



**URBAN  
DYNAMICS**  
town and regional planners

REPORT NUMBER: APP-

## **APPLICATION FOR ENVIRONMENTAL CLEARANCE:**

**FOR THE AMENDMENT OF CONDITIONS OF ESTABLISHMENTS, THE  
CONSTRUCTION OF A PUBLIC ROAD AND CLOSING OF PUBLIC OPEN  
SPACES THROUGH STATUTORY TOWN PLANNING PROCEDURES AT  
EHEKE SETTLEMENT WITHIN THE OSHANA REGION**

**AN ENVIRONMENTAL SCOPING ASSESSMENT**

**PROPONENT:**

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**OSHAKATI**  
NAMIBIA

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PLANNING AND SCOPING REPORT FOR THE EHEKE AMENDMENTS, PREPARED BY

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**GENERAL LOCATION DESCRIPTION OF THE DEVELOPMENT AREA:**

DESCRIPTOR:	LOCATION SPECIFICS:
NAME OF PROJECT	AMENDMENT OF CONDITIONS OF ESTABLISHMENTS, THE CONSTRUCTION OF A PUBLIC ROAD AND CLOSING OF PUBLIC OPEN SPACES THROUGH STATUTORY TOWN PLANNING PROCEDURES
REGION:	OSHANA
LOCAL AUTHORITY:	OSHANA REGIONAL COUNCIL
FALL WITHIN:	THE REMAINDER OF EHEKE TOWN AND TOWNLANDS NO. 1009
NEAREST TOWN	EHEKE SETTLEMENT
SIZE OF ERF 4, EHEKE	569 m <sup>2</sup>
SIZE OF ERF 5, EHEKE	1 342 m <sup>2</sup>
SIZE OF ERF 6, EHEKE	40 759 m <sup>2</sup>
SIZE OF ERF 204, EXTENSION 1 EHEKE	6 714 m <sup>2</sup>
SIZE OF ERF 296, EXTENSION 1 EHEKE	1 727 m <sup>2</sup>
LAND USE:	RESIDENTIAL
STRUCTURES:	YES
HISTORICAL RESOURCES:	NO
CEMETERY:	YES
FLOODLINES:	YES
ENVIRONMENTAL SIGNIFICANT AREA:	OSHANAS
LATTITUDE:	-17.927805 S,
LONGITUDE:	15.868799 E
RELEVANT LISTED ACTIVITIES:	<p>The Environmental Management Act (Act 7 of 2007),</p> <p><b>SECTION 5: LAND USE AND DEVELOPMENT ACTIVITIES</b>                      5.1 The re-zoning of land from –                      (a) residential use to industrial or commercial use;</p> <p><b>SECTION 8: WATER RESOURCE DEVELOPMENTS</b>                      8.8. Construction and other activities in watercourses within flood lines;                      8.9. Construction and other activities within a catchment area;</p> <p><b>SECTION 10: INFRASTRUCTURE</b>                      10.1 The construction of-                      (b) public roads;                      10.2 Route determination of roads and design of associate physical infrastructure where-                      (a) Public road.</p> <p><b>SECTION 11: OTHER ACTIVITIES</b>                      11.2 Construction of cemeteries, camping, leisure and recreation sites.</p>

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<b>ABBREVIATION:</b>	<b>DESCRIPTION:</b>
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
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

<b>UNIT SYMBOL:</b>	<b>UNIT DESCRIPTION:</b>
0°	DEGREES CELSIUS
E	EAST
ha	HECTARES
Km	KILOMETRE
m	METER
mm	MILLIMETRE
S	SOUTH
m <sup>2</sup>	SQUARE METERS
%	PERCENTAGE



## 1 APPOINTMENT

Oshana Regional Council appointed Urban Dynamics to obtain Environmental Clearance for the

### **AMENDMENT OF CONDITIONS OF ESTABLISHMENTS, THE CREATION OF A PUBLIC ROAD THROUGH A SUBDIVISION, THE CLOSER OF TWO PUBLIC OPEN SPACES AND FOR THE EXTENSION OF THE CEMETERY THROUGH CONSOLIDATION WITHIN THE EHEKE SETTLEMENT.**

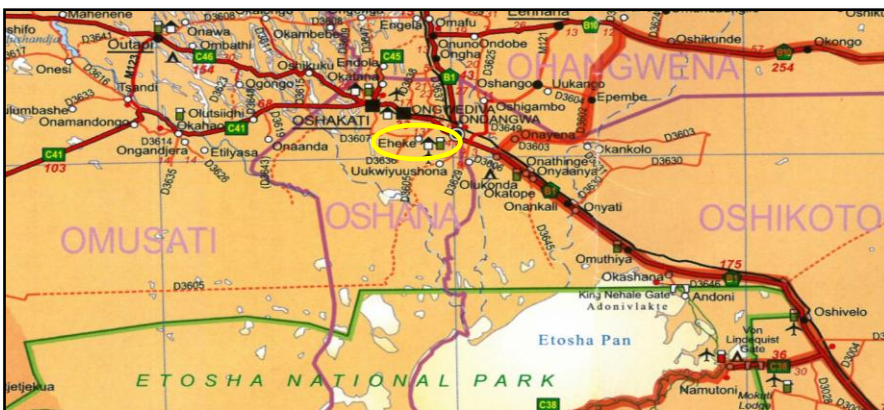
The relevant documentation are included in support of our application to the Environmental Commissioner; please refer to the appendices attached hereto.

## 2 BACKGROUND

The Oshana Regional Council intends to amend several erven’s conditions of establishments, create a public road through a subdivision, close two public open spaces and extend the local cemetery through consolidations within the Eheke Settlement.

Eheke Settlement is situated in the Ondangwa Rural Constituency, about 15 km west of Ondangwa in northern Namibia within the Oshana Region. The Settlement is the administrative centre for the Ondangwa Rural Constituency. Access to the Settlement is through the Ondangwa-Oshakati main road by District Road D3636.

Figure 1: The Locality of Eheke Settlement



Economic activities within Eheke include small and medium businesses. Eheke also includes the following institutions: a senior secondary school, a combined school, a primary school, an education circuit office, a clinic, and a police substation.

The project activities are located in Eheke Town and Townlands No. 1009, on Erven 4, 5 and 6 Eheke Proper, and Erven 204 and 296 Eheke, Extension 1.

For the purpose of obtaining approval from the Ministry of Urban and Rural Development (MURD) through the Urban and Regional Planning Board (URPB), an Environmental Clearance Certificate (ECC) must first be obtained from the Ministry of Environment, Forestry and Tourism (MEFT).

### 3 PURPOSE OF THE REPORT AND NATURE OF THE ACTIVITY

The purpose of the application is to obtain approval from the Ministry of Environment, Forestry and Tourism in terms of the following sections:

**The Environmental Management Act (Act 7 of 2007) and the Environmental Impact Assessment Regulations (2012) the following relevant activities may not be undertaken without environmental clearance:**

#### **Section 5: Land use and Development Activities**

- 5.1 The rezoning of land from
- (a) Residential use to industrial or commercial use;
  - (d) Use for nature conservation or zoned open space to any other land use;

#### **Section 8: Water Resource Developments**

- 8.8 Construction and other activities in watercourses within floodlines;

#### **Section 10: Infrastructure**

- 10.1 The construction of
- (b) Public roads
- 10.2 Route determination of roads and design of associate physical infrastructure
- (a) public roads

#### **Section 11: Other Activities**

- 11.2 Construction of cemeteries, camping, leisure and recreation sites.

## 4 LEGISLATION

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

STATUTE	PROVISIONS	PROJECT IMPLICATIONS
<p><b>THE CONSTITUTION OF THE REPUBLIC OF NAMIBIA, 1990:</b></p>	<p>The state shall actively promote and maintain the welfare of the people by adopting inter-alia policies aimed at the following:</p> <p>(i) <i>management of ecosystems, essential ecological processes and biological diversity of Namibia and utilisation of living natural resources on a sustainable basis for the benefit of all.</i></p>	<p>Ensure that the ecological integrity of the ecosystems of the area is protected.</p>
<p><b>ENVIRONMENTAL MANAGEMENT:</b></p>	<p><b><i>Environmental Management Act No.7 of 2007:</i></b></p> <p><b><i>EIA Regulation (EIAR) G.N. 57/2007 (GG 3212):</i></b></p> <p>In terms of Section 5.1(a) for the re-zoning of land from residential use to industrial or commercial use</p> <p>In terms of Sections 8.8, 8.10 and 8.11, for construction and other activities in watercourses within flood lines, the reclamation of land from below or above the high water and the alteration of natural wetlands are listed activities.</p> <p>In terms of Section 10.1(a), 10.1(b), 10.2(a), and 10.2(c) for environmental clearance for the construction of oil, water, gas and petrochemical and other bulk supply pipelines, the construction of public roads and the construction of a road with more than one lane of traffic in both directions.</p> <p>Prescribes the procedures to be followed to authorise the project (i.e. Environmental clearance certificate).</p>	<p>Evaluate if the alignment of the street will impact the social and natural environment.</p> <p>Determine if the risk of flooding of the erven is at acceptable levels.</p> <p>Determine if the proposed limited infill would impact the function of the watercourse or cause flooding elsewhere.</p> <p>Determine how wastewater pipelines in the riverbed should be designed, constructed and maintained to prevent groundwater and other pollution.</p>

<p><b>WATER AND RESOURCES MANAGEMENT:</b></p>	<p><b><i>The Water Act No. 54 of 1956 and Water Resources and Management Act No.27 of 2007 Section 92:</i></b></p> <p>Section 92 (1), A person may not engage in any construction work or activity that causes or is likely to cause the natural flow conditions of water in to or from a watercourse to be modified unless the Minister has granted prior written approval for the work or activity to be carried out.</p> <p>Section 100 (e) consults with the regional Council or local authority in determining the geographic extent of flood plain areas in its region or local authority, as the case may be, and assist any such councils in regulating the development and use of land within floodplain areas</p> <p>Section 100 (f) prescribes measures for control and management of storm and flood risk within local authority areas.</p> <p>Section 101 (c) the removal of rocks, sand or gravel or any other material from a watercourse.</p>	<p>Assess the potential risk that the planned activities may have on both the watercourse on the one hand and future occupants of the land on the other.</p>
<p><b>THE PUBLIC HEALTH AND HEALTH AND SAFETY REGULATIONS:</b></p>	<p><b><i>The Public Health Act 36 of 1919 as amended and the Health and Safety Regulations:</i></b></p> <p>These acts control the existence of nuisances such as litter that can cause a threat to the environment and public health.</p>	<p>Prevent activities that can impact the health and safety of the public.</p>
<p><b>COMPENSATION OF STRUCTURES OR FIELDS:</b></p>	<p><b><i>Cabinet Compensation Policy Guidelines for Communal land:</i></b></p> <p>Providing compensation to individuals regarding relocating people, removing fruit trees, or developing Mahango fields within communal land.</p>	<p>Assess to what extent the proposed policy complies with the plan's provision to ensure the rights of individuals within communal land.</p>

## 5 METHODOLOGY

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The following section discusses the methodology used by Urban Dynamics Africa (UDA) in assessing the site in terms of its strengths, weaknesses, opportunities and threats, and then formulate a planning approach to prepare a layout that harnesses the strengths, accommodates 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

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Urban Dynamics undertook site visits in 2018 to identify the existing structures, infrastructure, topography, land uses, and how the Settlement is currently functioning.

### 5.2 NATURAL RECEIVING ENVIRONMENT

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The Urban Dynamics team conducted an environmental screening for the project area in 2017 and 2018. The team used orthophoto analysis, a site visit, literature studies and extensive experience in the region.

Data sources used include:

- Atlas of Namibia (Mendelsohn et. al, 2002);
- The Tree Atlas of Namibia (Curtis & Mannheimer, 2005)
- Northern Regions. Flood Risk Management Plan 2011 (MoRLGHR, 2011)

### 5.3 PUBLIC CONSULTATION

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Urban Dynamics launched a public consultation campaign to ensure that any person interested in the project will have an opportunity to register as a stakeholder. Newspaper notices were placed in two separate newspapers simultaneously for two successive weeks, and a notice of intent was placed at the site. The advertisements which were placed are attached as **Appendix "C.1"**.

## 6 DESCRIPTION OF THE SITES

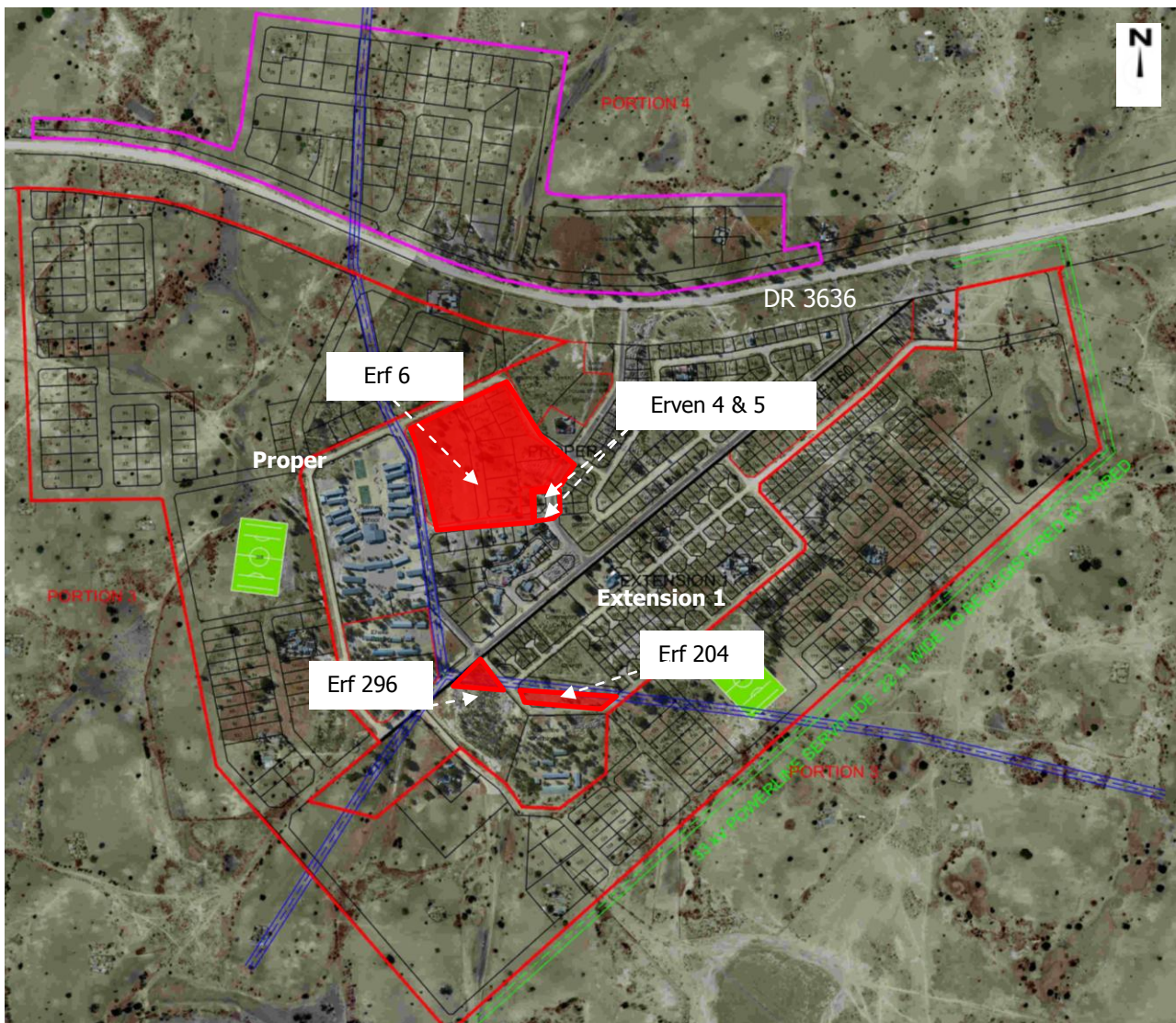
This section describes the proposed project site relative to the surrounding urban areas, existing use and Settlement, services and other infrastructure, topography, and other site features.

### 6.1 LOCATION OF THE SITES

The proposed project sites are located in the Eheke Settlement within Eheke Town and Townlands No. 1009, Registration Division, "A" in the Oshana Region. On relevant erven are Erven 4, 5, 6 Eheke Proper and 204, 296, Eheke, Extension 1.

Erven 4, 5 and 6, Eheke are situated south of the DR 3636 at 17.927805 S, 15.868799 E within the Eheke business centre and Erven 204 and 296, Extension 1 Eheke is situated south of Eheke Proper next to the Eheke cemetery. A locality plan is attached as **Appendix "B"**.

Figure 2: Locality of the Land Use Development Activities



## 6.2 OWNERSHIP, SIZE, AND SHAPE OF THE PORTIONS

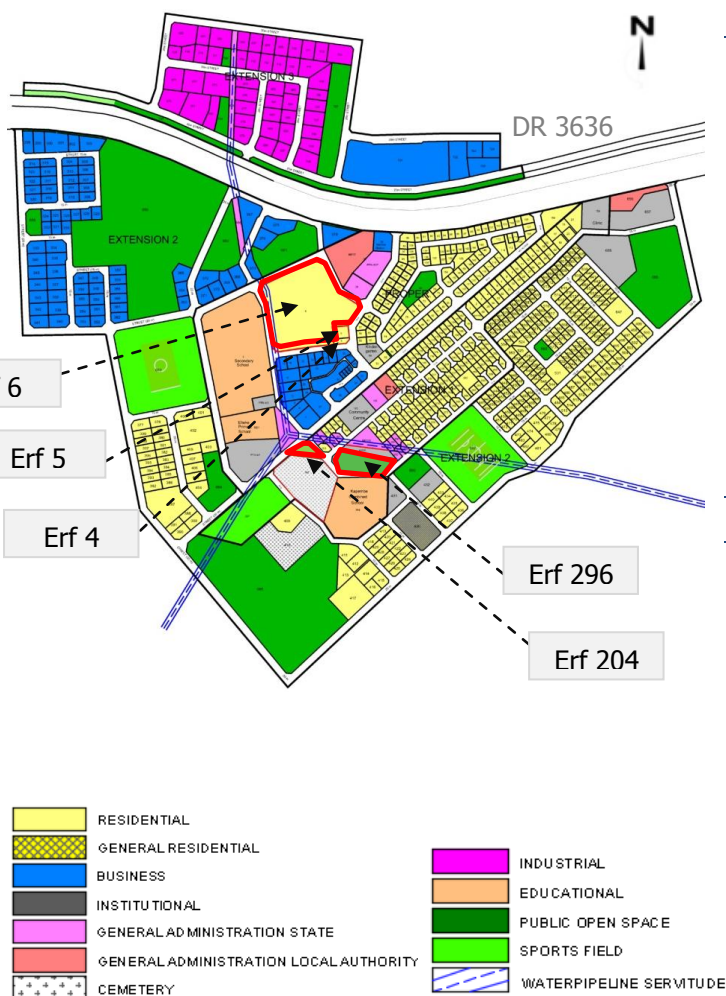
According to Eheke Proper’s Certificate of Registered Title No. T5187/2020 Erven 4, 5 and 6 are “Residential”. Eheke Extension 1’s Certificate of Registered Title No. T5188/2020 indicates Erf 204 is “Public Open Space” and Erf 296 is “Public Open Space”. **Table 1** provides the erven’s size and zoning. **Figure 3** illustrates the shape of the erven.

Table 1: Erf Sizes and Current Zoning

ERVEN	AREA / m <sup>2</sup>	TITLE CONDITIONS (ZONINGS)
4, Eheke	569	Residential
5, Eheke	1 342	Residential
6, Eheke	40 836	Residential
204, Eheke Extension 1	6 714	Public Open Space
296, Eheke Extension 1	1 727	Public Open Space

## 6.1 SURROUNDING LAND-USE & ONSITE LAND-USE ACTIVITIES

Figure 3: The Erven’s Shapes and Zonings



### Erven 4, 5 and 6, Eheke:

The surrounding land-use of these erven are mainly Business with General Administration State and General Administration Local Authority.

Land use activities on Erf 4, Eheke consist of one structure. Erf 5, Eheke is vacant with no land-use activities. Erf 6, Eheke includes 4 structures and a NamWater servitude.

### Erven 296 and 204, Eheke Extension 1

Erf 296, Eheke Extension 1 surrounded land-use includes Cemetery, Residential, Institutional and Public Open Space. Erf 204, Eheke Extension 1 surrounded land-use including Institutional, Education, Cemetery, General Administration State and Public Open Space.

Erf 296, Eheke Extensions 1 includes several graves and a NamWater servitude. Erf 204, Eheke Extensions 1 is vacant with a NamWater servitude.

## 6.2 ACCESS AND UTILITY SERVICES

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### Road Access:

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All the erven have access to the Settlement's internal road network.

### Water Connection:

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NamWater supplies bulk water to the Settlement. The sites have access to water through a communal tap. Once the layout is approved and implemented, the Regional Council should connect the site with the reticulation network.

### Electrical Supply:

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The development site's electricity will be supplied from NORED'S reticulated network.

### Sewerage:

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The Settlement does have oxidation ponds south of the town. The Regional Council is responsible for the maintenance of these services.

### Communication:

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The residents in the Settlement have access to television, radio, newspaper, telephone, and cell phone.

## 6.3 CULTURAL RESOURCES

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Erf 296, Eheke Extension 1 includes several scattered graves under land-use activities. No other items of historical value were found or could be identified within the development site boundaries.

## 6.4 ENVIRONMENTAL CHARACTERISTICS AND TOPOGRAPHY

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### Natural Environment:

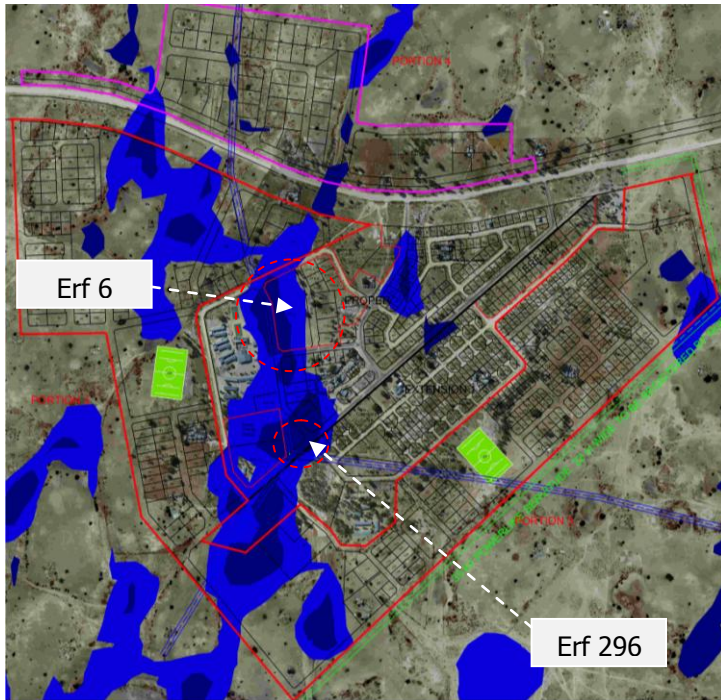
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The project is in an area populated by urban structures, homesteads and muhango fields. The remaining open ground demonstrates severe overgrazed, while well-worn paths suggest that it is subject to the heavy movement of people and livestock. Therefore, no significant low-level vegetation remains in the area.

No large wild mammals are resident in the area. Birds, reptiles, season amphibians and invertebrates do occur. However, due to the extensive habitat alteration, faunal biodiversity will be an impoverished version of the regional background and is likely to include mainly euryecious anthropophagic and pioneer species.



Figure 4: Aerial Image with Flood Areas




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**Topography and Flooding:**

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The topography of the erven is relatively flat. Parts of Erven 6 and 296 are impacted by flooding, as indicated in **Figure 4** below.

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**Soil Conditions:**

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Surface soils across the region are dominated by sand, with some areas covered by the Otavi Group. Ekeke is situated within Namibia's Kalahari and Namib Sand areas (Mendelsohn et al., 2002).

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**Vegetation Conditions:**

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Vegetation surrounding Ekeke and the Ondangwa Rural Constituency consists of the Oshana-Kalahari Mosaic (Mendelsohn et al., 2002), indigenous trees include the Makalani Palm Trees (*Hyphaene petersiana*), Jacelberrie Trees (*Diospyros mespiliformis*) and the Manketti Trees (*Schinziophyton Reatanenii*), i.e.

Due to overgrazing, land clearance for homesteads, fields, houses and wood harvesting, the development area has low green vegetation biomass.

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**Habitats on Site:**

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As with so many urban areas within the Oshana region, the sites may be best described as an impacted ecosystem and not a natural environment due to habitat alteration from urban activities.

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**Climate, Wind Directions, and Rainfall:**

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Namibia is a hot and dry country. Due to low levels of humidity in the air, the country experiences low levels of cloud cover and rain and extremely high rates of evaporation. The average monthly temperature at Ekeke ranges from 17°C in July to 26°C in December. The fewest hours of sunshine experienced per day is about 7 hours in January when there is a lot of cloud cover, and the area also receives the most rain. Oshakati has about 10 hours of sunlight from May to September.

Most rain-bearing clouds are fed into the country by north-easterly winds and blocked by dry air from the south and the west (Mendelsohn et al., 2002). As such, the South and Western parts of the country receive less rainfall than the central and northern parts of the country. The average monthly humidity at midday ranges from 50% in March to 17% in September. Approximately 99% of the annual rainfalls are from October to April, with January receiving the most precipitation. The average yearly rainfall across the north-central regions increases from west to east, less than 300mm and not more than 550mm (Mendelsohn et al., 2002).

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## 6.5 STATUS OF PROTECTED AREA

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The site itself has no protected status. However, flood areas (Oshana areas) are environmentally sensitive and need to be protected.

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## 6.6 SUMMARY OF THE HABITATION ON SITE

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The site is ecologically impacted, no longer pristine, and is not fully functional at an ecosystem level. It may be best described as an impacted ecosystem and is not a natural environment.

Key environmentally relevant features show that:

- ❖ Erven 4, 5 and 6, Eheke are situated south of the DR 3636 at -17.927805 S, 15.868799 E within the Eheke business centre and Erven 204 and 296, Eheke Extension 1 is situated south of Eheke Proper near and next to Eheke cemetery;
- ❖ Land use activities on the sites include six (6) temporary structures, graves sites and NamWater servitudes;
- ❖ The region's climate can be described as semi-arid, with summer rainfalls and the highest temperatures occurring during October and February. The average monthly temperature ranges from 23°C in July to 35°C in December;
- ❖ The average yearly rainfall across the north-central regions increases from west to east, less than 300mm and not more than 550mm (Mendelsohn, 2002);
- ❖ Vegetation surrounding the development site consists of the Nama Karoo Basin Biome;
- ❖ No significant low-level vegetation remains in the area but scattered shrubs, and no large wild mammals are resident within the development site;
- ❖ The cemetery on Erf 296- encroach on Erf 295, Eheke Extension 1;

- ❖ No items of historical value were found or could be identified within the development site boundaries;
- ❖ Erf 6, Eheke and Erf 269, Eheke Extension 1 are impacted by flooding;
- ❖ Flood areas (Oshana areas) are the only environmental sensitive areas within the development site.

The screening process showed no significant biodiversity-related issues for the current development, and no aspects require further investigation. Nevertheless, during the site's planning and construction phases, emphasis should be on accommodating the NamWater servitudes and existing Oshanas within the layout. When structures are relocated, the Regional Council needs to compensate the residents of the structures in accordance with the Parliaments Compensation Policy.

## 7 DEVELOPMENT INTENTION

The Oshana Regional Council noticed the need and desirability for the amendment of various erven’s conditions of establishment within Eheke, Proper and Extension 1 to promote business development opportunities in the Settlement and to make corrections to the cadastral boundaries in accordance with what is happening on the ground.

The client intends to amend the establishment conditions for Erven 4 and 5 Eheke from “Residential” to “Business” land use and Erf 6, Eheke’s from “Residential”- to “Business” land use and “Public Open Space” through the subdivision of Erf 6, Eheke into 13 new portions and remainder. For the remainder of Erf 6, Eheke will become a street.

Amend the conditions of establishment for Erf 204, Extension 1 Eheke from "Public Open Space" to "General Administrative purposes" and also amend Erf 296, Extension 1 Eheke’s establishment conditions from “Public Open Space” to “General Administration Local Authority” (to be used as a cemetery) before consolidating the erf with Erf 295, Eheke Extension1.

### 7.1 ERVEN 4 & 5, EHEKE

The current land uses of Erven 4 and 5 Eheke will be altered from “Residential” to “Business” land use. The erven shapes and sizes are illustrated in **Figure 5**.

Table 2: Erven 4 and 5, Eheke’s new Land Use and Size

ERVEN	AREA / m <sup>2</sup>	NEW TITLE CONDITIONS (ZONINGS)
<b>Erf 4,</b>	569	Residential
<b>Erf 5,</b>	1 342	Residential

Figure 5: The Proposed Title Conditions Amendment



## 7.2 ERF 6, EHEKE

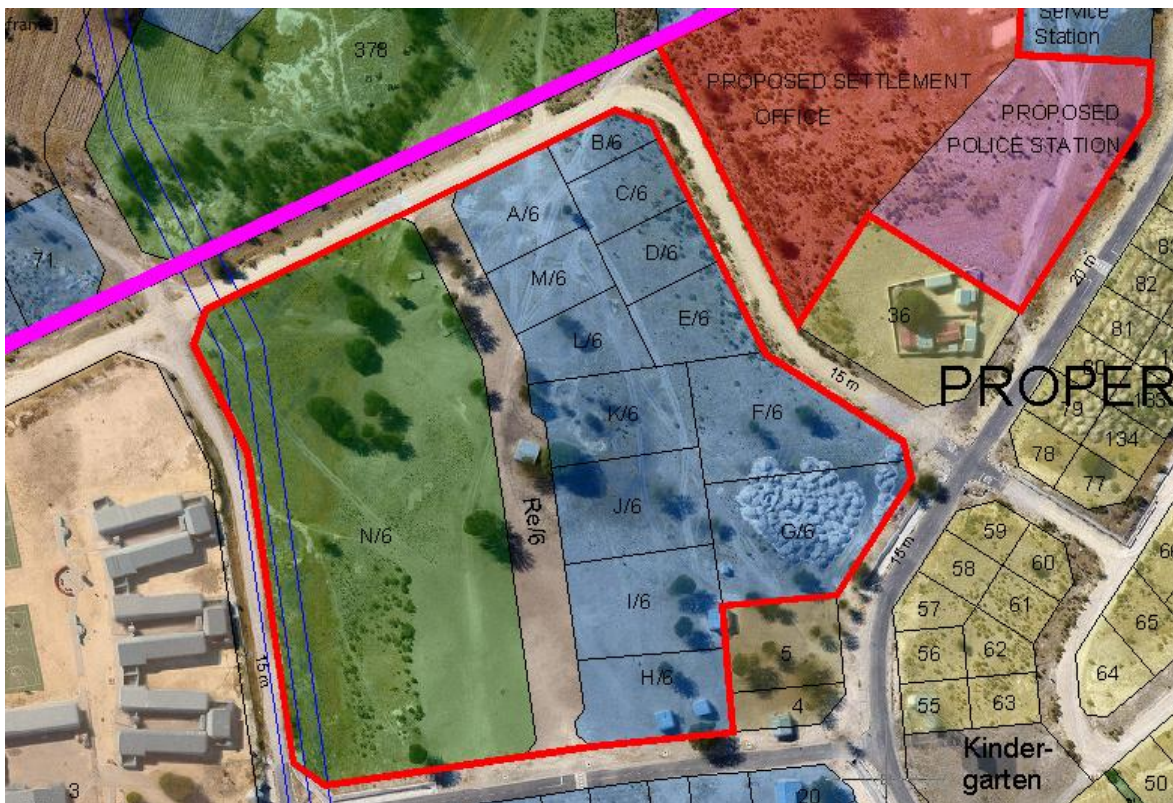
The subdivision of Erf 6, Eheke, into Portion A to M will alter the erfs title condition from “Residential”- to “Business” land use. Proposed Portion N’s land use will be altered to “Public Open Space”. The “Public Open Space” will act as a buffer between the school and the business and accommodate flood areas within the layout. The Remainder of Erf 6, Eheke, will become a street that provides access to the newly created business erven and public open space.

The size of the remaining extent of Erf 6, Eheke and the sizes of the proposed subdivided portions can be seen in **Table 2** below. The proposed subdivided portions shape is illustrated in **Figure 6**.

Table 3: Portions Sizes and new Land Use

PORTION	AREA / M <sup>2</sup>	NEW TITLE CONDITIONS (ZONINGS)	PORTION	AREA / M <sup>2</sup>	NEW TITLE CONDITIONS (ZONINGS)
<b>Portion A</b>	1 341	Business	<b>Portion H</b>	1 710	Business
<b>Portion B</b>	570	Business	<b>Portion I</b>	2 014	Business
<b>Portion C</b>	953	Business	<b>Portion J</b>	1 986	Business
<b>Portion D</b>	953	Business	<b>Portion K</b>	1 745	Business
<b>Portion E</b>	1 182	Business	<b>Portion L</b>	1 101	Business
<b>Portion F</b>	2 494	Business	<b>Portion M</b>	1 023	Business
<b>Portion G</b>	2 806	Business	<b>Portion N</b>	17 273	Public Open Space
			<b>Rem/6</b>	3 685	Street (13m)

Figure 6: The Proposed Subdivision & Title Conditions Amendment



**Provision for Pedestrians:**

The proposed 13m road reserves include sufficient space to accommodate pedestrian lanes and areas for landscaping.

**Provision for Drainage:**

Stormwater drainage should be designed, and culverts need to be used to accommodate the water flow.

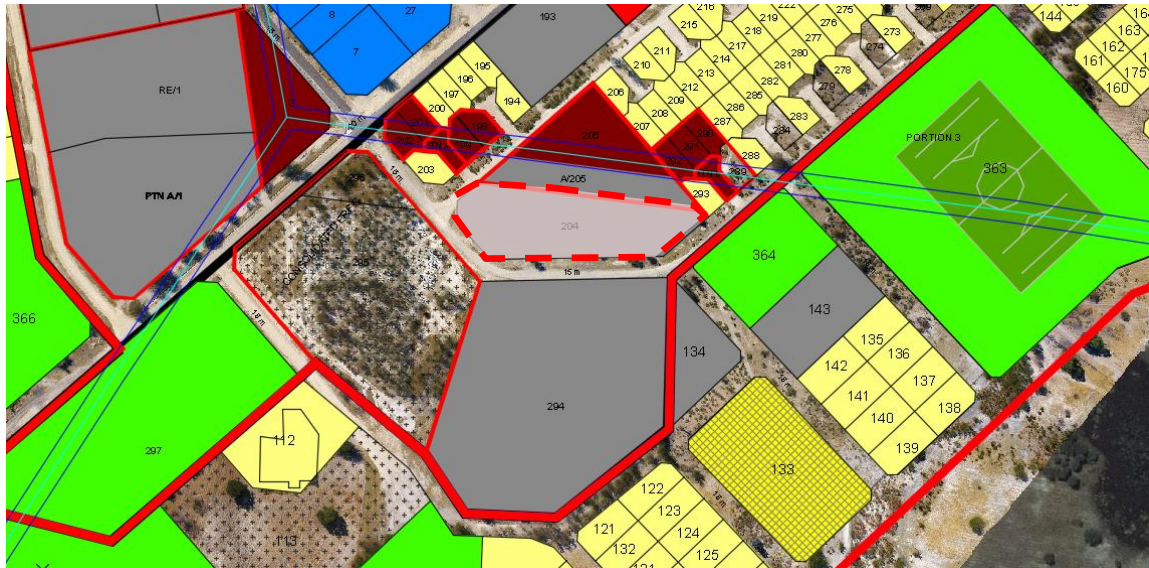
**7.3 ERF 204, EXTENSION 1, EHEKE**

The amendment of Erf 204, Extension 1 Eheke, will alter the erfs title condition from “Public Open Space”- to “General Administration Local Authority” land use as it accommodates the NamWater pipeline.

Table 4: Erf 204, Eheke Extension 1’s Sizes and new Land Use

ERVEN	AREA / m <sup>2</sup>	NEW TITLE CONDITIONS (ZONINGS)
<b>Erf 204, Extension 1</b>	6 714	General Administration Local Authority

Figure 7: Erf 204, Eheke Extension 1’s Amendment



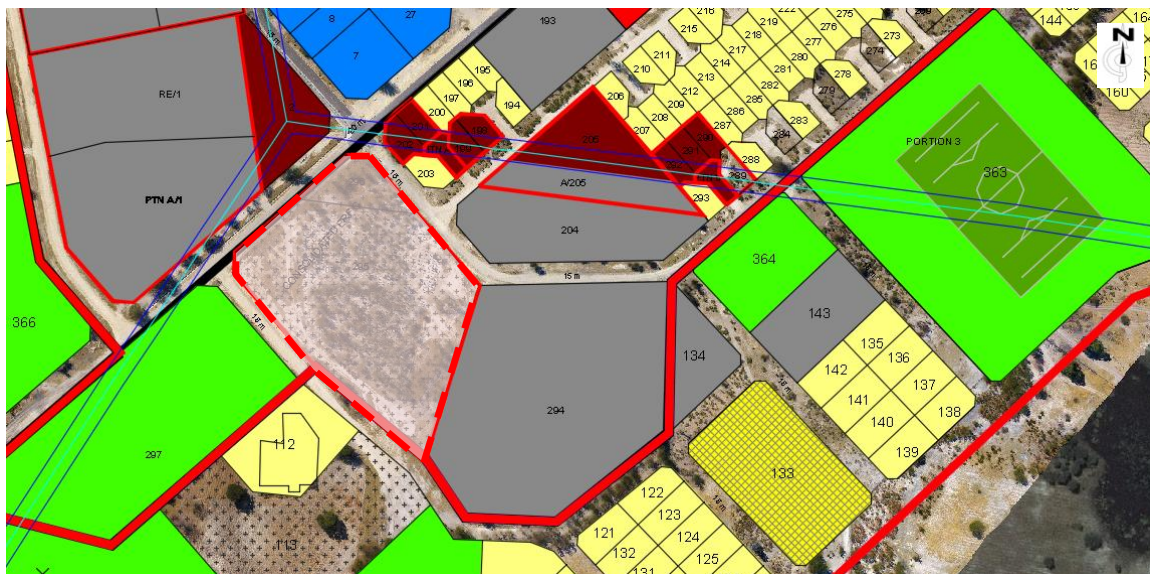
### 7.4 ERF 296, EXTENSION 1, EHEKE

Amend the conditions of establishment from "Public Open Space" to "General Administrative purposes" (to be used for as a "Cemetery"), to formalise the cemetery on the erf. as it accommodates the NamWater pipeline

Table 5: Erf 296, Sizes and new Land Use

ERVEN	AREA / m <sup>2</sup>	NEW TITLE CONDITIONS (ZONINGS)
<b>Erf 296, Extension 1</b>	1 727	General Administration Local Authority (to be used as a cemetery)

Figure 8: Erf 296, Eheke Extension 1's Amendment



## 8 POTENTIAL IMPACTS

While preparing the amendment of the Eheke amendments, the planner continuously assessed the project's potential positive and negative impacts. Attempts have been made to enhance and strengthen positive impacts and mitigate and weaken the effects of negative impacts in all cases. The planners made several alterations to the plan until they were satisfied that the layout had been refined to the point where it limits risks, mitigates negative impacts and enhances positive impacts to as great an extent as possible. The following section explores each of these impacts in detail, describing and exploring the various ideas integrated into the layout and assessing alternatives where they seem viable.

The section also explores positive impacts that are not fully addressed by the layout. Many influences may be transitory in nature (for example, occurring only during the project's construction phase) or unavoidable given the site constraints and the need for maximising long-term benefits overall. These impacts and strategies for dealing with them are discussed here, but given that this document is an application for environmental clearance, the measures dealing with their mitigation/enhancement are dealt with in detail in the EMP.

### 8.1 SUMMARY OF POTENTIAL IMPACTS

Planning of the layout, together with the upgrading of bulk infrastructure and alignment of roads, has the potential to cause environmental and social impacts. The following is a list of potential impacts identified through the scoping process:

#### Benefits of the Project:

- Provision for serviced erven;
- Extend the cemetery; and
- Stimulation of economic development and providing new employment opportunities during construction.

#### Potential Negative Impacts during Construction:

- Displacing existing community;
- Impact of dust;
- Impact of noise;
- Impact on traffic flow;
- Impact on the health and safety of workers; and
- Impact of waste.

#### Potential Negative Impacts during Operations:

- Potential flooding; and
- Impact of waste within the township.



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## 8.2 POTENTIAL IMPACTS

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### Project Benefits:

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- **Provide for serviced erven.** The Eheke community will have access to adequately planned erven with specified erf boundaries. This will lead to residents having the formal and a form of permanent occupation of land and security of tenure. The layout process creates a formal development framework to prevent uncontrolled settlement growth and address the current uncontrolled developments.
- **Stimulate employment creation and local economic development.** The development will lead to employment creation during the construction and operation phases. It will render services within the formal economy of Eheke, employ staff, contribute to rates and taxes and spend money within the same economy.
- **Stimulate health and wellness within Eheke and the Oshana Region.** The layout makes provision for much-needed service connections that are safe and in line with the layout. It will also create properly aligned roads which will ease traffic circulation within the Settlement. Clearly defined routes will allow for the provision of pedestrian infrastructure, creating a safe walking environment.

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### Negative Impacts during Construction:

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- **Impact of dust.** The movement of construction vehicles on bare soil will cause excessive dust, which will expose the community and workers to dust pollution and affect their health. Preventative measures need to be put in place on the site to prevent excessive dust.
- **Impact of potential construction noise.** Construction machinery creates substantial noise, and this will impact the surrounding community. Constant noise can cause stress and health impacts on nearby residents.
- **Impact on traffic flow during construction.** Construction vehicles would need to haul the excavated soil to a disposal site and provide building material and other supplies (i.e. fuel etc.) to the construction site, most of which could be delivered by truck. Construction vehicles are most likely to pass near erven and disrupt traffic flow (although the exact access routes to the site are yet to be defined).
- **Impact on the health and safety of workers and nearby residents.** Construction activities always have potential risks for workers and surrounding residents. Inadequate site management measures can expose workers and residents living near the site to hazardous chemicals, dust, and noise. A lack of notices and

signs within the area where deep excavation work is done can put the lives of residents and workers in danger.

- **Impact of construction waste.** Solid waste is the expected significant source of waste at the construction site. If no waste management plan is in place to address general and hazardous waste disposal, it can lead to water and soil pollution on the site and/or within the water areas.

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**Potential Negative Impacts during Operations:**

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- **Impact of flooding.** The development will include water areas. The planner should prepare the layout to accommodate the areas of the Oshana within public open spaces to prevent impacts as a result of flooding.
- **Impact of operational waste.** Solid household waste is the expected source of waste in the Settlement. The Oshana Regional Council has no Waste Management Plan (WMP) or Waste Removal Plan (WRP) to address general and hazardous waste disposal at Eheke. In that case, it can lead to soil pollution on the site and/or within the water areas.

### 8.3 DEALING WITH RESIDUAL IMPACTS

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#### Residual Social Impacts:

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The site has no residual social impacts.

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#### Residual Environmental Impacts:

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Residual environmental impacts through this project could be elaborated on as follows:

- The development project will create dust and noise during the construction phase. However, this will be limited, and a method to limit it is contained in the Environmental Management Plan (EMP).
- The project development will have an impact on traffic during the construction phase. To minimise the increase in transportation during the construction phase, mitigation measures to manage the vehicles on the construction site when services are included in the EMP provisions.
- As mentioned before, solid waste is the expected source of waste at the construction site. Mitigation methods are contained in the EMP regarding a WMP for the construction site.
- During the construction phase, there will be a potential impact on the workers' health and safety due to their work environment. This will be limited, and methods to restrict it are contained in the EMP.
- Solid household waste is the expected source of waste at the new extension. Mitigation methods are contained in the EMP regarding the removal of waste within Soetdoringlaagte.

**9 SUMMARY AND APPLICATION**

**9.1 PROJECT IMPACTS, AVOIDANCE MEASURES AND RESIDUAL IMPACTS**

POTENTIAL IMPACT:	MEASURES:			RESIDUAL IMPACTS:
	AVOIDANCE:	MITIGATION:	ENHANCEMENT:	
<b><i>Stimulate local economic development and create employment opportunities:</i></b>			<p>During the development phase, the construction company will render service within the formal economy, employ staff, pay rates and taxes and spend money within the same economy.</p> <p>Emphasis must be placed on the requirement and employment of local people.</p>	
<b><i>Providing serviced residential erven:</i></b>			<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>	
<b><i>STIMULATE THE HEALTH AND WELLNESS OF THE COMMUNITY:</i></b>			<p>The extension will provide a closed system sewer system, which will prevent pollution during flooding.</p> <p>Provide pedestrian infrastructure.</p>	

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

	phase.	need to be applied. The timeline for the potential impact is short term, and the responsibility lies with the contractor.		<i>prevented.</i>
<b>FLOODING:</b>	Avoid flood risk.	The planner needs to accommodate all the potential flood areas within public open spaces.  Management of the public open space needs to include public space maintenance during the operational phase.  The potential impact timeline is long-term, and the responsibility lies with the Oshana Regional Council		<i>Not all impacts as a result of flooding can be prevented.</i>
<b>WASTE MANAGEMENT:</b>	Avoid pollution as a result of no waste management.	The EMP mitigation measures for the waste on the construction site and during operations include:  <ul style="list-style-type: none"> <li>• A waste management plan should be used on the site during the construction phase.</li> <li>• The Settlement should compile a waste management system or program for the operational phase.</li> </ul> The potential impact timeline is short-term during construction and long-term during operations.  The responsibility lies with the contractor and the Oshana Regional Council.		<i>Not all pollution can be prevented</i>

## 10 APPLICATION FOR ENVIRONMENTAL CLEARANCE

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Given these baseline investigation findings, there are no current future environmental impacts and future identified due to creating the street portions or the construction activities within the Eheke Proper and Eheke Extension 1 development area. Nevertheless, during the site's planning and construction phases, emphasis should be on accommodating the graves, within the layout.

It is recommended that the development proceeds without the need for further assessment, as provided for under articles 33 and 34 of the Environmental Management Act. The Application Form 1 for an Environmental Clearance Certificate as per Section 32 is attached as **Annexure "1"** to this Scoping Report.