Environmental Assessment Scoping Report for:

September 2020

Formalisation of cemetery in Oshikuku Extension 1, Oshikuku, Omusati Region.

APP-001952

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PROJECT DETAILS

	Environmental Scoping Report for the:		
Title	Formalisation of Oshikuku, Omusati.	cemetery in Osh	nikuku Extension 1,
Report Status	Final		
SPC Reference	W/18034		
MEFT Reference	App-001952		
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EXECUTIVE SUMMARY

Introduction

The Oshikuku Town Council hereinafter referred to as the proponent intends to undertake the following activities:

• Formalisation of cemetery in Oshikuku Extension 1.

The above is a listed activity in terms of the Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012).

As such the proponent appointed Stubenrauch Planning Consultants (SPC) to undertake an independent Environmental Assessment (EA) in order to obtain an Environmental Clearance Certificate (ECC) for the above activities. The competent authority is the Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs (MEFT: DEA).

Project Description

When Oshikuku Extension 1 was established, ownership of the north western part of the extension was claimed by the Roman Catholic Church. After consultation between the Oshikuku Town Council and the church it was resolved that the land claimed by the church should remain the property of the church. Furthermore, the church has recently allocated grave sites on the western area which now forms part of Oshikuku Extension 1. Resultantly the Roman Catholic church cemetery area encroaches over a number of planned erven within Oshikuku Extension 1.

In light of the above the Oshikuku Town Council is in the process of re-planning the subject area in order to rectify the current cadastral overlap. The rectification of the subject area is outlined in a separate scoping report which will be submitted to MEFT for review.

The proposed re-planning will result in the cadastral boundaries for the existing cemetery to be outlined and as such the area needs to be formalized.

Public Participation

Communication with I&APs about the proposed development was facilitated through the following means and in this order:

- A Background Information Document (BID) containing descriptive information about the proposed activities was compiled and sent out to all identified and registered I&APs via email on 14 May 2020;
- Notices were placed in The New Era and The Sun newspapers dated 14 May 2020 and 20 May 2020, briefly explaining the activity and its locality, inviting members of the public to register as I&APs (Appendix B); and
- Notices were fixed at the project site (see **Appendix A**).

The Draft Scoping Report was circulated from **3 July 2020 until 17 July 2020** so that the public could review and comment on it. The overall commentary received from the public on the draft report is documented in the comments and responses report document.

Conclusions and Recommendations

With reference to **Table 6**, none of the negative operational phase impacts were deemed to have a high significance impact on the environment. The operational impacts were assessed to a *Medium to Low (negative)* significance, without mitigation measures. With the implementation of the recommended mitigation measures in Chapter 7 as well as in the EMP, the significance of the operational phase impacts is likely to be reduced to a *Low (negative)*.

It is recommended that this project be authorised because should the development not proceed there will continue to exist an encroachment of land in Oshikuku Extension 1. This would result in the cemetery not being formalised and would continue to operate without any mitigation measures in terms of the environmental and social impacts.

The "no go" alternative was thus deemed to have a *High (negative)* impact, as all the benefits resulting from the development would not be realised.

The significance of negative impacts can be reduced with effective and appropriate mitigation provided in this report and the EMP. If authorised, the implementation of an EMP should be included as a condition of approval.

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Annexure B: Proof of Advertisements
Annexure C: Public Participation process

I&AP Database & Registered List

Notification Letters and Emails sent of BID

Notification Letters and Emails Sent of DESR Available for Comment

Annexure D: Curriculum Vitae and ID of Environmental Assessment Practitioner

Annexure E: Environmental Management Plan

LIST OF ACRONYMS

AIDS Acquired Immune Deficiency Syndrome

CRR Comments and response report

dB Decibels

DESR Draft Environmental Scoping Report

EA Environmental Assessment

EAR 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

1&AP Interested and Affected Party

IUCN International Union for Conservation of Nature

MET Ministry of Environment and Tourism

MET: DEA Ministry of Environment and Tourism: Department of Environmental Affairs

MURD Ministry of Urban and Rural Development

MWTC Ministry of Works Transport and Communication

NAMPAB Namibia Planning Advisory BoardNPC Namibia Planning CommissionPPP 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 Oshikuku Town Council hereinafter referred to as the proponent intends to undertake the following activities:

• Formalisation of cemetery in Oshikuku Extension 1, Oshikuku, Omusati Region.

The above is a listed activity in terms of the Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012).

In terms of the Environmental Management Act (No. 7 of 2007) and Environmental Impact Assessment Regulations (Government Notice No. 30 of 2012), the following listed activities in **Table 1** were triggered by the proposed project:

Table 1: List of triggered activities identified in the EIA Regulations which apply to the proposed project

Activity description and No(s):	Description of relevant activity	The portion of the development as per the project description that relates to the applicable listed activity
Activity 11.2	Construction of cemeteries, camping, leisure and recreation sites.	The proposed project includes the formalization of a cemetery.

The above activities will be discussed in more detail in Chapter 4. The proponent appointed Stubenrauch Planning Consultants (SPC) to undertake an independent Environmental Assessment (EA) in order to obtain an Environmental Clearance Certificate (ECC) for the above activities. The competent authority is the Ministry of Environment, Forestry and Tourism: Department of Environmental Affairs (MEFT: DEA).

The process will be undertaken in terms of the gazetted Namibian Government Notice No. 30 Environmental Impact Assessment Regulations (herein referred to as EIA Regulations) and the Environmental Management Act (No 7 of 2007) (herein referred to as the EMA). The EIA process will investigate if there are any potential significant bio-physical and socio-economic impacts associated with the intended activities. The EIA process would also serve to provide an opportunity for the public and key stakeholders to provide comments and participate in the process.

1.2 PROJECT LOCATION

The area which has been allocated for the cemetery is located in the north western part of Oshikuku Extension 1. Please refer to below locality map (**Figure 1**).

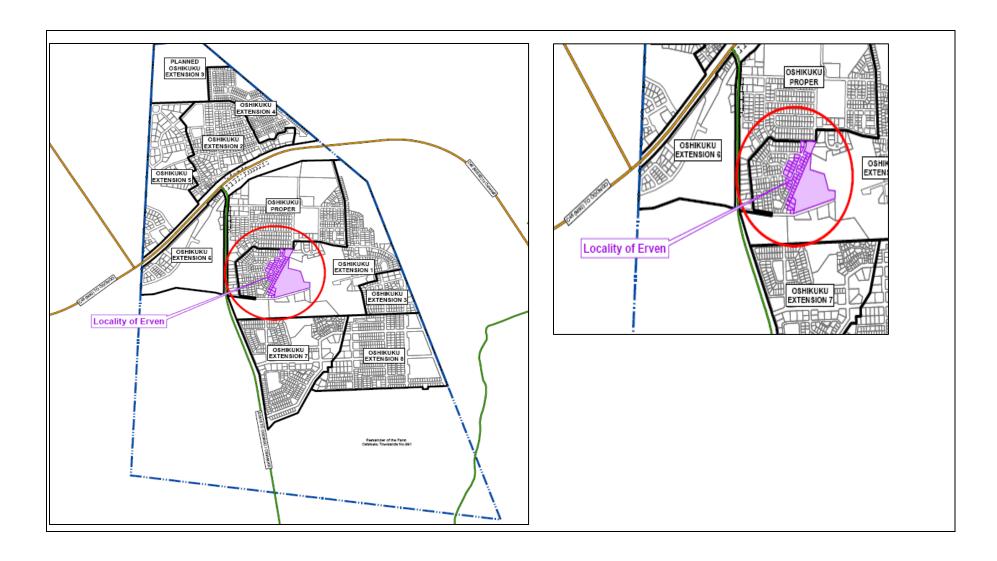


Figure 1: Locality of proposed development in Oshikuku

1.3 TERMS OF REFERENCE AND SCOPE OF PROJECT

The scope of this project is limited to conducting an environmental impact assessment and applying for an Environmental Clearance Certificate for the following as indicated in section 1.1 above:

• Formalisation of cemetery in Oshikuku Extension 1.

1.4 ASSUMPTIONS AND LIMITATIONS

In undertaking this investigation and compiling the Environmental Scoping Report, the following assumptions and limitations apply:

- Assumes the information provided by the proponent is accurate and discloses all information available.
- The limitation that no alternative except for the preferred layout plans and the 'no-go' option was considered during this assessment. The unique character and appeal of Oshikuku were however taken into consideration with the design perspective. Various layout alternatives were initially considered by the proponent, also taking terrain and environmental constraints into account, thus the current design plans being the most feasible result.

1.5 CONTENT OF ENVIRONMENTAL ASSESSMENT REPORT

Section 8 of the gazetted EIA Regulations requires specific content to be addressed in a Scoping / Environmental Assessment Report. **Table 2** 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 2: Contents of the Scoping / Environmental Assessment Report

Section	Description	Section of FESR/ Annexure
8 (a)	The curriculum vitae of the EAPs who	Refer to Annexure D
- (-)	prepared the report;	
8 (b)	A description of the proposed activity;	Refer to Chapter 4
	A description of the site on which the	
8 (c)	activity is to be undertaken and the location	Refer to Chapter 3
	of the activity on the site;	
	A description of the environment that may	
	be affected by the proposed activity and the	
8 (d)	manner in which the geographical, physical,	Refer to Chapter 3
8 (u)	biological, social, economic and cultural	Refer to Chapter 3
	aspects of the environment may be affected	
	by the proposed listed activity;	

Section	Description	Section of FESR/ Annexure
8 (e)	An identification of laws and guidelines that have been considered in the preparation of the scoping report;	Refer to Chapter 2
8 (f)	Details of the public consultation process conducted in terms of regulation 7(1) in connection with the application, including	Refer to Chapter 5
	(i) the steps that were taken to notify potentially interested and affected parties of the proposed application	Refer to Chapter 5
	(ii) proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the proposed application have been displayed, placed or given;	Refer to Annexures A and B for site notices and advertisements respectively.
	(iii) a list of all persons, organisations and organs of state that were registered in terms of regulation 22 as interested and affected parties in relation to the application;	Refer 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;	Refer 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;	Refer to Chapter 4
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 any	Refer to Chapter 7

Section	Description	Section of FESR/ Annexure
	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)	An environmental management plan	Refer to Annexure E

2.1 LEGISLATION RELEVANT TO THE PROPOSED DEVELOPMENT

There are multiple legal instruments that regulate and have a bearing on good environmental management in Namibia. Table 3 below provides a summary of the legal instruments considered to be relevant to this development and the environmental assessment process.

Table 3: Legislation applicable to the proposed development

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
The Constitution of the Republic of Namibia as Amended	Article 91 (c) provides for duty to guard against "the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia."	Sustainable development should be at the forefront of this development.
	Article 95(I) deals with the "maintenance of ecosystems, essential ecological processes and biological diversity" and sustainable use of the country's natural resources.	
Environmental Management Act No. 7 of 2007 (EMA)	Section 2 outlines the objective of the Act and the means to achieve that. Section 3 details the principle of Environmental Management	The development should be informed by the EMA.
EIA Regulations GN 28, 29, and 30 of EMA (2012)	GN 29 Identifies and lists certain activities that cannot be undertaken without an environmental clearance certificate. GN 30 provides the regulations governing the environmental assessment (EA) process.	Activity 11.2 Construction of cemeteries, camping, leisure and recreation sites. (The proposed project includes the formalization of an existing cemetery.)
Convention on Biological Diversity (1992)	Article 1 lists the conservation of biological diversity amongst the objectives of the convention.	The project should consider the impact it will have on the biodiversity of the area.
Draft Procedures and Guidelines for conducting EIAs and compiling EMPs (2008)	Part 1, Stage 8 of the guidelines states that if a proposal is likely to affect people, certain guidelines should be considered by the proponent in the scoping process.	The EA process should incorporate the aspects outlined in the guidelines.

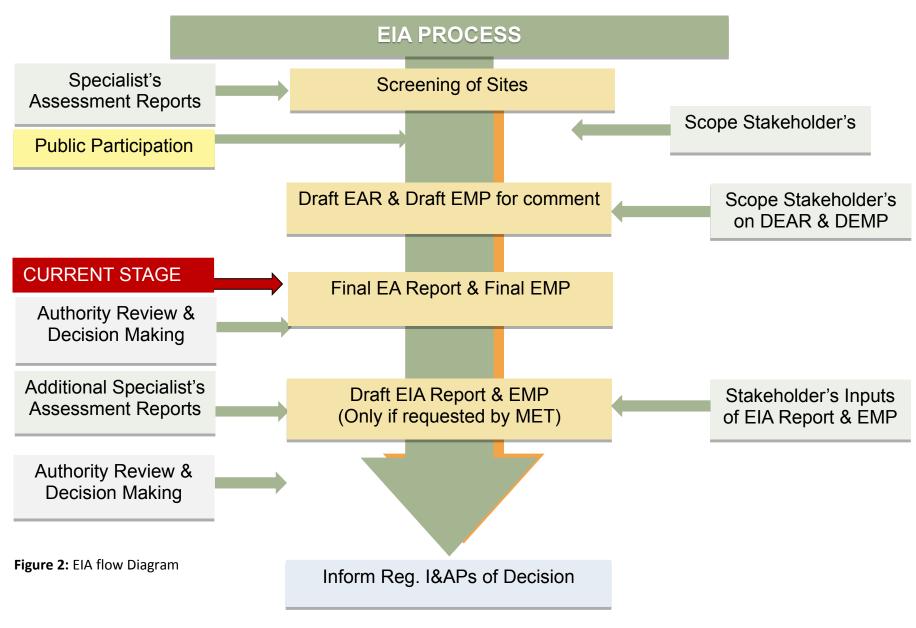
LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
Namibia Vision 2030	Vision 2030 states that the solitude, silence and natural beauty that many areas in Namibia provide are becoming sought after commodities and must be regarded as valuable natural assets.	Care should be taken that the development does not lead to the degradation of the natural beauty of the area.
Water Act No. 54 of 1956	Section 23(1) deals with the prohibition of pollution of underground and surface water bodies.	The pollution of water resources should be avoided during construction and operation of the development.
The Ministry of Environment and Tourism (MET) Policy on HIV & AIDS	MET has recently developed a policy on HIV and AIDS. In addition, it has also initiated a programme aimed at mainstreaming HIV and gender issues into environmental impact assessments.	The proponent and its contractor have to adhere to the guidelines provided to manage the aspects of HIV/AIDS. Experience with construction projects has shown that a significant risk is created when migrant construction workers interact with local communities.
Township and Division of Land Ordinance 11 of 1963	The Townships and Division of Land Ordinance regulates subdivisions of portions of land falling within a Local Authority area	In terms of Section 19 such applications are to be submitted to NAMPAB and Townships Board respectively.
Local Authorities Act No. 23 of 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.
Labour Act no. 11 of 2007	Chapter 2 details the fundamental rights and protections. Chapter 3 deals with the basic conditions of employment.	Given the employment opportunities presented by the development, compliance with the labour law is essential.
National Heritage Act No. 27 of 2004	The Act is aimed at protecting, conserving and registering places and objects of heritage significance.	All protected heritage resources (e.g. human remains etc.) discovered, need to be reported immediately to the National Heritage Council (NHC) and require a permit from the NHC before they may be relocated.

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
Roads Ordinance 17 of 1972 Public and Environmental Health Act of 2015	 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. This Act (GG 5740) provides a framework for a structured uniform public and environmental health system in Namibia. It covers notification, prevention and control of diseases and sexually transmitted infections; maternal, ante-natal and neo-natal care; water and food supplies; infant nutrition; waste management; health nuisances; public and environmental health planning and reporting. It repeals the Public Health Act 36 of 1919 (SA GG 979). 	Adhere to all applicable provisions of the Roads Ordinance. Contractors and users of the proposed development are to comply with these legal requirements.
Nature Conservation Ordinance no. 4 of 1975	Chapter 6 provides for legislation regarding the protection of indigenous plants	Indigenous and protected plants must be managed within the legal confines.
Water Quality Guidelines for Drinking Water and Wastewater Treatment	Details specific quantities in terms of water quality determinants, which wastewater should be treated to before being discharged into the environment	These guidelines are to be applied when dealing with water and waste treatment
Environmental Assessment Policy of	The Policy seeks to ensure that the environmental consequences of development projects and policies	This EIA considers this term of Environment.

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
Namibia (1995) Water Resources	are considered, understood and incorporated into the planning process, and that the term ENVIRONMENT is broadly interpreted to include biophysical, social, economic, cultural, historical and political components. Part 12 deals with the control and	The pollution of water resources
Management Act No. 11 of 2013	protection of groundwater Part 13 deals with water pollution control	should be avoided during construction and operation of the development. Should water need to be abstracted, a water abstraction permit will be required from the Ministry of Water, Agriculture and Forestry.
Forest Act 12 of 2001 and Forest Regulations of 2015	To provide for the establishment of a Forestry Council and the appointment of certain officials; to consolidate the laws relating to the management and use of forests and forest produce; to provide for the protection of the environment and the control and management of forest fires; to repeal the Preservation of Bees and Honey Proclamation, 1923 (Proclamation No. 1of 1923), Preservation of Trees and Forests Ordinance, 1952 (Ordinance No. 37 of 1952) and the Forest Act, 1968 (Act No. 72 of 1968); and to deal with incidental matters.	Protected tree and plant species as per the Forest Act No 12 of 2001 and Forest Regulations of 2015 may not be removed without a permit from the Ministry of Agriculture, Water and Forestry.
Atmospheric Pollution Prevention Ordinance No 45 of 1965	Part II - control of noxious or offensive gases, Part III - atmospheric pollution by smoke, Part IV - dust control, and	The development should consider the provisions outlined in the act. The proponent should apply for an Air Emissions permit from the Ministry of Health and Social Services (if needed).

LEGISLATION/POLICIES	RELEVANT PROVISIONS	RELEVANCE TO PROJECT
	Part V - air pollution by fumes emitted by vehicles.	
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, sale, use, operation, application, modification, disposal or dumping of such substances; and to provide for matters connected therewith.	The handling, usage and storage of hazardous substances on site should be carefully controlled according to this Ordinance.
Soil Conservation Act No 76 of 1969	Act to consolidate and amend the law relating to the combating and prevention of soil erosion, the conservation, improvement and manner of use of the soil and vegetation and the protection of the water sources	The proposed activity should ensure that soil erosion and soil pollution is avoided during construction and operation.

This EIA process will be undertaken in accordance with the EIA Regulations. A Flow Diagram (refer to **Figure 2** below) provides an outline of the EIA process to be followed.



3.1 SOCIAL ENVIRONMENT

3.1.1 Socio-Economic Context

The statistics shown in **Table 4** below are derived from the 2011 Namibia Population and Housing Census (Namibia Statistics Agency, 2013), and presented from a local and regional perspective.

Table 4: Statistics of the Oshikuku Constituency and Omusati Region (Namibia Statistics Agency, 2014)

OSHIKUKU CONSTITUENCY							
ATTRIBUTE	INDICATOR						
Population	9 093						
Females	5 209						
Males	3 884						
Population under 5 years	13%						
Population aged 5 to 14 years	23%						
Population aged 15 to 59 years	54%						
Population aged 60 years and above	10%						
Female: male ratio	75:100						
Literacy rate of 15 years old and above	93%						
People above 15 years who have never attended school	7%						
People above 15 years who are currently attending school	24%						
People above 15 years who have left school	67%						
People aged 15 years and above who belong to the labour	55%						
force							
Population employed	58%						
Homemakers	6%						
Students	57%						
Retired or old age income recipients	37%						
Income from pension	30%						
Income from business and non-farming activities	9%						
Income from farming	11%						
Income from cash remittance	4%						
Wages and salaries	42%						
Main Language	Oshiwambo Languages- 96%						
OMUSATI REGION							
ATTRIBUTE	INDICATOR						
Population	243 166						
Population aged 60 years and above	11%						
Population aged 5 to 14 years	26%						
Population aged 15 to 59 years	49%						

3.1.2 Archaeological and Heritage Context

No archaeological and heritage sites are known to be located within the proposed development area.

3.2 BIO-PHYSICAL ENVIRONMENT

3.2.1 Climate

The climate of the subject area can be described as semi-arid. Average annual temperatures are usually more than 22 °C, with average maximum temperatures between 34°C and 36 °C and average minimum temperatures between 6°C and 8 °C (Mendelsohn, Jarvis, Roberts & Roberston, 2002).

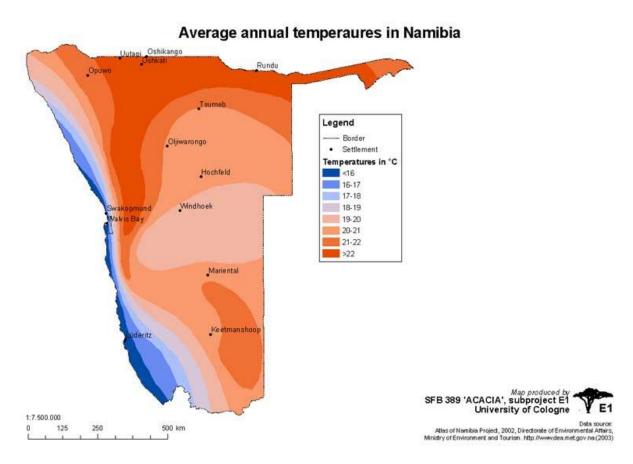


Figure 3: Annual average temperature (http://www.uni-koeln.de/sfb389/e/e1/download/atlas namibia/e1 download climate e.htm#temperature annual)

The subject area generally experiences more rainfall than the south and west of the country with an average rainfall of 350 to 550 mm as indicated in **Figure 4** below.

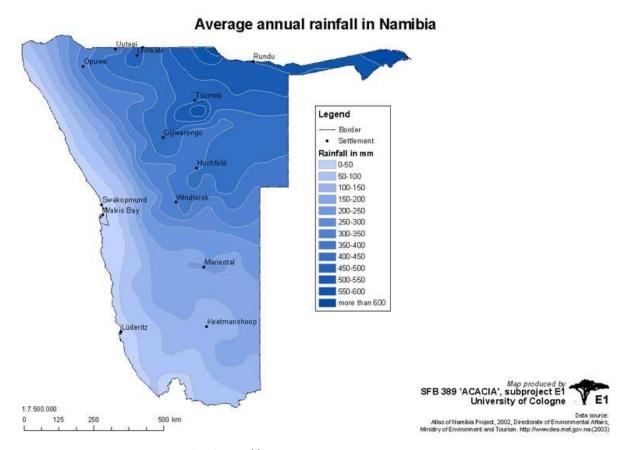


Figure 4: Average annual Rainfall (http://www.uni-koeln.de/sfb389/e/e1/download/atlas_namibia/pics/climate/rainfall-annual.jpg)

3.2.2 Topography, Geology and Soils

The Omusati Region forms part of the Kalahari Group Geological division depicted in pale yellow in **Figure 5** below. The dominant soils within the area are mainly sands and clays (Mendelsohn et al., 2002).

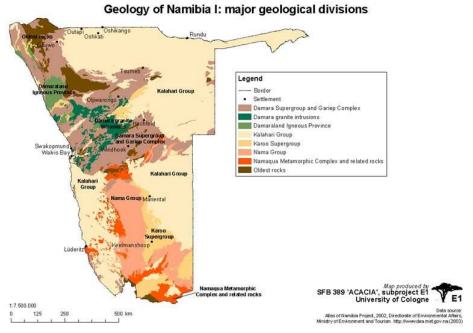


Figure 5: Geology of Namibia (http://www.uni-koeln.de/sfb389/e/e1/download/atlas namibia/pics/physical/geology.jpg)

3.2.3 Hydrology and Hydrogeology

In terms of groundwater, the area falls within the Cuvelai-Etosha groundwater basin depicted in **Figure 6** below. The hydrogeological Cuvelai Basin comprises the Omusati, Oshana, Ohangwena, and Oshikoto Regions and parts of the Kunene Region (Ministry of Agriculture Water and Rural Development, 2011).

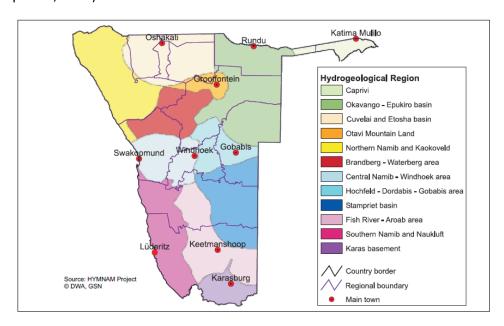


Figure 6: Groundwater basins and hydrogeological regions in Namibia

The Cuvelai Basin consists of thousands of drainage channels or oshanas which flow during the rainy season. The oshanas are "shallow, often vegetated and poorly defined, interconnected flood channels and pans through which surface water flows slowly or may form pools depending on the intensity of the floods ("efundja")" (Ministry of Agriculture Water and Rural Development, 2011).

The Cuvelai Basin is the most densely populated areas in the country with most communities living in rural areas largely dependent on agriculture (Ministry of Agriculture Water and Rural Development, 2011). The villages and towns located within the Cuvelai Basin are supplied with water from the Calueque Dam, north of the Angolan border, via an extensive system of canals and pipelines. "Water stored in the Calueque Dam on the Kunene River just north of the border is pumped via a canal to the Olushandja Dam in Namibia, from where it is gravity fed via a concrete-lined canal to Oshakati" (Ministry of Agriculture Water and Rural Development, 2011).

Because surface water is only available during the rainy season, people rely on other water sources during the dry season. As such groundwater is sourced in the region through dug wells and boreholes.

3.3 TERRESTRIAL ECOLOGY

3.3.1 Flora and Fauna

The Omusati Region falls within the broader Tree-and-Shrub Savanna biome and forms part of the Acacia Tree-and -shrub Savanna sub-biome. The Acacia Tree-and -shrub Savanna sub-biome is characterized by large, open expanses of grasslands dotted with Acacia trees (Mendelsohn *et al.*, 2002). The trees within this biome are tallest in the east where they grow in deeper sands and become more shrub-like to the west where they grow in shallower soils.

The indigenous trees found within the region include Makalani Palm Trees (*Hyphaene petersiana*) and Mopane Trees (*Colophospermum mopane*). The Makalani Palm and Mopane trees are protected tree species and should thus not be removed. If removal is required a permit needs to be obtained from the Ministry of Agriculture Water and Forestry prior to removal. Trees protected under the Forestry Act 12 of 2001 should be protected within the layout of the proposed development.

There are no significant fauna and flora found to be located within the development area.

4 PROJECT DESCRIPTION

4.1 PROJECT COMPONENTS

As previously outlined in Section 1.1, the proposed project involves the following activities:

• Formalisation of cemetery in Oshikuku Extension 1.

These components will be described in further detail below, in terms of their design, layout and footprint.

4.2 ALTERNATIVES

As pointed out in Section 1.4 above various layout alternatives were initially considered by the proponent, ultimately resulting in the final layouts.

4.2.1 No – Go Alternative

The no-go alternative is the baseline against which all alternatives are assessed. The no-go alternative would essentially entail maintaining the current situation, whereby there will exist an encroachment of land on various erven in Oshikuku Extension 1. In order for the proponent to rectify the current cadastral overlap it is necessary to re-plan the subject area (which is the Roman Catholic church cemetery area) and formalize the cemetery area which encroaches over a number of planned erven within Oshikuku Extension 1.

4.3 THE PROPOSED DEVELOPMENT

When Oshikuku Extension 1 was established, ownership of the north western part of the extension was claimed by the Roman Catholic Church. After consultation between the Oshikuku Town Council and the church it was resolved that the land claimed by the church should remain the property of the church. Furthermore, the church has recently allocated grave sites on the western area which now forms part of Oshikuku Extension 1. Resultantly the Roman Catholic church cemetery area encroaches over a number of planned erven within Oshikuku Extension 1.

In light of the above the Oshikuku Town Council is in process of re-planning the subject area in order to rectify the current cadastral overlap. The rectification of the subject area is outlined in a separate scoping report which will be submitted to MEFT for review.

outlined and as such the area needs to be formalized. Figure 7 below illustrates the cemetery area to be formalized.

The proposed re-planning will result in the cadastral boundaries for the existing cemetery to be

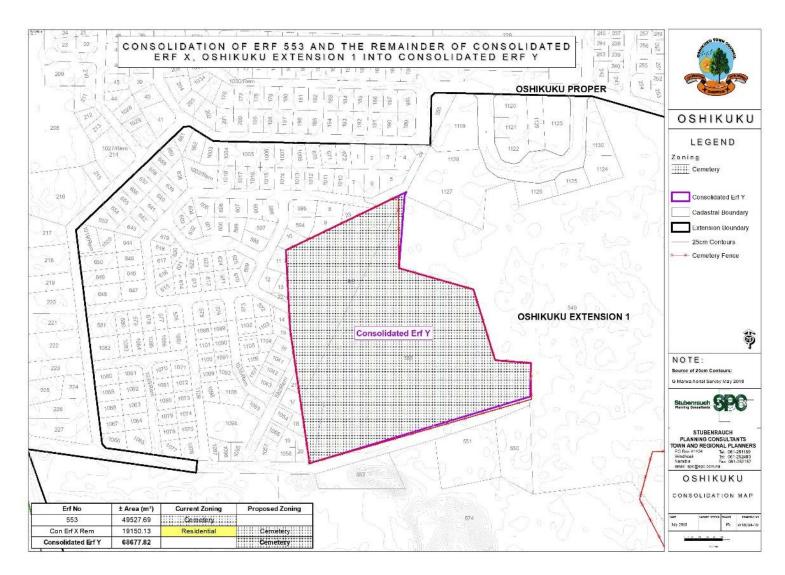


Figure 7: Consolidation of Erf 553 and the Remainder of Consolidated Erf X, into Consolidated Erf Y

4.3.1 Engineering Services and Access Provision

The subject erven will be serviced and connected to the Municipal Reticulation Services of the town consisting of water, electricity and sewage. It is expected that the services will be sufficient for this area and proposed development.

Access to the erven will be obtained via the existing 582/Rem and 1036/Rem Oshikuku Extension 1 internal street.

5.1 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 thus incorporated the requirements of Namibia's legislation, but also takes account of international guidelines, including Southern African Development Community (SADC) guidelines and the Namibian EIA Regulations. Public participation in this project has been undertaken to meet the specific requirements in accordance with the international best practice. Please see **Table 4** below for the activities undertaken as part of the public participation process. The I&APs were given time to comment from **14 May to 4 June 2020.**

Table 4: Table of Public Participation Activities

ACTIVITY	REMARKS
Placement of site notices/posters in Oshikuku	See Annexure A
Placing advertisements in two newspapers namely	See Annexure B
the New Era and The Namibian (14 May and 20	
May 2020)	
Written notice to surrounding property owners and	See Annexure C
Interested and Affected Parties via Email (14 May	
2020)	

5.1.1 Environmental Assessment Phase 2

The second phase of the PPP involves the lodging of the Draft Environmental Scoping Report (DESR) to all registered I&APs for comment. Registered and potential I&APs were informed of the availability of the DESR for public comment *via* a letter/email dated **3 July 2020**. An Executive Summary of the DESR was also included in the letters to the registered I&APs. I&APs had until **17 July 2020** to submit comments or raise any issues or concerns they may have with regard to the proposed project. No comments were received during the respective comment periods.

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 where 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 5**.

Table 5: Impact Assessment Criteria

CRITERIA	CATEGORY
Impact	Description of the expected impact
Nature	Positive: The activity will have a social / economical /
Describe type of effect	environmental benefit.
	Neutral: The activity will have no effect
	Negative: The activity will have a social / economical /
	environmental harmful effect
Extent	Site Specific: Expanding only as far as the activity itself (onsite)
Describe the scale of the	Small: restricted to the site's immediate environment within 1 km
impact	of the site (limited)
	Medium: Within 5 km of the site (local)
	Large: Beyond 5 km of the site (regional)
Duration	Temporary: < 1 year (not including construction)
Predicts the lifetime of the	Short-term: 1 – 5 years
impact.	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	Zero: Social and/or natural functions and/ or processes remain
Describe the magnitude	unaltered
(scale/size) of the Impact	Very low: Affects the environment in such a way that natural
	and/or social functions/processes are not affected

CRITERIA	CATEGORY
	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	Improbable: Not at all likely
Describe the probability of	Probable: Distinctive possibility
the Impact <u>actually</u> occurring	Highly probable: Most likely to happen
	Definite: Impact will occur regardless of any prevention measures
Degree of Confidence in	Unsure/Low: Little confidence regarding information available
predictions	(<40%)
State the degree of	Probable/Med: Moderate confidence regarding information
confidence in predictions	available (40-80%)
based on availability of	Definite/High: Great confidence regarding information available
information and specialist	(>80%)
knowledge	
Significance Rating	Neutral: A potential concern which was found to have no impact
The impact on each	when evaluated
component is determined by	Very low: Impacts will be site specific and temporary with no
a combination of the above	mitigation necessary.
criteria.	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.

6.1 MITIGATION MEASURES



There is a mitigation hierarchy of actions which can be undertaken to respond to any proposed project or activity (See **Figure 8** below). These cover avoidance, minimization, restoration and compensation. It is possible and considered sought after to enhance the environment by ensuring that positive gains are included in the proposed activity or project. If negative impacts occur then the hierarchy indicates the following steps.

Impact avoidance: This step is most effective when applied at an early stage of project planning. It can be achieved by:

- not undertaking certain projects or elements that could result in adverse impacts;
- avoiding areas that are environmentally sensitive; and
- putting in place preventative measures to stop adverse impacts from occurring.

Impact minimization: This step is usually taken during impact identification and prediction to limit or reduce the degree, extent, magnitude, or duration of adverse impacts. It can be achieved by:

- scaling down or relocating the proposal;
- redesigning elements of the project; and
 - taking supplementary measures to manage the impacts.

Figure 8: Mitigation Hierarchy

Restoration: This step is taken to improve degraded or removed ecosystems following exposure to impacts that cannot be completely avoided or minimised. Restoration tries to return an area to the

original ecosystem that occurred before impacts. Restoration is frequently needed towards the end of a project's life-cycle but may be possible in some areas during operation.

Impact compensation: This step is usually applied to remedy unavoidable residual adverse impacts. It can be achieved by:

- rehabilitation of the affected site or environment, for example, by habitat enhancement;
- restoration of the affected site or environment to its previous state or better; and
- replacement of the same resource values at another location (off-set), for example, by wetland engineering to provide an equivalent area to that lost to drainage or infill.

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, which may occur due to the proposed activities described in Chapter 4. These include potential impacts, which may arise during the operation of the proposed development (i.e. long-term impacts) as well as the potential construction related impacts (i.e. short to medium term). The assessment of potential impacts will help to inform and confirm the selection of the preferred layouts to be submitted to MEFT: DEA for consideration. In turn, MEFT: DEA's decision on the environmental acceptability of the proposed project and the setting of conditions of authorisation (should the project be authorised) will be informed by this chapter, amongst other information, contained in this EA Report.

The baseline and potential impacts that could result from the proposed development are described and assessed with potential mitigation measures recommended. Finally, comment is provided on the potential cumulative impacts which could result should this development, and others like it in the area, be approved.

7.2 OPERATIONAL PHASE IMPACTS ON THE BIOPHYSICAL ENVIRONMENT

The operational phase impacts are those impacts on the biophysical and socio-economic environment that would occur during the operational phase of the proposed project and are inherently long-term in duration.

7.2.1 Flora and Fauna Impacts (Biodiversity)

Trees protected under the Forestry Act 12 of 2001 should be protected within the development and may not be removed without a valid permit. The trees located on the subject site should be accommodated in the layout and proposed use for the erf.

It is anticipated that the proposed development area and associated infrastructure (e.g. water, sewage, access route, etc.) would have localised negative implications on the environment and associated fauna and flora should the proposed mitigation measures as outlined in the EMP be enforced.

7.2.2 Soil and Ground Water impacts

The operational activities may result in the environmental pollutions such as possible pollution of ground water, land degradation and soil pollution. This may particularly occur due to the use of certain chemicals used during burials. As such mitigation measures outlined within the EMP need to be adhered to, to ensure that these impacts are minimised.

7.2.3 Soil Erosion Impacts

Soil is used to cover the graves and fil out the excavations. As a result lose soil often remain stockpiled which may be susceptible to wind and/or surface-water runoff.

7.3 OPERATIONAL PHASE IMPACTS ON THE SOCIO-EONOMIC ENVIRONMENT

7.3.1 Heritage impacts

No archaeological and heritage resources are expected to be found on the site. The project management should however be made aware of the provisions of the National Heritage Act regarding the prompt reporting of archaeological finds. Section 3.1.2 provides an overview of the archaeological and heritage context of the town and region.

7.3.2 Noise Impacts

The operational activities may result in associated noise impacts, depending on the exact type of activities taking place on the properties. However due to the nature of the land uses proposed for the subject erven it is not expected that the noise levels will be significant if managed well.

7.3.3 Emission Impacts

The air quality in the area is considered to be fairly good. Additional emissions are not expected due to the land uses that are intended for the site.

7.3.4 Visual Impacts

There may be a change in visual characteristics of the site particularly as the area is currently mostly undeveloped. The intended activities for the proposed site may alter the sense of place for the existing community and property owners situated in close proximity to the site, as well as the residents of Oshikuku who frequent the site. The extent of this disturbance will depend on how highly the interested and affected parties valued the initial aesthetic quality of the site. However, it is not expected that the visual impact will be significant as the surrounding area is currently developed.

7.3.5 Social Impacts

A small number of residents from Oshikuku could benefit from employment by the activities taking place at the site.

7.4 CUMULATIVE IMPACTS

The cumulative impact of the proposed developments in regard to the degradation of the project area is very difficult to rate. If all proposed mitigation measures are however in place to minimise the overall impacts, then the cumulative impact can be expected to be rated as *Medium-Low* (*negative*) for the proposed developments.

7.1 ENVIRONMENTAL MANAGEMENT PLAN

An Environmental Management Plan (EMP) is contained in **Annexure E** of this report. The purpose of the EMP is to outline the type and range of mitigation measures that should be implemented during the construction and decommissioning phases of the project to ensure that negative impacts associated with the development are avoided or mitigated.

7.2 SUMMARY OF POTENTIAL IMPACTS

A summary of all the potential impacts from the proposed project assessed above is included in **Table 6**. The **Tables 7 – 8** provide a summary of the mitigation measures proposed for the impacts. While some difference in magnitude of the potential impacts would result from the proposed alternatives this difference was not considered to be significant for any of the potential impacts. As such, the table below applies to all proposed alternatives.

 Table 6: Summary of the significance of the potential impacts

Description of potential impact	Project alternative	No mitigation / mitigation	Exten t	Magnitude	Duration	Significance	Probability	Confidence	Reversibility	Cumulative impact
				OPE	RATION PHAS	E				
	Formalisation	No	Local	Medium-	Short term	Medium	Probable	Certain	Reversible	Medium (-
4 5 1 1	of cemetery	mitigation	1 1	Low	Chart taus		Doods also	Contain	D	ve)
1. Biodiversity	Oshikuku	Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
(Fauna and Flora)	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Formalisation	No mitigation	Local	Medium	Short term	Medium	Probable	Certain	Reversible	Medium (- ve)
2. Surface &		Mitigation	Local	Low	Short term	Medium - low	Probable	Certain	Reversible	Medium - Low (-ve)
ground water	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Formalisation of cemetery	No mitigation	Local	Medium	Short term	Medium – low	Probable	Certain	Reversible	Medium – low (-ve)
3. Soil erosion	Oshikuku	Mitigation	Local	Low	Short term	Low	Probable	Certain	Reversible	Low (-ve)
5. Son erosion	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Formalisation	No mitigation	Local	Very low	Short term	Very low	Probable	Certain	Irreversible	Very low(-ve)
4. Heritage	of cemetery Oshikuku	Mitigation	Local	Negligible	Short term	Negligible	Probable	Certain	Irreversible	Negligible (- ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral

Description of potential impact	Project alternative	No mitigation / mitigation	Exten t	Magnitude	Duration	Significance	Probability	Confidence	Reversibility	Cumulative impact
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Formalisation of cemetery	No mitigation	Local	Medium	Short term	Low	Probable	Certain	Reversible	Low (-ve)
5. Noise impacts	Oshikuku	Mitigation	Local	Low	Short term	Very Low	Probable	Certain	Reversible	Very low (- ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Formalisation	No mitigation	Local	Medium	Short term	Low	Probable	Certain	Reversible	Low (-ve)
6. Emissions		Mitigation	Local	Low	Short term	Very Low	Probable	Certain	Reversible	Very Low (- ve)
impacts	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Formalisation	No mitigation	Local	Low	Short term	Medium	Probable	Certain	Reversible	Low (-ve)
7. Waste	of cemetery Oshikuku	Mitigation	Local	Very low	Short term	Low	Probable	Certain	Reversible	Very low (- ve)
	No go	No mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Short term	Neutral	Probable	Certain	Reversible	Neutral
	Formalisation	No mitigation	Local	Medium	Medium term	Medium	Probable	Certain	Reversible	Low (-ve)
8. Surface & ground water	of cemetery Oshikuku	Mitigation	Local	Medium- Low	Medium term	Medium- Low	Probable	Certain	Reversible	Very-Low (- ve)
	No go	No mitigation	Local	Low	Medium term	Neutral	Probable	Certain	Reversible	Neutral

Description of potential impact	Project alternative	No mitigation / mitigation	Exten t	Magnitude	Duration	Significance	Probability	Confidence	Reversibility	Cumulative impact
		Mitigation	Local	Low	Medium term	Neutral	Probable	Certain	Reversible	Neutral
9. Visual & sense of place	Formalisation of cemetery	No mitigation	Local	Medium	Medium term	Medium	Probable	Certain	Reversible	Medium (- ve)
	Oshikuku	Mitigation	Local	Medium- Low	Medium term	Medium- Low	Probable	Certain	Reversible	Medium- Low (-ve)
	No go	No mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
		Mitigation	Local	Neutral	Medium term	Neutral	Probable	Certain	Reversible	Neutral
10. Social impact	Formalisation of cemetery	No mitigation	Local	Medium	Long term	Low (+)	Probable	Probable	Reversible	Medium (+)
	Oshikuku	Mitigation	Local	Medium	Long term	Low (+)	Probable	Probable	Reversible	Medium (+)
	No go	No mitigation	Local	Neutral	Long term	Neutral	Probable	Probable	Reversible	Neutral
		Mitigation	Local	Neutral	Long term	Neutral	Probable	Probable	Reversible	Neutral

Table 7: Proposed mitigation measures for the operational phase

	CONSTRUCTION PHASE IMPACTS
Impact	Mitigation Measures
Flora and Fauna	 Adapt the proposed developments to the local environment – e.g. small adjustments to the site layout could avoid potential features such as water bodies and vegetation. Prevent the destruction of protected and endemic plant species. The plants that are to be kept should be clearly marked with "danger tape" to prevent accidental removal. Regular inspection of the marking tool should be carried out. The very important plants should be "camped off" to prevent the unintended removal or damage to these trees. Recommend the planting of local indigenous species of flora as part of the landscaping as these species would require less maintenance than exotic species. Transplant removed plants where possible, or plant new plants in lieu of those that have been removed. Prevent the introduction of potentially invasive alien ornamental plant species such as; <i>Lantana</i>, <i>Opuntia</i>, <i>Prosopis</i>, <i>Tecoma</i>, etc.; as part of the landscaping as these species could infest the area further over time.
Surface and Ground Water	 A no-go buffer area of at least 15 m should be allocated to any water bodies in the area. No dumping of waste products of any kind in or in close proximity to any surface water bodies. Contaminated runoff from the various operational activities should be prevented from entering any surface or ground water bodies. Ensure that surface water accumulating on-site are channeled and captured through a proper storm water management system to be treated in an appropriate manner before disposal into the environment.

CONSTRUCTION PHASE IMPACTS					
Impact	Mitigation Measures				
	 The base of all burial pits must be at least 1 meter above the highest natural water table to minimise seepage directly into the groundwater. No digging of wells or boreholes for potable water within at least 250 meter of any grave. 				
Soil Erosion	 Appropriate erosion control structures must be put in place where soil may be prone to erosion. Checks must be carried out at regular intervals to identify areas where erosion is occurring. Appropriate remedial actions are to be undertaken wherever erosion is evident. Excavated soils not to be stockpiled on site and to be used as backfill and compacted in the graves. 				
Heritage	 The project management should be made aware of the provisions of the National Heritage Act regarding the prompt reporting of archaeological finds. In the event of such finds, construction must stop, and the project management or contractors should notify the National Heritage Council of Namibia immediately. 				
Noise	 Limit operational times to acceptable daylight hours. Install technology such as silencers on heavy machinery. Do not allow the use of horns as a general communication tool but use it only where necessary as a safety measure. 				
Waste	 A sufficient number of waste bins should be placed around the site for the soft refuse. A sufficient number of skip containers for the heavy waste and rubble should be provided for around the site. Solid waste will be collected and disposed of at an appropriate local land fill or an alternative approved site, in consultation with the local authority. 				
Visual and Sense of Place	• It is recommended that more 'green' technologies be implemented within the architectural designs and building materials of the development where possible in order to minimise the visual prominence of such a development within the more natural surrounding landscape.				

	CONSTRUCTION PHASE IMPACTS
Impact	Mitigation Measures
Emissions	 Natural colours and building materials such as wood and stone should be incorporated as well as the use of indigenous vegetation in order to help beautify the development. Visual pollutants can further be prevented through mitigations (i.e. keep existing trees, introduce tall indigenous trees; keep structures unpainted and minimising large advertising billboards). Consider tarring of the internal road network. Manage activities that generate emissions.
Social Impacts	 No specific mitigation measures are required, only that the local community be consulted in terms of possible job creation opportunities and must be given first priority if unspecialised job vacancies are available.

Table 8: Proposed mitigation measures for the decommissioning phase

	DECOMMISSIONING PHASE IMPACTS						
Impact	Mitigation Measures						
Loss of burial site for the community due to cemetery closure	The Proponent should, consider making arrangements well in time for a new cemetery before this cemetery reaches full capacity.						

8.1 OPERATIONAL PHASE

With reference to **Table 6**, none of the negative operational phase impacts were deemed to have a high significance impact on the environment. The operational impacts were assessed to a *Medium to Low (negative)* significance, without mitigation measures. With the implementation of the recommended mitigation measures in Chapter 7 as well as in the EMP, the significance of the operational phase impacts is likely to be reduced to a *Low (negative)*.

8.2 LEVEL OF CONFIDENCE IN ASSESSMENT

With reference to the information available at the project planning cycle, the confidence in the environmental assessment undertaken is regarded as being acceptable for the decision-making, specifically in terms of the environmental impacts and risks. The Environmental Assessment Practitioner believes that the information contained within this FESR is adequate to allow MEFT: DEA to be able to determine the environmental acceptability of the proposed project.

It is acknowledged that the project details will evolve during the detailed design and construction phases. However, these are unlikely to change the overall environmental acceptability of the proposed project and any significant deviation from what was assessed in this FESR should be subject to further assessment. If this was to occur, an amendment to the Environmental Authorisation may be required in which case the prescribed process would be followed.

8.3 MITIGATION MEASURES

With the implementation of the recommended mitigation measures in Chapter 7 as well as in the EMP, the significance of the construction and operational phase impacts is likely to be reduced to a Low (negative). It is further extremely important to include an Environmental Control Officer (ECO) on site during the construction phase of the proposed project to ensure that all the mitigation measures discussed in this report and the EMP are enforced.

It is noted that where appropriate, these mitigation measures and any others identified by MET: DEA could be enforced as Conditions of Approval in the Environmental Authorisation, should MEFT: DEA issue a positive Environmental Authorisation.

8.4 OPINION WITH RESPECT TO THE ENVIRONMENTAL AUTHORISATION

Regulation 15(j) of the EMA, requires that the EAP include an opinion as to whether the listed activity must be authorised and if the opinion is that it must be authorised, any condition that must be made in respect of that authorisation.

It is recommended that this project be authorised because should the development not proceed there will continue to exist an encroachment of land in Oshikuku Extension 1. This would result in the cemetery not being formalised and would continue to operate without any mitigation measures in terms of the environmental and social impacts.

The "no go" alternative was thus deemed to have a *High (negative)* impact, as all the benefits resulting from the development would not be realised.

The significance of negative impacts can be reduced with effective and appropriate mitigation provided in this report and the EMP. If authorised, the implementation of an EMP should be included as a condition of approval.

8.5 WAY FORWARD

The FESR is herewith submitted to MEFT: DEA for consideration and decision making. If MEFT: DEA approves or requests additional information / studies all registered I&APs and stakeholders will be kept informed of progress throughout the assessment process.

9 REFERENCES

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