ENVIRONMENT IMPACT ASSESSMENT
FOR
OKURIANGAVA EXTENSION 3 INFILL INDUSTRIAL AND RESIDENTIAL AREA,

WINDHOEK, KHOMAS REGION

Oct 2025

P.O. Box 59
Windhoek

August 2025 **Windhoek**

PROJECT DETAILS

Title	Environmental Scoping Report for the: ✦ Okuryangava, Extension 3 Infill, Industrial and Residential Area, Windhoek, Khomas Region		
Report Status	Draft		
Reference	01/2025		
Proponent	The Municipality of Windhoek		
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Report date	April 2025		
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LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CRR	Comments and response report
dB	Decibels

DESR	Draft Environmental Scoping Report
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
EAR	Environmental Assessment Report
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
FESR	Final Environmental Scoping Report
GTZ	Gesellschaft für Technische Zusammenarbeit
HIV	Human Immunodeficiency Virus
I&AP	Interested and Affected Party
IBA	Important Bird Area
IUCN	International Union for Conservation of Nature
MEFT	Ministry of Environment, Forestry and Tourism
MEFT: DEAF	Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs and Forestry
MURD	Ministry of Urban and Rural Development
MWTC	Ministry of Works Transport and Communication
NAMPAB	Namibia Planning Advisory Board
NPC	Namibia Planning Commission
PPP	Public Participation Process
SADC	Southern African Development Community
SPC	Stubenrauch Planning Consultants
USAID	United States Agency for International Development
VMMC	Voluntary Medical Male Circumcision

1 INTRODUCTION

1.1 Project Background

The Municipal Council of Windhoek, hereinafter referred to as the Council intends to finalise the town planning procedures for the infill Okuryangava Extension 3, industrial and residential.

The intent of the development is to optimize the use of the area by creating industrial erven to promote economic activity in the the area. Public parking provisions will also be made to complement the development.

The activities for this include the following with intension for development.

- Subdivision, rezoning, consolidation and subsequent subdivision on Erf X of Okuriangava Ext 3 Infill for **Industrial** Development.
- Subdivision, rezoning, consolidation and subsequent subdivision on Erf XX of Okuriangava Ext 3 Infill for **Residential** Development.
- Development of municipal infrastructure of both Erf X and Erf XX of Okuriangava Ext 3 Industrial and Residential.

The above development triggers listed activities in terms of the Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012) as follows:

Triggered Section	Activity
Section 1	The construction of supply of electricity
Section 5	Rezoning, subdivision and consolidation of land
Section 10	The construction of Municipal Infrastructure for water reticulation, sewerage systems, Roads and Stormwater

As such the Windhoek Municipal Council is undertaking an Environmental Impact Assessment (**EIA**) in order to obtain an Environmental Clearance Certificate (**ECC**) for the above activities. The competent authority of this project is the Ministry of Urban and Rural Development and the Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs and Forestry (**MEFT: DEAF**).

1.2 Project Location

The project area is located in the Okuryangava Township, Extension 3 which is situated in the northwest part of Windhoek. It is situated within the boundaries of Etetewe Street to east and Omungwindi Street and in a close proximity to a functional neighborhood business west node and a government school. All the erven are still vacant. Sporadic occurrence of illegal, temporal structures and encroachments can be spotted in the area.

The area is locked within a build Environment, with no structure in place. It is situated within the boundaries of Etetewe street with a residential neighborhood to the North and Omungwindi street towards the South also with residential neiborhood. It is in close proximity with a functional neiborhood business node and a government school, (Hage Geingob Secondary School toward East.

The area inclusive of residental and industrial is to the Extend of 35 422.23 m^2.

The latitude and longitude is 22°30'28"S; 17°02'37"E.

1.3 Ownership And Status Quo

The project area is currently vacant and under the ownership of the Windhoek Municipal Council. The Certification of Registered Title No.21/1991 which can be viewed at the offices of the Council.

1.4 Zoning

The current zoning for the site under discussion is as follows:

Table 1. Current Zoning for infill Okuryangava Township Extension 3 proposed for Industrial Development.

Current Zonings	
Erf Numbers	**Zoning**
2508	Institutional
2508 Ptn 1	Institutional
2509	
2518	
2519	
1718	Business with Bulk 1
1719	

Table 2. Current Zoning for infill Okuryangava Township Extension 3 proposed for Residential Development.

Erf No	Zoning
2488 - 2524	Institutional
Re/1714	Street

Erf 1714 from which erven 2488 – 2524 were created, to form part of the establishment of Okuryangava Extension 3 was an approved township under CRT number 21/1991 and government gazette number 1992 /355/2.

1.5 Terms of Reference

The scope is limited to conducting the EIA and EMP and obtaining a ECC for the township establishment of the following:

- Subdivision, rezoning, consolidation and subsequent subdivision on Erf X of Okuriangava Ext 3 Infill for **Industrial** Development.
- Subdivision, rezoning, consolidation and subsequent subdivision on Erf XX of Okuriangava Ext 3 Infill for **Residential** Development.
- Development of municipal infrastructure of both Erf X and Erf XX of Okuriangava Ext 3 Industrial and Residential.

The Terms of Reference for the proposed project are based on the requirements set out by the Environmental Management Act (No. 7 of 2007). This environmental assessment process is carried out in accordance with part VII & VIII of the Environmental Management Act, 2007 and section 15 of Environmental Impact Assessment Regulations: Environmental Management Act 7 of 2007(GN No 30 of 2012).

This study will enable decision makers to make an informed decision regarding the development. This scoping report and the EMP will be submitted to DEA, as required by Section 27(3) of the Environment Management Act (No 7 of 2007).

1.6 Assumptions and Limitations

The scope of this project is limited to obtaining an Environmental Clearance Certificate (**ECC**) for the completion of Town Planning procedures for Erf X and Erf XX of Okuriangava Ext 3 Infill for Industrial and Residential Development, as per the Environmental Regulations and the Town Planning Scheme.

1.7 Content of Environmental Assessment Report

In terms of Section 8 of the EIA Regulation requires specific content to be addressed in a Scoping /Environmental Assessment Report. Table 3 below is an extract from the EMA and highlights the required contents of a Scoping/ Environmental Assessment Report whilst assisting the reader to find the relevant section in the report.

Table 3. Contents of the Scoping/Environmental Assessment Report

Section	Description	Section of DESR/Annexure
8 (a)	The Curriculum vitae of the EAPs who prepared the report;	Refer to **Annexure F**
8 (b)	A description of the proposed activity;	Refers to Chapter 4

8 (c)	A description of the site on which the activity is to be undertaken and the location of the activity on the site;	Refers to Chapter 3
8 (d)	A description of the environment that may be affected by the proposed activity and the manner in which the geographical, physical, biological, social, economic and cultural aspect of the environment may be affected by the proposed listed activity;	Refers to Chapter 3
8 (e)	An identification of laws and guidelines that have been considered in the preparation of the scoping report;	Refers to Chapter 2
8 (f)	Details of the public consultation process conducted in terms of regulation 7(1) in connection with the application including	Refers to Chapter 5
	i) The steps that were taken to notify potentially interested and affected parties of the proposed application	Refers to Chapter 5
	ii) Proof that notice boards, advertisements and notices notifying potentially interested	Refers to **Annexure A** and **B** for site notices and advertisements respectively
	iii) A list of all persons, organizations and organs of state that were registered in terms of regulation 22 as interested and affected parties in relation to the application;	Refers to **Annexure C**
	iv) A summary of the issues raised by interested and affected parties, the date of receipt of and the response of the EAP to those issues;	Refers to **Annexure C**
8 (g)	A description of the need and desirability of the proposed listed activity and any identified alternatives to the proposed activity that are feasible and reasonable, including the advantages and disadvantages that the proposed activity or alternatives have on the environment and on the community that may be affected by the activity;	Refers to Chapter 4
Section	**Description**	**Section of DESR/Annexure**
8 (h)	A description and assessment of the significance of any significant effects, including cumulative effects, that may occur as a result of the undertaking of the activity or identified alternatives or as a result of	Refers to Chapter 7

	any construction, erection or decommissioning associated with the undertaking of the proposed listed activity;	
8 (i)	Terms of reference for the detailed assessment;	NB – Assessment of Impacts are included in this EA Report
8 (j)	Environmental Management Plan	Refers to **Annexure G**

2 LEGAL FRAMEWORK

The implementation of projects requiring EIA, should proceed within the framework of Namibia's policy and legal environment. The policies and legislations listed below relate to the protection of the biophysical environment and have relevance to the type of project activities planned**.**

2.1 National Legislation Relevant To The Proposed Development

The national legal environmental framework of the project is tabulated below.

Table 4. Relevant National Legislation for the Project

LEGISLATION	PROVISIONS	PROJECT IMPLICATION
Environmental Management Act (No 7 of 2007) and Namibia's Environmental Assessment Policy (1995)	Schedule 1: Screening list of policies/ plans/programme/ project subject to full Environmental Assessment. "The rezoning of land from use for nature conservation or zoned open space to any other land use". (Ministry of Environment and Tourism (MET), Directorate of Environmental)	An Environmental Impact Assessment is compulsory.
Windhoek Town Planning Scheme (2005)	Allowed activities under "Residential Building" and "Residential Unit".	"Any person intending to erect a building in any use zone may be required by Council to furnish an environmental assessment report having regard to the promotion of health, safety, order, amenity, convenience and general welfare and the impact the new buildings and the operations are likely to have on the amenity of the locality".

Constitution of Namibian 2030	Vision 2030 states that the solitude, silence and natural beauty that many areas in Namibia provide are becoming sought after commodities and must be regarded as valuable natural assets.	Care should be taken that the development does not lead to the degradation of the natural beauty of the area.
Forest Act, 2001 (Act No. 12 of 2001)	Provision of the protection of various plant species (Ministry of Agriculture, Water and Forestry (MAWF), Directorate of Forestry).	A Harvesting Permit needs to be acquired from the Directorate of Forestry for the removal of indigenous certain tree species from the site
Townships and Division of Land Amendment Act, 1992 (Act 28 of 1992)	"(I) Whenever any area of land constitutes, by reason of its situation, a portion of an approved township, or adjoins an approved township, the Executive Committee may, by proclamation notice in the Gazette and after consultation with the Board, extend the boundaries of that township to include such area". (Minister of Regional and Local Government).	A new township needs to be created for approval by the Namibian Planning Advisory Board and the Township Board.
Water Resources Management Act, 2004 (Act No. 24 of 2004)	Control of disposal of sewerage, the purification of effluent, the prevention of surface and groundwater pollution and the sustainable use of water resources. (Department of Water Affairs).	Developers need to develop a satisfactory plan for sewerage disposal.
Sewerage and Drainage Regulations (amendments) Local authorities Act, section 23, 1992	Affords the prevention of pollution and environmental damage caused by the improper construction of sewerage and water pipelines in drainage lines. (City of Windhoek).	Provides guidelines for the proper construction of pipelines in drainage lines.
Hazardous Substance	To provide for the control of substances which may cause injury or ill-health to or death of human	The handling, usage and storage of hazardous substances on site should be carefully controlled

Ordinance 14 of 1974	beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances; to provide for the division of such substances into groups in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances; and to provide for matters connected therewith.	according to this Ordinance.
Soil Conservation Act 76 of 1969	Prevention and combating of soil erosion, conservation, improvement and manner of use of soil and vegetation, and protection of water sources. (Ministry of Environment and Tourism).	Removal of vegetation cover is to be avoided and minimized at all costs.
National Heritage Act 27 of 2004	Heritage resources to be conserved in development. (National Heritage Council of Namibia).	Immediately inform the National Heritage Council of Namibia should any archaeological material e.g. graves be found during the construction phase. The site should be cleared for archaeological potential before construction may commence.
Labour Act (No 11 of 2007)	135 (f): "the steps to be taken by the owners of premises used or intended for	The Act specifies the measures to be taken to secure the safety and

	use as factories or places where machinery is used, or by occupiers of such premises or by users of machinery in connection with the structure of such buildings of otherwise in order to prevent or extinguish fires, and to ensure the safety in the event of fire, of persons in such building;" (Ministry of Labour and Social Welfare).	the preservation of the health and welfare of employees at work.
Convection on Biological Diversity (CBD)	Namibia is obliged under international law to conserve its biodiversity.	Projects should refrain from causing any damage to the country's biodiversity.
Urban and Regional Planning Act No 5 of 2018	To consolidate the laws relating to urban and regional planning; to provide for a legal framework for spatial planning in Namibia; to provide for principles and standards of spatial planning; to establish the urban and regional planning board; to decentralize certain matters relating to spatial planning; to provide for the preparation, approval and review of the national spatial development framework, regional structure plans and urban structure plans; to provide for the preparation, approval, review and amendment of zoning schemes; to provide for the establishment of townships; to provide for the alteration of boundaries of approved townships, to provide for the disestablishment of approved townships; to provide for the change of name of approved townships; to provide for the subdivision	

	and consolidation of land; to provide for the alteration, suspension and deletion of conditions relating to land; and to provide for incidental matters.	
Local Authority Act No. 23 if 1992	The Local Authorities Act prescribes the manner in which a town or municipality should be managed by the Town or Municipal Council.	The development must comply with provisions of the Local Authorities Act.
Road Ordinance 17 of 1972	Section 3.1 deals with width of proclaimed roads and road reserve boundaries • Section 27.1 is concerned with the control of traffic on urban trunk and main roads • Section 36.1 regulates rails, tracks, bridges, wires, cables, subways or culverts across or under proclaimed roads • Section 37.1 deals with Infringements and obstructions on and interference with proclaimed roads.	Adhere to all applicable provisions of the Roads Ordinance.
Convection to combat Desertification	Namibia is bound to prevent excessive land degradation that may threaten livelihoods.	This is a general requirement to be considered in all projects.

2.2. Local Legislation Relevant to the Proposed Development

The Local Authority legislation relevant to the proposed Development is tabulated below.

Table 5. Relevant Local Authority Legislation for the Project

LEGISLATION	PROVISIONS	PROJECT IMPLICATION
Windhoek Town Planning Scheme (2005)	Allowed activities under "Residential Building" and "Residential Unit".	"Any person intending to erect a building in any use zone may be required by Council to furnish an environmental assessment report having regard to the promotion of health, safety, order, amenity, convenience and general welfare and the impact the new buildings and the operations are likely to have on the amenity of the locality".
Windhoek Environmental Structure Plan (2004)	It indicates all sensitive and environmentally fragile zones that should be conserved and protected. These areas should be considered with great care and when planning for any development project. The document is mainly helping in applying sound environment planning and management (Section 3.3.1, page 60). (City of Windhoek)	Only strategic service developments should be allowed after environmental impact assessment.
Sewerage and Drainage Regulations (amendments) Local authorities Act, section 23, 1992	Affords the prevention of pollution and environmental damage caused by the improper construction of sewerage and water pipelines in drainage lines. (City of Windhoek).	Provides guidelines for the proper construction of pipelines in drainage lines.

Noise Control Regulations: Municipal Council of Windhoek	Regulates permissible noise levels in residential and commercial areas to prevent nuisance and health risks.	Construction activities must comply with noise limits; mitigation measures (e.g., restricted working hours, noise barriers) may be required.
Solid Waste Regulations: Municipal Council of Windhoek	Provides guidelines for proper storage, collection, and disposal of solid waste to prevent pollution and protect public health.	The project must implement a waste management plan during construction and operation phases.
Local Authority Fire Brigade Services Act	Mandates provision of fire prevention measures and emergency response services within local authority areas.	The development must include fire safety infrastructure (hydrants, access routes) and comply with fire prevention standards.

3. PROJECT DESCRIPTION

3.1 Project Components

This EIA will address Township Establishment as follows:

- Subdivision, rezoning, consolidation and subsequent subdivision on Erf X of Okuriangava Ext 3 for **Industrial** Development.
- Subdivision, rezoning, consolidation and subsequent subdivision on Erf XX of Okuriangava Ext 3 for **Residential** Development.

The Project description for Okuriangava Ext 3 **Industrial** will be addressed in 3.2, while the Okuriangava Ext 3 for **Residential** Development will be addressed in 3.3.

3.4 Proposed Town Planning Procedures on Erf X of Okuriangava Ext 3 for Industrial Development

The proposed Town Planning Procedures on Erf X of Okuriangava Ext 3 for Industrial Development involves the following activities:

- Subdivision of ERF 2508 into Portions 1 and Remainder
- Rezoning of Erven 1718 and 1719, Okuryangava below, Ext 3, from Bussiness with a Bulk of 1.0 to Industrial with a Bulk of 1.
- Rezoning of Erven 2509, 2518, 2519,and Ptn 1 (of Erf 2508) Okuriangava, Ext 3, from institutional to Industrial with a Bulk of 1.
- Consolidation of erven 1718, 1719, 2519, 2518, 2509 and Ptn 1 (A Ptn of Erf 2508) into Erf X, Okuryangava, Exr 3 and
- Subsequent Subdivision of Erf X into Portions 1 to 6 and Remainder Okuriangava, Extension.

3.2.1. Project Background *on* Erf X of Okuriangava Ext 3

i) Current Rezoning

Previously the site under discussion consisted of 2508,2509,2518,2519, 1718 and 1719 as shown in the Table 6 and layout 1 below:

Table 6. Current Zoning for 2508,2509,2518,2519, 1718 and 1719

Current Zonings	
Erf Numbers	**Zoning**
2508	Institutional
2508 Ptn 1	Institutional
2509	
2518	
2519	
1718	Business with Bulk 1
1719	
2488 - 2524	

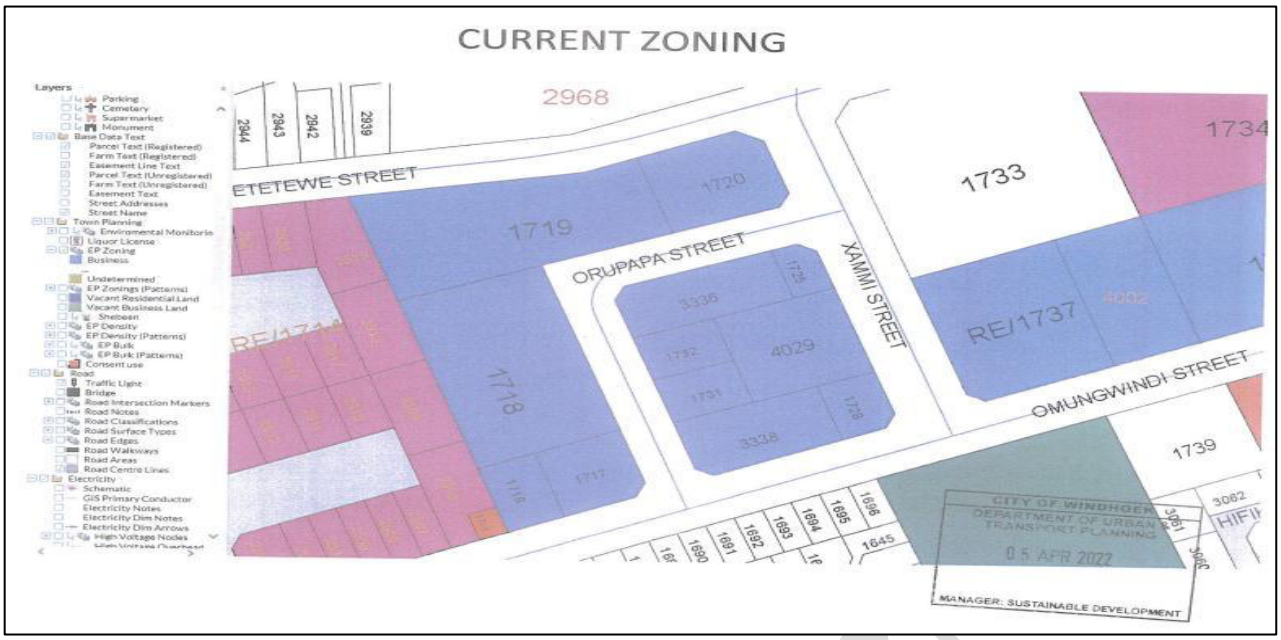


Figure 1: Cadastrial for 2508,2509,2518,2519, 1718 and 1719

ii) Municipal Services

Bulk infrastructure are not available to the consolidated erven. However the Infrastructure Services, Water and Technical Services indicated that water and sewer services can be extended from Etetewe Street and Omungwindi Street. Stormwater needs to be accommodated as well as be included in the sale contracts of the erven and affected by stormwater.

3.2.2 The Proposed Development

The Proposed Subdivisions, Consolidations and Rezonings for Okuriangava Ext 3 industrial is presented in Table 7 below. This table is described underneath.

Table 7. Proposed Subdivision, Rezoning, Consolidation and Subsequent Subdivision

Current		**Proposed** Subdivision, Rezoning, Consolidation and Subsequent Subdivision			
Erf Numbers	**Zoning**	**Subdivision**	**Rezoning**	**Consolidation**	**Subsequent Subdivision**
2508	Institutional	Remainder			
		Ptn 1	Industrial with bulk of 1	Erf X, Okuriangava Extension 3	Ptn 1
2508 Ptn 1	Institutional	No need	Industrial with bulk of 1		Ptn 2
2509					Ptn 3
2518					Ptn 4
2519					Ptn 5
1718	Business with Bulk 1		Industrial with bulk of 1		Ptn 6
1719					Remainder

i) Subdivision

Erf 2508 will be subdivided into Portion 1 and remainder, as presented in Fig 2 below.

Figure 2. Subdivision of Erf 2508 into Ptn 1 and Remainder

ii) Rezoning

The following erven will be rezoned from their current zoning into Industrial with a Bulk of 1 as follows:-

- The portion of the subdivided Erf 2508 that is subdivided into Ptn 1 2508, will be rezoned from Business with a Bulk of 1 to Industrial with a Bulk of 1.
- The Erven 2509, 2518, and 2519 will be zoned from institutional to Industrial within a Bulk of 1.
- The Erven 1718 and 1719, will be zoned from business with bulk of 1.0 to industrial with a bulk of 1,

This is presented in Table 5 above.

iii) Consolidation

All this Erven for 1718, 1719,2519,2518, 2509 and Ptn 1 (A Ptn of Erf 2508) are then consolidated into Erf X, Okuryangava Ext 3 as presented in figure 3 below.

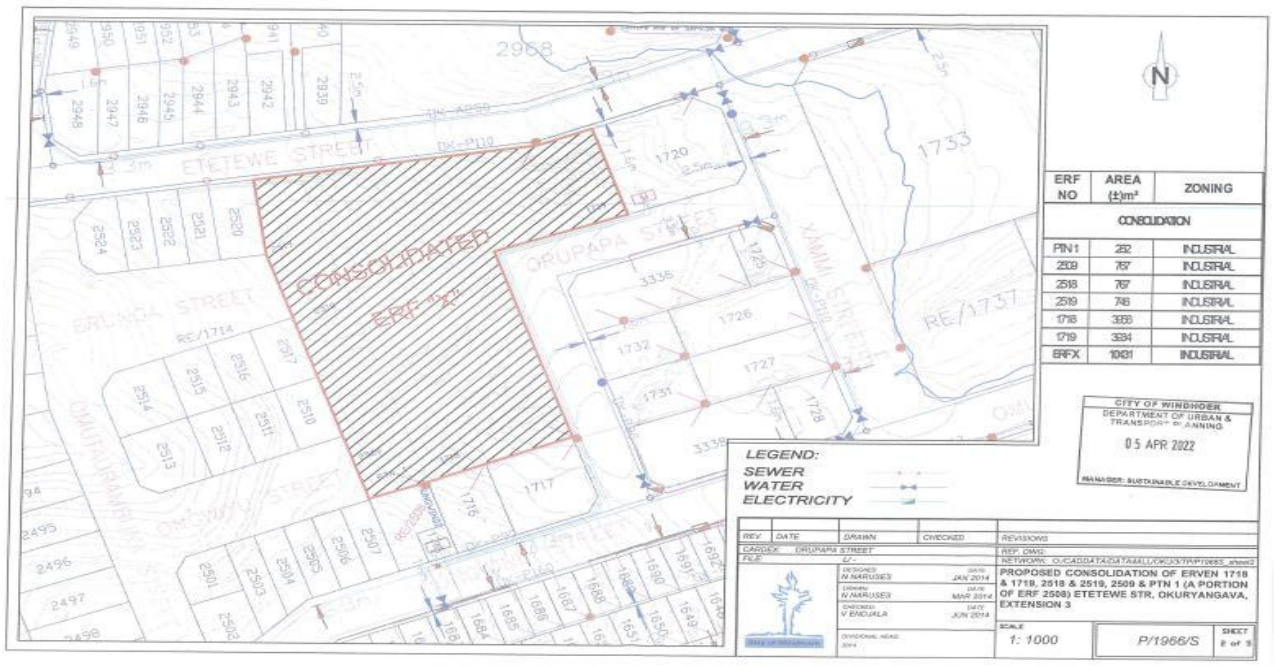


Figure 3. Consolidation of erven 1718, 1719, 2519, 2518, 2509 and Ptn 1 (A Ptn of Erf 2508) into Erf X, Okuryangava,

iv) Subsequent Subdivision

Erf X will subsequently subdivided into six Portions and the Remainder. The Proposed Portions with their extend are presented in Table 7 above and Figure 4 below.

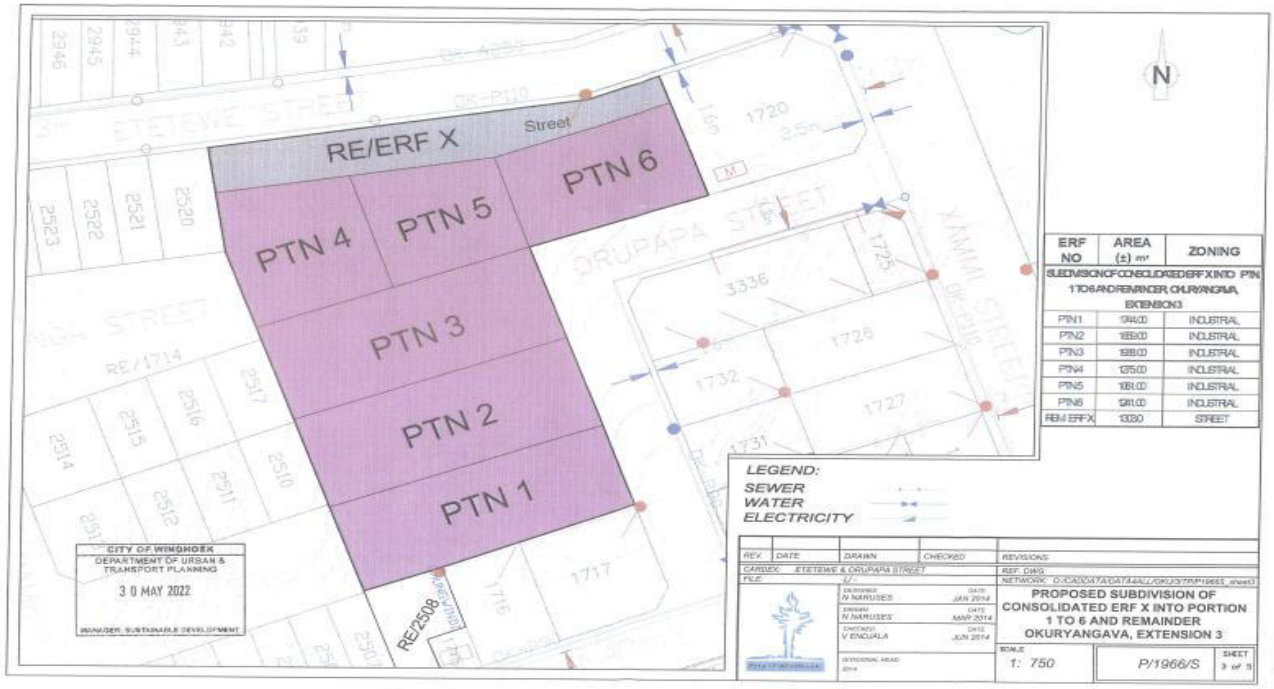


Figure 4. Subdivision of Erf X into Portions 1 to 6 and Remainder Okuriangava, Extension

Six (6) Erven are zoned Industrial to create a light industrial hub for trading opportunities for small and medium enterprises to boost the needed informal economic activities within the Okuryangava Township as well as benefit the winder spectrum of the society.

One (1) erf (Remainder) be reserved as street for purposes of parking along the Etetewe Street to accommodate the anticipated demand for parking due to the increase of economic activities.

The area is also in close proximity to one of Okuryangava's main business nodes which is located within a radius of 1km from the Project area hence business activities are within easy reach for the residents of the area.

3.5 Proposed Town Planning Procedures on Erf XX of Okuriangava Ext 3 for Residential Development.

The proposed Town Planning Procedures on Erf XX of Okuriangava Ext 3 for Residential Development involves the following:

- **Consolidation** and subsequent subdivision of Erven 2488 -2507, RE/2508, 2510 - 2517, 2520 - 2524 and RE/1714, Okuryangava, Extension 3.
- **Subdivision** of Erf 2508 into Portion 1 and Remainder Okuryangava, Extension 3.
- **Permanent Closure** of Erf Re/1714 (Street) Okuryangava, Extension 3, (namely Erunga, Omataurambuka and Ongwiyu Streets).
- **Consolidation** of Erven 2488 – 2507, RE/2508, 2510 – 2517, 2520 – 2524 and RE/1714 into ERF X, Okuryangava, Extension 3,
- **Subsequent Subdivision** of Erf X into Portions 1 to 41 and Remainder Okuryangava, Extension 3 and,
- **Rezoning** of Portions 1 to 24, 26 to 28 and 31 to 41 from Institutional to 'Single Residential ' with a density of 1:300m^2 and,
- **Rezoning** of Portions 25, 29 and 30 from Institutional to 'General Residential 'with a density of 1:300^2 and,
- **Reservation** of Remainder of Consolidated Erf X as Street.

3.3.1 Project Background

i) Previous Zonings of Erf 1714

Previously the site under discussion consisted of Erven 2488 to 2524 which were created through the subdivision of Erf 1714, Okuryangava and together measures 26390m^2 in extent.

Table 8. Current Zoning for erven Erven 2488 to 2524 and portion of Re/1714

Erf No	Zoning
2488 - 2524	Institutional
Re/1714	Street

Erven 2488 to 2524 (portion of Erf 1714) are located in Omataurambuka, Erunga and Ongwiyu, Okuryangava. The Erf, Re/1714 reserve for purposed of a street is currently named as Erunga, Omataurambuka and Ongwiyu Streets. The sizes range between 600 – 1014m^2 and are all zoned "Institutional".

ii) Municipal Services

Bulk infrastructure are not available to the consolidated erven. However the Infrastructure Services, Water and Technical Services indicated that water and sewer services can be extended from Etetewe Street and Omungwindi Street. Stormwater needs to be accommodated as well as be included in the sale contracts of the erven and affected by stormwater.

3.3.2 The Proposed Development

The Proposed Subdivisions, Consolidations and Rezonings for Industrial Deelopment in Okuriangava Extension 3 Infill is presented in Table 9 below.

The proposed cadastral changes aim to optimize the use of the area. It furthermore intends to form an integration of land use activities and a cost-effective design which is easy to implement. The proposed residential erven will easily tie with the developments on Erven 1718 and 1719, Okuryangava.

Table 9. Proposed Subdivision, Rezoning, Consolidation and Subsequent Subdivision for **Residential Development Okuriangava Extension 3**

Current Zoning Status		**Consolidation and Subsequent Sub-Division**		
Erf Numbers	**Zoning**	**Consolidation**	**Subsequent Sub-Division**	
			Erf Number	**Rezoning**
2488 – 2507	Industrial	Consolidated Erf X (Residential)	Ptn 1-24 Ptn 26-28 Ptn 31-41	Residential
RE/2508	Industrial			
2510-2524	Industrial		Ptn 25 Ptn 29-30	General Residential
RE/1714	Street		Re/Consolidated Erf X	Street

i) Subdivision

Subdivision of Erf 2508 into Portion 1 and Remainder Okuryangava, Extension 3.

ii) Permanent Closure of Street

Permanent closure of Erf Re/1714 (Street) Okuryangava, Extension 3, (namely Erunga, Omataurambuka and Ongwiyu Streets).

Since the erven to be consolidated includes a street, RE/1714, a permanent closure of the street needs to be undertaken.

iii) **Consolidation**

Consolidation of Erven 2488 – 2507, RE/2508, 2510 – 2517, 2520 – 2524 and RE/1714 into ERF XX, Okuryangava, Extension 3,

Erven 2488 -2507, RE/2508, 2510 - 2517, 2520 - 2524 and RE/1714, Okuryangava, Extension 3 will be consolidated into Erf XX Residential Okuriangava Ext 3.

iv) **Subsequent Subdivision**

Subsequent Subdivision of Erf XX Okuriangava Ext 3 into Portions 1 to 41 and Remainder Okuryangava, Extension 3 then took place as shown in Table 5 above. This will entail thirty-eight (38) Single Residential erven with a density of one dwelling per 1000m² and three (3) General Residential erven with density zoning of 1:100m^2.

The single residential and general residential erven are earmarked to accommodate the pilot project for construction of houses and housing units which is spearheaded by the Department of Department of Urban Planning & Property Management. These erven can alternatively be made available for sales. One (1) Erf will be reserved as a Street Remainder to facilitate ease of access to all newly created residential erven.

v) Rezoning and Reservation

- **Rezoning** of Portions 1 to 24, 26 to 28 and 31 to 41 from Institutional to 'Single Residential ' with a density of 1:300m^2 and,
- **Rezoning** of Portions 25, 29 and 30 from Institutional to 'General Residential 'with a density of 1:300^2 and,
- **Reservation** of Remainder of Consolidated Erf X as Street.

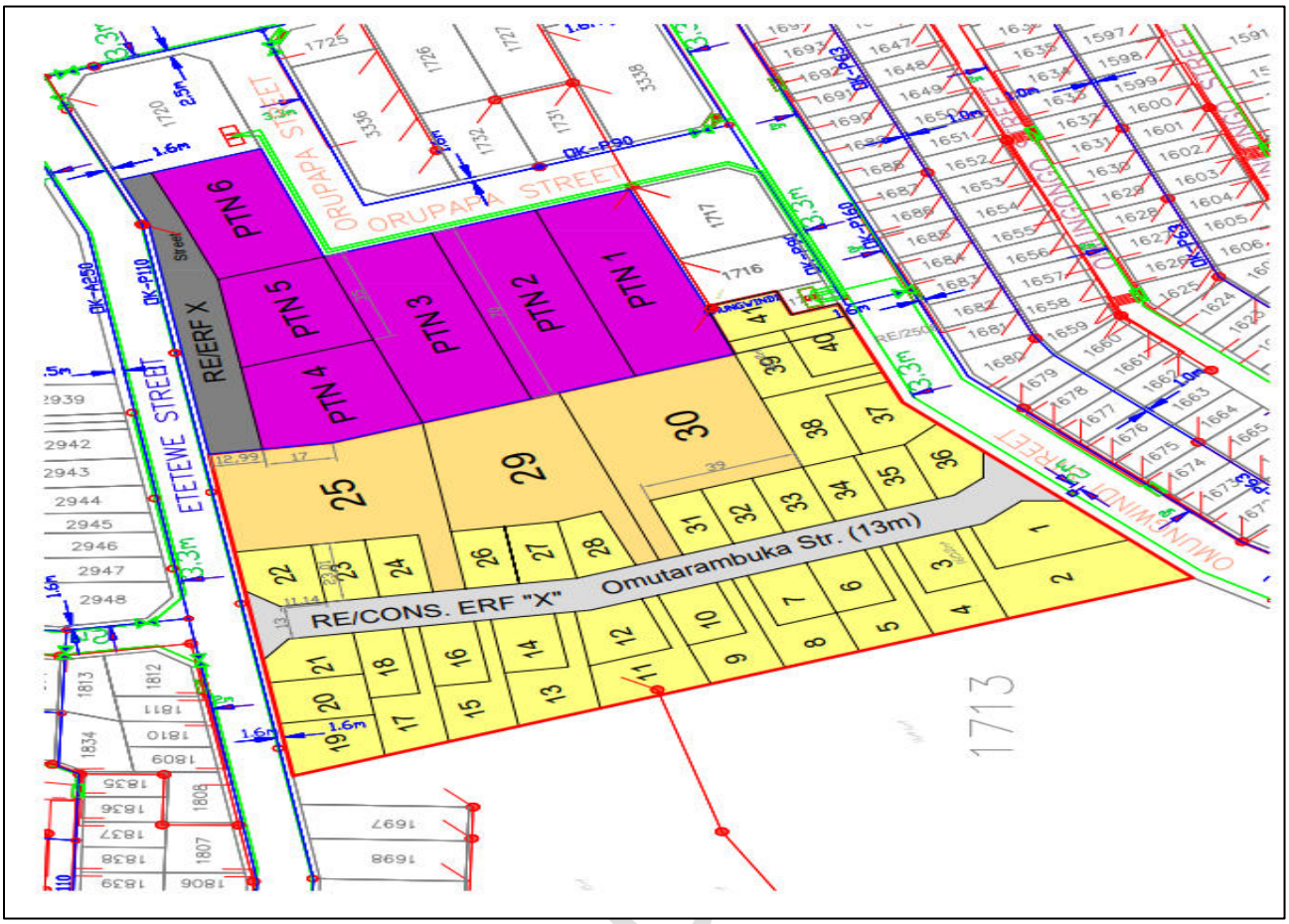


Figure 5. Proposed Layout Map for Okuriangava Ext 3 residential and Industrial combined

3.3.3 Engineering Services and Access Provision

The area is located within an already built – up environment and have direct access to all Municipal infrastructure such as water , wastewater, roads and power infrastructure. Individual connection points to the newly created portions can be made from existing sewerlines if necessary.

Street access to the newly created portions will be provided from existing municipal roads namely Etetewe and Orupapa streets.

3.4 Needs and Desirability

The Project area is one of the parts of Windhoek where informal trading is evident along the road reserve. Though the residential developments are formal in an orderly setting of an establishment township, the area attracts the majority of the Urban poor migrating to the City. The living conditions in this area are predominantly poor and in a dire need for improvement.

In order to reverse the undesirable and unwelcome development trends, it is important to redesign some of the areas to address currently experienced detrimental urban development challenges.

Introducing integration of various land use activities is therefore regarded as an important and a needed strategy to create the necessary and much needed changes for the overall socio – economic

benefit of the communities residing in the Okuryangava townships. It is furthermore needed to introduce activities that will elevate economic ventures for the local communities. The majority of the urban dwellers in this area carry out some kind of trading or economic activities along the streets, in particular Etetewe Street. To support this observed entrepreneurial trend of communities it is suggested to reserve two thirds of this layout for developments that will benefit the majority of inhabitants in the area. It is suggested that the latter be in a form of a Municipal Market and an incubator center. The redesign of the area from the previous submitted proposal is therefore pertinent to amongst other readdress the aspects as elaborated above.

The development proposal does not have any negative impact on the urban structure because of the suitable terrain. The site contains sparse vegetation as some of the areas in the surrounding are already inhabited. Furthermore, the erven have no specific environmental or historical features that needs to be preserved and could therefore be used for urban development. Any mitigation measures will be stipulated in the EMP.

3.5. Alternative

3.5.1 No-Go Alternative

The no-development alternative is the option of not going ahead with the development of the proposed Okuriangava Ext 3 Infill Industrial and Residential Township Establishment. The no-go alternative will keep the site in its current informal state. This alternative is undesirable in terms of the current serviced erven scarcity in Windhoek. Should the site remain in this state, the possibility and threat of more squatters settling on the site will persist, which promotes poor living conditions and threat to the environment and human health. Should the proposed activity not take place, the region could also be deprived of developing a township, and ultimately reducing the residential ervens demand in Windhoek. The proposed activity could yield positive results that could provide an alternative serviced land to Windhoek. The No-go option will not be a viable alternative at this stage.

3.5.2 Site Alternative

Serviceable land scarcity in the Windhoek City remains a challenge due to terrain and suitability for such development. The project site is suitable for a housing development and the land already belongs to the Windhoek Municipal Council. The local authority wants to provide formal serviced land to address the scarcity of serviced residential land in Windhoek. The area is in close proximity to existing engineering services which has capacity to support the proposed township development. The area holds less ecological and conservation values, and is considered best option chosen to develop the proposed township with strict consideration of environmental aspects. Mitigation measures on impacts likely to be caused by the activity are incorporated in the planning and execution of the activity. The proposed township development is expected to have minimal impact on the environment; hence the environmental footprint of this activity is expected to be minimal

5. PUBLIC PARTICIPATION

4.1 Public Participation Requirements

In terms of Section 21 of the EIA Regulations a call for open consultation with all I&APs at defined stages of the EIA process is required. This entails participatory consultation with members of The public by providing an opportunity to comment on the proposed project. Public participation has been done in accordance with the Environment Management Act 7 of 2007.

5.2 Public Participation Process Activities

Communication with Interested and Affected Parties (I&APs) about the proposed development was facilitated through the following means and in this order:

i) Newspaper Advert Placement

- Newspaper Adverts were placed in the Namibian, and the New Era newspapers dated **2 June 2025 and 9 June 2025**, briefly explaining the activity and its locality, inviting members of the public to attend the Public meeting as well as to register as I&Aps. This is attached as Attachment A1 under Annexure 1.

ii) Background Information Document Distribution

A Background Information Document (**BID**) containing descriptive information about the proposed activities was compiled and sent out to all identified stakeholders and I&APs via email on **2 June 2025.** The I&APs were requested to register as well as submit their comments on the project (until **11 July 2025**).

The BID, the list for identified stakeholders and I&APs and Proof of e-mail distribution is attached as Attachment A2 under Annexure A.

iii) Placing Public Notice Posters

The Public Notice Posters containing descriptive information about the proposed activities, similar to the BID above was placed at the following places:

- Customer Care Centres for Windhoek Municipal Townhouse, Katutura, Soweto and Ombili Community Centres.
- Elevators at Windhoek Municipal Townhouse
- Nearby shops of Okuriangava Ext 3 Infill.

The pictures as proof are attached as Attachment A3 under Annexure A.

iv) Placing Advert Social Media

Soft copies of the Public Notice Posters were circulated in the Social Media pages for facebook and Instagram for City of Windhoek.

v) Mobilizing Community Leaders

The Community Leaders were handed with Public Notice Posters to inform and mobilize the community to attend the scheduled Public Participation meeting.

5.3 Public Participation Meeting

Public Participation Meeting was carried out on 28 June 2025 according to the Environmental Management Act's EIA Regulations. After the initial notification, the I&APs were given two weeks to submit their comments on the project (until **11 July 2025**).

Picture 1 and 2: Public Participation for Okuriangava Ext 3 Infill Industrial and Residential

The meeting was well attended as can be seen in the pictures below. However, the community were more interested in land delivery and comments were more around the proposed layout, than environment related issues. The minutes of the meeting is attached as Attachment A4.

4.4 Public Participation Meeting Outcome

The meeting participants were from community residing in the neighborhood. Most of the issues raised by the community was about the availability of and long awaited erven and housing, which were not relevant to the purpose of the meeting. They were informed to consult the relevant authority that are directly dealing with such matters.

4.5 EIA Draft Review

The I&APs and those attending the Public Meeting were asked to register to receive the draft Report for Review. Thus far no one registered.

As mentioned above the Public were advised to raise their concern in writing to submit to the relevant offices at the Council office.

6. ENVIRONMENTAL BASELINE DESCRIPTION

5.1 SOCIAL ENVIRONMENT

5.1.1 Social – Economic Context

The statistics shown in **Table 10** below are derived from 2011 Namibia Population and Housing Census (Namibia Statistic Agency, 2013a), and presented from a local and regional perspective.

Table 10: Statistics of the Windhoek East Constituency and Khomas Region (Namibia Statistic Agency, 2013b)

WINDHOEK EAST CONSTITUENCY	
ATTRIBUTE	**INDICATOR**
Population	22 712
Females	11 342
Males	11 370
Population under 5 years	7%
Population aged 5 to 14 years	13%
Population aged 15 to 59 years	70%
Population aged 60 year and above	10%
Female: Male ratio	100:100
Literacy rate of 15 years old and above	100%
People above 15 years who have never attended school	1%
People above 15 years who are currently attending school	18%
People above 15 years who have left school	77%
People aged 15 years and above who belong to the labour force	74%
Population employed	69%
Homemakers	3%
Students	11%
Retired or old age income recipients	8%
Income from pension	7%
Income from business and non – farming activities	19%
Income from Farming	1%
Income from cash remittance	1%
Wages and Salaries	67%
KHOMAS REGION	
ATTRIBUTE	**INDICATOR**
Population	342 141
Population aged 60 years and above	4%
Population aged 5 to 14 years	16%
Population aged 15 to 59 years	69%
Main language	Oshiwambo Languages – 41%

5.1.2 Archeological and Heritage Context

It is unlikely that the proposed project area will have any significant archaeological resources due to the fact that no major historical activity took place within close proximity to the sites.

5.2 BIO-PHYSICAL ENVIRONMENT

5.2.1 Climate

This section lists the most important environmental characteristics of the study area and provides a statement on the potential environmental impacts. The landscape is classified as being in the Khomas Hochland Plateau.

Classification of climate: semi-arid highland savannah

Average rainfall: Rainfall in the area is averaged between 300 to 350mm per year

Average evaporation: Evaporation in the area is averaged 3000 to 3200mm per year.

Precipitation: sporadic and unpredictable, high intensity, highly localised storm events between October and April does occur. Evaporation exceeds precipitation by approximately 90%.

Water Deficit: Water deficit in the area is averaged 1701- 1900mm/a

Temperatures: Highest temperatures are measured in December with an average daily maximum of 31°C and minimum of 17.3°C; the coldest temperatures are measured in July with an average daily maximum of 20.4°C and minimum of 6.4°C. 13

Wind direction: Predominantly southeasterly. Southerly, easterly, and northerly airflow is also common. Wind seldom blows from the northwest and southwest. Strong westerly winds blow in the afternoons and evenings in early summer.

The Okuryangava area and its surroundings can be classified as a water deficit area with annual evaporations exceeding the mean annual rainfall by far. Summer rainfall dominates precipitation in the form of thundershowers and seasonal run off events might occur in the form of flash floods. The aridity of the region causes the water resource to be a scarce commodity and has to be conserved and protected from pollution at all cost. Groundwater in Windhoek is an important source of potable water for the City of Windhoek.

6.2.2 Topography, Soils and Geology

The landscape in the area is classified as being in the Khomas Hochland Plateau, which is characterised by rolling hills in the west with many summit heights equivalent reflecting older land surfaces. Drainage in the area is well developed and runoff is expected to takes place through small nearby drainage channels or streams. The site is located within the catchment of the Goreangab Dam which is situated approximately 5km southwest of the site. The relief of most of the streams or channels running in the area remain intact and are usefull for good drainage from the site. Care should be taken to avoid contamination of these surface water bodies in the area, especially during rainy seasons, as water in these bodies is used for aquifer recharge.

Windhoek generally has poorly developed thin topsoil that is the product of alluvial and colluvial deposition of mainly fine sands and silts intermixed with residual quartz pebbles. The soils in the study area are largely shallow, described as lithic leptosols (Mendelsohn, et al. 2002), and tend to have a sandy-to-sandy loam texture depending upon slope position, with a lot of gravel and stones embedded in the surface. On the slopes and ridges, much of the soil is covered by resistant quartzitic pebbles, which may act as ”pebble mulch” providing effective protection from rain splash erosion (Joubert, in prep.), thus reducing overall erosion on steep slopes.

The project site itself has been subjected to cut and fill earthworks for landfill purposes; hence depth to bedrock may vary from place to place due to filled-up backfills. The rock formations underlying the site consist mainly of mica rich schist, containing quartz veins. All of the intersected rock formations belong to 14 the Kuiseb formation of the Damara Sequence. In this area the formation is known to have a dip of ±30° in a northerly direction. North-south striking faults are present approximately 500m and 300m west and east of the site respectively.

The area is characterized by generally flat slope which drains towards a western direction**. T**he geological formation is characterized by biotite schist which is generally considered suitable for township development.

6.2.3 Geohydrology

A number of north-southerly striking faults and joints found in Windhoek form the major underground water conduits of the Windhoek Aquifer and hence determine the conditions of the aquifer. Secondary

porosity giving rise to high aquifer transmissivity is best developed in faults with post-hydrothermal alteration brecciation in quartzitic environments. Moreover host rock fracturing along fault planes results in better development of secondary porosity in quartzite compared to schistose terrain such that the aquifer reaches its maximum potential in this type of setting.

The sedimentary cut and fill earthworks; and schistose bedrock 15 formations of the study area strike in an east-north-easterly direction and dip 25-30° to the north. The micaceous schist found in the area, is prone to plastic deformation rather than brittle, fracturing, exhibiting significantly lower secondary porosity and permeability.

Groundwater flow would be mostly through secondary porosity along fractures, faults and other geological structures present within the underlying formations in the area.

Groundwater belongs to the government of the Republic of Namibia; hence the area does fall within the Windhoek-Gobabis Subterranean Water Control Area, of Government Notice 189 of 6 February 1970. This means that Government controls groundwater usage in this area.

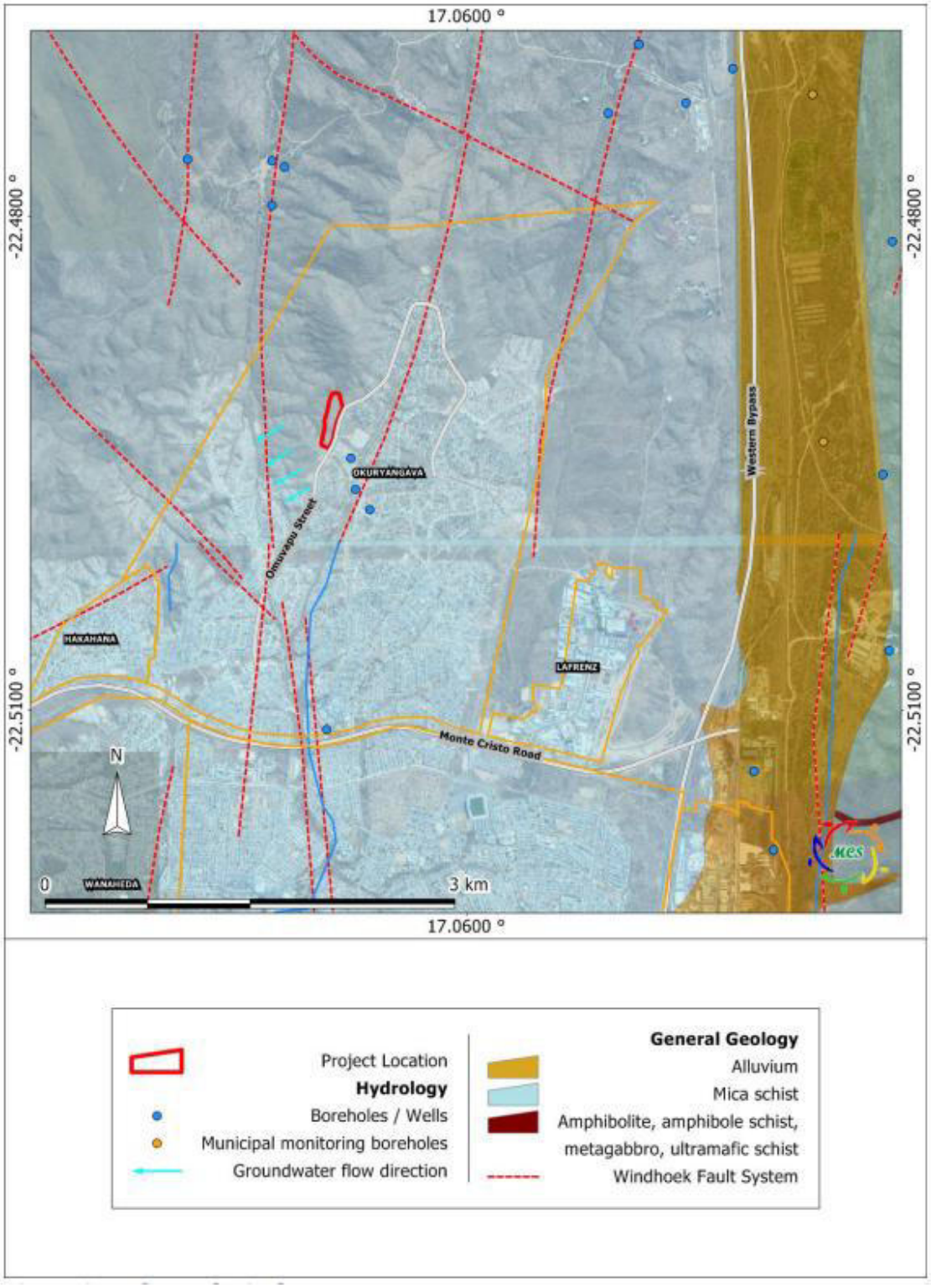


Figure 6. Hydrogeological Map

5.2.4.1. Groundwater Pollution Vulnerability

In order to protect groundwater resources from pollution, the need to assess and map the vulnerability of the Windhoek aquifer was identified to prove the municipality with a planning tool that will form the basis for setting priorities in protecting the groundwater resource. Infiltration water transports a large proportion of pollutants either directly or indirectly on 17 the groundwater to underlying aquifers. As a result, a vulnerability study of Windhoek aquifer was conducted in the year 2000. The project area was mapped during the study as having low aquifer pollution vulnerability, mainly due to the absence of sensitive geological structures at the landfill site and immediate surrounding. Geological features may form preferential pathways to the underlying aquifer. This map does however not consider impacts to surface water bodies in the area, as well as direct impacts to human health.

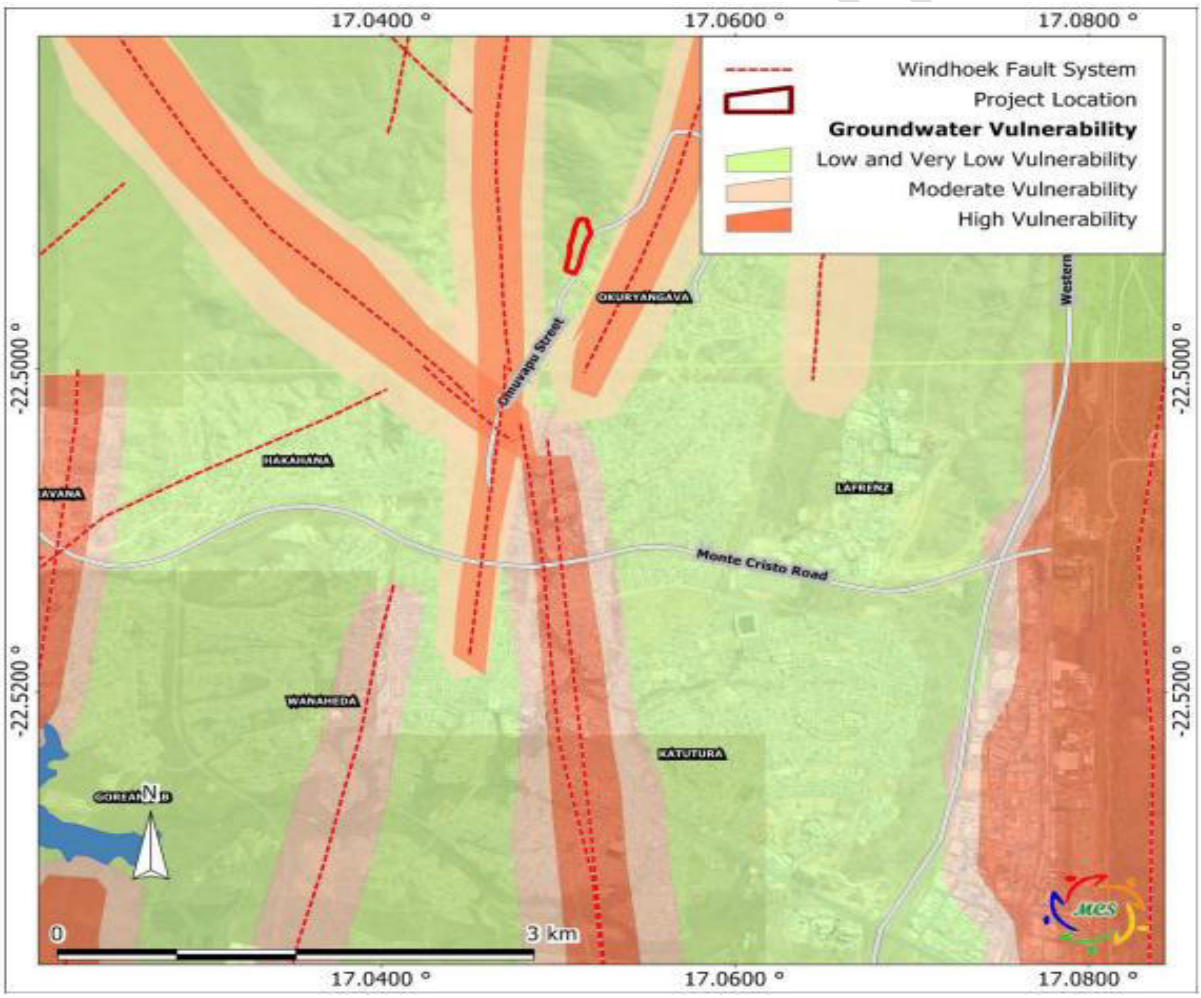


Figure 7. Groundwater Vulnerability Map

5.3 Terrestrial Ecology

5.3.1 Flora

According to Giess (1971), this area is classified as Highland Savanna vegetation type. This vegetation type is mainly characterised by trees such as Combretum apiculatum and Acacia species (such as Acacia reficiens, A. hereroensis, and A. erubenscens). The grass in this vegetation type mainly comprises of the climax grasses such as Anthephora pubescens, Brachiaria nigropedata, Digitaria eriantha and many other species.

The following table indicates the trees and shrubs known and/or expected to occur in the project area. Their protection status is indicated (As listed in the Forestry Act).

Table 11. **: Common plant species expected to occur in the study area**

Species	Common name	Status
Acacia erioloba	Camel thorn	Protected
Acacia mellifera	Black thorn	
Acacia reficiens	False umbrella thorn	
Acacia haematoxylon	Grey camel thorn	Protected
Acacia erubescens	Blue thorn	
Acacia karroo	Sweet thorn	
Acacia tortolis	Umbrella thorn	
Acacia hereroensis	False hook-thorn	
Commiphora tenuipetiolata	White-stem corkwood	
Aloe littoralis		(Protected: nature conservation ordinance)
Ozoroa crassinervia	Namibian resin tree	Near endemic, protected
Boscia albitrunca	Shepherd's tree	Protected
Albizia anthelmintica	Worm-bark false-thorn	Protected
Ziziphus mucronata	Buffalo-thorn	Protected

Species	Common name	Status
Catophractes alexandri	Trumpet thorn	
Combretum apiculatum	Red bush willow	
Commiphora dinteri		Endemic
Commiphora glandulosa	Tall common corkwood	
Commiphora glaucescens	Blue-leaved corkwood	Near-endemic
Croton gratissimus	Lavender fever-berry	
Cyphostemma bainesii		Endemic, protected
Dichrostachys cinerea	Sickle bush	
Diospyros lycioides	Blue bush	
Dombeya rotundifolia	Common wild pear	Endemic
Ehretia alba		
Elephantorrhiza suffruticosa		
Euclea pseudebenus	Ebony tree	Protected
Euclea undulata	Common guarri	
Euphorbia guerichiana	Western woody milkbush	
Euphorbia virosa		
Ficus cordata	Namaqua fig	Protected
Ficus ilicina	Laurel fig	
Ficus sycomorus	Common cluster fig	Protected
Grewia bicolor	White raisin	
Grewia flava	Velvet raisin	
Grewia flavescens	Sand paper raisin	
Gymnosporia senegalensis	Red spike-thorn	
Ipomoea adenioides		
Lycium bosciifolium		
Lycium cinereum		

Species	Common name	Status
Lycium eenii		
Lycium hirsutum		
Lycium villosum		
Maerua juncea		
Maerua schinzii	Ringwood tree	Protected
Manuleopsis dinteri		Endemic
Melianthus comosus		
Obetia carruthersiana		Near endemic
Pechuel-Loeschea leubnitziae		
Sterculia africana	African star-chestnut	Protected
Tarchonanthus camphoratus		
Tetragonia schenckii		
Vernonia cinerascens		
Searsia (Rhus) ciliata		
Searsia (Rhus) lancea	Karree	Protected
Searsia (Rhus) marlothii		

The following are the protected tree and shrub species listed in the Forestry Act known and/or expected to occur in the general area of the Northern Informal Settlements.

- *Albizia anthelmintica* (Worm-bark false-thorn)
- *Acacia haematoxylon* (Grey camel thorn)
- *Euclea pseudebenus* (Ebony tree)
- *Maerua schinzii* (Ringwood tree)

- *Sterculia Africana* (African star-chestnut)
- *Ficus cordata* (Namaqua fig)
- *Ficus sycomorus* (Common cluster fig)
- *Boscia albitrunca* (Shepherd's tree)
- *Ozoroa crassinervia* (Namibian resin tree)
- *Searsia (Rhus) lancea* (Karree)
- *Ziziphus mucronata* (Buffalo-thorn)
- *Acacia erioloba* (Camel thorn)

About a 100 grass species are expected to occur in the area. The species of conservation importance include: endemic (Eragrostis scopelophila, Pennisetum foermeranum and Setaria finite).

5.3.2 Fauna

Mammals

There is at least 250 species of mammals in Namibia. Currently 14 mammal species are considered endemic to Namibia of which 11 species are rodents and small carnivores of which very little is known. The most common endemic mammals include the rodent family Petromuridae (Dassie rat) and the rodent genera Gerbillurus and Petromyscus.

The following table indicates mammal species were known and/or are expected to occur in the general area surrounding the project area.

Table 12. Known and expected mammal species in Northen Informal Settlement

Scientific name	Common name
Atelerix frontalis angolae	Southern African Hedgehog
Manis temminckii	Ground Pangolin
Proteles cristatus	Aardwolf
Lepus capensis	Cape Hare Secure
Lepus saxatilis	Scrub Hare

Scientific name	Common name
Parahyaena (*Hyaena*) *brunnea*	Brown Hyena
Crocuta crocuta	Spotted Hyena
Acinonyx jubatus	Cheetah
Panthera pardus	Leopard
Caracal caracal	Caracal
Felis silvestris/lybica	African Wild Cat
Felis nigripes	Black-footed Cat
Genetta genetta	Small Spotted Genet
Suricata suricatta marjoriae	Suricate
Cynictis penicillata	Yellow Mongoose
Galerella sanguinea	Slender Mongoose
Otocyon megalotis	Bat-eared Fox
Vulpes chama	Cape Fox
Canis mesomelas	Black-backed Jackal
Mellivora capensis	Honey Badger/Ratel
Ictonyx striatus	Striped Polecat
Equus zebra hartmannae	Hartmann's Mountain Zebra
Phacochoerus africanus	Common Warthog
Tragelaphus strepsiceros	Greater Kudu
Alcelaphus buselaphus	Red Hartebeest
Oryx gazella	Gemsbok
Sylvicapra grimmia	Common Duiker
Antidorcas marsupialis	Springbok
Raphicerus campestris	Steenbok
Oreotragus oreotragus	Klipspringer

Birds

Namibia has about 658 species of birds (Barnard, 1998). High diversity of bird species in the study are is expected to occur in river courses. The highland savanna in which the study area is, have relatively high diversity of birds. This is probably because of the fact that the highland savanna vegetation type is at the interface of the Kalahari to the east, Karoo to the south, thorn bush savanna to the north and escarpment to the west. Birds from all these biomes and vegetation types occur around the highland savanna. More than 230 species of birds are expected to occur in the study area (Barnard, 1998).

Bird species of conservation importance expected to occur in the area include the following species which are endemic to Namibia:

- *Pternistis hartlaubi* (Hartlaub's Spurfowl)
- *Tockus monteiri* (Monteiro's Hornbill)
- *Tockus damarensis* (Damara Hornbil)
- *Phoeniculus damarensis* (Violet Wood-Hoopoe)
- *Poicephalus rueppellii* (Rüppell's Parrot)
- *Agapornis roseicollis* (Rosy-faced Lovebird)
- *Eupodotis rueppellii* (Rüppell's Korhaan)
- *Lanioturdus torquatus* (White-tailed Shrike)
- *Parus carpi* (Carp's Tit)
- *Achaetps pycnopygius* (Rockrunner)

Amphibians

According to Griffin (1998) only anuran amphibians (frogs and toads) are found in Namibia. Namibia has about 50 frog species on record. The dependence of frogs to surface water for breeding limits most species of frog in Namibia to the five perennial rivers and more reliable seasonal sources. Despite this many species in Namibia are arid-adapted and occur throughout the country. About 9-12 species of frogs is expected to occur in the study area (Griffin, 1998).

Amphibian species expected to occur in this area include the following species of conservation importance:

Poyntonophrynus (Bufo) hoeschi Hoesch's (Pygmy Toad) -Endemic

Phrynomantis annectens (Marbled Rubber Frog)- Endemic

Pyxicephalus adspersus (Giant Bullfrog)- Near threatened

Reptiles

There are about 261 species (56% of the Southern African region's species diversity) of reptile expected to occur in Namibia (Barnard, 1998). 71-80 species of reptiles are expected to occur in the project area (Barnard, 1998).

6. ASSESSMENT METHODOLOGY

The purpose of this chapter is to describe the assessment methodology utilized in determining the significance of the construction and operational impacts of the proposed project, and were applicable the possible alternatives, on the biophysical and socio-economic environment.

Assessment of predicted significance of impacts for a proposed development is by its nature, inherently uncertain – environmental assessment is thus an imprecise science. To deal with such uncertainty in a comparable manner, a standardised and internationally recognised methodology has been developed. Such accepted methodology is applied in this study to assess the significance of the potential environmental impacts of the proposed development, outlined as follows in **Table 7**.

Table 13: Impact Assessment Criteria

CRITERIA	CATEGORY
Impact	Description of the expected impact
Nature Describe type of effect	**Positive**: The activity will have a social / economical /environmental benefit. **Neutral**: The activity will have no effect **Negative**: The activity will have a social /economical /environmental harmful effect
Extent Describe the scale of the impact	**Site Specific:** Expanding only as far as the activity itself (onsite) **Small:** restricted to the site's immediate environment within 1 km of the site (limited) **Medium:** Within 5 km of the site (local) **Large:** Beyond 5 km of the site (regional)
Duration Predicts the lifetime of the impact.	**Temporary:** < 1 year (not including construction) **Short-term:** 1 – 5 years **Medium term:** 5 – 15 years **Long-term:** >15 years (Impact will stop after the operational or running life of the activity, either due to natural course or by human interference) **Permanent:** Impact will be where mitigation or moderation by natural course or by human interference will not occur in a particular means or in a particular time period that the impact can be considered temporary
Intensity Describe the magnitude (scale/size) of the Impact	**Zero:** Social and/or natural functions and/ or processes remain unaltered **Very low:** Affects the environment in such a way that natural and/or social functions/processes are not affected **Low:** Natural and/or social functions/processes are slightly altered **Medium:** Natural and/or social functions/processes are notably altered in a modified way **High:** Natural and/or social functions/processes are severely altered and may temporarily or permanently cease

Probability of occurrence Describe the probability of the Impact actually occurring	**Improbable:** Not at all likely **Probable:** Distinctive possibility **Highly probable:** Most likely to happen **Definite:** Impact will occur regardless of any prevention measures
Degree of Confidence in predictions State the degree of confidence in predictions based on availability of information and specialist knowledge	**Unsure/Low:** Little confidence regarding information available (<40%) **Probable/Med:** Moderate confidence regarding information available (40-80%) **Definite/High:** Great confidence regarding information available (>80%)
Significance Rating The impact on each component is determined by a combination of the above criteria.	**Neutral:** A potential concern which was found to have no impact when evaluated **Very low:** Impacts will be site specific and temporary with no mitigation necessary. **Low:** The impacts will have a minor influence on the proposed development and/or environment. These impacts require some thought to adjustment of the project design where achievable, or alternative mitigation measures **Medium:** Impacts will be experienced in the local and surrounding areas for the life span of the development and may result in long term changes. The impact can be lessened or improved by an amendment in the project design or implementation of effective mitigation measures. **High:** Impacts have a high magnitude and will be experienced regionally for at least the life span of the development or will be irreversible. The impacts could have the no-go proposition on portions of the development in spite of any mitigation measures that could be implemented.

*__NOTE__: Where applicable, the magnitude of the impact has to be related to the relevant standard (threshold value specified, and source referenced).

The magnitude of impact is based on specialist knowledge of that particular field. For each impact, the **EXTENT** (spatial scale), **MAGNITUDE** (size or degree scale) and **DURATION** (time scale) are described. These criteria are used to ascertain the **SIGNIFICANCE** of the impact, firstly in the case of no mitigation and then with the most effective mitigation measure(s) in place. The decision as to which combination of alternatives and mitigation measures to apply lies with the proponent, and their acceptance and approval ultimately with the relevant environmental authority.

The **SIGNIFICANCE** of an impact is derived by taking into account the temporal and spatial scales and magnitude. Such significance is also informed by the context of the impact, i.e. the character and identity of the receptor of the impact.

7 ASSESSMENT OF POTENTIAL IMPACTS AND POSSIBLE MITIGATION MEASURES

7.1 INTRODUCTION

This Chapter describes the potential impacts on the biophysical and socio-economic environments that may occur due to the proposed activities, described in Chapter 5, affecting the baseline environment. The assessment focuses on impacts that may arise during construction (i.e. short to medium term) and the operation of the proposed development (i.e. long term impacts) but also includes consideration of planning phase impacts and cumulative impacts.

Decommissioning is not included, because demolition and rehabilitation of a development such as this is never anticipated nor planned for.

The baseline and potential impacts that could result from the proposed development are described and assessed with potential mitigation measures recommended. The primary and most significant impacts of this type of urban development accrue during the construction phase, hence greater definition and detail is provided in this chapter concerning the impacts of that phase. Operational phase impacts will occur over a long period of time/ indefinitely but at a low level of intensity. Finally, comment is provided on the cumulative impacts that could result should this development, and others like it in the area, be approved.

7.2 PLANNING AND DESIGN PHASE IMPACTS

During the planning and design phase consideration should be given on aspects such as impacts of existing municipal infrastructure and biodiversity.

7.2.1 Existing Service Infrastructure Impacts

Okuriangava Ext 3 infill Industrial and Residential is fully connected to the municipal reticulation system of the City of Windhoek, which consists of water, electricity and sewer connections. This connection will be maintained. Stormwater run-off will follow the natural drainage paths on site. Further measures necessary to manage stormwater within the area are to be employed in accordance with the Windhoek Municipal Council stormwater drainage system.

7.3 CONSTRUCTION ACTIVITIES OF THE TOWNSHIP DEVELOPMENT

The construction of Okuriangava Ext 3 Infill Industrial and Residential will involve various activities that may result in environmental and social impacts. These impacts are expected to be site-specific, short-term, and manageable with appropriate mitigation measures. Below is a summary of the key anticipated impacts and proposed mitigation strategies:

7.3.1 Dust Pollution and Air Quality

Construction activities, particularly the installation of bulk services, will generate dust, especially during the dry and windy winter months. Dust can reduce visibility, affect human health, and hinder plant growth. Additionally, emissions from construction vehicles and machinery may contribute to air pollution.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Dust and Air Quality	-VE	2	1	2	1	M	L

7.3.2 Noise Impact

An increase of ambient noise levels at the construction site is expected due to construction activities. Noise pollution due to construction vehicles, heavy-duty equipment and machinery will be generated. It is not expected that the noise generated during construction will impact any nearby land or properties.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Noise	-VE	1	1	4	4	M	L

7.3.3 Safety and Security

Safety issues could arise from construction vehicles, earthmoving equipment and tools that will be used during the construction phase. This increases the possibility of injuries and the contractor must ensure that all staff members are made aware of the potential risks of injuries on site. Construction sites usually house construction building material and equipment on site which may attract criminal activities.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Safety & Security	-VE	1	1	4	2	M	L

7.3.4 Groundwater Contamination

Groundwater quality could be impacted through leachate of petroleum, chemical, harmful and hazardous substances. In particular, oil leakages, diesel, lubricants and grease from construction vehicles, equipment and machinery utilised during the bulk servicing of the townships may occur. Care must be taken to avoid contamination of soil and groundwater. Any overflow of the temporary sewage systems available, may transport the effluent to drainage lines in the area. Geological structures (fault lines / joints) present in the area may also act as preferential pathways for contaminants to groundwater.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Groundwater	-VE	2	3	3	2	M	L

7.3.5 Contamination of Surface

Water Contamination of surface water bodies may occur through petroleum, chemical and hazardous substances. Contaminants in the form of oil leakages, diesel, lubricants and grease from the construction equipment and machinery may occur during the construction phase. Oil spills may form a film on water surfaces in the nearby streams causing physical damage to water-borne organisms.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Surface water	-VE	2	2	2	3	M	L

7.3.6 Generation of Waste

Waste material will be generated during the construction activities of the township developments. Waste in the form of rock cuttings, building rubble, pipe cuttings, oil spills or leakages of petroleum products may occur during the construction phase.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Waste Generation	-VE	1	1	4	4	M	L

7.3.7 Traffic

Construction related activities are expected to have a minimal impact on the movement of traffic along Etetewe Street and Omungwindi Street (and other access nearby streets), as construction vehicles will frequent the project site periodically. A slight nuisance might be experienced by motorists in the area. This will most likely be caused by slow moving vehicles frequenting the construction sites.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Traffic	*-VE*	2	1	4	3	M	L

7.3.8 Fires and Explosions

There should be sufficient water available for fire fighting purposes. Ensure that all fire-fighting devices are in good working order and they are serviced. All personnel have to be trained about responsible fire protection measures and good housekeeping such as the removal of flammable materials on site. Regular inspections should be carried out to inspect and test firefighting equipment by the contractor. The proposed township development may require blasting of the hard rock at the project site, in order to install and construct various infrastructure of the development.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Fires and Explosion	-VE	1	1	4	2	M	L

7.3.9 Nuisance Pollution

Aesthetics and inconvenience caused to persons using the roads and streets in the area. The construction activities would be visible from **Etetewe Street and Omungwindi Street**, thus the supervisor should maintain tidiness on site at all times. Take cognition when parking vehicles and placing equipment.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Nuisance Pollution	-VE	1	1	2	2	L	L

7.3.10 Erosion and Sedimentation

Clearing of the vegetation during earthworks is expected to take place and can make the project site susceptible to soil erosion especially during rainy seasons. The constant movement of heavy construction vehicles during construction also tend to compact the soil surface, which can reduce infiltration capability, and increase surface water runoff.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Erosion and Sedimentation	-VE	1	1	4	2	M	L

7.3.11 Ecological Impacts

The project site is currently disturbed with an existing informal settlement. The area consist of some big trees and alien invasive plant species. Land will be cleared, leaving the big trees and protected species to maintain the vegetation within township development.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Ecology	-VE	1	1	4	2	L	L

7.3.12 Socio-Economic Impacts

Temporary employment opportunities are anticipated to be created during construction, both directly through construction workers and indirectly through suppliers, service providers, and informal traders attracted to the project site.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Socio - economic	-VE	1	1	4	2	L	L

Summary of all potential impacts during the construction phase:

In general, impacts are expected to be low to medium, mostly short lived and site specific. Mitigation options recommended in the Environmental Management Plan (EMP) will guide and ensure that the impacts during the construction activities are minimised.

Proper storm water management plans must be in place to minimise the risk of flooding and pollution, and must form part of the engineering designs.

The appointed contractor should be made aware of the content and environmental requirements of this report through proper induction training.

7.4 OPERATIONAL ACTIVITIES OF TOWNSHIP DEVELOPMENT

7.4.1 Dust Pollution and Air Quality

Vehicles that will be accessing the township development will contribute to the release of hydrocarbon vapours, carbon monoxide and sulphur oxides into the air. Possible release of sewer odour, due to sewer system failure or maintenance might also occur.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Dust & Air Quality	-VE	2	1	2	1	M	L

7.4.2 Noise Impact

Noise pollution already exists around the site in the form of noise generated from vehicles frequenting the existing Etetewe streets. Noise pollution due to this project in the operational phase is expected to be mainly from generators or pumps, road maintenance machinery during maintenance.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Noise	-VE	1	3	4	4	M	L

7.4.3 Surface and groundwater

Spillages might also occur during maintenance of the sewer system. This could have impacts on groundwater especially in cases of large sewer spills. Potential health impact on groundwater users do exist. Potential impact on the natural environment from possible polluted groundwater also exits. The area is subjected to north-northwest structures, which may act as preferential pathways for any contaminants entering the saturated zone.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Groundwater Contamination	-VE	2	2	3	2	M	L

7.4.5 Generation of Waste

Waste in the form of solid waste from households, businesses and institutions will be generated. Waste will be removed and disposed of at **Kupferberg Landfill by Council's waste removal contractors and Municipal Council.** The Council will have waste skips around proposed new township development, just like the rest of the suburbs in Windhoek.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Waste Generation	-VE	1	1	2	4	M	L

7.4.6 Socio-Economic Aspects

The creation of new employment opportunities is eminent for maintenance activities; and is considered to be a positive impact. At this stage, it is unclear how many temporary and permanent employment positions will be created but jobs will be created. Proposed Mitigation Measures Employment creation should be targeted at the immediate communities of township. Maintenance contractors should be sourced from Windhoek, or the region at large. Locally source services required during the operational process, such as securities, plant hire, etc.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Socio - economic	-VE	1	1	8	2	L	L

7.4.7 Ecological Impacts

The operations of the development will have minimal impacts on fauna and flora; however vegetation control in and around the townships must be maintained. Proposed Mitigation Measures Vegetation in open spaces should not be disturbed or removed during the operational phase. Minimise the area of disturbance by restricting movement to the designated working areas during Maintenance.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Ecology Impacts	-VE	1	1	4	2	L	L

7.4.8 Traffic

Traffic around the proposed township development should be monitored, to avoid traffic congestion in the area. Speed limits and road signs as set out by the national road traffic regulations and Council's Traffic Department should be adhered to in order to minimise accidents. It is advisable that some traffic lights be erected to ease traffic flow around the new township.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Traffic	-VE	1	3	4	4	M	L

7.4.9 Safety and Security

A number of health and safety threats exist during operational activities of township developments. Waste water from leaking pipes (if unattended) can lead to waterborne diseases such as cholera, dysentery, typhoid and diarrhea, which is a health risk to local communities. Severe noise pollution can also become a nuisance, which can result in dangerous confrontations and/or violence, depression, headaches etc. Accidents on roads could increase as a result of increased traffic; and deteriorated roads in and around the township developments. Safety issues could also arise from the vehicles, equipment and tools that will be used on during maintenance activities.

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Safety Security	-VE	1	3	6	3	M	L

In general, impacts are expected to be low, short lived and site to local specific. An EMP will ensure that the impacts during the operational activities are minimised and includes measures to reduce all impacts identified.

7.5 Decommissioning Activities of the Township Development

The impacts associated with this phase will be similar to that of the construction phase. The EMP for this phase will have to be reviewed at the time of decommissioning to cater for changes made to the development.

8 CONCLUSION

All known environmental and social risks can be minimised and managed through implementing preventative measures and sound management systems. It is recommended that environmental performance be monitored regularly to ensure compliance and that corrective measures be taken if necessary. It is also recommended that this information be made available to the surrounding communities on a regular basis. In general, the proposed Okuriangava Ext 3 Infill Industrial and Residential Township project would pose limited environmental risks, provided the EMP for the activity is used properly during planning, construction and operational phase.

The EMP should be used as an on-site tool during all phases of the township project. Parties responsible for non- conformances of the EMP will be held responsible for any rehabilitation that may need to be undertaken. Should the township project be modified or extended to a different area, it is recommended that a different EIA be done for the probable new location.

It should also be noted that environment clearance certificates issued on EIA/EMPs are only valid for 3 years and will need to be reviewed and submitted to the Department of Environmental Affairs again for approval, in the event that the township establishment is delayed or postponed

ANNEXURE A

PUBLIC PARTICIPATION

Attachment 1. Newspaper Adverts and Public Notices

City of Windhoek

The Gateway to Endless Opportunities

BACKGROUND INFORMATION DOCUMENT

ENVIRONMENT IMPACT ASSESSMENT STUDY FOR REZONING, CONSOLIDATION AND SUBDIVISION OF THE INFILL AREA IN OKURIANGAVA EXTENSION 3, WINDHOEK, KHOMAS REGION

Vision: To be a **Sustainable** and **Caring City** by 2027

1. PURPOSE OF THIS DOCUMENT

Public Consultation is a mandatory part of the Environmental Impact Assessment (**EIA**) process, to allow Interested and Affected Parties (**I&AP**) to raise concerns and comments of the proposed development. The EIA Study, which produces the Environment Management Plan (**EMP**) is conducted to obtain an Environmental Clearance Certificate (**ECC**)

Background Information Document (**BID**) is prepared as part of the EIA process. Its purpose is to:

- Inform the I&AP's and Stakeholders about the EIA being undertaken for the proposed development activity;
- Introduce the proposed project an related activities to potential I&AP and stakeholders;
- Invite members of the public to register as I&AP; and
- Afford all I&AP and stakeholders the opportunity to provide input, concerns and to comment on the proposed project.

2. INTRODUCTION

The Windhoek Municipal Council (**Council**), intends to obtain an ECC to finalize the town planning procedures for rezoning, consolidation and subdivision of the Infill area in Okuryangava Ext 3, to create industrial and residential erven.

The EIA study to obtain the ECC will be done in terms of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (*GN 30 in GG 4878 of February 2012*). The following listed activities were triggered by the proposed project:

Activity 5. Land use Development activity: Rezoning of land.

Activity 9. Hazardous Substance Treatment, Handling and Storage: (**9.1**) Handling of a hazardous substance defined in the Hazardous Substances Ordinance, 1974.

Activity 10.1 The construction of **(a)** Water and other bulk supply pipelines; **(b)** public roads; **(g)** communication networks including towers, telecommunication lines and cables;

The existing zoning of industrial, business and street zone will be rezoned, consolidated and subsequently subdivided to create erven with land uses of industrial, business, single residential, general residential, open spaces and street.

Municipal Services of tarred roads, sewerage, water, storm water management, electricity, and telecommunications, will be extended from the neighboring formal areas.

3. BACKGROUND

The Council aims to interact with I&AP and stakeholders about the project through the BID. The BID will also provide I&AP with the opportunity to register as stakeholders in public participation process and to make initial comments to the proposed project.

This is done In line with the EIA Regulation Section 21(2) of the GN 30 in GG 4878 of February 2012. This BID is distributed to pre – identified I&APs as part of the public consultation process for this EIA.

An Assessment will be undertaken to determine the potential impact of the development on the environment and to determine all safety, health and social impacts associated with the proposed development activities.

4. LOCALITY

The project area is located in the Infill are of Okuryangava Ext 3 Township, which is situated in the Northwest part of Windhoek. It is situated within the boundaries of Etetewe Street to the east and Omungwindi Street to the west and in a close proximity to a functional neighborhood business node and a government school. The INFILL is vacant and under the ownership of Windhoek Municipal Council.

The project area, which is currently vacant forms part of the initially established township, Okuryangava Ext 3 as per Government Gazette declaration number 1992/355/2.

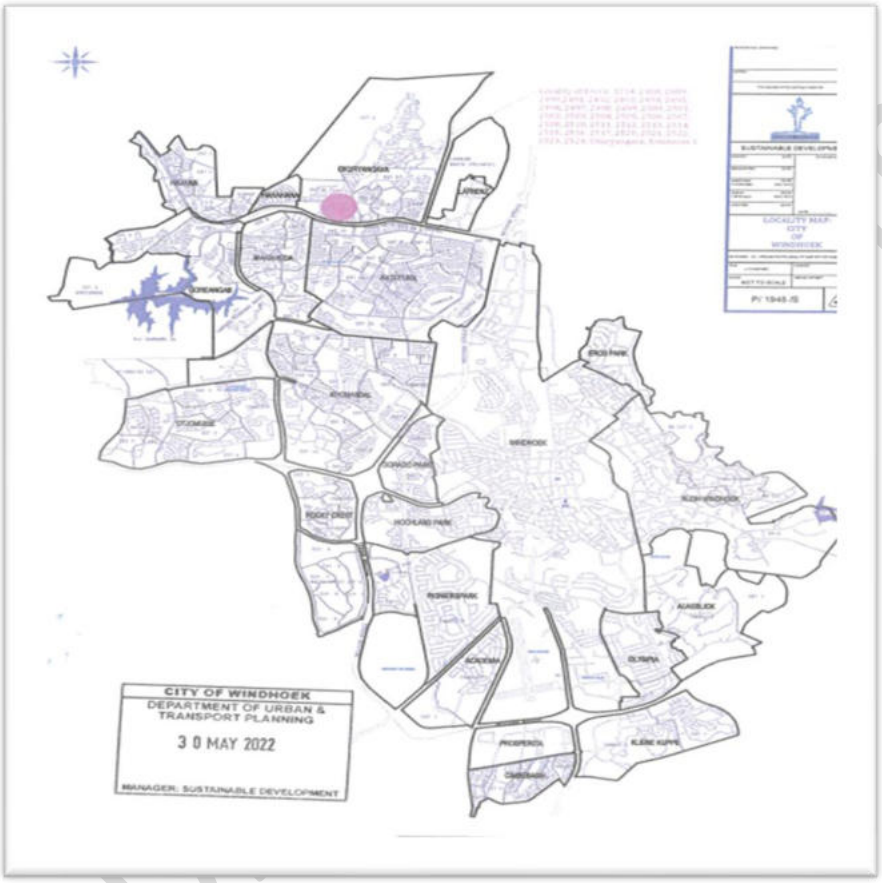


Figure 1. Location of the Project Area

5. PROJECT DESCRIPTION:

The current Cadastral Layout P/1945/S has two layouts. The 1st Layout consists of 5 industrial erven, 2 Business erven with a bulk 1, while the 2nd layout consist of 34 industrial erven and a street.

The 1st Cadastral layout will be rezoned, consolidated, and subdivided to create six (6) industrial erven and a street. These six (6) erven are zoned industrial to create a light industrial hub for trading opportunities for

small and medium enterprises, while One (1) erf (Remainder) be reserved as street for purposes of parking along the Etetewe Street.

The 2nd Cadastral layout will be consolidated and subdivided to create 38 single residential erven and 3 general erven, and a street.

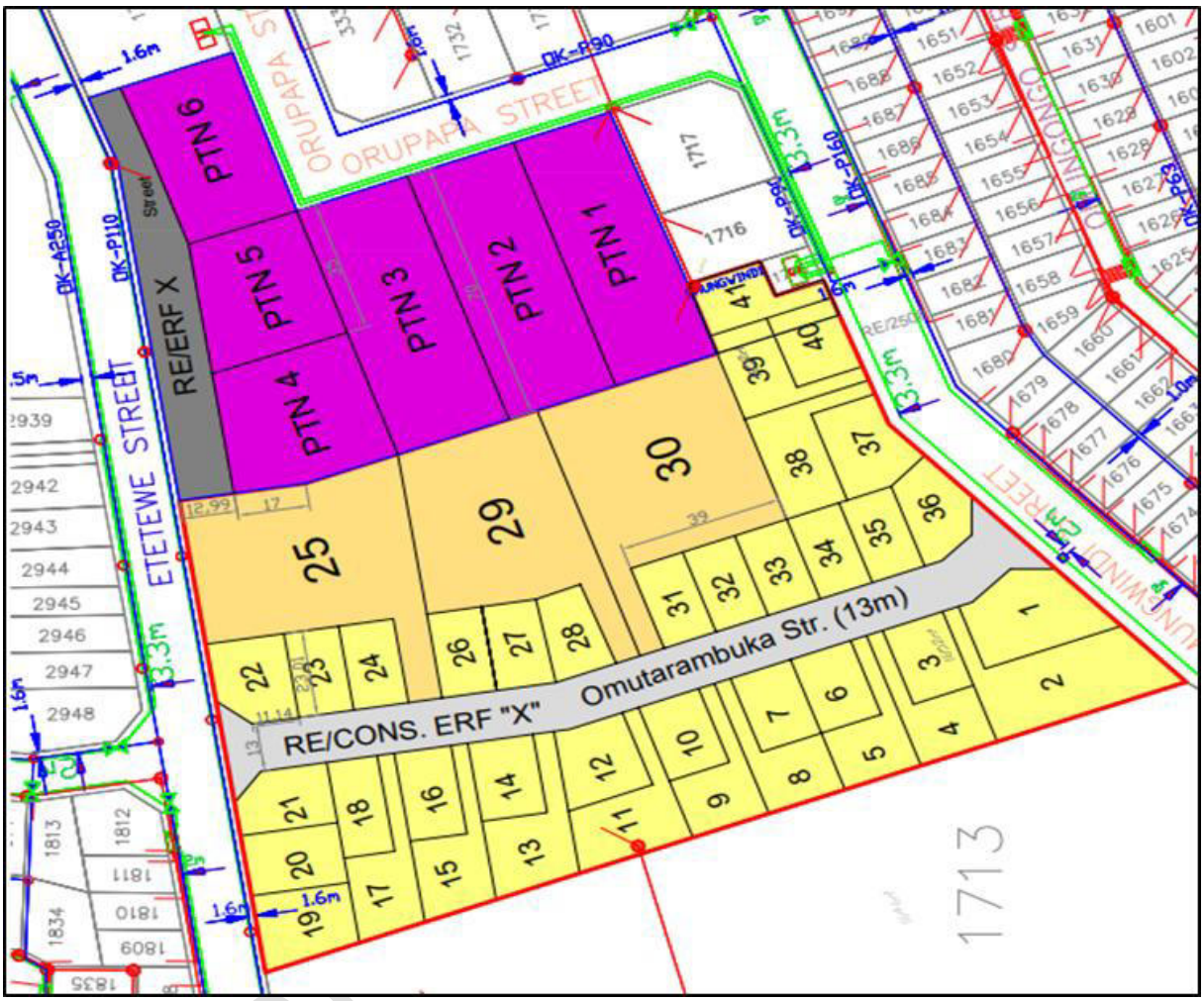


Figure 2. Proposed Layout of the Okuriangava Ext 3 Infill

6. MUNICIPAL SERVICES

The area is located within the already build-up environment and have direct access to all Municipal Infrastructure such as water, wastewater, roads, power infrastructure. Individual connection points to the newly created portions can be made from existing sewer lines if necessary.

Streets access to the newly created portions will be provided from existing Municipal roads namely Etetewe and Orupapa streets.

7. TOPOGRAPHY, GEOLOGY AND HYDROGEOLOGY

The area is characterized by a generally flat slopes which drains towards a Western direction. The Geological information is characterized by biotite schist, which is generally considered suitable for township developments. The area is within a built environment with a high pedestrian movement, hence there are very little signs of any animal life. Natural vegetation has also been partially disturbed with all the human interferences, though very few indigenous trees can be found.

8. ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

The EIA Study follows the following process:

- Establishing environmental risks of the intended project;
- Preparing the draft EIA Report & Environment Management Plan (**EMP**);
- Public reviewing of draft EIA Report & EMP;
- Preparing the final EIA Report & EMP and submitting to Ministry of Environment, Forestry and Tourism (**MET**);
- Awaiting decision from Authorities;
- Communicating decision to I&AP and
- Availing opportunities to appeal

9. POTENTIAL IMPACTS

The potential impacts that are likely to be produced are:

- Traffic Impact
- Air quality, Noise and Dust
- Social and cultural issues
- Surface and groundwater issues
- Use of harmfull substances
- Safety and Health hazards

The impacts will be described, assessed and mitigation measures, will be provided in the EIA Report and EMP.

10. PUBLIC PARTICIPATION PROCESS

The EIA process involves interaction with people who are interested in, or who could be affected by the proposed development and/or operational activity of the Infill area of the Okuryangava Extension 3 Township. Thus, the public are invited to attend the Public Participation meeting or to register as I&AP.

A Public Participation meeting is scheduled to take place as follows:

Date: 28 June 2025
Time: 10h00 am
Venue: Ombili Community Centre

This BID will also be sent out to various potential I&APs and Line Ministry to obtain comments on the proposed developments.

11. ALL STAKEHOLDERS/INTERESTED & AFFECTED PARTIES (I&AP)

All I&AP, the stakeholders and Public are invited to participate in the public participation process as follows:

- By attending meetings and obtain information about proposed project
- By raising any environmental issues relating to the project
- By responding to the invitation advertised in any local newspaper
- By registering as an I&AP for your name to be added to your register list
- Submitting your comments or requests

The issues and suggestions regarding the proposed project should be done before 14 July 2025. The draft EIA Report will be shared with the registered I&AP during the review period.

The attached document can be completed to register as an Interested and affected Party (I&AP) as well as raise your concerns and commends about the proposed project.

Please fill in particulars and return completed document to be registered as an Interested and Affected Parties (I&AP) to:

Participant Name:	**Position:**
Telephone No:	
Physical address:	
Email address:	

Comments/Questions/Concerns:

Please complete the form and return it to be registered as an Interested and Party to

Postal Address:	**Physical Address:**
Windhoek Municipal Council Department of Economic Development and Community Services P.O Box 59 **Windhoek**	Department of Economic Development and Community Services C/o Independence Avenue Townhouse **Windhoek**
Email: Grazy.Tshipo@windhoekcc.org.na	**Tel**: +264 290 2373

Attachment 4. Public Notice which was plugged at various sites

City of Windhoek

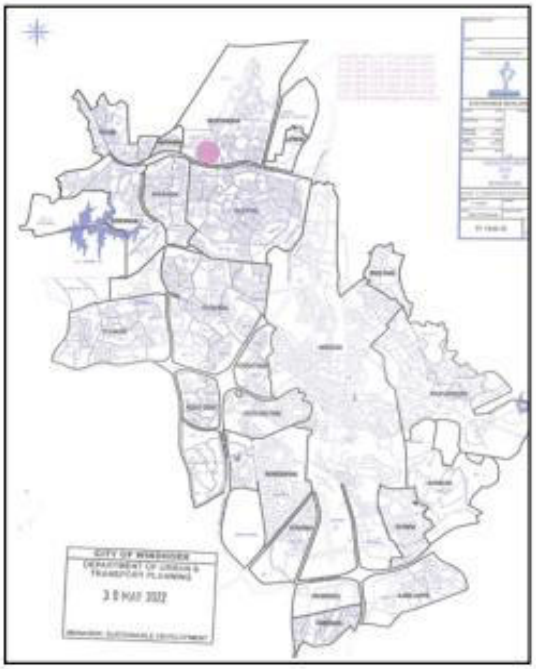
Vision: To be a **Sustainable** and **Caring City** by **2027**

PUBLIC NOTICE

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) PUBLIC PARTICIPATION PROCESS

The Windhoek Municipal Council hereby give notice to all potentially Interested and Affected Parties **(I&AP)** that an Application for the Environmental Clearance Certificate will be made to the Environmental Commissioner as per the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (Government Notice No 30 of 2012) for the following Activities:

Project Name:
EIA process for Subdivision, Zoning and Development of Municipal Services for the Okuryangava Extension 3 Infill.



Project location: Open Space (Okuryangava Ext 3, Infill), erven, 1714 and Re/1714, 2508, 2509, 2518, 2519, 1718 and 1719 situated within the boundaries of Etetewe Street and Omungwindi Street buffered by a public School (Hage Gaigob Secondary School) and a functional bussinesss node (22°30'29.04"S, 17°02'32.30"E).

The Proponent: Windhoek Municipal Council
Environmental Assessment Practitioner: Health and Environment Services Division (Windhoek Municipal Council)

REGISTRATION OF I&APs AND SUBMISSION OF COMMENTS:
In line with Namibia's Environmental Management Act (No 7 of 2007) and EIA Regulations (GN 30 of 6 February 2012), all I&APs are hereby invited to register and submit their comments, concerns or questions to the contact details below, by 2 July 2025.

Public Meeting: A Public meeting will be held on 28 June 2025 at 10h00, at Ombili Community Centre, Omungwindi Street.

Contact: Ms. Grazy Tshipo
Email: Grazy.Tshipo@windhoekcc.org.na
Tel: +264 612902373

Attachment 5. Proof of Site Notice and Adverts at various sites

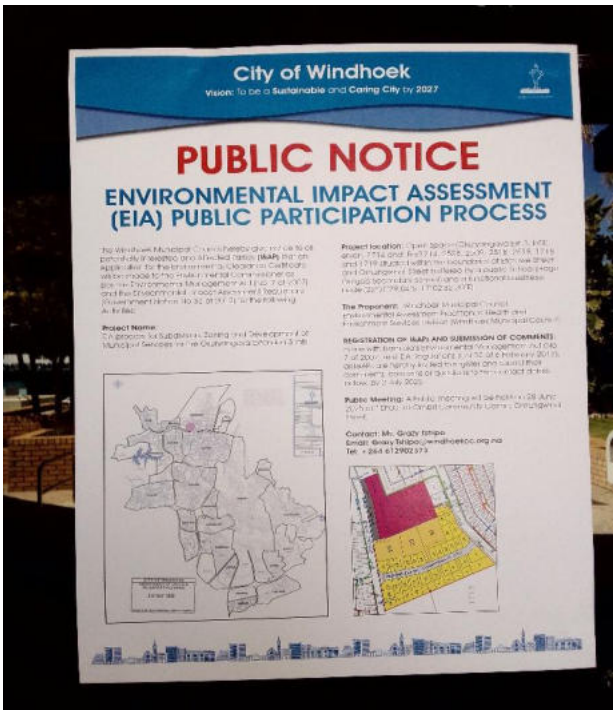


Photo 1. Old Town House

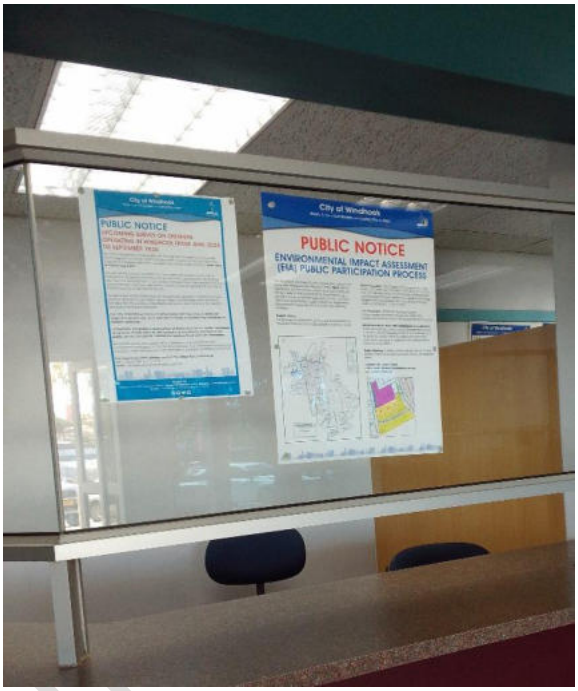


Photo 2. Katutura Customer Care

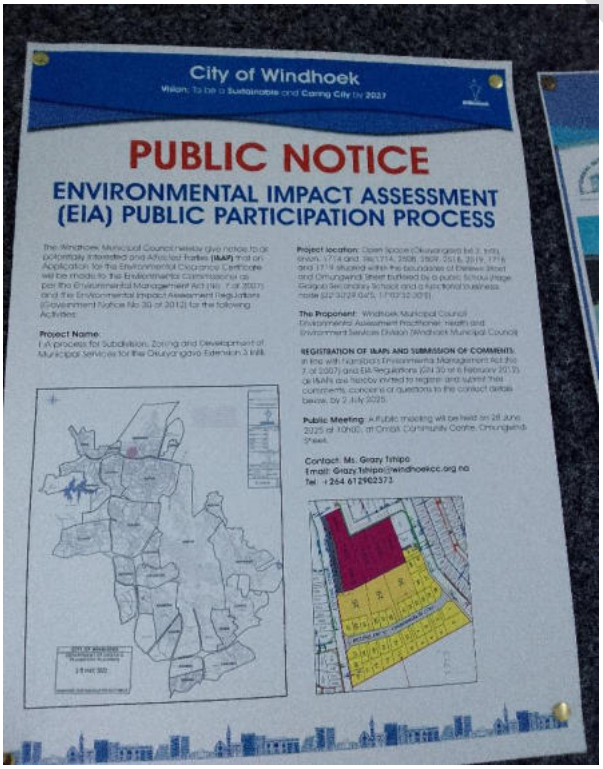


Photo 3. Elevator at Townhouse

Photo 4. Ombili Community Center

Photo 5. Ombili Police Office

Photo 6. Rennie Supermarket

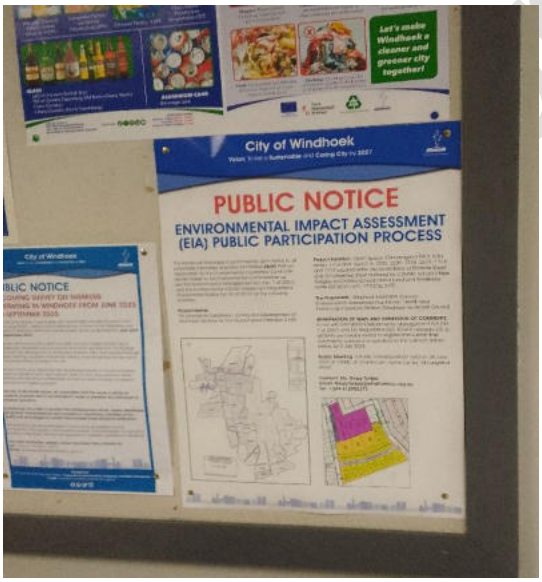


Photo 7. Soweto Customer Care

Attachment 5. Minutes of Meeting

SUBJECT: PUBLIC PARTICIPATION FOR EIA STUDY FOR CONSOLIDATION, SUBDIVISION, ZONING AND STREET CREATION FOR OKURYANGAVA EXTENSION 3 INFILL

Date: 28 June 2025

Venue: Ombili Community Centre

ATTENDANCE:

1. Grazy Tshipo
2. Elmelinde Ambunda
3. Katuuo Kuveri
4. Martin Shikongo

1. Purpose

The purpose of the meeting was to present to the Public the EIA process for the proposed Development by the City of Windhoek, on the open space area of the Okuryangava Extension 3 infill. A presentation was presented to the community about the Environment Impact Studies, the proposed project, the possible impacts and the way forward.

2. Questions, Comments & Answers

Ques 1: Kleopas Dominic – What will happen to the ongoing illegal businesses along side of the road, will they also be considered for the new developed area?

Ques 2: Sevelinus – Why only 37 ervens for residential while the huge area is proposed for Industrials and we have a huge amount of people who don't have ervens at Kapuka Kanauyala and most of the people attending this meeting been wanting to relocate to that area?

- **Answer:** the specified area is actually not meant for Okapuka Kanauyala but for the proposed development.
- And any comment or concern will be submitted to the right information.

Ques 3: Johannes: Is there will be relocation for people from Okapuka Nauyala to the given among the 37 ervens that are going to be given, because it is so over crowded there?

Ques 4: Akapeke Tertu – Instead of putting industrials purposes, why don't you relocate all the people from Okapuka kanauyala B then you will put businesses on the rest of the land that will remain?

Ques 5: Lydia – There was an application for that open space, is there any approval?

- Is the Job opportunity mentioned will be given to the residents of Okapuka kanauyala or is it going to be advertised for people to apply?
- How long the Environmental Clearance certificate takes for City of Windhoek to come back to the community for feedback?

Comment: Festus Nuumbala – We have been in Okapuka kanauyala since 1992 with no development. We want to be relocated there instead of industrial and businesses.

Comment: Joel Ashikoto – He feels like this meeting is not for them because we thought the area will be given to the people of Okapuka Kanauyala.

Frans Iyambo: Explained very well the purpose of the meeting is not for relocation but to collect information on what the community says on the proposed development. He added that people who deals with the issue of relocation were not present in the meeting and that the proposed development is also not final.

Conclusion: The people attended the meeting were advised to understand the purpose of the meeting and ensure that whatever comment they have raised will reach to the right offices and that they must expect another public participation for Okapuka kanauyala.

Closing Remarks:

Attachment 6. Interested and Affected Stakeholder Data base with e-mail as proof that the BID was shared with them.

From: Tshipo (G) <15693@windhoekcc.org.na>
Sent: Thursday, June 26, 2025 5:56 PM
To: ED@mawlr.gov.na; Maria.Amakali@mawlr.gov.na; Bertram.Swartz@mawlr.gov.na; Paulina.Mufeti@mawlr.gov.na; Cynthia.Ortmann@mawlr.gov.na; ed@mit.gov.na; Erwin.Nakafingo@mhss.gov.na; Erasmus.Shivolo@mme.gov.na; Patrick.Elungu@mme.gov.na; Esther.Kaapanda@mwt.gov.na; ED@mawlr.gov.na; timoteus.mufeti@meft.gov.na; ed@murd.gov.na; info@namwater.com.na; webinfo@nampower.com.na; remmie.hilukwa@mawf.gov.na; pr@ra.org.na; pr@ra.org.na; Matyayi (M) <Moses.Matyayi@windhoekcc.org.na>; Pierre.vanRensberg@windhoekcc.org.na; Steenkamp (Z) <Zurilea.Steenkamp@windhoekcc.org.na>; Endjala (V) <Vernouman.Endjala@windhoekcc.org.na>; Kapia (RJ) <Raymond.Kapia@windhoekcc.org.na>; Hekandjo (OA) <Obrien.Hekandjo@windhoekcc.org.na>; Adams (DR) <David.Adams@windhoekcc.org.na>; Asino (KM) <Kristofina.Asino@windhoekcc.org.na>; Sebastian.Husslemann@windhoekcc.org.na; Heunis (TW) <Theunis.Heunis@windhoekcc.org.na>; Naruses (N) <Narikutuke.Naruses@windhoekcc.org.na>; Hamata.Hilma@windhoekcc.org.na; Kahitu (M.M) <Mary-Anne.Kahitu@windhoekcc.org.na>; Shanyengange (M) <Mekondjo.Shanyengange@windhoekcc.org.na>; Shikongo (M.L) <Martin.Shikongo@windhoekcc.org.na>; Ambunda (E.N) <Elmelinde.Ambunda@windhoekcc.org.na>
Subject: BID for EIA Study for Rezoning, Consolidation and Subdivision of the INFILL Area Okuriangava Ext 3, Windhoek

Dear Interested and Affected Party,

This e-mail serves to inform your office that the Windhoek Municipal Council (Council) intents to apply for an Environmental Clearance Certificate (ECC) to finalize the town planning procedures for rezoning, consolidation and subdivision of the Infill area in Okuryangava Ext 3, to create industrial and residential erven. Okuryangava Ext 3 is located in the Northwest part of Windhoek, Khomas Region, Namibia.

The proposed project include activities that are listed as 'Listed Activities' according to GN 29 in GG 4878 of 6 February 2012, which requires that an ECC be obtained from the office of the Environmental Commissioner, thus requiring that an Environmental Assessment to be conducted.

The activities entail the town planning procedures of rezoning, consolidation and subsequent subdivision and development of municipal infrastructure which include roads, sewerage, water, electricity, storm water management, telecommunications and streets.

In line with Section 21 of the EIA Regulations (GN 30 in GG 4878 of February 2012), your office /sector has been identified as a potentially Interested and Affected Party (I&AP), who is hereby informed of the Council's

intention to apply for an ECC and is thus invited to register as an I&AP and to provide comments and/or feedback, should there be any.

Attached please find **the Background Information Document (BID),** which provide relevant information.

Comments and questions should be submitted **in writing** to Health and Environment Services Division, within the Department of Economic Development and Community Services as follows:

- **Postal Address:-** City of Windhoek, P.O. Box 59, WINDHOEK
- **Physical Address**:- 80 Independence Avenue, WINDHOEK, NAMIBIA
- **E-mail**:- Grazy.Tshipo@windhoekcc.org.na
- **Contact:–** 061 290 2373

A PUBLIC MEETING WILL BE HELD AS FOLLOWS:

Saturday, 28 June 2025 at 10h00am at Ombili Community Centre

DEADLINE FOR REGISTRATION AND SUBMISSION OF COMMENTS AS PART OF THE PUBLIC CONSULTATION IS 14 July 2025.

For any queries, please contact us?

ANNEXURE 2

GEOHYDROLOGICAL STUDIES

1. INTRODUCTION

The Windhoek Municipality is undertaking an EIA for the infill in the Okuriangava Ext 3. Previous studies for Geohydrological Studies in the area has been done by Namib Hydrosearch for the Windhoek Municipal Council.

The investigation involved the following activities:

- *Collate all hydrogeological data with limited fieldwork and carry out a GIS based assessment of the area.*
- *Classify the area according to the sensitivity of the hydrogeological environment and conduct an initial evaluation of the engineering designs on this basis.*
- *Based on the hydrogeological data, engineering designs and concerns raised by I&APs in various public participation meetings identify the potential impacts.*
- *Document the findings and the make recommendations to mitigate against possible negative impacts.*
- *Liaise with other specialist in identifying common issues and mitigation.*

2. GROUNDWATER RESOURCE

Kuiseb Formation (Swakop Group) rocks forms the bedrock geology of the area (**Figure 3**). The dominant lithologies are biotite schist and quartz biotite schist. Surfacial deposits are generally thin to very thin over much of the area. Along the larger drainages, some alluvial deposits (about 1 m) have developed.

Structures present are north-south and northwest-southeast faults and joint systems (**Figure 3**). To the south of the City, north-south normal faulting of the brittle Auas Formation quartzite is responsible for the development of the high yielding Windhoek aquifer. The north-south fault systems extend to this area and affect the Kuiseb Formation rocks. These faults are less developed in the micaceous lithologies as the mica schist undergoes plastic deformation. The major faults are shown in published geology maps and are often marked by north flowing ephemeral streams.

2.1 Hydrogeological Conditions

In the area borehole information is scare and only four (4) partial borehole records were located. From adjacent areas it is known that the fractured Kuiseb Formation mica schists form low potential aquifers often with poor quality water. Yielding boreholes appear to be associated with the north-south structures and drainage

channels. The fractured micas schist do not form aquifers of the same potential as in the fractured quartzite Windhoek aquifer to the south and the area is classified as having low potential in the Hydrogeological Map of Namibia. In general, groundwater (and surface water) flow is northwards.

The study area has undulating terrain with elevation differences of 20-30m being common (**Figure 2**). The depth to water table is thus variable from being deep in elevated areas to shallower in the larger valleys.

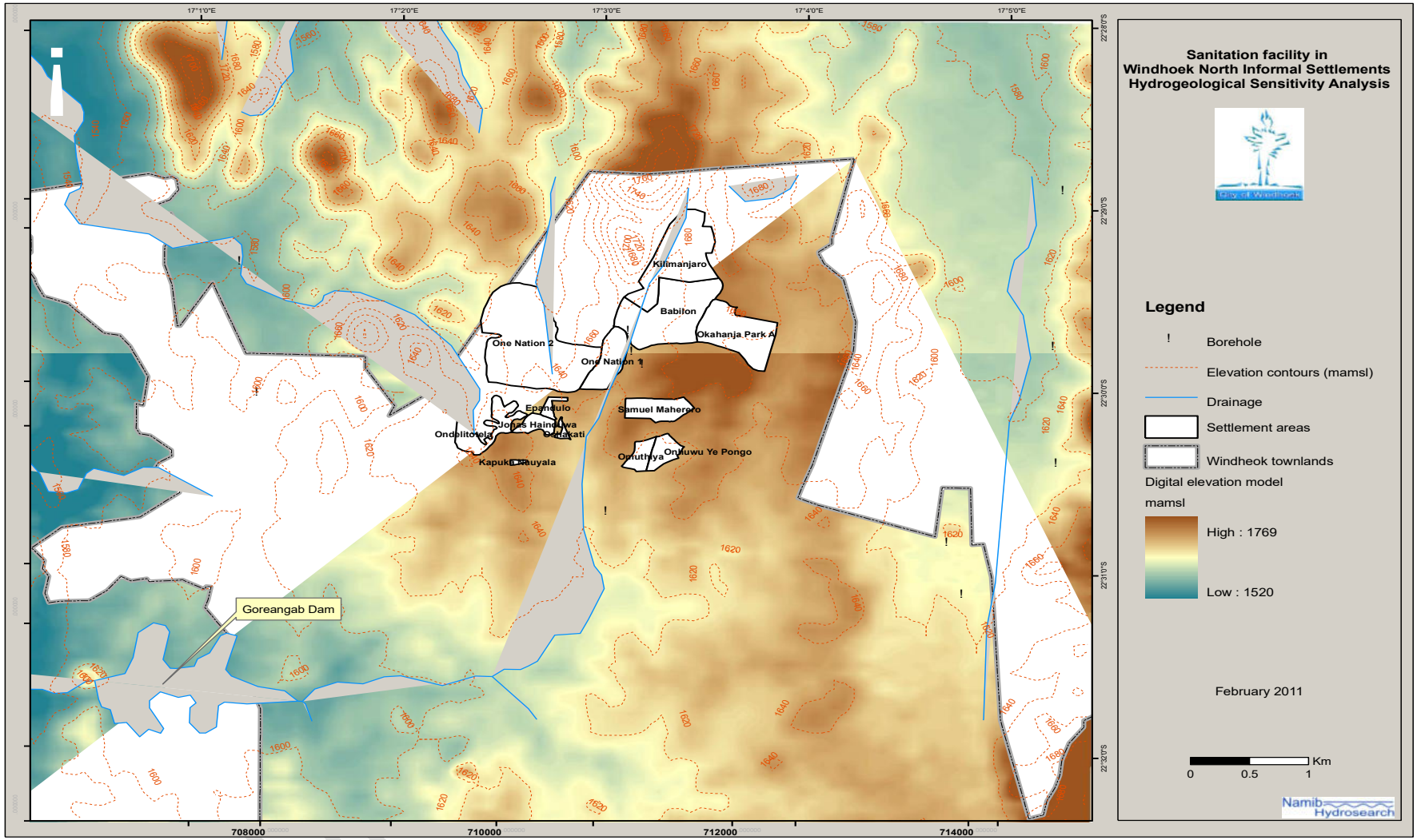


Figure 1: Study area shown on digital elevation data. Major drainages and Goreangab Dam shown in relation to the project areas

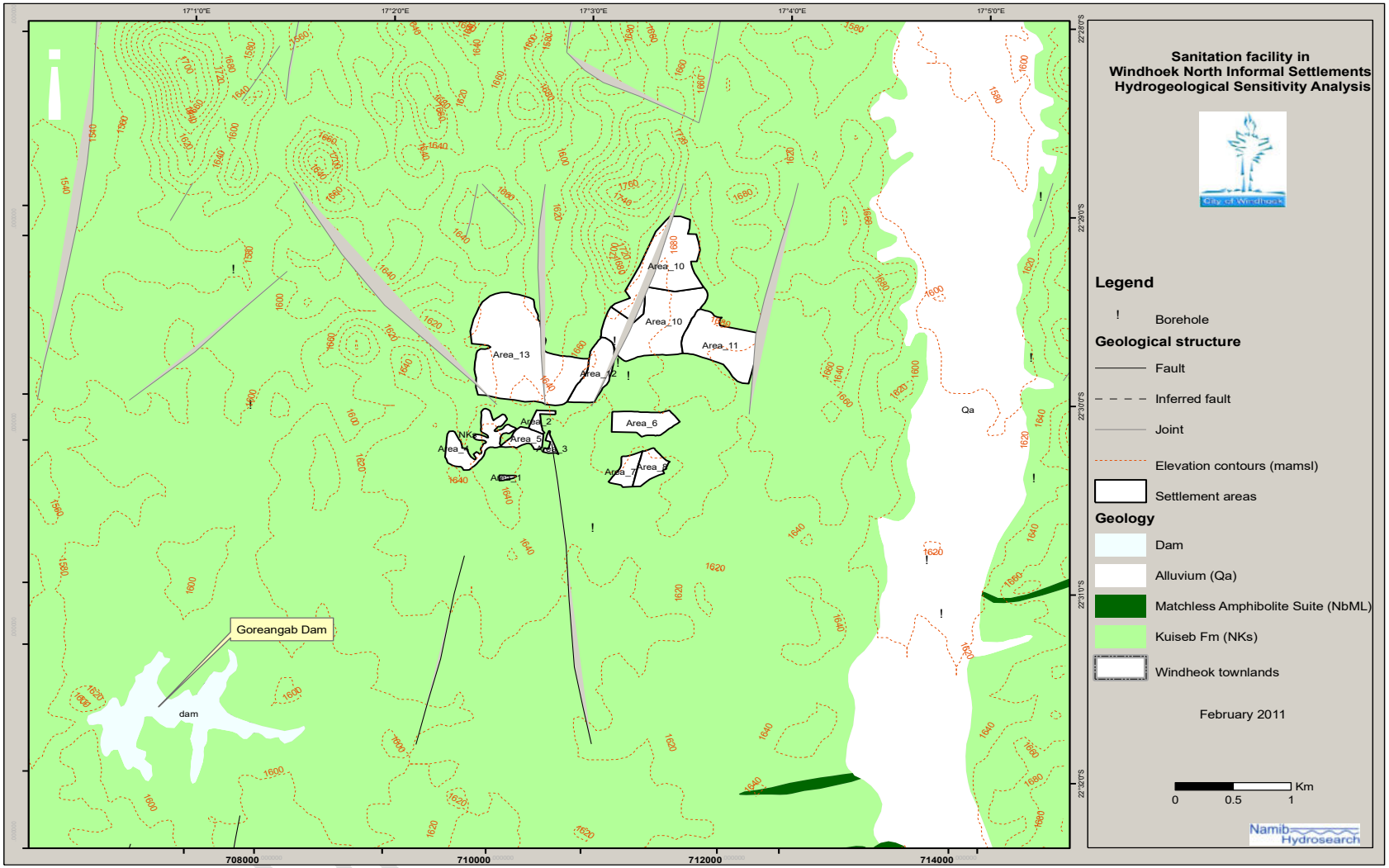


Figure 2: Study area shown on digital elevation data: Major drainages and Goreangab Dam shown in relation to the project areas.

2.2 Recharge

Comments on r*echarge to the underground water resources in the Windhoek area is summarised in Barbour (1997) and is reproduced here verbatim:*

- *Direct and indirect recharge from rainfall. Precipitation and run-off over quartzite outcrop areas can reach the water table by infiltrating fractures, joints or bedding planes or via any large outcropping fault zone in the vicinity. Other recharge routes are via fault zones, which cut the surface in schist outcrop areas. Stream courses frequently follow the outcrop of fault zones, thereby promoting indirect recharge from runoff along streams.*

- *From lateral sub-surface inflow along the quartzite beds from higher-lying areas to the east and southwest of the wellfield area.*

- *From deep-seated underlying sources via the major faults that cut the area. This is the source of the hot water found in certain of the production boreholes.*

Barbour (1997) further comments on the pollution threat as follows:

When assessing the pollution threat to the underground water resources posed by development on surface, the danger is as a result of the production of contaminating waste substances on surface which can be mobilised by water from rainfall or from any other source, and reach the water-table by means of the mechanisms described in paragraph 1 above."

2.3 Topography and Drainage

The informal settlement area is located in an elevated area with south and north flowing ephemeral streams draining the area (**Figure 2**). The north flowing streams in the central part of the study area flow into the Aretaragas River. The south flowing streams merge and flow in the Goreangab Dam to the south west of the area. In the absence of any sanitation facilities in the informal areas, it is conjectured that the effluent from the area currently enters the drainage system and is removed downstream by surface flow.

2.5 Specific Methodology

The risk of groundwater contamination from pollution sources at surface is determined by the possibility of movement through the land surface (infiltration) into the unsaturated zone and the ability to travel through the unsaturated zone to the saturated zone (aquifer). The programme of investigation has therefore focused on the interpretation of the geology and structure and included the following tasks:

- Detailed air-photo interpretation to identify geological structure and areas of soil cover
- Understanding of the geology of the area from published maps and field visit
- Evaluation and interpretation of data
- Mapping of zones of high pollution vulnerability

A search for all relevant data regarding geology and hydrogeology as well as existing reports was carried out. Data and information was obtained from various sources such as the CoW, the Geological Survey of Namibia, and the Department Water Affairs.

Previous Studies

Several reports of previous studies have been located and findings from two relevant studies from neighbouring areas are summarised below.

Geotechnical Implications of Dry Sanitation, Interconsult, 1999; CoW

Soil tests

Test pits excavated showed that the soil is generally less than 1m thick. More commonly the bedrock outcrops, which may be covered by a very thin veneer of quartz float and regolith. Where surface drainage courses (ephemeral streams) have incised steep sided valleys a thin layer of scree may occur on the lower slopes. Immature alluvium forms the bed of these streams.

Infiltration Tests: Infiltration coefficient (Kp) values ranging from 50-250 l/h were obtained.

Sorption Studies: Qualitative cation and anion sorption studies were carried out. Sorbent qualities of the tested soil samples with respect to organic molecules as very poor. Therefore one cannot rely on the soil to restrict seepage from effluent.

Identification of areas for ultra low-income settlement: Effect on underground water resources. Carr Barbour and Associates, 1997; City of Windhoek

Barbour, 1997 provides an overview of the pollution potential of 8 settlements to be serviced by dry sanitation systems. It was concluded that, under the prevailing groundwater conditions in the area studied, there was little likelihood of pollution resulting from the use of the systems. This was due to the following:

- the water table is approximately 50m below surface
- hydraulic conductivity in the schistose lithologies characterising the area is generally very low, particularly below the weathered zone near surface and away from fractures.
- clogging will reduce vertical hydraulic conductivity over time,
- passage through the dry unsaturated zone will improve effluent quality through the die off of organisms,
- the expected volume of discharge from each system is small,
- It was recommended that the City Council use the systems but with certain provisos such as:
    - attention be given to improved pit design
    - foreign discharge (from sources other than the digestion tank) is to be avoided
    - pits should avoid natural drainage in the area
    - monitoring boreholes should be sunk at appropriate sites and a monitoring programme initiated.

GIS based deskstudy

Basemaps were produced for interpretation and fieldwork. The aerial photo mosiac proved the most useful data set for interpretation of the geology, structure and drainage. Unfortunately the natural characteristics of the builtup areas are lost to a large extent in the images. The digital elevation model and older images were used to retrieve some information from these areas. The data density in these areas however remains low. The following data sets were used in the study:

- structural interpretation of the underlying geology was conducted using high-resolution digital aerial photo mosaic
- use of the SRTM digital elevation model to capture data on slopes and drainage
- capture of drainage lines from the aerial photo mosaic

- overlay of digital geological data (1:250,000)
- overlay of informal settlement areas.

Fieldwork

Fieldwork was carried out to ground truth interpretation based on GIS. The main observations are given:

- The position of north-south fault system and lineaments were verified and visited digitised lineaments were found to be correctly located (**Figure** 4 and **Figure 5**). The north-south faults form linear valleys often with ephemeral streams.
- Soil cover in the area is minimal with sub-cropping mica schist visible in most areas. It was estimated that most areas have less than one meter of soil cover. Soil and scree cover is thicker in the base of the north-south valleys marking the location of faults.
- The informal settlements are located in elevated areas and in gentler slopes. The bottom of the valley and steeper slopes are largely uninhabited.
- No sewer system is present in the area, and the limit of CoW services areas lie immediately to the south. The waste from this area, including human waste, finds its way into the surface drainage.
- No boreholes were found in the areas probably due to the limited yield in mica schist.

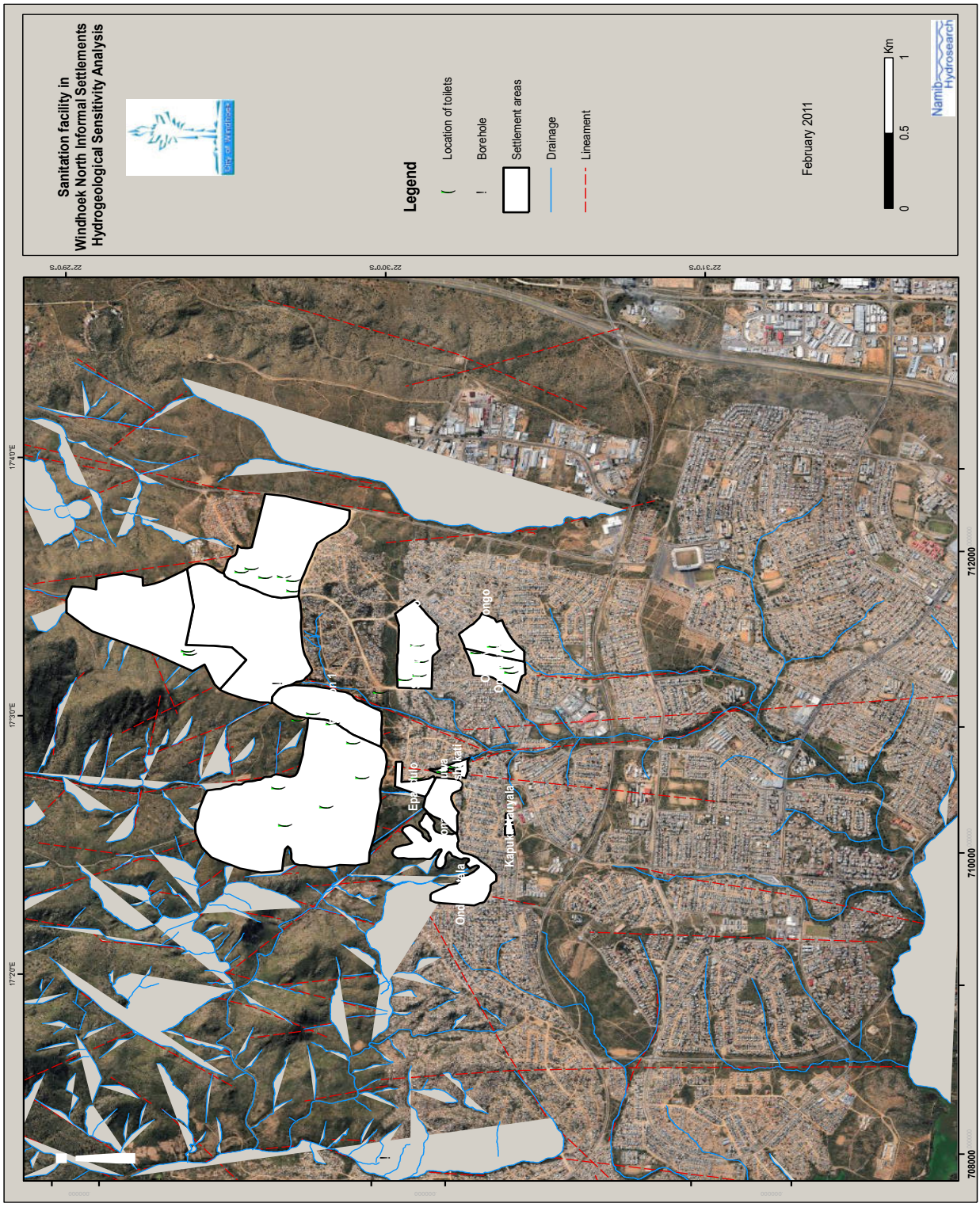


Figure 3 (4): Aerial photo mosaic of the study area with digitised lineaments and drainages. Note that details are obscured in the built up areas.

3 KEY FINDINGS

Zones of susceptibility to pollution have been identified from the above. The basis for the zonation of the area was decided using the following parameters as discussed above:

- lithology of the underlying bedrock
- proximity to faults and fractures
- thickness and nature of overburden and its sorption properties
- slope and surface drainage

Of these the positions of fault zones (lineaments) and drainage were given the highest priority. The underlying lithology consisting of quartz-biotite schist has relatively low infiltration capacity and is not necessarily capable of high groundwater yields but where dissected by faults and numerous fractures form conduits for groundwater recharge. The groundwater resource is not presently used in the area, it is tapped further to the north by numerous smallholders and farmers, and surface drainage flows into the Aretaragas River or Goreangab Dam (which is to large extent already polluted). The soil, examined in a nearby area, is known to have low capacity to retard organic pollutants.

As such, effluent infiltrating from surface will pose a threat to users to the north or surface water bodies and effort should be made to prevent pollution and not further deteriorate the current condition of the surface water bodies. The drainage in the area is part of the Swakop River catchment and eventual pollution of surface water bodies such as the Swakopoort Dam is possible from this source. It should also be noted that the DWAF borehole database hasn't been regularly updated and that the number of boreholes down gradient of the area could be much higher.

In order to aid design of a safe sanitation system and sewer network the area has been classified into 3 Zones while the drainage system has been identified as vulnerable to illegal surface waste and pollutants:

- Zone 1 – where no leakage of effluent is permitted, extends 50m on either side of areas where streams and faults (lineaments) coincide and within a 20m strip on either side of lineaments (**Figure 6**).
- Zone 2 – where effluent discharge poses a lesser threat. This zone extends from the boundaries of Zone 1 to 50m away on either side from the lineaments (**Figure 7**).
- Zone 3 – areas not classified as Zone 1 or 2.

- Drainage – the drainages and immediate surroundings are classified as vulnerable to dumping of wastes, leakage from sewer systems and informal lavatories (**Figure 2**)

Zone 1 areas is expected to have higher infiltration rates, particularly in times of high precipitation and surface water flow. In these areas effluent and other pollutants should not to be allowed to be discharged. In Zone 2, the ground is characterised by less infiltration potential and possibly thicker unsaturated zone but is in almost all cases immediately up slope of the higher risk Zone 1 and therefore it is important that protection measures are adhered to. The drainages require protection as discussed above. The south flowing drainage flows into the Goreangab Dam while those draining north drain into the Aretaragas River and pose a risk to downstream fresh water resources.

The proposed sewer network and sanitary systems should be implemented as a matter of priority to avoid pollution of surface water and groundwater resources in the area and downstream of the area.

Figure 5: North – south lineament evident as valley with ephemeral stream

4 Conclusions

It is concluded that:

- The underlying geology consists of mica schist and in general has low infiltration potential. But, where faulted, infiltration is likely to be higher.
- The soil has low sorption capacity to retard pollutants.

- Discharge of effluent that reach geological faults and drainages can lead to groundwater pollution and certain areas are demarcated for protection - Zone 1 and 2.
- The overburden is thin and made up of weathered schist and quartz float. The thickness is generally 1m or less. Surface drainages therefore need to be free of waste and effluent.
- The proposed sewer network and sanitary systems should be implemented as a matter of priority to avoid pollution of downstream surface water.

5 Recommendations

It is recommended that:

- The protection of groundwater resources through the protection zones be implemented.
- Groundwater pollution monitoring should be included as an integral part of any proposed sanitation implementation.
- The sanitation and sewer network should be implemented as a matter of urgency to protect surface and groundwater resources.

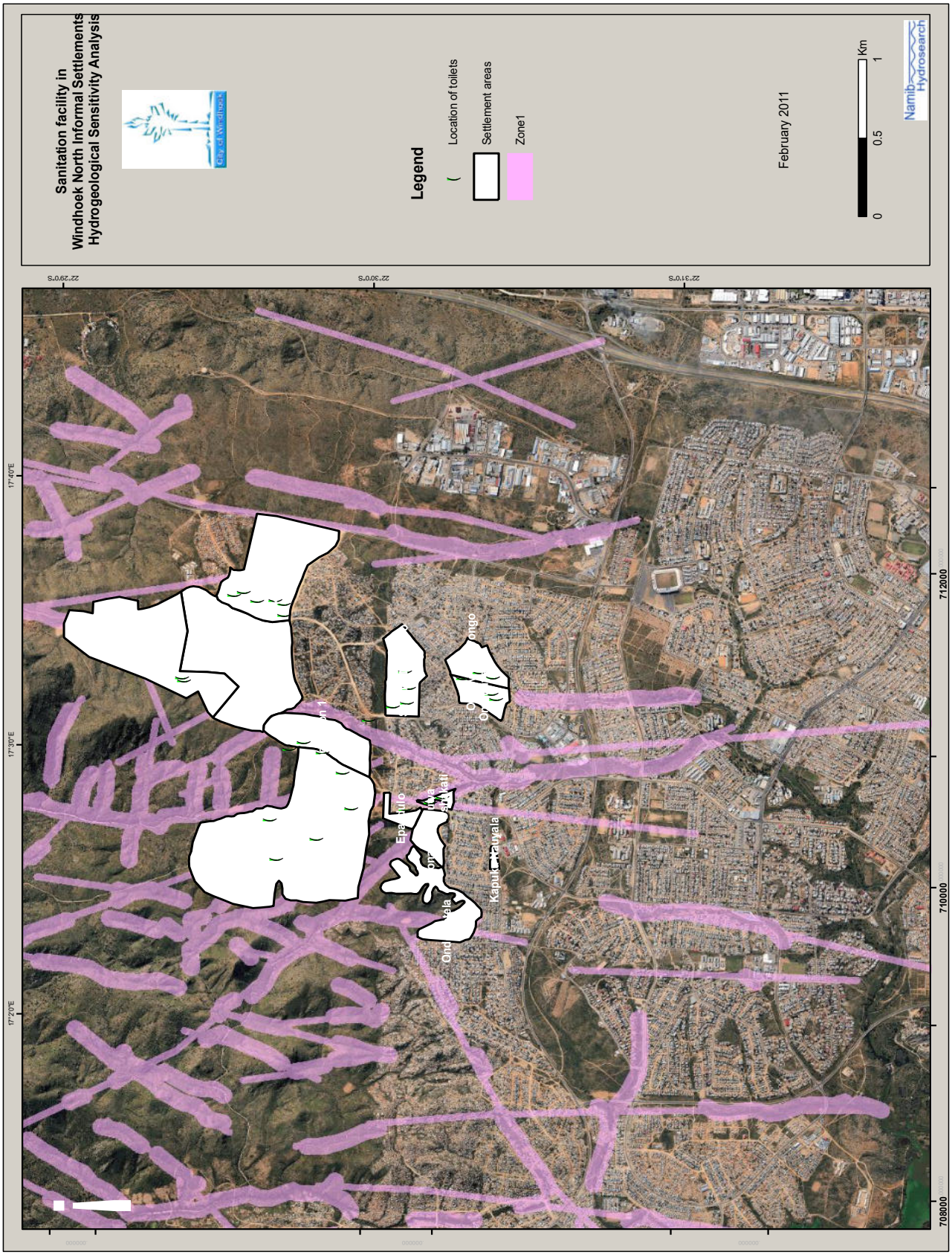


Figure 6: Zone 1 area: no leakage of effluent is permitted.

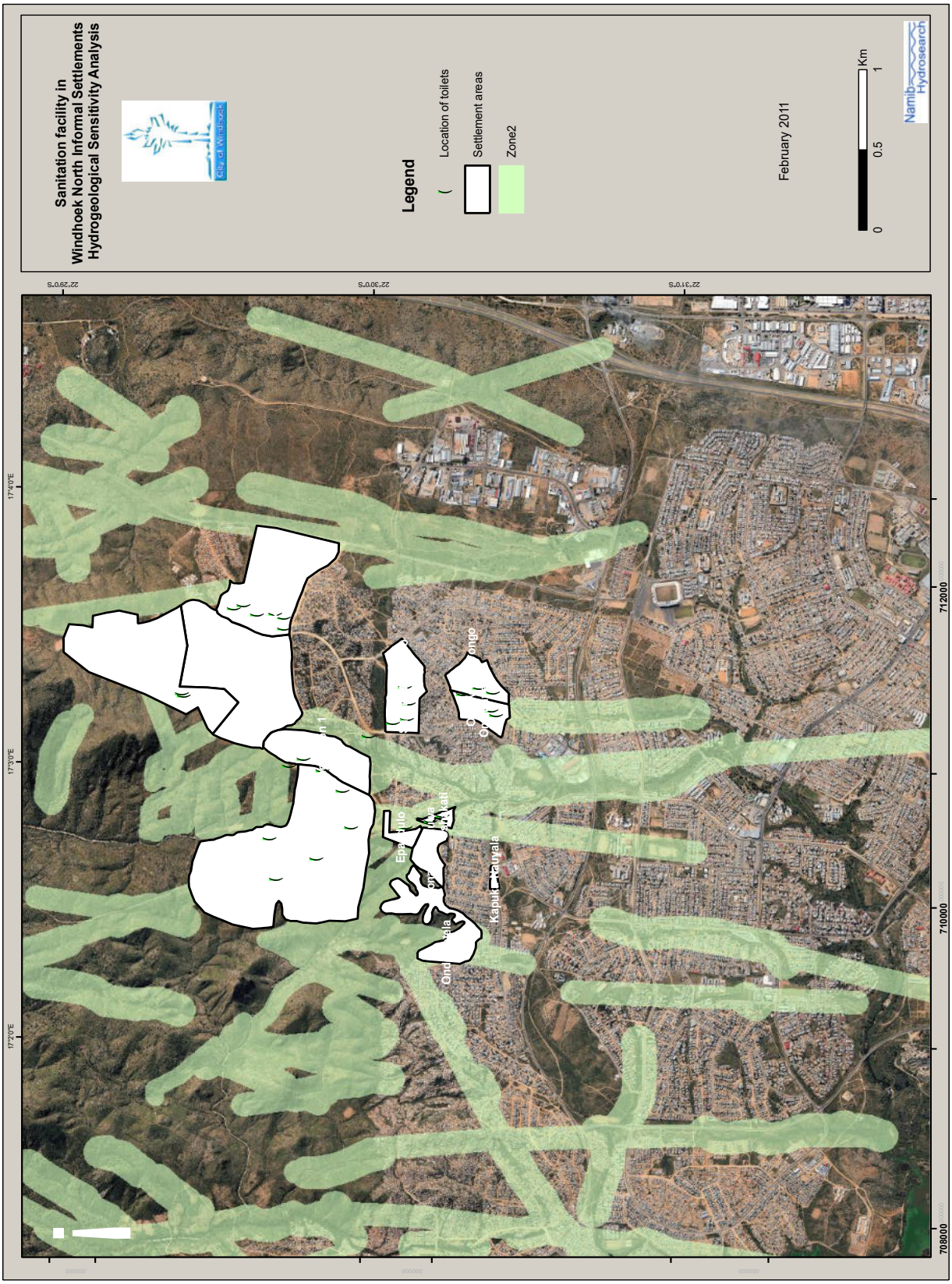


Figure 7: Zone 2 areas: where effluent discharge poses a lesser threat but areas mostly are up slope of the higher risk Zone 1

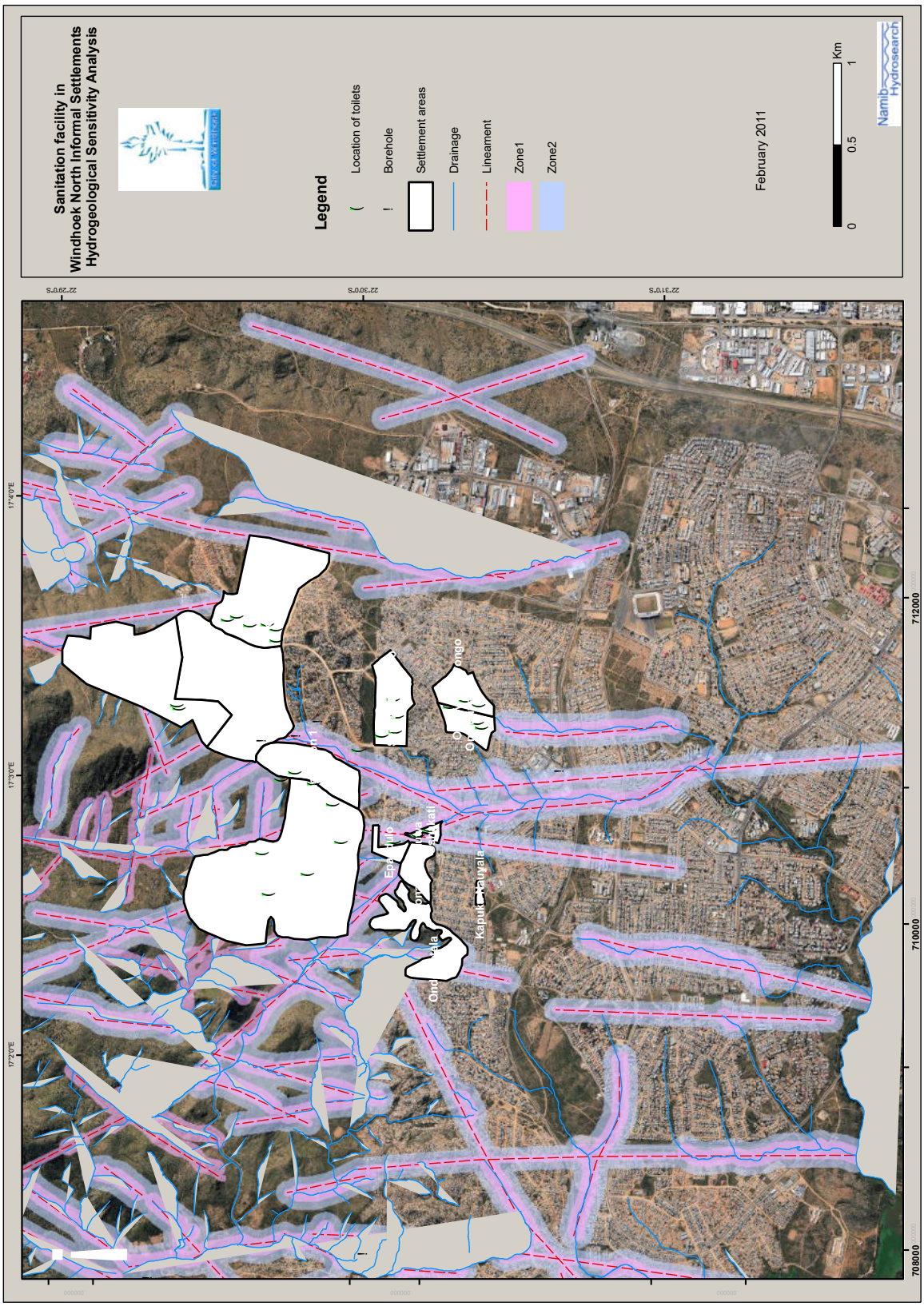


Figure 8: Pollution hazard zones, lineaments and drainage

ANNEXURE C

ENVIRONMENT MANAGEMENT PLAN

ENVIRONMENT IMPACT ASSESSMENT
FOR
OKURIANGAVA EXTENSION 3 INFILL INDUSTRIAL AND RESIDENTIAL AREA,

WINDHOEK, KHOMAS REGION

Windhoek Municipal Council
August 2025

P.O. Box 59
Windhoek

List of Content

1. INTRODUCTION AND BACKGROUND

The aim of an operational Environmental Management Plan (**EMP**) is to ensure that the proposed township development is conducted in an environmentally acceptable and safe manner. This EMP serves as a managing tool for all construction and operational activities during the development of the Okuriangava Ext 3 Infill Industrial and Residential, in Windhoek. The EMP is developed to outline measures to be implemented in order to minimise adverse environmental degradation associated with this development.

The EMP serves as a guiding tool for the contractors and workforce on their roles and responsibilities concerning environmental management on site, and also provides an environmental monitoring Framework for all project phases of the development. This environmental management plan aims to take a pro-active route by addressing potential problems before they occur. The EMP acts as a stand-alone document, which can be used during the various phases of the development. In this report, the Contractor refers to Windhoek Municipal Council and its sub-contractors.

The purpose of the EMP is to:

- Train employees and contractors with regard to environmental obligations.
- Promote and encourage good environmental management practices.
- Outline responsibilities and roles of Windhoek Municipal Council and its contractors in managing the environment.
- Describe all monitoring procedures required to identify environmental impacts.
- Minimise disturbance of the natural environment.
- Develop waste management practices.
- Prevent all forms of pollution.
- Protect the natural environment.
- Prevent soil and water erosion.
- Comply with all applicable laws, regulations and standards for environmental

This EMP covers the Construction and Operational phase of the township development.

The construction phase of the township development entails:

o Land clearance

o Transporting relevant building material and equipment.

o Installation of associated electrical supply cables.

o Installation of associated water pipelines.

o Installation of associated sewer lines.

o Installation of storm water management system; and

o Roads construction

The operational phase will entail:

o Operation and maintenance of the sewer and water reticulation systems, electrical services and roads.

2 PROPOSED DEVELOPMENT

2.1 Project Components

This EIA will address Township Establishment as follows:

- Subdivision, rezoning, consolidation and subsequent subdivision on Erf X of Okuriangava Ext 3 for **Industrial** Development.
- Subdivision, rezoning, consolidation and subsequent subdivision on Erf XX of Okuriangava Ext 3 for **Residential** Development.

The Project description for Okuriangava Ext 3 **Industrial** will be addressed in 3.2, while the Okuriangava Ext 3 for **Residential** Development will be addressed in 3.3.

2.2 Proposed Town Planning Procedures on Erf X of Okuriangava Ext 3 for Industrial Development

The proposed Town Planning Procedures on Erf X of Okuriangava Ext 3 for Industrial Development involves the following activities:

- Subdivision of ERF 2508 into Portions 1 and Remainder
- Rezoning of Erven 1718 and 1719, Okuryangava below, Ext 3, from Bussiness with a Bulk of 1.0 to Industrial with a Bulk of 1.
- Rezoning of Erven 2509, 2518, 2519,and Ptn 1 (of Erf 2508) Okuriangava, Ext 3, from institutional to Industrial with a Bulk of 1.
- Consolidation of erven 1718, 1719, 2519, 2518, 2509 and Ptn 1 (A Ptn of Erf 2508) into Erf X, Okuryangava, Exr 3 and
- Subsequent Subdivision of Erf X into Portions 1 to 6 and Remainder Okuriangava, Extension.

2.2.1. Project Background *on* Erf X of Okuriangava Ext 3

iii) Current Rezoning

Previously the site under discussion consisted of 2508,2509,2518,2519, 1718 and 1719 as shown in the Table 1 and layout 1 below:

Table 1. Current Zoning for 2508,2509,2518,2519, 1718 and 1719

Current Zonings	
Erf Numbers	**Zoning**
2508	Institutional
2508 Ptn 1	Institutional
2509	
2518	
2519	
1718	Business with Bulk 1
1719	
2488 - 2524	

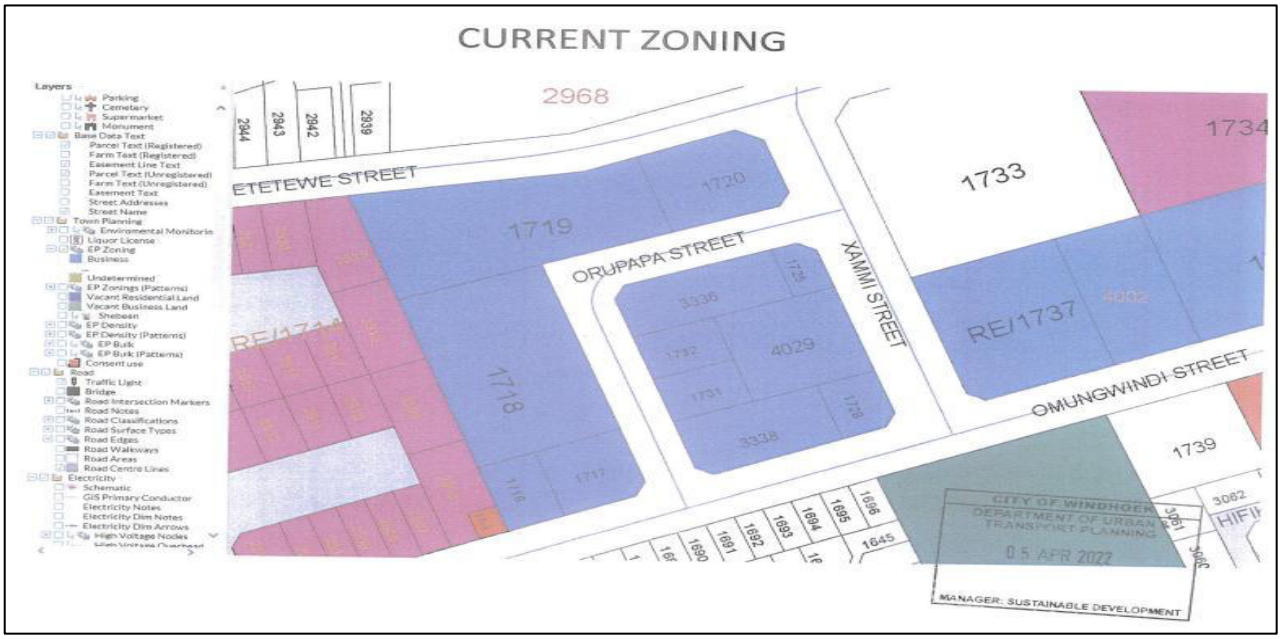


Figure 1: Cadastrial for 2508,2509,2518,2519, 1718 and 1719

iv) Municipal Services

Bulk infrastructure are not available to the consolidated erven. However the Infrastructure Services, Water and Technical Services indicated that water and sewer services can be extended from Etetewe Street and Omungwindi Street. Stormwater needs to be accommodated as well as be included in the sale contracts of the erven and affected by stormwater.

2.2.2 The Proposed Development

The Proposed Subdivisions, Consolidations and Rezonings for Okuriangava Ext 3 industrial is presented in Table 2 below. This table is described underneath.

Table 2. Proposed Subdivision, Rezoning, Consolidation and Subsequent Subdivision

Current		**Proposed** Subdivision, Rezoning, Consolidation and Subsequent Subdivision			
Erf Numbers	**Zoning**	**Subdivision**	**Rezoning**	**Consolidation**	**Subsequent Subdivision**
2508	Institutional	Remainder			
		Ptn 1	Industrial with bulk of 1	Erf X, Okuriangava Extension 3	Ptn 1
2508 Ptn 1	Institutional	No need	Industrial with bulk of 1		Ptn 2
2509					Ptn 3
2518					Ptn 4
2519					Ptn 5
1718	Business with Bulk 1		Industrial with bulk of 1		Ptn 6
1719					Remainder

v) Subdivision

Erf 2508 will be subdivided into Portion 1 and remainder, as presented in Fig 2 below.

Figure 2. Subdivision of Erf 2508 into Ptn 1 and Remainder

vi) Rezoning

The following erven will be rezoned from their current zoning into Industrial with a Bulk of 1 as follows:-

- The portion of the subdivided Erf 2508 that is subdivided into Ptn 1 2508, will be rezoned from Business with a Bulk of 1 to Industrial with a Bulk of 1.
- The Erven 2509, 2518, and 2519 will be zoned from institutional to Industrial within a Bulk of 1.
- The Erven 1718 and 1719, will be zoned from business with bulk of 1.0 to industrial with a bulk of 1,

This is presented in Table 5 above.

vii) Consolidation

All this Erven for 1718, 1719,2519,2518, 2509 and Ptn 1 (A Ptn of Erf 2508) are then consolidated into Erf X, Okuryangava Ext 3 as presented in figure 3 below.

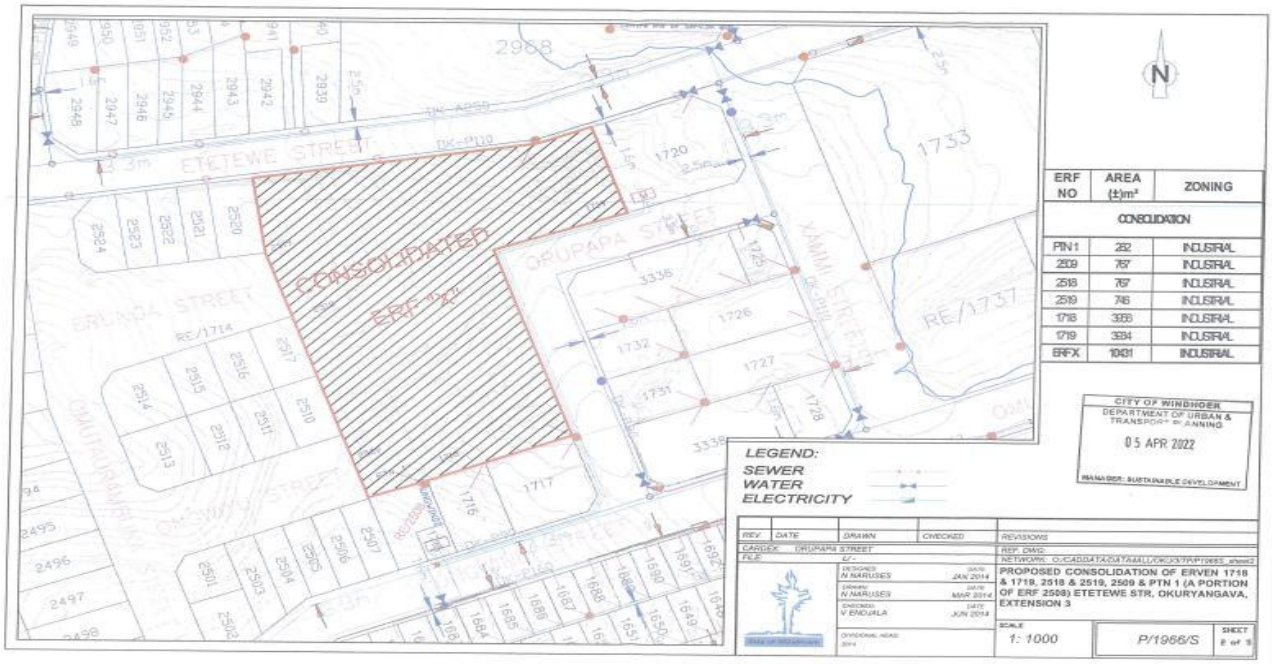


Figure 3. Consolidation of erven 1718, 1719, 2519, 2518, 2509 and Ptn 1 (A Ptn of Erf 2508) into Erf X, Okuryangava,

viii) Subsequent Subdivision

Erf X will subsequently subdivided into six Portions and the Remainder. The Proposed Portions with their extend are presented in Table 7 above and Figure 4 below.

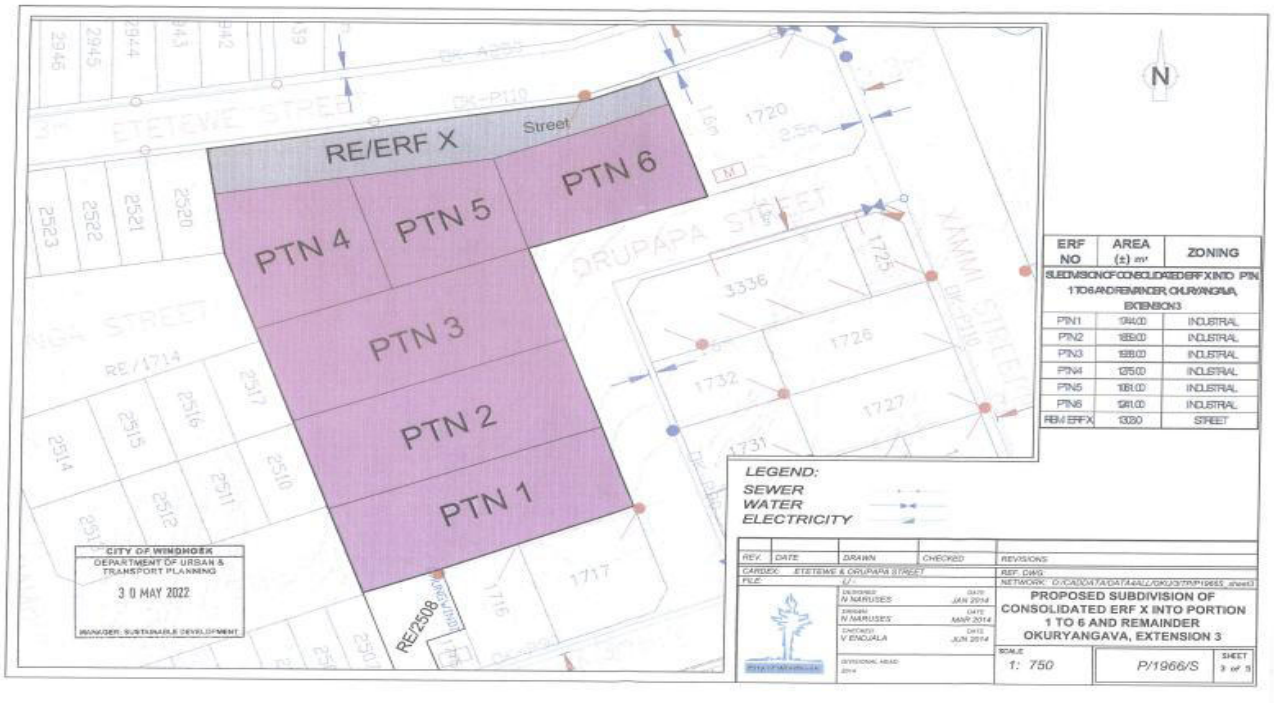


Figure 4**.** Subdivision of Erf X into Portions 1 to 6 and Remainder Okuriangava, Extension

Six (6) Erven are zoned Industrial to create a light industrial hub for trading opportunities for small and medium enterprises to boost the needed informal economic activities within the Okuryangava Township as well as benefit the winder spectrum of the society.

One (1) erf (Remainder) be reserved as street for purposes of parking along the Etetewe Street to accommodate the anticipated demand for parking due to the increase of economic activities.

The area is also in close proximity to one of Okuryangava's main business nodes which is located within a radius of 1km from the Project area hence business activities are within easy reach for the residents of the area.

2.3 Proposed Town Planning Procedures on Erf XX of Okuriangava Ext 3 for Residential Development.

The proposed Town Planning Procedures on Erf XX of Okuriangava Ext 3 for Residential Development involves the following:

- **Consolidation** and subsequent subdivision of Erven 2488 -2507, RE/2508, 2510 - 2517, 2520 - 2524 and RE/1714, Okuryangava, Extension 3.
- **Subdivision** of Erf 2508 into Portion 1 and Remainder Okuryangava, Extension 3.
- **Permanent Closure** of Erf Re/1714 (Street) Okuryangava, Extension 3, (namely Erunga, Omataurambuka and Ongwiyu Streets).

- **Consolidation** of Erven 2488 – 2507, RE/2508, 2510 – 2517, 2520 – 2524 and RE/1714 into ERF X, Okuryangava, Extension 3,
- **Subsequent Subdivision** of Erf X into Portions 1 to 41 and Remainder Okuryangava, Extension 3 and,
- **Rezoning** of Portions 1 to 24, 26 to 28 and 31 to 41 from Institutional to 'Single Residential ' with a density of 1:300m^2 and,
- **Rezoning** of Portions 25, 29 and 30 from Institutional to 'General Residential 'with a density of 1:300^2 and,
- **Reservation** of Remainder of Consolidated Erf X as Street.

2.3.1 Project Background

i) Previous Zonings of Erf 1714

Previously the site under discussion consisted of Erven 2488 to 2524 which were created through the subdivision of Erf 1714, Okuryangava and together measures 26390m^2 in extent.

Table 3. Current Zoning for erven Erven 2488 to 2524 and portion of Re/1714

Erf No	Zoning
2488 - 2524	Institutional
Re/1714	Street

Erven 2488 to 2524 (portion of Erf 1714) are located in Omataurambuka, Erunga and Ongwiyu, Okuryangava. The Erf, Re/1714 reserve for purposed of a street is currently named as Erunga, Omataurambuka and Ongwiyu Streets. The sizes range between 600 – 1014m^2 and are all zoned "Institutional".

ii) Municipal Services

Bulk infrastructure are not available to the consolidated erven. However the Infrastructure Services, Water and Technical Services indicated that water and sewer services can be extended from Etetewe Street and Omungwindi Street. Stormwater needs to be accommodated as well as be included in the sale contracts of the erven and affected by stormwater.

2.3.2 The Proposed Development

The Proposed Subdivisions, Consolidations and Rezonings for Industrial Deelopment in Okuriangava Extension 3 Infill is presented in Table 9 below.

The proposed cadastral changes aim to optimize the use of the area. It furthermore intends to form an integration of land use activities and a cost-effective design which is easy to implement. The

proposed residential erven will easily tie with the developments on Erven 1718 and 1719, Okuryangava.

Table 4. Proposed Subdivision, Rezoning, Consolidation and Subsequent Subdivision for **Residential Development Okuriangava Extension 3**

Current Zoning Status		**Consolidation and Subsequent Sub-Division**		
Erf Numbers	**Zoning**	**Consolidation**	**Subsequent Sub-Division**	
			Erf Number	**Rezoning**
2488 – 2507	Industrial	Consolidated Erf X (Residential)	Ptn 1-24 Ptn 26-28 Ptn 31-41	Residential
RE/2508	Industrial			
2510-2524	Industrial		Ptn 25 Ptn 29-30	General Residential
RE/1714	Street		Re/Consolidated Erf X	Street

vi) Subdivision

Subdivision of Erf 2508 into Portion 1 and Remainder Okuryangava, Extension 3.

vii) Permanent Closure of Street

Permanent closure of Erf Re/1714 (Street) Okuryangava, Extension 3, (namely Erunga, Omataurambuka and Ongwiyu Streets).

Since the erven to be consolidated includes a street, RE/1714, a permanent closure of the street needs to be undertaken.

viii) **Consolidation**

Consolidation of Erven 2488 – 2507, RE/2508, 2510 – 2517, 2520 – 2524 and RE/1714 into ERF XX, Okuryangava, Extension 3,

Erven 2488 -2507, RE/2508, 2510 - 2517, 2520 - 2524 and RE/1714, Okuryangava, Extension 3 will be consolidated into Erf XX Residential Okuriangava Ext 3.

ix) **Subsequent Subdivision**

Subsequent Subdivision of Erf XX Okuriangava Ext 3 into Portions 1 to 41 and Remainder Okuryangava, Extension 3 then took place as shown in Table 5 above. This will entail thirty-eight (38) Single Residential erven with a density of one dwelling per 1000m^2 and three (3) General Residential erven with density zoning of 1:100m^2.

The single residential and general residential erven are earmarked to accommodate the pilot project for construction of houses and housing units which is spearheaded by the Department of Department of Urban Planning & Property Management. These erven can

alternatively be made available for sales. One (1) Erf will be reserved as a Street Remainder to facilitate ease of access to all newly created residential erven.

x) Rezoning and Reservation

- **Rezoning** of Portions 1 to 24, 26 to 28 and 31 to 41 from Institutional to 'Single Residential ' with a density of 1:300m^2 and,
- **Rezoning** of Portions 25, 29 and 30 from Institutional to 'General Residential 'with a density of 1:300^2 and,
- **Reservation** of Remainder of Consolidated Erf X as Street.

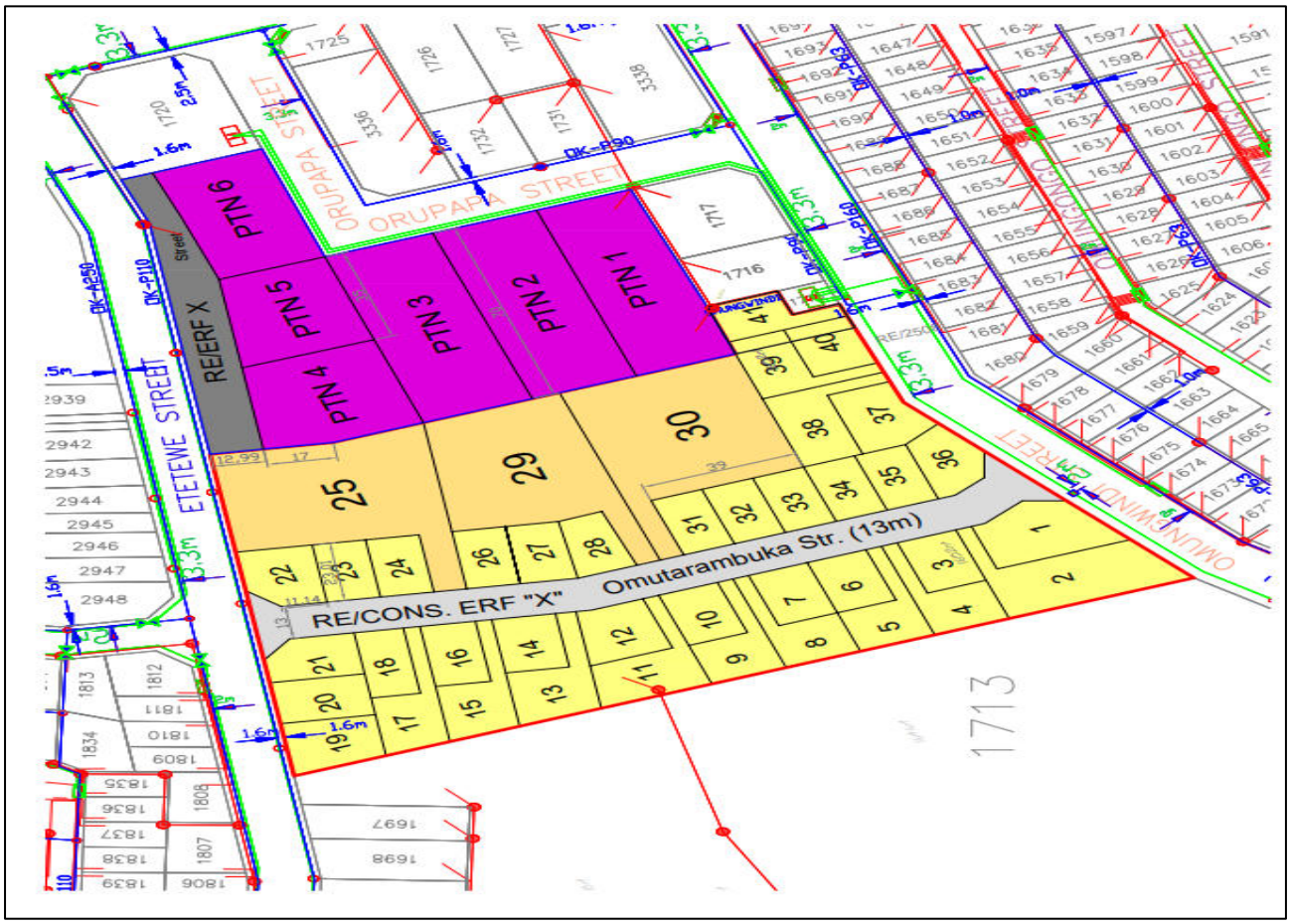


Figure 5. Proposed Layout Map for Okuriangava Ext 3 residential and Industrial combined

2.3.3 Engineering Services and Access Provision

The area is located within an already built – up environment and have direct access to all Municipal infrastructure such as water , wastewater, roads and power infrastructure. Individual connection points to the newly created portions can be made from existing sewerlines if necessary.

Street access to the newly created portions will be provided from existing municipal roads namely Etetewe and Orupapa streets.

3 LEGAL FRAMEWORK

The implementation of projects requiring EIA, should proceed within the framework of Namibia's policy and legal environment. The policies and legislations listed below relate to the protection of the biophysical environment and have relevance to the type of project activities planned**.**

2.1 NATIONAL LEGISLATION RELEVANT TO THE PROPOSED DEVELOPMENT

The national legal environmental framework of the project is tabulated below.

Table 5. Relevant National Legislation for the Project

LEGISLATION	PROVISIONS	PROJECT IMPLICATION
Environmental Management Act (No 7 of 2007) and Namibia's Environmental Assessment Policy (1995)	Schedule 1: Screening list of policies/ plans/programme/ project subject to full Environmental Assessment. "The rezoning of land from use for nature conservation or zoned open space to any other land use". (Ministry of Environment and Tourism (MET), Directorate of Environmental)	An Environmental Impact Assessment is compulsory.
Windhoek Town Planning Scheme (2005)	Allowed activities under "Residential Building" and "Residential Unit".	"Any person intending to erect a building in any use zone may be required by Council to furnish an environmental assessment report having regard to the promotion of health, safety, order, amenity, convenience and general welfare and the impact the new buildings and the operations are likely to have on the amenity of the locality".
Constitution of Namibian 2030	Vision 2030 states that the solitude, silence and natural beauty that many areas in Namibia provide are becoming sought after commodities and must be regarded as valuable natural assets.	Care should be taken that the development does not lead to the degradation of the natural beauty of the area.

Forest Act, 2001 (Act No. 12 of 2001)	Provision of the protection of various plant species (Ministry of Agriculture, Water and Forestry (MAWF), Directorate of Forestry).	A Harvesting Permit needs to be acquired from the Directorate of Forestry for the removal of indigenous certain tree species from the site
Townships and Division of Land Amendment Act, 1992 (Act 28 of 1992)	"(I) Whenever any area of land constitutes, by reason of its situation, a portion of an approved township, or adjoins an approved township, the Executive Committee may, by proclamation notice in the Gazette and after consultation with the Board, extend the boundaries of that township to include such area". (Minister of Regional and Local Government).	A new township needs to be created for approval by the Namibian Planning Advisory Board and the Township Board.
Water Resources Management Act, 2004 (Act No. 24 of 2004)	Control of disposal of sewerage, the purification of effluent, the prevention of surface and groundwater pollution and the sustainable use of water resources. (Department of Water Affairs).	Developers need to develop a satisfactory plan for sewerage disposal.
Sewerage and Drainage Regulations (amendments) Local authorities Act, section 23, 1992	Affords the prevention of pollution and environmental damage caused by the improper construction of sewerage and water pipelines in drainage lines. (City of Windhoek).	Provides guidelines for the proper construction of pipelines in drainage lines.
Hazardous Substance Ordinance 14 of 1974	To provide for the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances; to provide for the division of such substances into groups in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture,	The handling, usage and storage of hazardous substances on site should be carefully controlled according to this Ordinance.

	sale, use, operation, application, modification, disposal or dumping of such substances; and to provide for matters connected therewith.	
Soil Conservation Act 76 of 1969	Prevention and combating of soil erosion, conservation, improvement and manner of use of soil and vegetation, and protection of water sources. (Ministry of Environment and Tourism).	Removal of vegetation cover is to be avoided and minimized at all costs.
National Heritage Act 27 of 2004	Heritage resources to be conserved in development. (National Heritage Council of Namibia).	Immediately inform the National Heritage Council of Namibia should any archaeological material e.g. graves be found during the construction phase. The site should be cleared for archaeological potential before construction may commence.
Labour Act (No 11 of 2007)	135 (f): "the steps to be taken by the owners of premises used or intended for use as factories or places where machinery is used, or by occupiers of such premises or by users of machinery in connection with the structure of such buildings of otherwise in order to prevent or extinguish fires, and to ensure the safety in the event of fire, of persons in such building;" (Ministry of Labour and Social Welfare).	The Act specifies the measures to be taken to secure the safety and the preservation of the health and welfare of employees at work.
Convection on Biological Diversity (CBD)	Namibia is obliged under international law to conserve its biodiversity.	Projects should refrain from causing any damage to the country's biodiversity.
Urban and Regional Planning Act No 5 of 2018	To consolidate the laws relating to urban and regional planning; to provide for a legal framework for spatial planning in Namibia; to provide for principles and standards of spatial planning; to establish the urban and regional planning board; to decentralize certain matters relating to spatial planning; to provide for the preparation, approval and review of the national spatial development	

	framework, regional structure plans and urban structure plans; to provide for the preparation, approval, review and amendment of zoning schemes; to provide for the establishment of townships; to provide for the alteration of boundaries of approved townships, to provide for the disestablishment of approved townships; to provide for the change of name of approved townships; to provide for the subdivision and consolidation of land; to provide for the alteration, suspension and deletion of conditions relating to land; and to provide for incidental matters.	
Local Authority Act No. 23 if 1992	The Local Authorities Act prescribes the manner in which a town or municipality should be managed by the Town or Municipal Council.	The development must comply with provisions of the Local Authorities Act.
Road Ordinance 17 of 1972	Section 3.1 deals with width of proclaimed roads and road reserve boundaries • Section 27.1 is concerned with the control of traffic on urban trunk and main roads • Section 36.1 regulates rails, tracks, bridges, wires, cables, subways or culverts across or under proclaimed roads • Section 37.1 deals with Infringements and obstructions on and interference with proclaimed roads.	Adhere to all applicable provisions of the Roads Ordinance.
Convection to combat Desertification	Namibia is bound to prevent excessive land degradation that may threaten livelihoods.	This is a general requirement to be considered in all projects.

2.2. Local Legislation Relevant to the Proposed Development

The Local legislation relevant to the proposed Development is tabulated below.

Table 6. Relevant Local Authority Legislation for the Project

LEGISLATION	PROVISIONS	PROJECT IMPLICATION

Windhoek Town Planning Scheme (2005)	Allowed activities under "Residential Building" and "Residential Unit".	"Any person intending to erect a building in any use zone may be required by Council to furnish an environmental assessment report having regard to the promotion of health, safety, order, amenity, convenience and general welfare and the impact the new buildings and the operations are likely to have on the amenity of the locality".
Windhoek Environmental Structure Plan (2004)	It indicates all sensitive and environmentally fragile zones that should be conserved and protected. These areas should be considered with great care and when planning for any development project. The document is mainly helping in applying sound environment planning and management (Section 3.3.1, page 60). (City of Windhoek)	Only strategic service developments should be allowed after environmental impact assessment.
Sewerage and Drainage Regulations (amendments) Local authorities Act, section 23, 1992	Affords the prevention of pollution and environmental damage caused by the improper construction of sewerage and water pipelines in drainage lines. (City of Windhoek).	Provides guidelines for the proper construction of pipelines in drainage lines.

3. ROLES AND RESPONSIBILITIES

3.1 Windhoek Municipal Council

Windhoek Municipal Council will be responsible for environmental control on site during the construction and operational phase. The Council will appoint a Project or Residence Engineer who is responsible to appoint various contractors for construction of various sections eg, roads, water reticulation etc. therefore the contractor should appoint and Environment Control Officer (ECO), who will implement the EMP and also undertake the required training for all contractors and subcontractors on site.

It is very important a pre-work briefing meeting be held at all times to reach an agreement on specific roles of various parties and penalties for non-compliances.

3.2 Contractor

The appointed contractor by the Council is automatically responsible for implementing all provisions contained within the relevant chapters of the EMP. The EMP should form part of the Terms of Reference for all contractors, sub-contractors and suppliers. All contractors, sub-contractors and suppliers will have to sign an agreement to assure that they understood the EMP and that they will comply. All senior staff should familiarise themselves with the full contents of the EMP and its implications.

3.3 Environmental Control Officer

The Environmental Control Officer for the site is an independent environmental consultant appointed by the Residence or Project Engineer to monitor and review the on-site environmental management and implementation of this EMP.

Duties of the ECO officer:

- The identification of potential environmental impacts, prior to the onset of decommissioning. A site visit may also be required prior to site development. This would be carried out in consultation with the Technical Manager.
- Providing of an environmental register at the site to be filled in by any person reporting an environmental incident, issue or concern and inspected by the ECO officer on a regular basis to check for issues raised and actions taken.
- Ensuring that the EMP conditions are adhered to at all times and taking action.
- Ensuring that environmental impacts are kept to a minimum.
- Reviewing and approving method statements in consultation with the Technical Manager.
- Reporting to City of Windhoek and the Project Engineer on a regular basis and advising of any major environmental impacts. Attending the site meetings (when necessary)
- Inspecting the site and surrounding areas regularly, and monitoring an ongoing environmental awareness program in conjunction with the Technical Manager.
- Requesting the removal of people and/or equipment not complying with thespecifications of EMP.
- Keeping both a written and photographic record of progress on site from an environmental perspective, and an ad hoc record of all environmental incidents

- Undertaking continual review of the EMP and submitting a report to the relevant stakeholders.
- The ECO officer will submit all written instructions and verbal requests to Windhoek Municipal Council via the Technical Manager and Project Engineer.

4. MANAGEMENT ACTION

The aim of the management actions in this chapter of the EMP is, firstly to avoid potential impacts, then where impacts cannot be avoided, to minimize impacts.

4.1 Training and induction

Windhoek Municipal Council is bound to be responsible for ensuring that environmental awareness education of all employees and contractors is done satisfactorily. Windhoek Municipal Council should ensure that employees and contractors are made aware of the environmental requirements of the project. It is also suggested that before any work is commenced on site, the entire contractor's staff shall attend an environmental education talk, presented by the ECO with the assistance of the contractor and the residence or project engineer. Senior staffs (Foreman/Supervisor) are expected to train and assist the rest of the employees on the contents of the EMP.

4.2 Environmental incident reporting

All environmental incidents occurring at the proposed site will be recorded. The incident report will have to include time, date, location, and nature of the incident, extent of the incident, actions taken, and personnel involved.

All complaints received from the neighbouring community should be directed to the Project Engineer/ Environmental Management Officers at the Windhoek Municipal Council and channelled to the appointed ECO officer. All the complaints will also be reported on a monthly meetings where the City's Environmental Management Department (EMD) official is invited to attend. Windhoek Municipal Council Management should be able to respond to the complainant within a week (even if pending further investigation). It is important that the issues raised are considered and that the complainant feels that their concerns have been addressed to and wherever possible actions taken to address these. All complaints should be entered in the environmental register and all responses and actions taken to address these should be recorded.

4.3 Environmental monitoring

The EMD is to oversee that the EMP is implemented by regularly undertaking inspection for auditing and also to inspect and review the audit report done by the ECO.

4.4 EMP administration

Copies of this EMP shall be kept at the site office and should be distributed to all senior staff members, including those of the contractors.

4.5 EMP amendments

The EMP amendments can only be made with the approval of the ECO officer and ultimately the DEA. Amendments to the EMP should be liaised to all employees and contractors.

4.6 Non compliance of the EMP

Problems may occur in carrying out mitigation measures or monitoring procedures that could result in non-compliance of the EMP. The responsible personnel should encourage staff to comply with the EMP, and address acts of non-compliance and penalties. Windhoek Municipal Council is responsible for reporting non-conformance with the EMP, to the ECO officer. The Contractor, in consultation with the ECO officer must, thereafter, undertake the following activities:

- Investigate and identify the cause of non-conformance.
- Report matters of non-conformance to Windhoek Municipal Council Health and Environmental Division (depending on the severity of the incident).
- Implement suitable corrective action as well as prevent recurrence of the incident.
- Assign responsibility for corrective and preventative action.
- Any corrective action taken to eliminate the causes of non-conformance shall be appropriate to the magnitude of the problems and commensurate with the environmental impact encountered.

4.7 Environmental Register

An environmental register should be kept on site in which incidents related to actual impacts are recorded. This will include information related to incidents as spillages, dust generation and complaints from adjacent neighbours. It should also contain information relating to actions taken. Any party on site may complete the register, however, it is envisaged that the Project Engineer, the contractor and the ECO officer will be the main contributors, and who will also be the main parties involved in suggesting mitigation measures.

4.8 Site Management

Areas outside this designated working zone shall be considered "no go" areas. The offloading zones must be clearly demarcated when offloading goods to enhance safety around the project location.

4.8.1 Access routes and work sites

During the construction phase, road transport trucks will access the project location via Etetewe Street and Omungwindi Street. No new tracks/roads shall be established and only existing roads may be used. Work sites shall be clearly demarcated and road signs erected were needed. The general public should not have unauthorised/uncontrolled access to the project location during this phase. Vehicle access will be limited to one or two entrances to facilitate control. Access must be of a high standard to prevent unauthorised access from entering the site.

The entrance will be manned during the operation hours; and access routes will be closed to prevent unauthorised entry. A notice board, in two languages, must be erected at the entrance and must state entrance requirements and operating hours of the site, the operator/responsible person and emergency telephone numbers. Suitable signs must also be erected on the approach roads and on-site, to direct drivers and to control speed.

Road access to the working face of the township development must be maintained at all times in a manner suitable to accommodate vehicles normally expected to use the facility. Roads must be regularly graded and wetted to control dust, where necessary. Furthermore, on-going controls, such as fencing and policing, must be implemented.

4.8.2 Fire and safety management

All electrical installations, wiring and systems at the project location, must be approved by a qualified electrician who will issue a Certificate of Compliance. Proper handling, storage, use and disposal of any hazardous waste (e.g. hydrocarbons, paint, batteries, condemned meat products, ink, colours, radioactive

waste etc.) should be conducted. Hydrocarbons are volatile under certain conditions and their vapours in specific concentrations are flammable. If precautions are not taken to prevent their ignition, fire and subsequent safety risks may arise. No uncontrolled fire, whether for cooking or any other purpose, is to be made at the project location during both the construction and operation phases. The Contractor shall take all reasonable measures and active steps to avoid increasing the risk of fire through activities on site and prevent the accidental occurrence or spread of fire; and shall ensure that there is sufficient fire-fighting equipment on site at all times. This equipment shall include fire extinguishers. The Contractor should be prepared for such events.

4.8.3 Staff management

The Contractor must ensure that their employees have suitable personal protective equipment and properly trained in fire fighting and first aid. Training records must be kept for future references.

4.8.4 Waste management

Waste will be generated in the form of rubble, cement bags, pipe and electrical wire cuttings. Contaminated soil due to oil leakages, lubricants and grease from the contruction equipment and machinery may also be generated during the construction phase. The oil leakages, lubricants and grease must be addressed. Contaminated soil must be removed and disposed off at the hazardous waste cell at Kupferberg Landfill. The contractor must provide containers on-site, to store any hazardous waste produced. Regular inspection and housekeeping procedure monitoring should be maintained by the contractor. Waste in the form of solid waste from households, businesses and institutions will also be generated during the operational phase. Domestic waste from residential places will be removed by the Municipal Council and waste generated from business and industrial area will be removed by Waste Removal Contractors and disposed off at Kupferberg Landfill. The Windhoek Municipal Council ity of Windhoek will have waste skips around the proposed township development like the rest of the suburbs in Windhoek.

4.8.5 Cement and concrete batching

Concrete mixing directly on the ground shall not be allowed and shall take place on an impermeable surface. All run-off from batching areas shall be strictly controlled, and cement contaminated water shall be collected, stored and disposed of at a suitable waste disposal facility.

4.8.6 Hydrocarbons management

If any spillage occurs, contaminated soil shall be collected in a holding tray or drum and which will then disposed at a hazardous waste disposal site. Any spillage of more than 200 litres must be reported to the Ministry of Mines and Energy as per the Petroleum Products Act. The Contractor shall take all reasonable measures to prevent surface or groundwater pollution from the release of oils and fuels.

4.8.7 Information board

The Contractor will be responsible for erecting information boards on site. The number and locations of these boards shall be agreed upon by the ECO officer. The contents of the information board shall be provided by the Technical Manager and will essentially be to advise the public of the construction activity and the prohibition on entering certain areas. The information board shall also provide the contact number of the ECO, to ensure that the public can access relevant information and lodge any complaints during the construction phase of the township development.

4.8.8 Flood management

The township development will be designed in such a way that surface water run-off is well developed. Storm water management of the township development should be a key aspect of flood management at the township. All culverts should be kept clean to allow storm water to flow freely.

4.8.9 Progressive Rehabilitation

Rehabilitation must commence as soon as possible on areas where construction has taken place or no further development is to take place, i.e. on completed excavations, soil/rock cutting hips, slopes etc.

4.9 Management Actions of Environmental Aspects – Construction Phase

i) NOISE AND VIBRATIONS

DESCRIPTION	Construction activities are associated with noise and vibrations generated by the construction machineries and vehicles.
MITIGATION MEASURES	• All workers on site must be equipped with ear plugs to be used when the noise becomes unbearable. • Switch off machines that are not used. • construction activities which known to generate vibration should be scheduled for day periods and not at night. • Duration of vibration should be kept as short as possible. • Proper maintenance including routine servicing of equipment.
MONITORING	Monitoring and measurement of noise and vibration impacts in the surrounding areas as per law or best available standards
RESPONSIBLE PARTY	Site Manager/ Safety Officer

ii) LOSS OF BIODIVERSITY AND HABITAT DESTRUCTION

DESCRIPTION	Various protected plant species were observed onsite and this might be destroyed/disturbed during the construction of services to the township. The clearing of vegetation to make way for the installation of services might also destroy the habitat that support the various forms of biodiversity in this area.
MITIGATION MEASURES	• Preserve some plants in the yards of erven. • Only remove plants that are in the path were services will be constructed. permit must be obtained from the Directorate of Forestry before any protected species is removed. • Mark all protected plant species on site with a visible mark to assist the construction team to avoid them. • The construction team should inform the Environmental Control Officer before any marked plants are removed to ensure that the valid permits are obtained.

Proposed Monitoring	- Regular Visual Inspection
RESPONSIBLE PARTY	Site Manager/ Environmental Control Officer

iii) WASTE GENERATION

DESCRIPTION	Chemical pollution from oil spills resulting from the handling of various machineries used during the construction phase might emanate from the construction activities if not handled properly. Other sources of pollution include building rubble and empty bags and containers. Construction workers can also pollute the surrounding environs if they are not provided with adequate toilet facilities.
MITIGATION MEASURES	• Ensure that all waste from construction activities is stored and contained in designated containers and transported to the Kupferberg Waste Disposal Site for proper disposal. • Bulky waste such as building rubble must be collected and disposed of at any of the various municipal satellite sites. • Adequate mobile toilets must be provided at the construction camps for the use of the workers.
MONITORING	Regular visual inspection
RESPONSIBLE PARTY	Site Manager and Environmental Control Officer

iv) AIR QUALITY - DUST

DESCRIPTION	Dust can result from construction activities having an impact on the nearby residential areas. Activities such as the levelling of land where the services will be constructed will slightly affect the air quality. This will especially be an issue during windy days. Dust can affect the health of the construction workers and nearby residential areas.

MITIGATION MEASURES	• Equip all the workers exposed to dust with dust masks • Spray the areas that are mostly affected with water to minimize dust (due to water shortages in Windhoek, consider pumping water from Goreangab Dam to be used for this purpose). • Minimize activities that can generate dust during windy days. • Limit the speed within the whole construction area to a maximum of 40 km/h. • Dust will significantly be reduced if excavation and land clearing is carried out after it has rained and the soil is wet.
MONITORING	Regular visual inspection
RESPONSIBLE PARTY	Site Manager and Environmental Control Officer

v) HEALTH AND SAFETY

DESCRIPTION	The likely influx of labour to Okuriangava Ext 3 area during the construction of services at the township may influence the spread of HIV / AIDS.
MITIGATION MEASURES	• Establishing awareness raising programme at workplace. • Provision of protective measures including distribution of condoms to workers.
MONITORING	• Stock take of the quantity of condoms left behind in the distribution box. • Routine refresher discussion with workers about views of HIV/AIDS and feedback on the existing programme.
RESPONSIBLE PARTY	Safety Officer / Wellness officer.

vi) EMPLOYMENT OPPORTUNITIES

DESCRIPTION	The project will require manpower during the construction of services at the township. This will provide employment opportunities to the residents of Okuriangava area and Windhoek as a whole.

MITIGATION MEASURES	• Establish recruitment policy that gives first priority to the locals (residents of the City of Windhoek). • To further enhance the socio-economic benefits of the surrounding communities from the development, the Project Manager should make it mandatory to all contractors that all unskilled work should be given to the locals.
MONITORING	Ensure adherence to recruitment policy.
RESPONSIBLE PARTY	Site Manager.

vii) GROUNDWATER

Description	Possible Groundwater quality could be impacted through leachate of oil leakages, diesel, lubricants and grease from the heavy-duty equipment and machinery utilised during construction phase. Care must be taken to avoid contamination of soil and groundwater. Drip trays must be used when removing oil from machinery. Run-off from overflowing onsite sewage systems might transport the effluent to areas where geological structures are present. Inflow into these structures would cause a pollution thread. The presence of a north south striking faults on the project area and groundwater basin should be noted and protected at all cost. There is a slight potential health impact on groundwater users in the area. Potential impacts on the natural environment from the polluted groundwater also exits.
Proposed Mitigations Measures	- Prevent spillages of any chemicals and petroleum products (i.e. oils, lubricants, petrol and diesel). Use drip trays and linings when evidence of leaks are observed on vehicles or equipment. - No major servicing and maintenance of vehicles and/or equipment should be conducted at the project sites. - All fuelling, storage and chemical handling should be conducted on surfaces provided for this purpose. Drip trays,

	linings or concrete floors must be used when removing oil from machinery. - Spillage control procedures must be in place according to relevant SANS standards or better. Waste water collection systems should be connected to these systems. - Should portable toilet facilities be necessary, adequate containment systems should be erected at the project site for use during the construction phase. - Waste should be contained properly to avoid any leakages and/or spillages; and should be regularly disposed off at a suitable sewage disposal site. Avoid run-off from these toilets due to overflows at all cost.
Proposed Monitoring	Regular Visual Inspection
Responsible Party	City of Windhoek/Contractors ECO Officer

viii) SURFACE WATER

Description	Contamination of surface water might occur through leakages, diesel, lubricants and grease from the heavy-duty equipment and machinery during the construction phase. Surface runoff emanating from overflowing and/or leakages from chemical and sewage storage and reticulation pipeline systems, and cement contaminated water might reach surface water bodies like the nearby Goreangab dam. Potential Health problems caused by viruses, bacteria and parasites.
Proposed Mitigations Measures	- Use drip trays and linings when evidence of leaks are observed on construction vehicles or equipment. - Remove leaking vehicles from project location immediately. - No servicing and maintenance of vehicles and/or equipment should be conducted at the project site. - Any spillage of hazardous substances including fuel, oil, paint or cleaning solvent must be cleaned up immediately and disposed off at a designated disposal facility. - Prevent discharge of any pollutants, such as cements, concrete, lime, chemicals, and hydrocarbons into waterways or any surface water bodies. - Prevent illegal washing out of containers in nearby waterways or any surface water bodies. - Properly secure all portable toilets (if any) to the ground to

	prevent them toppling due to wind or any other cause. - Maintain toilets in a hygienic state and remove waste to a licensed disposal facility. - Ensure that no spillages occur when the toilets are cleaned or emptied. Prohibit urination on site, other than at designated facilities. - Contain contaminated water from batching operations and allow sediments to settle before being disposed of as waste water. - Stabilise cleared areas as soon as possible to prevent and control surface erosion. - Proper environmental awareness and remedial response training of operators must be conducted on a regular basis.
Proposed Monitoring	Regular Visual Inspection
Responsible Party	City of Windhoek/Contractors ECO Officer

ix) EROSION AND SEDIMENTATION

Description	Vegetation clearance and creation of impermeable surfaces could result in erosion in areas across township development. The clearance of vegetation will further reduce the capacity of the land surface to slow down the flow of surface water, thus decreasing infiltration, and increasing both the quantity and velocity of surface water runoff. The particles in suspension will be transported towards the north and could increase the sedimentation in the nearby Arebbusch river flowing in the northern direction towards the Goreangab Dam. The proposed development will increase the amount of impermeable surfaces and therefore decrease the amount of groundwater infiltration. As a result, the amount of stormwater during rainfall events could increase.
Proposed Mitigations Measures	- Surfaces that are susceptible to erosion should be covered with a suitable vegetation cover as soon as construction is completed. - Ensure stockpiles are located within the boundary of the project sites; and are protected from erosion. - Stabilise cleared areas as soon as possible to prevent and control surface erosion. - Limit clearing of vegetation to those areas within the footprint of project sites.

Proposed Monitoring	Regular Visual Inspection
Responsible Party	City of Windhoek/Contractors ECO Officer

x) TRAFFIC HUMAN WILDLIFE CONFLICT

Description	Human–wildlife interactions, including human wildlife conflict, are encountered in parts of Windhoek.
Proposed Mitigations Measures	- Ensure natural and built structures that are coalesce to form heterogeneous fitness landscapes in the project area. - Deploying green infrastructure at the project site during construction, including green roofs, wetlands, and wildlife corridors, provides valuable passages, stepping stones, and refuges for wildlife to avoid several types of conflicts with people. - Careful design of development and location of infrastructure to avoid loss or damage of reptile habitat and maintaining connectivity between blocks of habitat; Timing works to avoid the period when reptiles may be hibernating (October & March); - Use of fencing to prevent reptiles moving into areas where they could be killed or injured; - Altering habitat to displace reptiles from areas where they could be killed or injured (eg. careful strimming of grassland in open spaces) - provided there is a suitable safe area nearby that they can easily move to; Where necessary, reptiles can be caught and translocated to suitable habitat that won't be affected by the development. Translocation is a difficult and time consuming operation and should be treated as a last resort.
Proposed Monitoring	Regular Visual Inspection
Responsible Party	City of Windhoek/Contractors ECO Officer

4.10 Management Actions of Environmental Aspects – Operational Phase

i) NOISE AND VIBRATIONS

DESCRIPTION	Noise pollution already exists around the site in the form of noise generated from vehicles frequenting the existing traffic along Etetewe Street and Omungwindi Street. Noise pollution due to this projecting the operational phase is expected to be mainly from generators or pumps, road maintenance machinery during maintenance.

MITIGATION MEASURES	- Ensure that generator engines are fitted with mufflers. - Operators working in close proximity to the generators should be equipped with ear protection equipment, when noise becomes an issue. - Observation of on-site noise levels by the Manager or Supervisor of Bulk Services Maintenance Department
MONITORING	Observation of on-site noise levels
RESPONSIBLE PARTY	City of Windhoek

ii) LOSS OF BIODIVERSITY AND HABITAT DESTRUCTION

DESCRIPTION	No impact are expected during the operational phase. Vegetation in open spaces should not be disturbed or removed during the operational phase.
MITIGATION MEASURES	Minimise the area of disturbance by restricting movement to designated working area during maintenance
MONITORING	Regular site inspection
RESPONSIBLE PARTY	City of Windhoek

iii) WASTE GENERATION

DESCRIPTION	Waste in the form of contaminated soil, rubble and domestic waste. Littering along access roads may also be produced during the operational phase.
MITIGATION MEASURES	• Waste must be removed and disposed off at Kupferberg Landfill by Waste Removal Contractors and Windhoek Council.
MONITORING	Regular visual inspection
RESPONSIBLE PARTY	City of Windhoek

iv) AIR QUALITY - DUST

DESCRIPTION	Vehicles that will be accessing township development will contribute to the release of hydrocarbon vapours, carbon monoxide and sulphur oxides into the air. Possible release of sewer odour, due to sewer system failure or maintenance might also occur.

MITIGATION MEASURES	- Excessive vehicle idling shall be minimised by putting up educative signs. - All maintenance of bulk services of the township have to be designed to enable environmental protection. - Regular air quality monitoring should be conducted at the project site. - Keep a complaints register regarding bad odour / smells at the project site.
MONITORING	Regular visual inspection
RESPONSIBLE PARTY	City of Windhoek

v) HEALTH AND SAFETY

DESCRIPTION	The likely influx of labour to Okuriangava Ext 3 area during the construction of services at the township may influence the spread of HIV / AIDS.
MITIGATION MEASURES	- **O**perators and maintenance contactors must be properly trained on safety and health issues. - The contractors are advised to ensure that proper personal protective gear and first aid kits are available, at all times.
MONITORING	- Regular inspection and incident monitoring report evaluation
RESPONSIBLE PARTY	City of Windhoek

vi) GROUNDWATER

Description	Spillages and/or leakages of various possible contaminants might occur due to failure of reticulation pipelines or storage tanks. Contaminated soil might pose a risk to surface water. Groundwater pollution from industrial activities within the township. Potential impact on the natural environment from possible polluted groundwater also exits. The area is subjected to north-south structures, which might act as preferential pathways for any contaminants entering the saturated zone.
Proposed Mitigations Measures	- The risk can be lowered further through the use of suitable and adequate SANS approved piping material; and installation should be done by certified installers/technicians. - All surface spillages and leakages must be cleaned up immediately.

	- Proper containment structures should be constructed to avoid any possible leakages. - Only light/dry industries that do not produce liquid toxic waste may be approved and erected on the business erven in this township.
Proposed Monitoring	Regular Visual Inspection
Responsible Party	City of Windhoek

vii) SURFACE WATER

Description	Spillages and/or leakages of various possible contaminants might occur due to failure of reticulation pipelines or storage tanks. Contaminated soil might pose a risk to surface water. All spills should be cleaned up as soon as possible. An emergency plan should be in place on how to deal with spillages and leakages during this phase. Potential health impact on surface water users and on the natural environment associated with the river channels in the area do exist. This may result in socio economic impacts on surfaces and groundwater users.
Proposed Mitigations Measures	- Proper design of bulk installations and containment mechanisms installed should be able to contain any leakages that might occur during the operation and maintenance of the township developments. - Maintaining the installation in good operating order is of paramount importance in preventing failure of bulk services. - Proper containment response and readiness should be available during operations and maintenance. - During maintenance operations, remove leaking vehicles and/or equipment from project location immediately. - The presence of an emergency response plan and suitable equipment is advised, so as to react to any spillage or leakages properly and efficiently. - Ensure all stormwater drains or channels are clear of litter or obstructing material.

	- Remove all excess sedimentation, rubble and any other waste material present in waterways and dispose of in a suitable manner to ensure proper drainage runoff. - Ensure that stormwater management systems are regularly maintained and tested, and are in good working order.
Proposed Monitoring	Regular Visual Inspection
Responsible Party	City of Windhoek

viii) FAILURE OF RETICULATION PIPELINE

Description	Potential release of sewage, storm-water, water, into the environment due to pipeline/system failure. As a result, the spillage could be released into the environment and could potentially be a health hazard to surface and groundwater
Proposed Mitigations Measures	- Proper reticulation pipelines and drainage systems should be installed. - Regular bulk services infrastructure and system inspection should be conducted.
Proposed Monitoring	Regular Visual Inspection
Responsible Party	City of Windhoek/Contractors ECO Officer

4 CONCLUSION

The management actions included in this report aim to assist in the avoidance, management and/or mitigation of potential impacts on the environment that may result from the proposed activities.

The EMP should be used as an on-site tool during implementation of all phases. Parties responsible for contravention of the EMP should be held responsible for any rehabilitation that may need to be undertaken.

Clearance certificates issued on EIA/EMPs are only valid for 3 years and will need to be reviewed and submitted to the Department of Environmental Affairs again for approval

ANNEXURE F

CV OF ENVIRONMENT PRACTITIONER

CURRICULUM VITAE

Grazy Tshipo
P.O. Box 7340, Katutura
Erf 3565, Rev Kaurerua Street, Wanaheda, Namibia
Cell: +264 81355 4803
Tel: +264 290 2373
E-mail: Grazy.Tshipo@windhoekcc.org.na

IDENTITY NUMBER	:	730506 00 187
DATE OF BIRTH	:	6 MAY 1973
NATIONALITY	:	NAMIBIAN
SEX	:	FEMALE
MARITAL STATUS	:	SINGLE
HOME LANGUAGE	:	TSWANA
RELIGION	:	CHRISTIAN
STATE OF HEALTH	:	EXCELLENT
DRIVERS LICENCE NUMBER	:	500 10000 5R1Y
CRIMINAL OFFENCES	:	NONE

B. EDUCATIONAL QUALIFICATIONS

i) Secondary Qualifications

SECONDARY EDUCATION			
Name of Course	**Institution**	**Duration**	
Grade 12 (National Senior Certificate)	TUCSIN	1993 – 1996	

ii) Tertiary

TERTIARY EDUCATION			
Name of Course	**Institution**	**Year completed**	
National Diploma In Chemical Engineering	Peninsula Technikon, Cape Town (R.S.A)	1996	
B. Sc. (Hons) Degree in Water Utilization	University of Pretoria, Pretoria (R.S.A)	2001	
Maters Degree in Water Utilization	University of Pretoria, Pretoria (R.S.A)	2008	

D. EMPLOYMENT HISTORY

Position Held	Employer/Institute	Year
Pupil Technician in Service Training	MAWF, (DWAF), Division Water Environment – Windhoek	March 1996

Hydrological Engineering Technician	MAWF, (DWAF), Division Water Environment – Windhoek	December 2000
Hydrologist (DWAF – Windhoek)	MAWF, (DWAF), Division Water Environment – Windhoek	September 2007
Senior Hydrologist (DWAF – Windhoek)	MAWF, (DWAF), Division Water Environment – Windhoek	December 2008
Part time Lecturer	Polytechnic of Namibia, Division Environmental Health Science– Windhoek	June 2010
Environment Management Officer	Windhoek Municipal Council, Division Health and Environment – Windhoek	January 2009 – current

*Ministry of Agriculture, Water and Forestry (**MAWF**), Department of Water Affairs and Forestry (**DWAF**),*

E. EXPERIENCE AND SKILLS

Analytical Work	- Analytical work at Chemistry, Bio-chemistry and Microbiological Laboratories, testing and comparisons of field equipment used for testing water quality parameters (1996).
Pollution Control	- The processing and issuing of Wastewater and Effluent Disposal Exemption Permits as a tool for pollution control include, completion of technical report, assessment of the design and actual operation of the plant, water balance and comparison of produced effluent with required effluent standards from septic tanks, oxidation ponds, conventional wastewater treatment plants from mines, industries, local authorities and tailings dams.
Pollution Investigations	- Investigations of the nature and cause of pollution should it be detected during inspections or reported.
Pollution Monitoring	- Surface water pollution monitoring, Risk assessment and environmental management auditing at potential companies.
Cleaner Production mechanism	– Awareness of cleaner production opportunities and mechanism at potential companies
Water Quality monitoring	- Collection of drinking water and wastewater samples for analysis and assessment within Windhoek District, Walvis Bay (Erongo Region) and Kombat Mine (1995-1997).
Data Assessment	- Water quality data interpretation and assessment for compliance with required effluent disposal standards, and possible contamination of ground and surface waters.
Report and other regulatory documents	The following regulatory documents were developed on a project basis: *i) Code of practice manual for Oxidation ponds (Volume 1):* This document guides the operation, types and maintenance of oxidation ponds. *ii) Pollution control Policy document:* This document specified the principles, legal requirements of pollution control and responsibilities of Local Authorities as required by the Water Act 54 of 1956. *iii) WA1 (a) Questionnaire for Oxidation ponds:* This questionnaire is used to apply for the Wastewater

	and Effluent Disposal Exemption Permits for Oxidation Ponds. *iv) Public Participation guidelines for Environment Impact Assessment Studies for the City of Windhoek.*
Operation and optimum dosage at Water Purification Plant-	- inspections of water purification plant, determine optimum flocculation dosage through sedimentation tests with feed water.
Administration Tasks	– Organizing and chairing of pollution control meetings, administrative tasks, attending of meetings, processing water analysis tender, processing the purchasing of equipments (requisitions for orders and payments).
Presentation	- Preparation, presentation and information sessions of pollution related titles at workshops.
Projects	The following projects were undertaken: i) "P**ollution Monitoring in the Walvis Bay Harbour"** (Project assistant). ii) "**SEA BASE Project**" (Project assistant which involved literature review, drafting of the project proposal and data collection). iii) "**Ramatex Wastewater Management Project" (**Steering committee member). iv) **"Solid Waste Management Practices that may pollute the water resources in the Erongo Region and the Revision of the related legislation" (Project Leader)**.
Project Management	– Project management for Environment Impact Assessments studies and projects for the CoW operations. Project management include co-ordination and supervision of consultancy, administrating tender (terms of reference, adverts and legal agreements.)
Lecturing	- Lectured Part time (Environment Pollution subject) at the polytechnic of Namibia (Jan-June 2010)
Environmentalist	- Key performance areas as an Environmentalist include: - Co-ordinate the formulation, review and provide advice on policies, legislation and plans/programs - Obtain Environment Clearance Certificates, Environment Impact Assessment and Environment Management and Strategic Environment Assessments through tendering process. - Coordinate all internal Environmental Assessments (EIA's, Audits) through tendering process. - Renew Environmental Clearance Certificates - Review all Environmental Assessment reports received from external proponents,

	- Conduct EIA'S to obtain Environment Clearance Certificates. - Co-ordinate Environmental and promote Public Participation and Awareness - Enforcement and implementation of Policies/Legislations and Plans/Programs - Initiate and co-ordinate environmental research projects. (List of EIA Studies Conducted, ECC Renewed, EIA Reviews and EIA Sources via Tendering Process is attached as Annexure A

F. TRAINING COURSES

Training Courses Attended: Work Related

TRAINING AND SHORT COURSES		
Name of Training	**Training Institute**	**Duration**
Pollution control and Environment course	Gaborone University	26 May – 06 June 1996
Microsoft Windows 95	SISU Campus, Windhoek	10 February 1997
Microsoft 7.0	ISU Campus , Windhoek	12-14 February 1997
Supervisory Course	Prime Ministers Office, Windhoek	September 1997
Presentation Skills	Agriculture training office	July 2001
Cleaner Production Technology	Windhoek	10-13 November 2003
Water Demand Management Course.	University of Lusaka, Zambia	19-23 July 2004
Project Management	UNAM, Namibia	22-24 June 2005
Cleaner Production Technology Short Course –	Windhoek	3-7 April 2006
Cleaner Production Technology Tour	Cleaner Production Technology Tour – R.S.A	10-12 April 2006
Environment Management Course	University of Pretoria, Pretoria, R.S.A	9-11 October 2006
Environmental Engineering: Sustainable Management in Coastal Areas	Cape Peninsula University of Technology, Cape Town, R.S.A	January – July 2007
Bookkeeping	Polytechnic of Namibia	5 March – 25 April 2007
Managing a small business Enterprise	Polytechnic of Namibia	2 July – 15 August 2007
Financial Planning and Control	Polytechnic of Namibia	2 July – 15 August 2007
Used Water Management Board	Singapore Public Utilities Board	26 February to 3 March 2008
Carbon footprint Analyst 1 course	Windhoek,	25-27 November 2009
Strategic Environment Impact Assessment Workshop	Johannesburg, R.S.A	30 – 31 July 2013

H. REFERENCES

Ms M. Amakali (Previous Manager)
Director: Water Resource Management
Department of Water Affairs and Forestry
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Environment Management Division
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Fr Martinus Nangwasa (Religious leader)
Holy Redeemer Catholic Church
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Katutura
NAMIBIA
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martinusmatty@gmail.com

A. LIST OF EIA REVIEWS UNDERTAKEN

1. Review Of The Environmental Scoping Report Of The Proposed Construction Of A Water-Based Paint Manufacturing Plant On Erf 2, Nubuamis Industrial Park, 2021

2. Review Letter To The Environmental Impact Assessment And Environmental Management Plan: For The Construction And Operational Activities Of A Fuel Retail Facility In Rocky Crest, Windhoek, Namibia, 2021

3. Renewal Application Of An Expired Environmental Clearance Certificate Application No. App-001867 – Proposed Base & Precious Metals Prospecting Activities On Exclusive Prospecting License (Epls) 6011 & 5772 (Previously 3905 & 3238) In The Khomas Region, Namibia, 2020.

4. Background Information Document: For The Completion Of The Development Of A Service Staion Erf, A Rural Residential And Nature Estate, Business Erven And Street Portions On The Remainder Of Portion 1 Of Farm Gross Haigama No. 447, Khomas Region, 2020.

5. Environmental Assessment Screening Report For The Proposed Establishment Of Sterilwave Apparatus For Treatment Of Medical Waste At Lady Pohamba Private Hospital, Winhoek, 2020.

6. Review Letter To The Application Of An Environmental Clearance Certificate (Ecc) Application No. App-002139 – For The Development Of Small-Scale Quarrying And Crushing Of Quartzite On Mining Claim (Mc) 72245 In The Khomas Region, Namibia, 2020..

7. Background Information Document: Application For An Environmental Clearance Ceritificate For The Proposed Ongos Valley Township Overhead Transmission Line And Load Centre (Windhoek) , 2020.

8. Re: Proposed Establishment Of 8 New Townships On Portion 34 To 40 And The Remainder Of Portion 13 Of Farm Augiegas No.34, 2019.

9. Environmental Impact Assessment (Eia) And Environmental Plan (Emp) For Gravel Removal Activities On Mining Claims 71260, 71261, 71262 And 71226 In The Groot Aub District, Khomas Region, 2019.

10. Subject: Final Environmental Scoping Report: Five Mini Bts Sites In Ludwigsdorf, Windhoek, 2018.

11. Re: Environmental Scoping Report Addendum For Section One And Two: Review Of The Basic Planning For Tr9/1 And Tr6/1 Windhoek To Hosea Kutako Airport Borrow Pit 3, 2018.

12. The Environmental Scoping Report Addendum For Section One And Two: Review Of The Basic Planning For Tr9/1 And Tr6/1 Windhoek To Hosea Kutako Airport, Burrow Pit 4, 2018.

13. Notification Of Environmental Assessment For The Puma Energy Bulk Fuel Storage Facility At Hosea Kutako Airport, 2018.

14. Background Information Document: For The Development Of ±20 Residential Portions, A Street Portion And The Remainder Of Portion 1 Of Farmrgross Haigamas No. 447, 2018.

15. Environmental Impact Assessment To Finalise The Town Planning Procedures For The Proposed Subdivision And Development Of Farm Klein Aub No.490, 2018.

16. Background Information Document For The Construction Of A Bakey On Portion 7 Of Farm Klein Okapuka N0. 51, Windhoek, Khomas Region, 2018.

17. Background Information Document: For Proposed Sand Mining In A Section Of The Seëis River Located On The Remainder Of Farm Ondekaremba No. 78, Windhoek, 2018.

18. Environmental Impact Assessment Report For The Proposed Township Establishment On Remainder Of Portion 9 Of The Farm Emmerentia, No 380, Windhoek, 2018.

19. Subject: Environmental Clearance Certificate For The Construction And Operation Of The Proposed Sanny Auto Repair (Sar) Total Service In Okuryangava/Ombili, Katutura, Windhoek, Khomas Region, 2018.

20. Application For An Environmental Clearance Certificate For The Zannier Omaanda Lodge On The Remaining Extent Of The Farm Ondekaremba No. 78, Windhoek, Khomas Region, 2018.

21. Environmental Assessment For The Existing Oil Recycling Plant At The Aris Industrial Area, 2017.

22. Environmental Impact Assessment And Environmental Management Plan For The Proposed Eros Valley Golf Estate, June 2016

23. Environmental Impact Assessment Scoping Report And Environmental Management Plan For Services Provision To The Leopard Valley Smallholding On The Remainder Of Gochechanas No 26 And Remainder Of Leopard No 218, Windhoek, 2016.

B. EIA STUDIES UNDERTAKEN

1. Proposed Beneficial Utilisation Of Bio-Solids At Gammams Waste Water Treatment Works Windhoek, 2014

2. An Environmental Impact Assessment For The Water And Sanitation Infrastructure Provision In The Northern Informal Settlements Of Windhoek, February 2011

3. Environmental Impact Assessmentfor Service Provision For Goreangab Extention 4 Township , Windhoek, Khomas Region October 2015

C. PROJECT CO-ORDINATION FOR EIAs -TENDERING

1. Consulting Services To Conduct An Environmental Impact Assessment Study And Environmental Management Plan For The Upgrading Of Ujams Wastewater Treatment Plant

2. Consulting Services To Conduct A Strategic Environmental Assessment For Windhoek Municipality

3. Consulting Services To Conduct An Environmental Impact Assessment Study And Environmental Management Plan For The Upgrading Of Ujams Wastewater Treatment Plant.

4. Consulting Services To Conduct An Environmental Impact Assessment For The Mix Settlement (Brakwater-Windhoek) – M.35/2012

5. Commends And Recommendations For The Environmental Draft Scoping Report For The City Of Windhoek Cemetry Development On Portion Y In Rocky Crest, Windhoek Namibia (2014)

6. Environmental Impact Assessment For Proposed Haloid Township Development (Ramatex), Windhoek

7. Environmental Clearance Certificate For Otjomuise Extension 10, Windhoek Municipality

8. Bid No: Sc Rp Cow 05/2020 – Consulting Services To Conduct An Environmental Assessment And Environmental Management Plan For Khomasdal Extension 17 And 18 And Extension 7, Erf 2131, Township Development.

9. Bid No: Sc Rp Cow 05/2020 – Consulting Services to Conduct an Environmental Assessment and Environmental Management Plan for Khomasdal Extension 17 and 18 and Extension 7, Erf 2131, Township Development Consultancy Contract for Bid No: SC/RP/Cow-170/2022 – Consulting Services to Conduct an Environmental Assessment And Environmental Management Plan For The Establishment And Development of Townships in Cimbabesia Extensions 5, 6, 8 And 9, Portions Of Erven 878 And 1402

10. Consulting Services To Conduct An Environmental Impact Assessment Study And Environmental Management Plant For The Establishment And Development Of Townships In Otjomuise Extensions 11 And 13,

11. Consulting Services To Conduct An Environmental Impact Assessment Study And Environmental Management Plan For Townships Establishment For Havanna Proper, Windhoek, Khomas Region

12. Consulting Services To Conduct An Environmental Impact Assessment Study And Environmental Management Plan For Establishment And Development Of Otjomuise Extension 11 & 13 Townships, Windhoek, Khomas Region

13. Consulting Services To Conduct An Environmental Impact Assessment Study And Environmental Management Plan For Establishment And Development Of Otjomuise Extention 6 & 7 Townships, Windhoek, Khomas Region

D. PROJECT MANAGENT OF CONSULTANCY SERVICES

1. Environmental Impact Assessment Study And Environmental Management Plan For The Programme To Provide Acceptable And Affordable Sanitation Solutions In The Informal Settlements Of Windhoek

2. Consulting Services To Conduct A Strategic Environmental Assessment (SEA) For Windhoek Municipality

E. THE LIST OF ENVIRONMENT CLEARANCE RENEWALS DONE

1. Environmental Impact Assessment For Proposed Haloid Township Development (Ramatex), Windhoek

2. Extension 4, Windhoek, Khomas Region, 2015

3. Application For Renewal Of Environmental Clearance Certificate For The Environmental Scoping Report And Environmental And Social Management Plan For The Proposed Formalisation Of The Mix Settlement, Windhoek, Namibia

4. Application For Renewal Of Environmental Clearance Certificate For The Environmental Impact Assessment For The Proposed Service Provision And Township Establishment For Northern Informal Settlements Omuthiya And Onghuwo Ye Pongo, One Nation 1, Onyika, Greenwell Matongo D, Okahandja Park D And Freedom Land A & B, Windhoek, Namibia.

5. Application For Renewal Of Environmental Clearance Certificate For The Development Of Cemetery On Portion Y Situated In Rocky Crest, Windhoek District, Khomas Region

6. Application for Renewal of ECC for Brakwater Waste Transfer Facility, Windhoek Khomas Region.

7. Application for Renewal of ECC for Health Care Risk Waste Treatment Facility, Windhoek Khomas Region

8. Application for Renewal of ECC for Existing Khomasdal Satellite Waste Disposal Facility, Windhoek.

9. Application for Renewal of ECC for Emp of Kleine Kuppe Waste Transfer Facility , Windhoek Khomas Region

10. Application or Renewal of ECC for Ludwigsdorf Satellite Waste Disposal Facility, Windhoek

11. Application for Renewal of ECC for the Existing Otjomuise Satellite Waste Disposal Facility, Windhoek

12. Application for Renewal of ECC for Olympia Mix Waste Transfer Facility, Windhoek Khomas Region

13. Application for Renewal of ECC Northern Informal Settlement, Windhoek