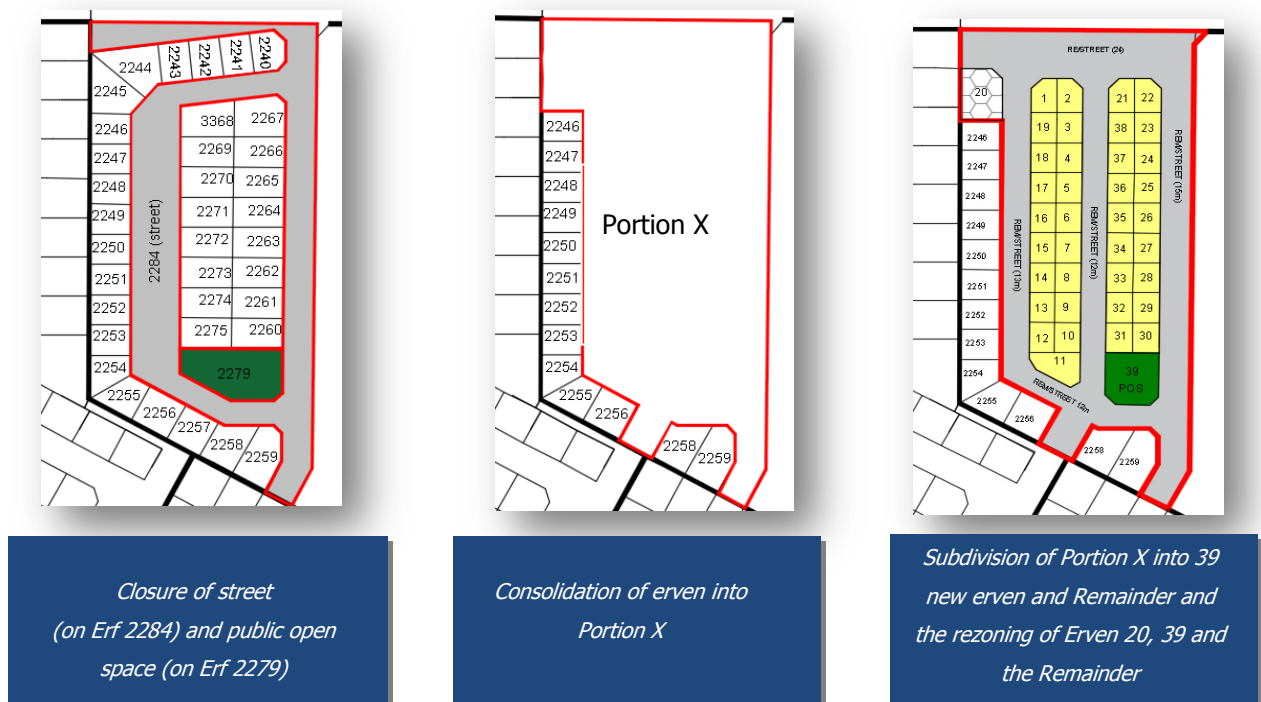


Table 2: Erf sizes and zonings

Erf	Erf size (Sq m)	Zoning / Reservation
New Erf 39	635	Public Open Space
Remainder of Portion X	1 171	Street

7 POTENTIAL IMPACTS

During the planning process, the Urban Dynamics team conducted a continuous assessment of potential positive and negative impacts associated with the project. They have strived to enhance positive impacts and mitigate negative effects wherever feasible. This section offers a detailed exploration of these impacts, including the integration of various ideas into the layout and assessment of alternative approaches.

The section also addresses positive impacts that may not be fully addressed by the layout. Some of these impacts are temporary, occurring only during the construction phase, while others may be unavoidable due to site constraints and the goal of maximizing long-term benefits. While we discuss these impacts and strategies for dealing with them here, detailed measures for mitigation and enhancement can be found in the Environmental Management Plan (EMP), recognizing that this document serves as an application for environmental clearance.

7.1 SUMMARY OF POTENTIAL IMPACTS

The planning and layout design, along with the alignment of roads and infrastructure upgrades, have the potential to yield both environmental and social impacts. The following is a summary list of potential impacts identified during the scoping process:

7.1.1 Benefits of the Project:

- Provision of serviced erven, addressing housing demand and providing secure land tenure.
- Stimulation of economic development, leading to job creation during construction and operation phases.
- Enhancement of health and wellness in the Tsumeb Townlands and the broader region.

7.1.2 Potential Negative Impacts during Construction:

- Impact of vegetation removal from the site.
- Generation of dust due to construction activities.
- Noise pollution from construction machinery.
- Disruption of traffic flow.
- Health and safety concerns for workers.
- Management of construction waste.

7.1.3 Potential Negative Impacts during Operations:

- Management of operational waste.

7.2 POTENTIAL IMPACTS

7.2.1 Project Benefits:

- **Facilitating Serviced Erven:** The revised layout process creates a structured development framework to effectively manage settlement expansion, effectively addressing the existing housing demand within Tsumeb and the broader region. This development provides residents with meticulously planned erven featuring well-defined boundaries, thereby guaranteeing secure land tenure for the community
- **Stimulate Employment Creation and Local Economic Development:** The project will generate employment during the construction phase.
- **Enhancing Health and Wellness:** The newly designed layout incorporates vital service connections and a meticulously planned road system, which not only enhances traffic flow within the township but also preserves the public open space designated for informal soccer matches. These enhancements play a significant role in promoting the overall health and well-being of the local community.

7.2.2 Negative Impacts during Construction:

- **Impact on Traffic Flow during Construction:** Construction activities, including the transportation of materials and supplies, may disrupt traffic flow within Nomtsoub Extension 1. The exact access routes to the site are yet to be defined.
- **Impact of Dust:** The movement of construction vehicles on bare soil can generate excessive dust, potentially impacting the health of the community and workers. Preventative measures should be implemented to mitigate dust pollution.
- **Impact of Construction Noise:** Construction machinery generates substantial noise, which can affect the surrounding community. Prolonged noise exposure may lead to stress and health issues among nearby residents.
- **Impact of Construction Waste:** Solid waste is expected to be a significant waste source during construction. Proper waste management measures, including hazardous waste disposal, must be in place to prevent soil and water pollution.

- **Impact on Health and Safety of Workers:** Construction activities inherently carry risks for workers. Adequate site management and safety measures are essential to protect workers from hazards such as chemicals, dust, and noise.

7.2.3 Potential Negative Impacts during Operations:

- **Impact of Operational Waste:** Solid household waste is expected during the operational phase of the new townships. Waste management plans for waste removal must be in place to prevent soil pollution and ensure responsible waste disposal.

7.3 DEALING WITH RESIDUAL IMPACTS

7.3.1 Residual Social Impacts:

No residual social impacts were identified.

7.3.2 Residual Environmental Impacts:

Residual environmental impacts associated with this project are detailed as follows:

- **Dust and Noise during Construction:** Dust and noise generated during construction will be limited and managed according to the EMP.
- **Traffic Impact during Construction:** Mitigation measures will be implemented to manage construction vehicle traffic during the construction phase as outlined in the EMP.
- **Construction Waste:** Effective waste management practices, including a Waste Management Plan (WMP), will be employed to address waste generated during construction.
- **Worker Health and Safety:** Measures to restrict potential health and safety risks for workers will be included in the EMP.
- **Solid Waste during Operations:** The removal of waste within the new townships will be managed according to the EMP to prevent soil pollution.
- **Groundwater Impact from Septic Tanks/Pit Latrines:** Potential groundwater impact during the operational phase will be limited and managed through measures outlined in the EMP.
- **Stormwater Drainage:** Stormwater drainage and culverts should be designed and utilised to accommodate water flow.

These measures are designed to address and mitigate residual impacts and ensure responsible environmental management throughout the project's construction and operational phases.

8 SUMMARY AND APPLICATION

8.1 PROJECT IMPACTS, AVOIDANCE MEASURES AND RESIDUAL IMPACTS

POTENTIAL IMPACT:	MEASURES:			RESIDUAL IMPACTS:
	AVOIDANCE:	MITIGATION:	ENHANCEMENT:	
<i>Stimulate local economic development and create employment opportunities:</i>			<p>During the development phase, the construction company will render services within the formal economy, employ staff, pay rates and taxes and spend money within the same economy.</p> <p>Emphasis should be placed on the requirement and employment of local people.</p>	
<i>Providing serviced residential erven:</i>			<p>The project will lead to formal and permanent land occupation, tenure security, access to capital and partaking in the economy, and ultimately to wealth creation in the operational phase.</p>	
<i>STIMULATE THE HEALTH AND WELLNESS OF THE COMMUNITY:</i>			<p>THE DEVELOPMENT:</p> <p>Provide that all services will be on the higher road reserves.</p> <p>Provide a closed system sewer system, which will prevent pollution during flooding.</p> <p>Provide for pedestrian infrastructure.</p>	

POTENTIAL IMPACT:	MEASURES:			RESIDUAL IMPACTS:
	AVOIDANCE:	MITIGATION:	ENHANCEMENT:	
POTENTIAL DUST AND NOISE ON THE CONSTRUCTION SITE:	Avoid dust and noise during the construction phase.	<p>The EMP mitigation measures for</p> <p>Dust:</p> <ul style="list-style-type: none"> No removal of vegetation or soil on the site except where necessary during the construction phase. <p>Noise:</p> <ul style="list-style-type: none"> Construction work will be restricted between 07h00 and 18h00. <p>The timeline for the potential impact is short-term, and the responsibility lies with the contractor and the Okahao Town Council.</p>		<i>Not all dust and noise can be prevented.</i>
POTENTIAL IN AN INCREASE IN TRAFFIC DURING THE CONSTRUCTION PHASE:	Avoid uncontrolled increase in traffic during the construction phase.	<p>The EMP mitigation measures for traffic at the site include:</p> <ul style="list-style-type: none"> Traffic during the construction phase will be restricted between 07h00 and 18h00. <p>The timeline for the potential impact is short-term, and the responsibility lies with the contractor and the Municipality.</p>		<i>An increase in traffic can be managed, although the increase in traffic will still have a potential impact on nearby residents.</i>
HEALTH AND SAFETY OF WORKERS:	Avoid health and safety impacts on workers during the construction phase.	<p>The EMP mitigation measures for the health and safety of workers at the site include:</p> <ul style="list-style-type: none"> Construction practices and safety procedures 		<i>Not all the health and safety aspects of the workers can be prevented.</i>

		<p>need to be applied.</p> <p>The timeline for the potential impact is short-term, and the responsibility lies with the contractor.</p>		
<p>WASTE MANAGEMENT:</p>	<p>Avoid pollution as a result of no waste management.</p>	<p>The EMP mitigation measures for the waste on the construction site and during operations include:</p> <ul style="list-style-type: none"> • During construction, a waste management plan should be used on the site. • The township needs to be included in the Tsumeb Municipal' waste management system or program during the operational phase. <p>The potential impact timeline is short-term during construction and long-term during operations.</p> <p>The responsibility lies with the contractor/ Municipal Council.</p>		<p><i>Not all pollution can be prevented.</i></p>

9 APPLICATION FOR ENVIRONMENTAL CLEARANCE

Based on the findings from this baseline investigation, no anticipated future environmental impacts have been identified resulting from the street and public open space closures, alterations to the street and public open spaces through the realignment of the original township layout, or the construction activities within the Nomtsoub Extension 1 as a result of the aforementioned activities.

Therefore, it is recommended that the development proceeds without the necessity for further assessment, aligning with the provisions outlined in Articles 33 and 34 of the Environmental Management Act. The Application Form 1 for an Environmental Clearance Certificate, as specified in Section 32, is included as **Annexure "1"** to this Scoping Report.