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**ENVIRONMENTAL SCOPING ASSESSMENT (ESA) FOR THE PROPOSED ESTABLISHMENT & OPERATION OF TWO NEW (PHASES A & B) CEMETERIES & STREET IN REHOBOTH, HARDAP REGION: NAMIBIA**

**ENVIRONMENTAL ASSESSMENT REPORT: FINAL**

**ECC APPLICATION NUMBER – 002346**

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## **EXECUTIVE SUMMARY**

Rehoboth Town Council (*The Proponent*) is responsible for the planning and management of the establishment of sufficient grave spaces, streets and maintenance thereof within the Town. The Rehoboth Town currently has two existing and operational cemeteries operated by the Town Council. However, the two cemeteries are nearing capacity, hence the need for new cemeteries in the Town. Thus, the need to site and prepare for new cemeteries and a street to access the new cemeteries in the Town.

In terms of the Environmental Management Act (EMA) No.7 of 2007 and its 2012 EIA Regulations, the proposed project triggers listed activities that cannot be undertaken without an ECC. Establishment and operational of Cemetery facilities and street are one of the listed activities that requires an EIA study.

Subsequently, to ensure that the proposed activity is compliant with the national environmental legislation, the project Proponent appointed an independent environmental consultant, Excel Dynamic Solutions (Pty) Ltd to undertake the required Environmental Assessment (EA) process and apply for the ECC on their behalf.

The application for the ECC was compiled and submitted to the competent authority (Ministry of Environment, Forestry and Tourism (MEFT)) as the environmental custodian for project registration purposes. Upon submission of an Environmental Scoping Assessment (ESA) Report and Draft Environmental Management Plan (EMP), an ECC for the proposed project may be considered by the Environmental Commissioner at the MEFT's Department of Environmental Affairs and Forestry (DEAF).



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## **Brief Project Description**

### **Planned Activities:**

Once the ECC is issued, administrative and technical tasks completed, and the Town Council is ready, the construction works, and associated activities will commence. There will be some earthworks to prepare the site for construction and installation necessary services infrastructure and structures required for the cemeteries and the street.

### **Construction phase**

The construction works for the cemeteries will be outsourced to an appointed contractor through the Council's Procurement Procedures. Therefore, the Council cannot predict the exact number of people to be employed by the contractor during this phase, as the contractor is likely to provide its own workforce. However, it is strongly advised that construction contractor and employment preference for unskilled (and skilled, if available) works should be given to the Town's residents.

The following will be constructed in preparation of the new cemetery's operational phase:

- Cemeteries fences and other cemetery related facilities and structures
- Site access roads (street) and parking lots preparation.
- Storeroom and male and female ablution facilities (toilets / washrooms).
- Security office.
- Installing information signs of No Vandalism / Stealing of cemeteries properties (in both English, and Afrikaans languages for comprehension) and penalty thereof.
- Installation of cemeteries entrance and exit points as well as emergency exits points.
- Planting of hedges and other local plants around the cemeteries fences to enhance the sight of the place (visual).

### **Operation and Maintenance (Upkeep) Phase**

This is the phase during which the cemeteries will be operational and maintenance done by the Town Council's responsible Division. The Town Council will, as and when required by its residents provides the needed burial arrangements in the cemeteries and maintenance.



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## **Public Consultation**

### **Public Consultation Activities**

Regulation 21 of the EIA Regulations details steps to be taken during a public consultation process and these have been used in guiding this process. The public consultation process assisted the Environmental Consultant in identifying all potential impacts and aid in the process of identifying possible mitigation measures and alternatives to certain project activities. The communication with I&APs about the proposed activities was done through the following means and in this order to ensure that the public is notified and afforded an opportunity to comment on the proposed project:

- A Background Information Document (BID) containing information about the proposed Reforestation activities was compiled and delivered to relevant Authoritative Ministries, and upon request to all new registered Interested and Affected Parties (I&APs).
- Project Environmental Assessment notices were published in The Namibian and New Era Newspapers (19<sup>th</sup> and 26<sup>th</sup> October 2023) briefly explaining the activity and its locality, inviting members of the public to register as I&APs and submit their comments/concerns.
- A consultation meeting was scheduled and held with the I&APs on the 22<sup>th</sup> of November 2023 at Rehoboth (Rehoboth Town Council Chambers) at 14h00.
- No one showed up for the public consultation meeting.



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## **Potential Impacts identified.**

The following potential impacts are anticipated:

### **Positive impacts:**

- Social: gathering of families to give their loved ones a respectful and dignified burial process in a comfortable place.
- Employment and business opportunities: creation of jobs to the locals (temporary work for the construction phase, and permanent / contractual work for cemetery maintenance and security).

### **Negative impacts:**

- Physical land (soil) disturbance
- Impact on water resources (groundwater pollution)
- Environmental pollution (waste generation)
- Accidental fire outbreaks
- Site safety and security
- Occupation and community health and safety risks
- Vehicular traffic safety
- Noise
- Archaeological resources impact through inadvertent unearthing onsite
- Visual impact.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusions**

The potential impacts that are anticipated from the proposed project activities were identified, described, and assessed. For the significant adverse (negative) impacts with a medium rating, appropriate management, and mitigation measures were recommended for implementation by the Proponent.

The public was consulted as required by the EMA and its 2012 EIA Regulations (Section 21 to 24). This was done via the two newspapers (New Era and The Namibian) used for this



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environmental assessment. A consultation meeting was scheduled in in Rehoboth on the 22<sup>nd</sup> of November 2023. The meeting was no-show. The comments received via email from I&APs were noted for incorporation in this report.

It is crucial for the Proponent and their contractors, as well as for the effective implement of the recommended management and mitigation measures, to protect both the biophysical and social environment throughout the project duration. All these activities would be followed with the aim of promoting environmental sustainability while ensuring a smooth and harmonious existence and purpose of the project activities in the community and the environment at large.

### **Recommendations**

The Environmental Consultant is confident that the potential negative impacts associated with the proposed project activities can be managed and mitigated by the effective implementation of the recommended management and mitigation measures and with more effort and commitment put into monitoring the implementation of these measures.

It is, therefore, recommended that the proposed reforestation activities be granted an ECC, provided that:

- All the management and mitigation measures provided herein are effectively and progressively implemented.
- All required permits, licenses, and approvals for the proposed activities should be obtained as required. These include permits and licenses for land use access agreements to explore and ensure compliance with these specific legal requirements.
- The Proponent and all their project workers or contractors comply with the legal requirements governing their project and its associated activities and ensure that project permits and or approvals required to undertake specific site activities are obtained and renewed as stipulated by the issuing authorities.
- Environmental Compliance monitoring reports should be compiled and submitted to the DEAF Portal as per the provision made on the MEFT/DEAF's portal.



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## **Disclaimer**

Excel Dynamic Solutions (EDS) warrants that the findings and conclusion contained herein were accomplished in accordance with the methodologies set forth in the Scope of Work and Environmental Management Act (EMA) of 2007. These methodologies are described as representing good customary practice for conducting an EIA of a property for the purpose of identifying recognized environmental conditions. There is a possibility that even with the proper application of these methodologies there may exist the subject property conditions that could not be identified within the scope of the assessment, or which were not reasonably identifiable from the available information. The Consultant believes that the information obtained from the record review and during the public consultation processes concerning the proposed reforestation work is reliable. However, the Consultant cannot and does not warrant or guarantee that the information provided by the other sources is accurate or complete. The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluations. No other warranties are implied or expressed.

Some of the information provided in this report is based upon personal interviews, and research of available documents, records, and maps held by the appropriate government and private agencies. This report is subject to the limitations of historical documentation, availability, and accuracy of pertinent records, and the personal recollections of those persons contacted.



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**Appendix B:** Draft Environmental Management Plan (EMP)

**Appendix C:** Curricula Vitae (CVs) for the Environmental Assessment Practitioner (EAP)

**Appendix D:** Proof of Public Consultation (Newspaper Adverts, Attendance registers and Meeting Minutes)

**Appendix E:** Comments /concerns received from stakeholders.

## LIST OF ABBREVIATIONS

Abbreviation	Meaning
AMSL	Above Mean Sea Level
BID	Background Information Document
CV	Curriculum Vitae
DEA	Department of Environmental Affairs
EA	Environmental Assessment
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EDS	Excel Dynamic Solutions
ESA	Environmental Scoping Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
GG	Government Gazette
GN	Government Notice
I&Aps	Interested and Affected Parties



MEFT	Ministry of Environment, Forestry and Tourism
PPE	Personal Protective Equipment
Reg	Regulation
S	Section
TOR	Terms of Reference
REDD	Reducing Emissions from Deforestation and forest Degradation
UNFCCC	United Nations Framework Convention on Climate Change

## DEFINITION OF TERMS

<b>Alternative</b>	A possible course of action, in place of another that would meet the same purpose and need of the proposal.
<b>Baseline</b>	Work done to collect and interpret information on the condition/trends of the existing environment.
<b>Biophysical</b>	That part of the environment that does not originate with human activities (e.g. biological, physical and chemical processes).
<b>Cumulative Impacts/Effects Assessment</b>	In relation to an activity, means the impact of an activity that in it may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
<b>Decision-maker</b>	The person(s) entrusted with the responsibility for allocating resources or granting approval to a proposal.
<b>Ecological Processes</b>	Processes which play an essential part in maintaining ecosystem integrity. Four fundamental ecological processes are the cycling of water, the cycling of nutrients, the flow of energy and biological diversity (as an expression of evolution).



<p><b>Environment</b></p>	<p>As defined in the Environmental Management Act - the complex of natural and anthropogenic factors and elements that are mutually interrelated and affect the ecological equilibrium and the quality of life, including – (a) the natural environment that is land, water and air; all organic and inorganic matter and living organisms and (b) the human environment that is the landscape and natural, cultural, historical, aesthetic, economic and social heritage and values.</p>
<p><b>Environmental Management Plan</b></p>	<p>As defined in the EIA Regulations (Section 8(j)), a plan that describes how activities that may have significant environments effects are to be mitigated, controlled and monitored.</p>
<p><b>Interested and Affected Party (I&amp;AP)</b></p>	<p>In relation to the assessment of a listed activity includes - (a) any person, group of persons or organization interested in or affected by activity; and (b) any organ of state that may have jurisdiction over any aspect of the activity. Mitigate - practical measures to reduce adverse impacts. Proponent – as defined in the Environmental Management Act, a person who proposes to undertake a listed activity. Significant impact - means an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment.</p>
<p><b>Fauna</b></p>	<p>All of the animals that are found in a given area.</p>
<p><b>Flora</b></p>	<p>All of the plants found in a given area.</p>



<b>Mitigation</b>	The purposeful implementation of decisions or activities that are designed to reduce the undesirable impacts of a proposed action on the affected environment.
<b>Monitoring</b>	Activity involving repeated observation, according to a pre-determined schedule, of one or more elements of the environment to detect their characteristics (status and trends).
<b>Proponent</b>	Organization (private or public sector) or individual intending to implement a development proposal.
<b>Public Consultation/Involvement</b>	A range of techniques that can be used to inform, consult or interact with stakeholders affected by the proposed activities.
<b>Scoping</b>	An early and open activity to identify the impacts that are most likely to be significant and require specialized investigation during the EIA work. Can also be used to identify alternative project designs/sites to be assessed, obtain local knowledge of site and surroundings and prepare a plan for public involvement. The results of scoping are frequently used to prepare a Terms of Reference for the specialized input into full EIA.
<b>Terms of Reference (ToR)</b>	Written requirements governing full EIA input and implementation, consultations to be held, data to be produced and form/contents of the EIA report. Often produced as an output from scoping.

## 1 INTRODUCTION

### Project Background

The Rehoboth Town Council (RTC / The Proponent) is responsible for the planning and management of the establishment of sufficient burial spaces and associated maintenance within the Town. The Rehoboth Town currently has two existing and operational cemeteries operated by the Town Council. However, the two existing cemeteries are nearing capacity, hence the need for new cemeteries in the Town. Thus, the need to site and prepare for new cemeteries and a street in the Town. The locality of the proposed site of the cemeteries (marked as cemetery A and Cemetery B) and street and proposed cemeteries and the street are shown on the map in **Figure 1** below.

Section 27(1) of the Environmental Management Act (EMA) (No. 7 of 2007) and its 2012 Environmental Impact Assessment (EIA) Regulations, provides a list of activities that may not be carried out without an EIA undertaken and an ECC obtained. Establishment, Operational, and Maintenance of Cemeteries and streets and all -related activities are listed among activities that may not occur without an ECC. Therefore, individuals or organizations may not carry out the establishment, operational, and maintenance of cemeteries and, streets activities without an ECC awarded to the Proponent.



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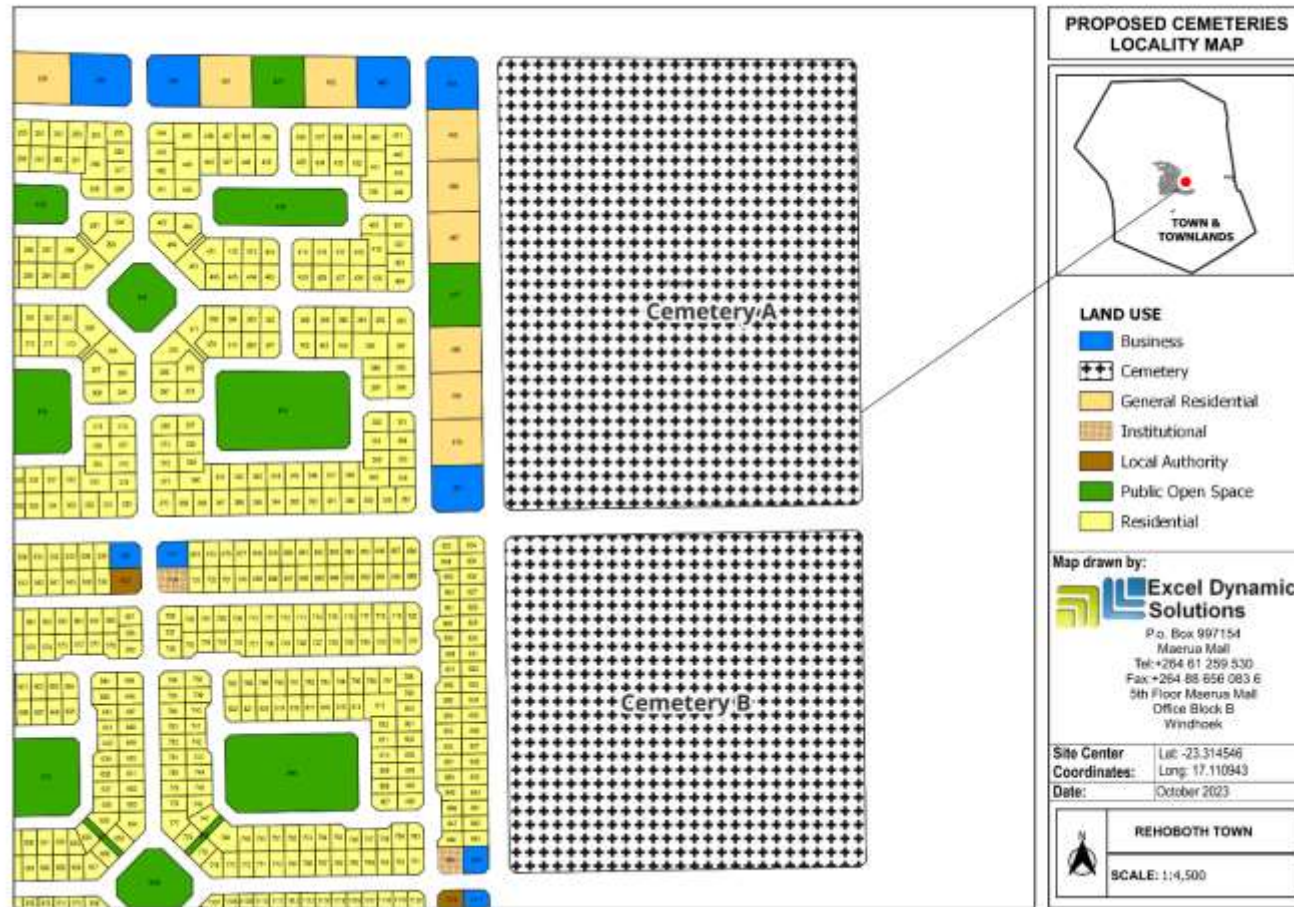


Figure 1(a): Locality map of the proposed cemeteries (phase A and B) and street





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Figure 2: The land use map showing the exist cemeteries and the proposed cemeteries (phase A and B)



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## **Terms of Reference, Scope of Works and Appointed EA Practitioner**

To satisfy the requirements of the EMA and its 2012 EIA Regulations, the Proponent appointed EDS to conduct the required Environmental Assessment (EA) process on their (Proponent's) behalf, and thereafter, apply for an ECC for the proposed reforestation activities. There were no formal Terms of Reference (ToR) provided to EDS by the Proponent. The consultant, instead, relied on the requirements of the Environmental Management Act (No. 7 of 2007) (EMA) and its EIA Regulations (GN. No. 30 of 2012) to conduct the study.

The application for the ECC (**Appendix A**) is compiled and submitted to the Ministry of Environment, Forestry, and Tourism (MEFT), the environmental custodian for project registration purposes. Upon submission of an Environmental Scoping Assessment (ESA) Report and Draft Environmental Management Plan (EMP) (**Appendix B**), an ECC for the proposed project may be considered by the Environmental Commissioner at the MEFT Department of Environmental Affairs and Forestry (DEAF).

The EIA project is headed by Mr. Nerson Tjelos, a qualified and experienced Geoscientist and experienced EAP. The consultation process and reporting process are done by Mr. Leonard Mandume and reviewed by Rose Mtuleni. Mr. Nerson Tjelos and Mr. Mandume Leonard's CVs are presented below in **Appendix C**.

## **Motivation for the Proposed Project**

The existing cemeteries in the Town are reaching full capacity, but the remaining capacity cannot be determined because this will depend on the spacing of grave size according to the grave regulations. The Town Council has ceased burials on the cemeteries for reservations only, i.e., some people committed to paying a high annual fee to reserve their spaces at the cemeteries. Therefore, new cemeteries must be built as delegated by the Parks recreation, Gardens, and Cemeteries department of the Town Council. The new cemeteries are proposed to address the need for further committal grounds in the area. Furthermore, cemeteries bring families together and offer them an insight into local history. Cemeteries are known to have the following importance for the community:



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- A place of historical significance: Cemeteries have a deep historical connection to the local community. They bring residents closer to an understanding of the past and help to provide insights into how people within the area used to live. By looking at the headstones and reading details about those who have passed, people can gain information on the importance of individuals to the community at the time and the jobs and social connections they had during their lives.
- A connection between families: Cemeteries can also hold deep significance for families with loved ones buried in the area. Local cemeteries can help offer a space that brings comfort to families as they struggle with their grief while remembering loved ones. It can provide a serene environment in which to place flowers on important occasions and to spend time connecting spiritually with loved ones who have passed on. It's a deeply personal process that can have many psychological benefits for those who have suffered a recent death in their family.
- A location of memorial for the deceased: Beyond their functional value as an area in which to place people after they have passed, cemeteries can act as a place of memorial. These are a host of ritual events for families and post-funeral events, allowing the family to give their loved one a respectful and dignified burial process at the end of their life. A cemetery therefore holds great significance to communities and their values.



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## **2 PROJECT DESCRIPTION**

### **12.3.2 Planning and Design Phase**

Once an ECC is issued, and administrative and technical tasks are completed by the Town Council, the construction works and associated activities will commence. There will be some earthworks to prepare the site for construction and installation of necessary services infrastructure and structures required for the cemetery.

### **22.3.2 Construction Phase**

The construction works for the cemetery will be outsourced to an appointed contractor through the Council's Procurement Procedures. Therefore, the Council cannot predict the exact number of people to be employed by the contractor during this phase, as the contractor is likely to provide its workforce. However, it is strongly advised that construction contractors and employment preference for unskilled (and skilled, if available) work should be given to the Town's residents. The following will be constructed in preparation for the new cemeteries and the street operational phase:

- Cemetery wall.
- Site access roads and parking lots preparation.
- Storeroom and male and female ablution facilities (toilets/washrooms).
- Security office.
- Information signs against Vandalism / Stealing of cemetery properties (in both English and Afrikaans languages for comprehension) and penalty thereof.
- Installation of cemetery entrance and exit points as well as emergency exit points.
- Planting of hedges around the cemetery wall to enhance the sight of the place (visual).
- Installation of other cemetery-related facilities and structures

### **32.3.2 Operational and Maintenance Phase**

This is the phase during which the cemeteries will be operational. and maintenance is done by the Town Council's relevant maintenance Division. The Town Council will, as and when required by its residents provide the needed burial arrangements in the cemeteries and maintenance.

The cemeteries will be operated similar to the existing cemeteries, but some with improvements.

Rehoboth Town Council

Cemeteries (Phase A & B) and Street



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Like what is currently done at the existing cemeteries, similar sized graves will be prepared for burials.



**Figure 3: The typical preparation of a grave in a cemetery (photo contributed)**

#### **42.3.2 Resources, services, and infrastructure**

The required resources and services that will not require contractors will be provided by the Town Council throughout the life cycle of the cemeteries and associated street. The following services will be required and utilized during the construction and operational phase:

- Human Resources: About 2 to 3 people may be employed by the Town Council to work as caretakers for the cemetery to assist the Town Council Foreman. Security guards will be deployed day and night to guard the cemeteries daily. The security guards will be on-site as per their shifts.
- Water supply: Water is required for grave digging and watering the plants around the cemeteries. The Town Council will install taps at the cemeteries connected to its water



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supply system. The amount of water used for the project activities is not known but from existing operations, the volume of water is low.

- Power supply: Currently, the proposed sites are not equipped with electricity (for lighting). This will be considered for the (proposed) sites. There are powerlines passing on the immediate left of (phase Cemeteries Site 1 and the new cemetery site).
- Site accessibility: The site is accessible from the Town via a well-maintained unpaved access road.
- Health and safety: When required to dig graves and carrying out maintenance, the responsible personnel (employees) will be provided with appropriate Personal Protective Equipment (PPE). Since cemeteries are associated at a certain extent with manual labour such as digging, there will be one fully equipped first aid kit onsite.
- Potential Accidental Fire Outbreaks: the site will be equipped with two fully serviced fire extinguishers to be kept at the security control room (at the entrance).
- Waste management: the waste generated from the construction and operational & upkeeping phases of the cemetery will be handled as follows:
  - Solid waste: The cemetery site will be equipped with secured waste bins for each waste type. Depending on the amount generated, waste will be sorted and collected on a weekly basis or monthly and taken to the Town Council Dumpsite which located to the northwest of the site.
  - Construction rubbles: these will be stored at a designated area at the cemetery for disposal at the Town dumpsite.
  - Hazardous waste: all the fuels and lubricants that will be used onsite, particularly during construction will be properly handled and waste fuels will be stored in containers for disposal at the nearest hazardous waste management facility.
  - Human waste (sewage): The construction workers will be provided with movable (temporary) toilets. Permanent flushing ablution facilities (toilets) will also be constructed for cemetery operational workers, burial attendees (mourners) as well as cemetery day visitors (families, friends and acquaintances).



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### **02.3.2 Decommissioning / Closure**

Cemeteries do not necessarily require decommissioning, but rather closure when they reach full capacity. Therefore, when the new cemetery reaches capacity in future, the Town Council will need to close it and look for a new site. Nevertheless, mitigation measures for closure will need to be made and provided in the draft EMP for the cemetery.



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### **3 PROJECT ALTERNATIVES**

Alternatives are defined as the “different means of meeting the general purpose and requirements of the activity” (EMA, 2007). This section highlights the different ways in which the project can be undertaken and identifies alternatives that may be the most practical, but least damaging to the environment.

Once the alternatives have been established, these are examined by asking the following three questions:

- What alternatives are technically and economically feasible?
- What are the environmental effects associated with the feasible alternatives?
- What is the rationale for selecting the preferred alternative?

#### **13.3.2 Types of Alternatives Considered**

##### **3.3.3 The "No-go" Alternative**

The “No-Go” alternative is the option of not proceeding with the activity, which typically implies a continuation of the status quo. Should the proposed cemeteries and street plan be discontinued, the site will continue to be vacant as it currently is, and probably be planned for something else in the Town. In addition, should the cemeteries and the street be not constructed, none of the associated potential impacts would occur. Furthermore, the No-Go option would mean that the Town Council would face a challenge of not being able to cater to its residents' burial space needs. This is a concern because the existing cemetery in the Town will soon reach its full capacity in approximately 3 to 5 months. The cemeteries and the street development would also mean creation of jobs to local people to work at the cemeteries and continued provision of community and social services by the Town Council to its residents.

If the proposed project is to be discontinued, the current land use for the proposed site will remain unchanged and the Town Council will not be able to meet the residents' basic services such as this (availability of cemetery in the Town). In considering the proposed project, the ‘no-go’ option is not considered the preferred alternative.





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Considering the above losses, the “no-action/go” alternative was not considered a viable option for this project.

### **3.3.3 Cemeteries Location**

The site was selected because it is a viable land considering that there are already similar land uses such as the oxidation-pond to the eastern side of the proposed sites. Therefore, the site can be used for this type of activity. Given the fact that the Town is fast growing to cater for the much-needed development, the availability of land is decreasing, and it would be suitable to site the cemeteries at this specific area.

The site area is also suitable because the area is already open, with low vegetation density (no need to disturb vegetation). Therefore, the site is a perfect option for its location.

## 4 LEGAL FRAMEWORK: LEGISLATION, POLICIES, AND GUIDELINES

Operation, and maintenance of cemeteries and a street activities have legal implications associated with certain applicable legal standards. A summary of applicable and relevant international policies and Namibian legislation, policies, and guidelines for the proposed development is given in this section (**Table 1**). This summary serves to inform the project Proponent, Interested and Affected Parties, and the decision-makers at the DEAF, of the requirements and expectations, as laid out in terms of these instruments, to be fulfilled to establish the proposed reforestation activities.

### **The Environmental Management Act (No. 7 of 2007)**

This EIA was carried out according to the Environmental Management Act (EMA) and its Environmental Impact Assessment (EIA) Regulations (GG No. 4878 GN No. 30).

The EMA has stipulated requirements to complete the required documentation to obtain an ECC for permission to undertake certain listed activities. These activities are listed under the following Regulations:

#### *'11. OTHER ACTIVITIES:*

- *11.2 Construction of cemeteries, camping, leisure and recreation sites.*
- *0.1 (b) The construction of public roads*

The Environmental Impact Assessment (EIA) Regulations GN 28-30 (GG 4878) detail requirements for public consultation within a given environmental assessment process (GN 30 S21). The EIA regulations also outline the required details of a Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15).

Other legal obligations that are relevant to the proposed activities of reforestation activities and related activities are presented in Table 1.

**Table 1: Applicable local, national, and international standards, policies, and guidelines governing the proposed development.**



Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
<p>The Constitution of the Republic of Namibia, 1990 as amended:</p> <p><b>Government of the Republic of Namibia</b></p>	<p>The Constitution of the Republic of Namibia (1990 as amended) addresses matters relating to environmental protection and sustainable development. Article 91(c) defines the functions of the Ombudsman to include:</p> <p>“...the duty to investigate complaints concerning the over-utilization of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia...” Article 95(l) commits the state to actively promoting and maintaining the welfare of the people by adopting policies aimed at the:</p> <p>“...Natural resources situated in the soil and on the subsoil, the internal waters, in the sea, in the continental shelf, and in the exclusive economic zone are property of the State.”</p>	<p>By implementing the environmental management plan, the establishment will be conformant to the constitution in terms of environmental management and sustainability.</p> <p>Ecological sustainability will be the main priority for the proposed development.</p>
<p>Nature Conservation Amendment Act, No. 3 of 2017:</p>	<p>The Ordinance provides a legal framework that protects objects/structures such as geological,</p>	<p>The Proponent will be required to enhance the conservation of biodiversity and the maintenance of the</p>



Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
<b>Ministry of Environment, Forestry and Tourism (MEFT)</b>	ethnological, archaeological, and historical within the project area.	ecological integrity of the areas.
<b>Health &amp; Safety Regulations, GN 156/1997(GG1617): Ministry of Health and Social Services (MHSS)</b>	Makes provision for the health and safety of persons employed or otherwise present in areas. These deal with among other matters; clothing and devices; design, use, operation, supervision, and control of machinery; fencing and guards; and safety measures during repairs and maintenance.	The Proponent should. comply with all these regulations concerning their employees.
<b>The Regional Councils Act (No. 22 of 1992): Ministry of Urban and Rural Development (MURD)</b>	This Act sets out the conditions under which Regional Councils must be elected and administer each delineated region. From a land use and project planning perspective, their duties include, as described in section 28 “to undertake the planning of the development of the region for which it has been established with a view to physical, social and economic characteristics, urbanization patterns, natural resources, economic	The relevant Regional Councils are IAPs and must be consulted during the Environmental Assessment (EA) process. The project site falls under the Hardap Regional Council; therefore, they should be consulted.



Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
	development potential, infrastructure, land utilization pattern and sensitivity of the natural environment.	
Traditional Authority Act (Act No. 25 of 2000): Ministry of Urban and Rural Development (MURD)	The Act also stipulates that Traditional Authorities (TAs) should ensure that natural resources are used on a sustainable basis that conserves the ecosystem. This Act implies that TAs must be fully involved in the planning of land use and development for their area. It is the responsibility of the TA's customary leadership, the Chiefs, to exercise control on behalf of the state and the residents in their designated area.	The cemeteries and street considered under this project is predominantly located in the Rehoboth Constituency within the town land. Therefore, the community members should be consulted throughout the Project.
Water Act 54 of 1956: <b>Ministry of Agriculture, Water and Land Reform (MAWLR)</b>	<p>The Water Resources Management Act 11 of 2013 is present without regulations; therefore, the Water Act No 54 of 1956 is still in force:</p> <p>It prohibits the pollution of water and implements the principle that a person disposing of effluent or waste has a duty of care to prevent pollution (S3 (k)).</p> <p>The Act provides for the control and protection of groundwater (S66 (1), (d (ii))).</p>	The protection (both quality and quantity/abstraction) of water resources should be a priority.



Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
	It also regulates liability for clean-up costs after the closure/abandonment of an activity (S3 (l)). (l)).	
Water Resources Management Act (No 11 of 2013): <b>Ministry of Agriculture, Water and Land Reform (MAWLR)</b>	The Act provides for the management, protection, development, use, and conservation of water resources; provides for the regulation and monitoring of water services, and provides for incidental matters. The objects of this Act are to:  Ensure that the water resources of Namibia are managed, developed, used, conserved, and protected in a manner consistent with, or conducive to, the fundamental principles set out in Section 66 - protection of aquifers, Subsection 1 (d) (iii) provide for preventing the contamination of the aquifer and water pollution control (S68).	
National Heritage Act No. 27 of 2004: <b>Ministry of Education, Arts, and Culture (MEAC)</b>	To provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects; to establish a National Heritage Council; to establish a National Heritage	The Proponent should ensure compliance with this act's requirements. The necessary management measures and related permitting requirements



Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
	Register; and to provide for incidental matters.	must be taken. This is to be done by consulting with the
The National Monuments Act (No. 28 of 1969): <b>Ministry of Education, Arts, and Culture (MEAC)</b>	The Act enables the proclamation of national monuments and protects archaeological sites.	National Heritage Council (NHC) of Namibia. The management measures should be incorporated into the Draft EMP.
Pollution Control and Waste Management Bill (Guideline only)	The relevant parts of this Bill to the project are part 7 and 8. Part 7 states that any person who sells, stores, transports or uses any hazardous substances or products containing hazardous substances shall notify the competent authority, in accordance with sub-section (2), of the presence and quantity of those substances. The competent authority for the purposes of section 74 shall maintain a register of substances notified in accordance with that section and the register shall be maintained in accordance with the provisions. Part 8 provides for emergency preparedness by the person handling hazardous substances, through emergency response plans.	The Proponent should ensure compliance with the Bill requirements throughout the project cycle.
Soil Conservation Act (No 76 of 1969): <b>Ministry of Agriculture, Water</b>	The Act makes provision for the prevention and control of soil erosion and the protection, improvement, and conservation of soil, vegetation, and	Duty of care must be applied to soil conservation and management measures must be included in the EMP.



Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
<b>and Land Reform (MAWLR)</b>	water supply sources and resources, through directives declared by the Minister.	
Public Health Act (No. 36 of 1919): <b>Ministry of Health and Social Services (MHSS)</b>	Section 119 states that “no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.”	The Proponent and all its employees should ensure compliance with the provisions of these legal instruments.
Health and Safety Regulations GN 156/1997 (GG 1617): <b>Ministry of Health and Social Services (MHSS)</b>	Details various requirements regarding the health and safety of laborers.	
Public and Environmental Health Act No. 1 of 2015: <b>Ministry of Health and Social Services (MHSS)</b>	The Act serves to protect the public from nuisance and states that no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.	The Proponent should ensure that the project infrastructure, vehicles, equipment, and machinery are designed and operated in a way that is safe, or not injurious or dangerous to public health and that the noise and dust emissions which could be considered a





Legislation / Policy / Guideline: Custodian	Relevant Provisions	Implications for this project
		<p>nuisance remain at acceptable levels.</p> <p>Public and environmental health should be preserved and remain uncompromised.</p>
<p>Atmospheric Pollution Prevention Ordinance (1976): <b>Ministry of Health and Social Services (MHSS)</b></p>	<p>This ordinance provides for the prevention of air pollution and is affected by the Health Act 21 of 1988. Under this ordinance, the entire area of Namibia, apart from East Caprivi, is proclaimed as a controlled area for section 4(1) (a) of the ordinance.</p>	<p>The proposed project and related activities should be undertaken in such a way that they do not pollute or compromise the surrounding air quality. Mitigation measures should be put in place and implemented on-site.</p>
<p>Hazardous Substance Ordinance, No. 14 of 1974: <b>Ministry of Health and Social Services (MHSS)</b></p>	<p>The ordinance provides for the control of toxic substances. It covers manufacture, sale, use, disposal, and dumping as well as import and export. Although the environmental aspects are not explicitly stated, the ordinance provides for the importing, storage, and handling.</p>	<p>The Proponent should handle and manage the storage and use of hazardous substances on site so that they do not harm or compromise the site environment</p>
<p>Road Traffic and Transport Act, No. 22 of 1999: <b>Ministry of Works and Transport</b></p>	<p>The Act provides for the establishment of the Transportation Commission of Namibia; for the control of traffic on public roads, the licensing of drivers, the registration and licensing of vehicles,</p>	<p>Mitigation measures should be provided for, if the roads and traffic impact cannot be avoided, the relevant permits must be applied for.</p>



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<b>Legislation / Policy / Guideline: Custodian</b>	<b>Relevant Provisions</b>	<b>Implications for this project</b>
<b>(Roads Authority of Namibia)</b>	the control and regulation of road transport across Namibia's borders; and for matters incidental thereto. Should the Proponent wish to undertake activities involving road transportation or access to existing roads, the relevant permits will be required.	
<b>Labour Act (No. 6 of 1992): Ministry of Labour, Industrial Relations and Employment Creation (MLIREC)</b>	Ministry of Labour, Industrial Relations and Employment Creation is aimed at ensuring harmonious labour relations through promoting social justice, occupational health and safety, and enhanced labour market services for the benefit of all Namibians. This ministry ensures the effective implementation of the Labour Act No. 6 of 1992.	The Proponent should ensure that the prospecting and reforestation activities do not compromise the safety and welfare of workers.



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## 5 ENVIRONMENTAL BASELINE

The proposed project activities will be undertaken in specific environmental and social conditions. Understanding the pre-project conditions of the environment will aid in providing background "information" on the status quo and future projections of environmental conditions after proposed works on the site has been done. This also helps the EAP in identifying the sensitive environmental features that may need to be protected through the recommendations and effective implementation of mitigation measures provided.

The baseline information presented below is sourced from a variety of sources including reports of studies conducted in the Hardap Region (Rehoboth Town). Further information was obtained by the Consultant during the site visit.

### 15.3.2 Biophysical Environment

#### 5.3.3 Climate

Climate has a major influence on the project activities. An understanding of climatic conditions helps to determine the appropriate and/or inappropriate times to conduct the project activities.

The area around Rehoboth town has relatively constant temperatures for most of the year. Seasons and temperatures vary during the year. The months of October to March are the warmest with an average temperature of 23.0 °C – 25.4 °C.

The highest rainfall in the project area is usually experienced in January and February which may reach an average of approximately 76 mm. The general amount of rainfall received in the Region is not deemed high enough or disastrous to put the project works to a complete standstill. Little to no rainfall periods are recorded from May to August with an average of 0 – 2 mm.

The relative humidity during the least humid months of the year, i.e. August to October is around 20%, 17%, and 18%, respectively. Namibia has a low humidity in general and the lack of moisture in the air has a major impact on its climate, reducing cloud cover increases the rate of evaporation (Mendelsohn, 2002). **Figure 3** show the climate data around the project area.



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	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C	25.1 °C	24.3 °C	23 °C	20.6 °C	17.8 °C	14.2 °C	13.9 °C	16.4 °C	20.3 °C	23.3 °C	24.3 °C	25.4 °C
(°F)	(77.2) °F	(75.7) °F	(73.4) °F	(69) °F	(64.1) °F	(57.8) °F	(57) °F	(61.6) °F	(68.5) °F	(73.9) °F	(75.7) °F	(77.7) °F
Min. Temperature °C (°F)	18.7 °C (65.6) °F	18.3 °C (64.9) °F	17 °C (62.6) °F	14 °C (57.2) °F	10.6 °C (51.1) °F	6.7 °C (44.1) °F	6.2 °C (43.2) °F	7.9 °C (46.3) °F	11.3 °C (52.3) °F	14.7 °C (58.5) °F	16.2 °C (61.1) °F	18 °C (64.3) °F
Max. Temperature °C	31.4 °C	30.2 °C	29 °C	27.1 °C	25 °C	22.1 °C	21.7 °C	24.9 °C	28.7 °C	31.2 °C	31.8 °C	32.4 °C
(°F)	(88.4) °F	(86.3) °F	(84.2) °F	(80.7) °F	(77) °F	(71.7) °F	(71.1) °F	(76.8) °F	(83.7) °F	(88.2) °F	(89.3) °F	(90.3) °F
Precipitation / Rainfall	72	76	59	27	2	0	0	0	4	11	18	31
mm (in)	(2)	(2)	(2)	(1)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(1)
Humidity(%)	36%	42%	43%	40%	31%	30%	28%	20%	17%	18%	21%	25%
Rainy days (d)	7	7	6	3	1	0	0	0	0	2	2	3
avg. Sun hours (hours)	11.4	10.6	10.2	10.0	9.8	9.6	9.7	10.1	10.7	11.3	11.8	12.0

Figure 4: The climate data around the project

### 5.3.3 Geology

The project (study) area is overlain by the Rehoboth Group and associated rocks (oldest rocks) as shown on the geology map of the project site in. According to Mendelsohn et al., (2003), the geology of the area under which the Rehoboth area falls, in the broader area, Sand is underlain by area consists of sand, gravel, scree, and calcrete. **Figure 5** shows the geology map for the project area..

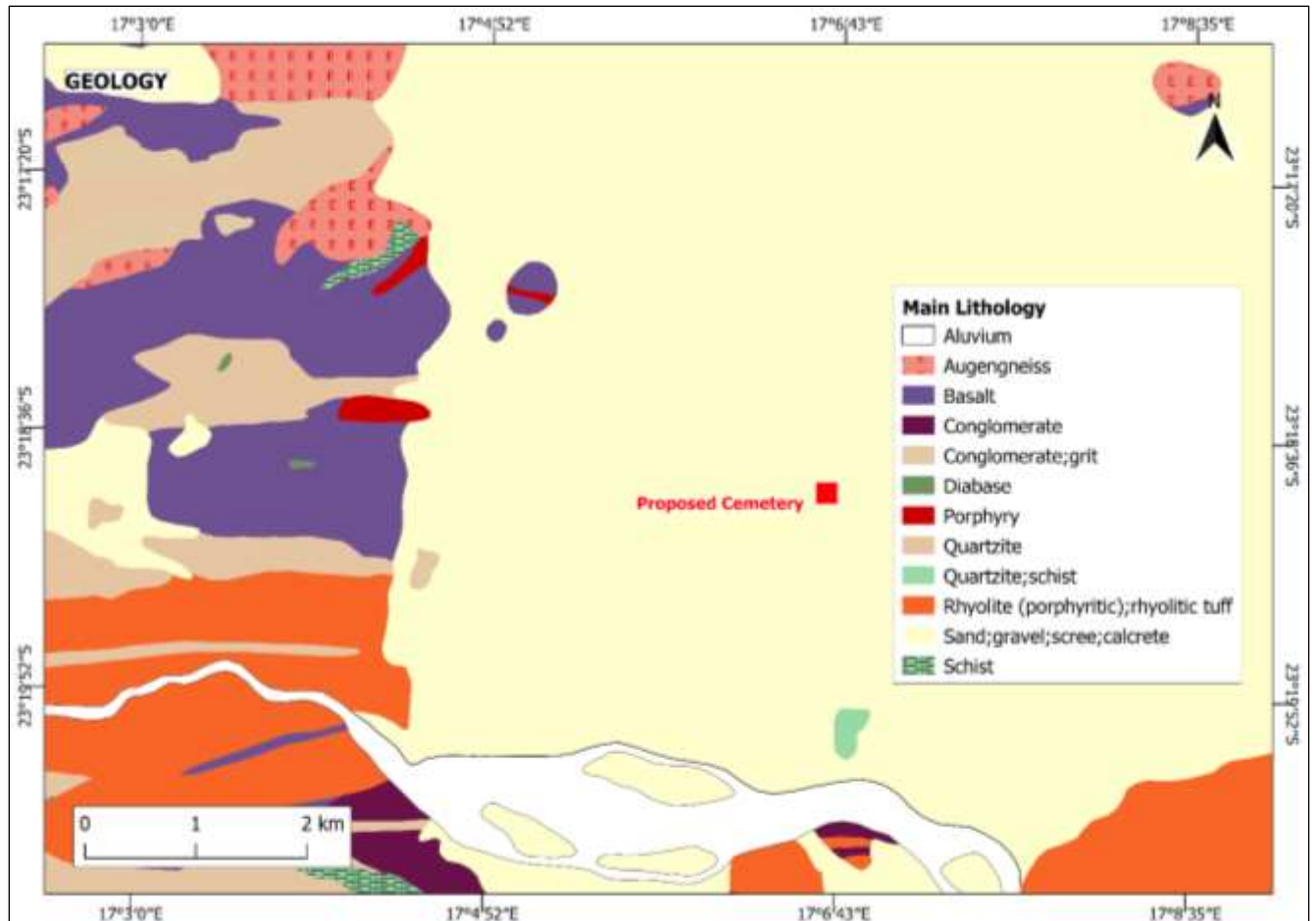


Figure 5: A map of the general geology of the project area

### 5.3.3 Soil

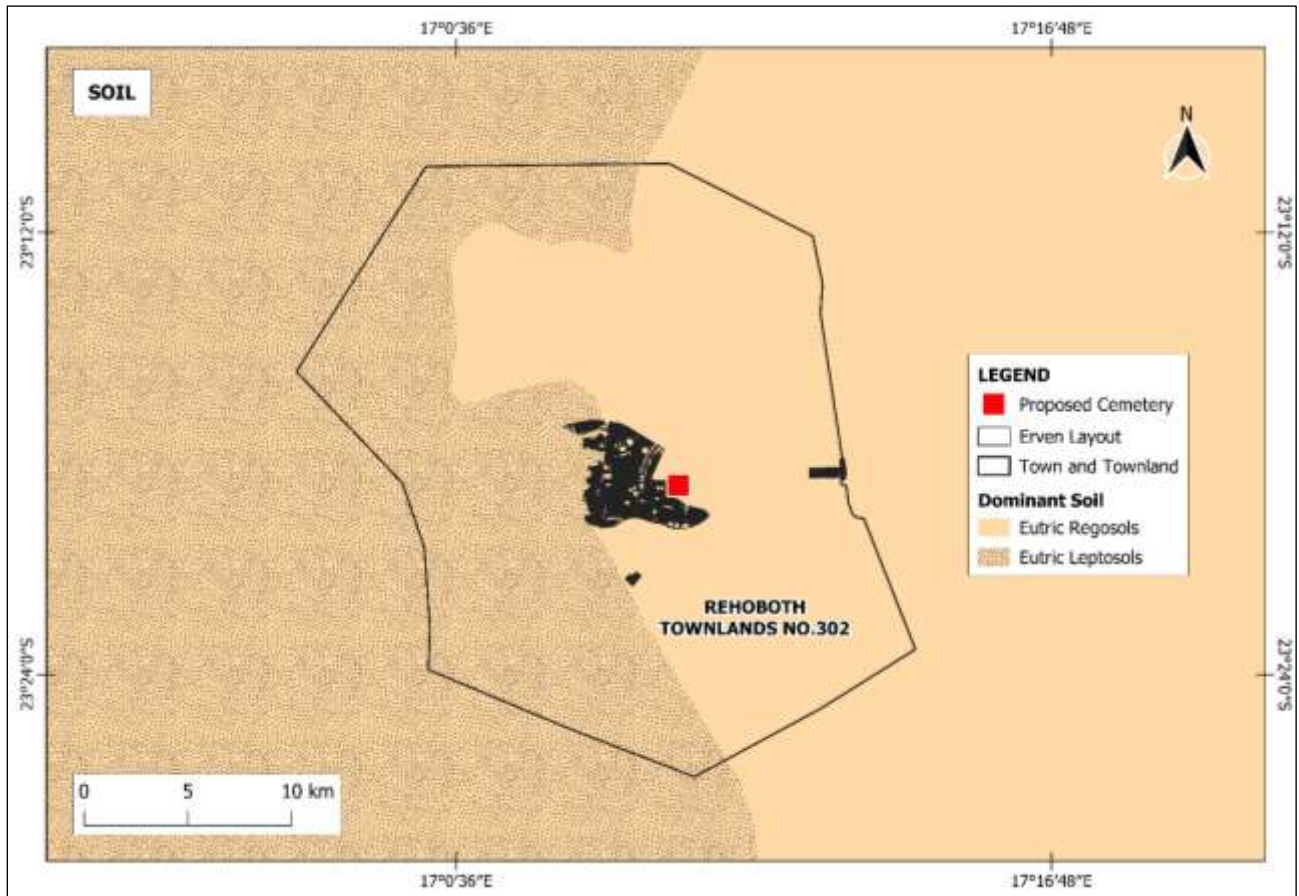
The project area is dominated by Eutric Regosol soils. Eutric Regosols are characterized by specific properties related to their horizon composition, nutrient content, and other soil characteristics. The term "eutric" indicates a relatively high fertility status, suggesting that these soils typically contain a good balance of essential nutrients for plant growth.

In terms of horizon composition, Regosols are soils that lack well-defined horizons or layers. They are often characterized by a relatively homogenous soil profile. The "eutric" quality implies a certain level of fertility, which may be attributed to the presence of essential nutrients like nitrogen, phosphorus, and potassium.



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Eutric Regosols are found in various climatic and geographical regions, and their specific properties can vary based on factors such as climate, parent material, and land use. **Figure 6** below shows the soil types map in the project area.



**Figure 6: Dominant soil types on the site**



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**Figure 7: The soil observed onsite**

### **5.3.3 Hydrology, Groundwater Vulnerability to Pollution, and Water Resources**

In terms of surface water/ hydrology, the site is mainly covered by rock bodies with little groundwater potential. This means that there is limited storage capacity, transmission, and flow of groundwater. Furthermore in terms of vulnerability to ground water pollution the project area falls under moderate vulnerability of ground water resources. **Figure 8** shows the hydrology map around the project area.

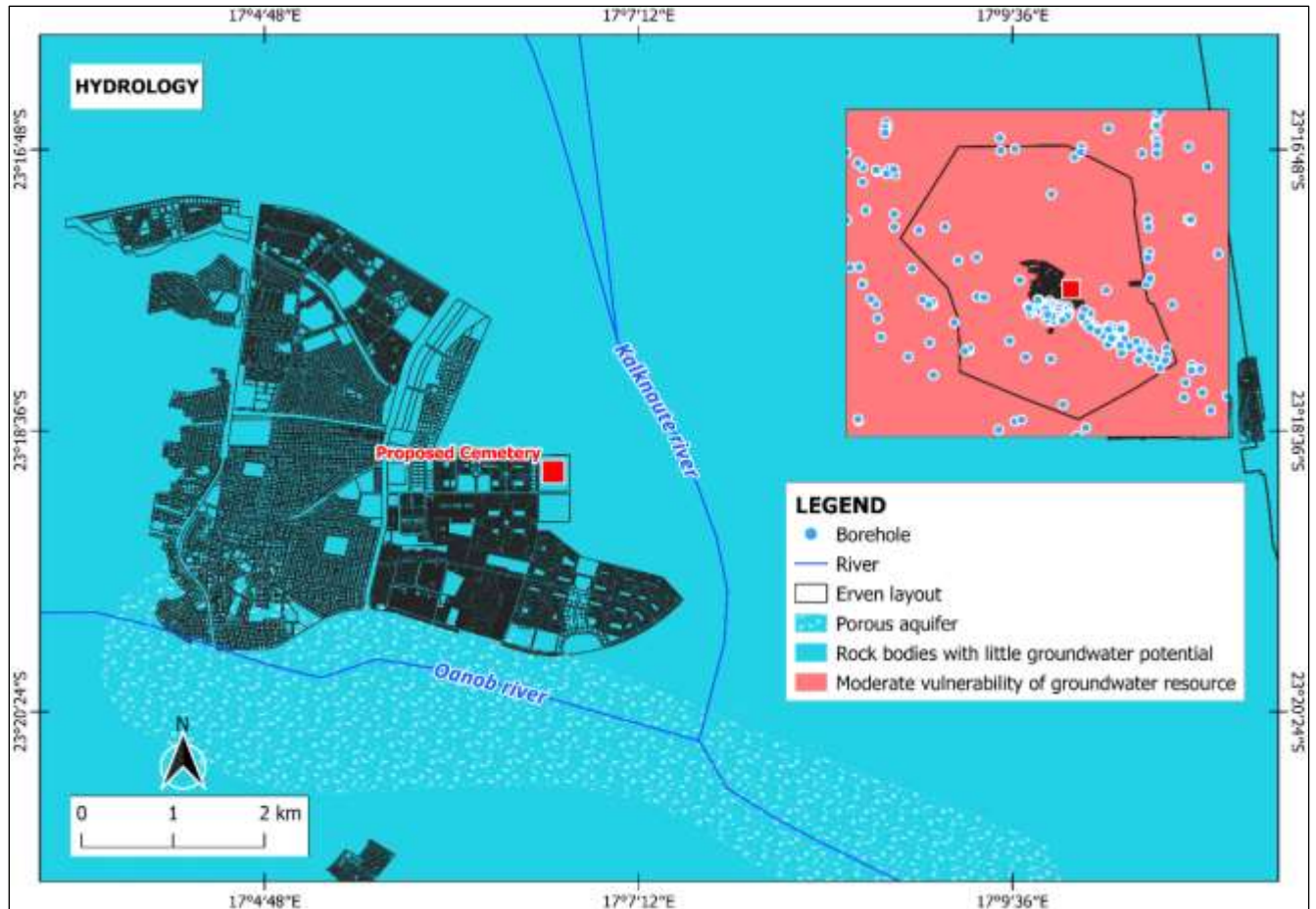


Figure 8: Hydrology map of the project area.

### 5.3.3 Flora and Fauna

#### 5.1.5.1 Flora

The site falls within a Mixed tree and shrub savanna vegetation type. The mixed tree and shrub savanna is a type of ecosystem characterized by a combination of trees and shrubs scattered across a grassy landscape. In this environment, both trees and shrubs coexist, creating a diverse vegetation structure. The composition of species can vary, and these savannas are often found in regions with a distinct dry season. The vegetation within the study site is dominated by Camelthorn trees (*Acacia Erioloba*). **Figure 9** shows the vegetation map around the proposed site.





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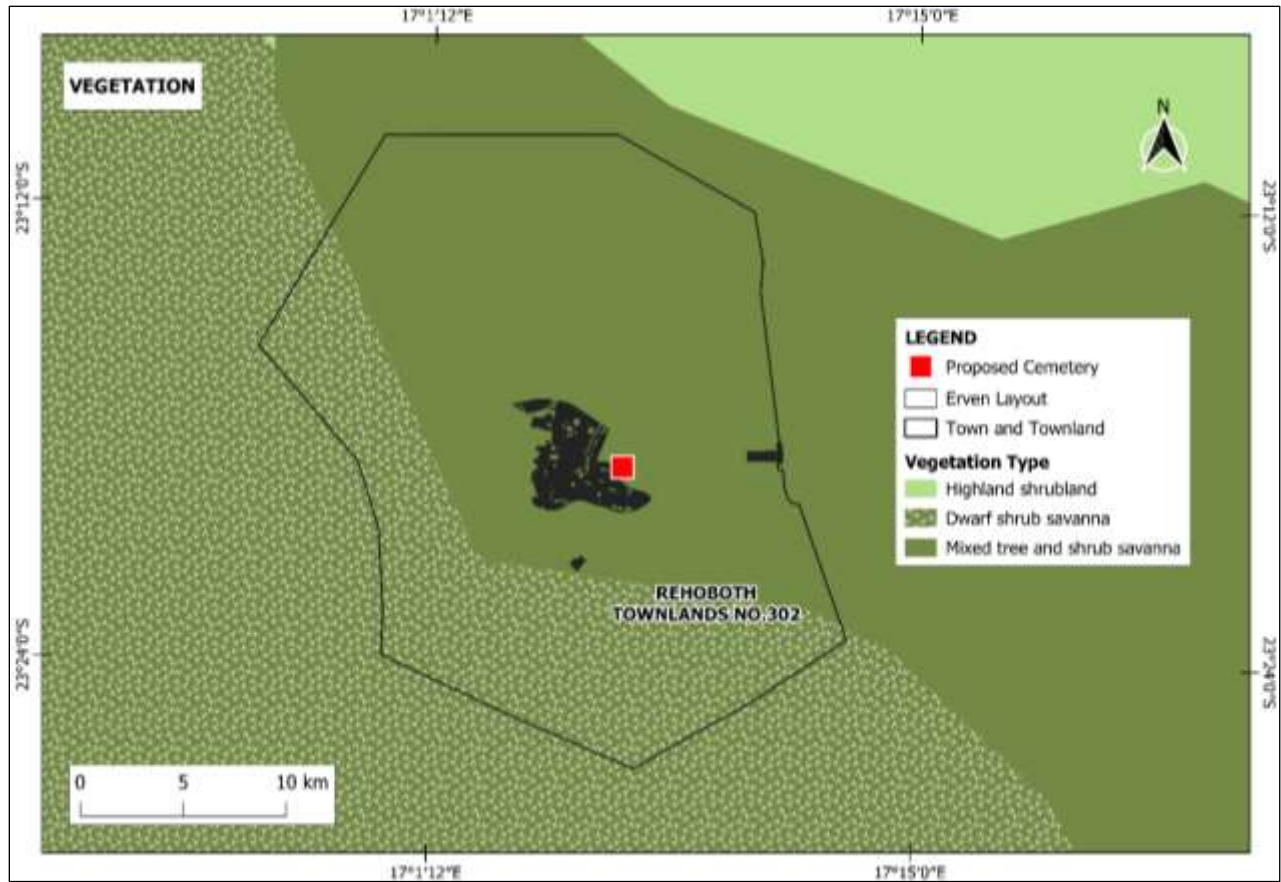


Figure 9: Vegetation map of the project



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**Figure 10: Tree species observed on site**

## **Fauna**

No animal was observed on site during site visit, however, there were some, footprints, and animal droppings observed on the site, which suggests that there is some livestock in the area.



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**Figure 11: Animal droppings (Evidence of faunal presence) on site**

### **25.3.2 Heritage and Archaeology**

#### **5.2.1 Local Level and Archaeological Findings**

Archaeological sites in Namibia are protected under the National Heritage Act of 2004 (No. 27 of 2004). Evidence shows that the emergence of modern humans and their ancestors have lived in Namibia for more than one million years, and there are fossil remains of lineal hominin ancestors as early as the Miocene Epoch (Kinahan, 2017). Namibia has a relatively complete sequence covering the mid-Pleistocene to the Recent Holocene period, represented by thousands of archaeological sites mainly concentrated in the central highlands, escarpment, and the Namib Desert.

The Hardap is not well explored archaeologically. Early investigations by MacCalman (1972) and MacCalman and Grobbelaar (1965) drew attention to the presence of late Pleistocene evidence from the area, and more spectacularly, observations on stone tool use by contemporary hunter-gatherer groups. More recent investigations have documented a late Holocene occupation



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sequence (Albrecht et al 2001) and some of the detailed archaeological characteristics of nomadic pastoral settlement patterns in the area (Kinahan 2001). The area is also considered to have a high cultural heritage sensitivity due to the possible impact of various development initiatives on the traditional life and historical sites of the people (Kinahan 2013).

Therefore, it is highly recommended that the National Heritage act, 27 of 2004 should be adhered to on-site, and a qualified archaeologist should always be on standby/call during the setting up of the site to ensure that no archaeological resources that may be discovered on site are affected/damaged.

### 35.3.2 Surrounding Land Uses

The site falls within Townlands. The Proponent is required to secure a signed agreement with the local authorities before the commencement of the activities.

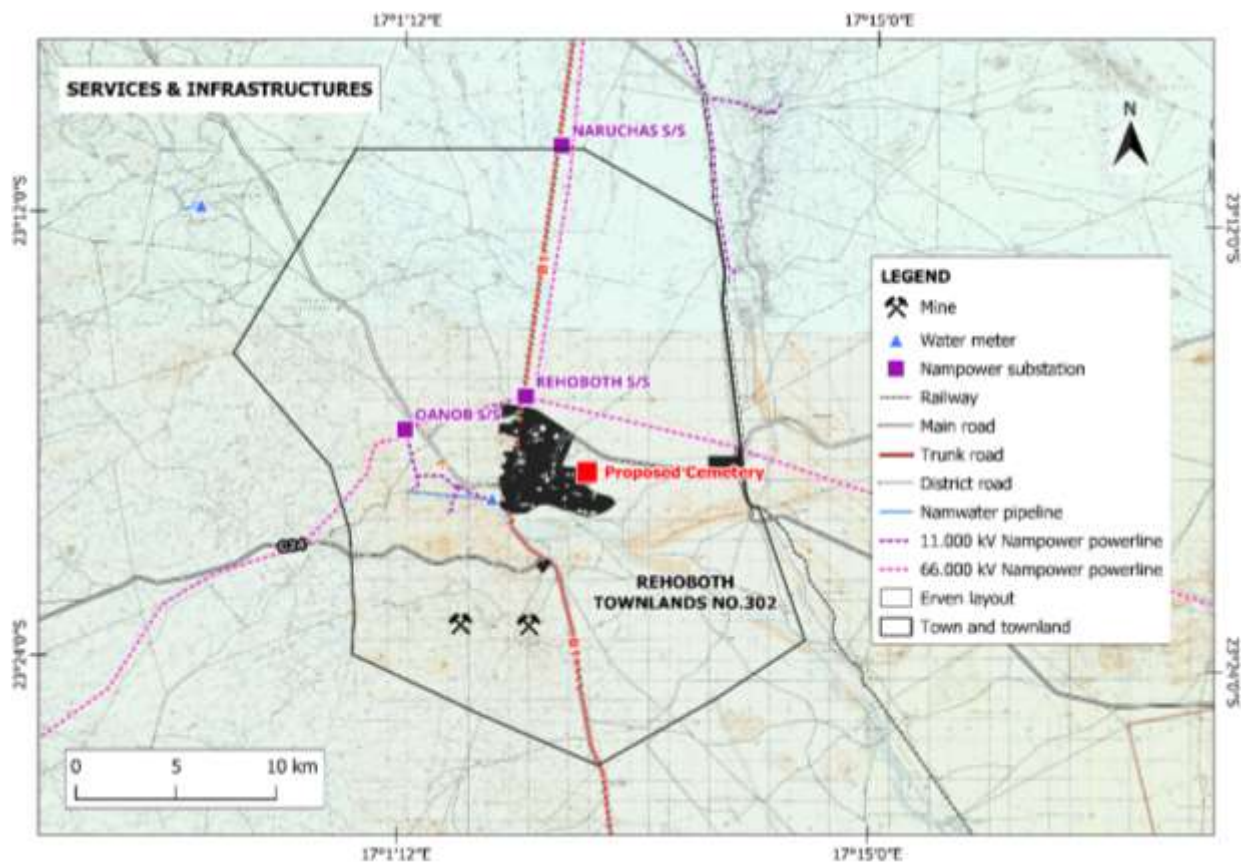


Figure 12: The services and infrastructure map in Rehoboth



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### **Socio-Economic conditions of the Rehobothi area**

Rehoboth is located in central Namibia just north of the Tropic of Capricorn. It is located 90 km south of Windhoek. Rehoboth is intersected from north to south by the national road B1. Rehoboth is situated on the railway line Windhoek—Keetmanshoop, thus, the town is served by Rehoboth railway station.

In 2011, it had a population of 28,843, according to the 2011 Namibian Population and Housing Census. Rehoboth is divided into eight neighbourhoods, called blocks. The oldest part of the town is blocks A, B and C, of which block B contains most public services and shops. Block D is home to the wealthiest inhabitants of the town. Block E is the poorest neighbourhood and was originally (under Apartheid) designated for blacks. Blocks F, G and H are the newest neighbourhoods.

Public amenities include a public hospital, primary and secondary schools and a district court with resident magistrate. There are supermarket complexes, ATMs are widespread, and fuel is readily available. The Oanob Dam, approximately six kilometres from Rehoboth, supplies the town with fresh water. There is also a private landing strip for small aircraft near the Oanob Dam, and Gamsberg Nature Reserve to the west.



## 6 PUBLIC CONSULTATION PROCESS

Public consultation is an important component of an Environmental Assessment (EA) process. It provides potential Interested and Affected Parties (I&APs) with an opportunity to comment on and raise any issues relevant to the project for consideration as part of the assessment process, thus assisting the Environmental Assessment Practitioner (EAP) in identifying all potential impacts and the extent to which further investigations are necessary. Public consultation can also aid in the process of identifying possible mitigation measures. Public consultation for this scoping study has been done following the EMA and its EIA Regulations.

### 6 Pre-identified and Registered Interested and Affected Parties (I&APs)

Relevant and applicable national, regional, and local authorities, local leaders, and other interested members of the public were identified. Pre-identified I&APs were contacted directly, while other parties who contacted the Consultant after project advertisement notices in the newspapers, were registered as I&APs upon their request. Newspaper advertisements of the proposed operational and maintenance of the cemeteries and a street activities were placed in two widely read national newspapers in the region (New Era Newspaper and The Namibian Newspaper). The project advertisement/announcement ran for two consecutive weeks inviting members of the public to register as I&APs and submit their comments. The summary of pre-identified and registered I&APs is listed in **Table 4** below and the complete list of I&APs is provided in **Appendix D**.

**Table 2: Summary of Interested and Affected Parties (I&APs)**

<b>National (Ministries and State-Owned Enterprises)</b>
Ministry of Environment, Forestry and Tourism
Ministry of Health and Social Services
<b>Regional, Local, and Traditional Authorities</b>
Hardap Regional Council
Epupa Constituency Office

Rehoboth Town Council

Cemeteries (Phase A & B) and Street



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General Public
Landowners /Interested members of the public
Namibia Community-Based Tourism Association

### 16.3.2 Communication with I&APs

Regulation 21 of the EIA Regulations details the steps to be taken during a public consultation process and these have been used in guiding this process. Communication with I&APs with regard to the proposed development was facilitated through the following means and in this order:

- A Background Information Document (BID) containing brief information about the proposed Establishment, operational, and maintenance of new cemeteries (phase A & B) and, the street works was compiled and delivered to relevant Authoritative Ministries, and upon request to all newly registered Interested and Affected Parties (I&APs);
- Project Environmental Assessment notices were published in The Namibian and New Era Newspaper (19 and 26 October 2023) briefly explaining the activity and its locality, inviting members of the public to register as I&APs and submit their comments/concerns.
- A consultation meeting was scheduled with the I&APs on the 22<sup>nd</sup> of November 2023 at Rehoboth Town Council Chambers at 14h30.
- Issues or concerns were raised during the public consultation meeting and information obtained from the site visit, to inform the ESA Report and EMP.



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**Figure 13: The site notices placed at Rehoboth Town council office and a Home shop in the location**



**Figure 13: An empty Rehoboth Town Council Chambers, where the public consultation meeting was scheduled to take place**

Rehoboth Town Council

Cemeteries (Phase A & B) and Street





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Issues raised by I&APs have been recorded and incorporated in the environmental report and EMP. The summarized issues raised via emails are presented in **Table 5** below. The issues raised and responses by EDS are attached under **Appendix G** and **H**

**Table 5: Summary of main issues raised, and comments received during public meeting engagements**

Issue	Concern
The protected trees onsite ( <i>Acacia Erioloba</i> )	The protected camelthorn trees in with the project area must/should not be cut down but retained to improve the visual of the cemeteries.



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## **7 IMPACT IDENTIFICATION, ASSESSMENT, AND MITIGATION MEASURES**

### **17.3.2 Impact Identification**

Proposed developments/activities are usually associated with different potential positive and/or negative impacts. For an environmental assessment, the focus is placed mainly on the negative impacts. This is done to ensure that these impacts are addressed by providing adequate mitigation measures such that an impact's significance is brought under control while maximizing the positive impacts of the development. The potential positive and negative impacts that have been identified from the prospecting activities are listed as follows:

Positive impacts:

- Social: gathering of families to give their loved ones a respectful and dignified burial process in a comfortable place.
- Employment and business opportunities: creation of jobs to the locals (temporary work for the construction phase, and permanent / contractual work for cemetery maintenance and security).

Negative impacts:

- Physical land (soil) disturbance
- Impact on water resources (groundwater pollution)
- Environmental pollution (waste generation)
- Accidental fire outbreaks
- Site safety and security
- Occupational and community health and safety risks
- Vehicular traffic safety
- Noise
- Archaeological resources impact through inadvertent unearthing onsite
- Visual impact

### **Impact Assessment Methodology**

The Environmental Assessment process primarily ensures that potential impacts that may occur from project activity are identified and addressed with environmentally cautious approaches and legal compliance. The impact assessment method used for this project is in accordance with Rehoboth Town Council Cemeteries (Phase A & B) and Street



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Namibia's Environmental Management Act (No. 7 of 2007) and its Regulations of 2012, as well as the International Finance Corporation (IFC) Performance Standards.

The identified impacts were assessed in terms of scale/extent (spatial scale), duration (temporal scale), magnitude (severity), and probability (likelihood of occurring), as presented in **Table 6**, **Table 7**, **Table 8**, and **Table 9**, respectively.

To enable a scientific approach to the determination of the environmental significance, a numerical value is linked to each rating scale. This methodology ensures uniformity and that potential impacts can be addressed in a standard manner so that a wide range of impacts are comparable. It is assumed that an assessment of the significance of a potential impact is a good indicator of the risk associated with such an impact. The following process will be applied to each potential impact:

- Provision of a brief explanation of the impact.
- Assessment of the pre-mitigation significance of the impact; and
- Description of recommended mitigation measures.

The recommended mitigation measures prescribed for each of the potential impacts contribute towards the attainment of environmentally sustainable operational conditions of the project for various features of the biophysical and social environment. The following criteria were applied in this impact assessment:

### **7.3.3 Extent (spatial scale)**

The extent is an indication of the physical and spatial scale of the impact. **Table 4** shows the rating of impact in terms of the extent of spatial scale.



**Table 4: Extent or spatial impact rating**

Low (1)	Low/Medium (2)	Medium (3)	Medium/High (4)	High (5)
Impact is localized within the site boundary: Site only	Impact is beyond the site boundary: Local	Impacts felt within adjacent biophysical and social environments: Regional	Impact widespread far beyond site boundary: Regional	Impact extend National or over international boundaries

### 7.3.3 Duration

Duration refers to the timeframe over which the impact is expected to occur, measured in relation to the lifetime of the project. **Table 5** shows the rating of impact in terms of duration.

**Table 5: Duration impact rating**

Low (1)	Low/Medium (2)	Medium (3)	Medium/High (4)	High (5)
Immediate mitigating measures, immediate progress	Impact is quickly reversible, short-term impacts (0-5 years)	Reversible over time; medium term (5-15 years)	Impact is long-term	Long term; beyond closure; permanent; irreplaceable or irretrievable commitment of resources

### 7.3.3 Intensity, Magnitude / severity

Intensity refers to the degree or magnitude to which the impact alters the functioning of an element of the environment. The magnitude of alteration can either be positive or negative. These ratings



were also taken into consideration during the assessment of severity. **Table 6** shows the rating of impact in terms of intensity, magnitude or severity.

**Table 6: Intensity, magnitude or severity impact rating**

Type of criteria	Negative				
	H- (10)	M/H- (8)	M- (6)	M/L- (4)	L- (2)
<b>Qualitative</b>	Very high deterioration, high quantity of deaths, injury of illness / total loss of habitat, total alteration of ecological processes, extinction of rare species	Substantial deterioration, death, illness or injury, loss of habitat / diversity or resource, severe alteration or disturbance of important processes	Moderate deterioration, discomfort, partial loss of habitat / biodiversity or resource, moderate alteration	Low deterioration, slight noticeable alteration in habitat and biodiversity. Little loss in species numbers	Minor deterioration, nuisance or irritation, minor change in species / habitat / diversity or resource, no or very little quality deterioration.

### 7.3.3 Probability of occurrence

Probability describes the likelihood of the impacts occurring. This determination is based on previous experience with similar projects and/or based on professional judgment. **Table 7** shows impact rating in terms of probability of occurrence.



**Table 7: Probability of occurrence impact rating**

Low (1)	Medium/Low (2)	Medium (3)	Medium/High (4)	High (5)
<p>Improbable; low likelihood; seldom. No known risk or vulnerability to natural or induced hazards.</p>	<p>Likely to occur from time to time. Low risk or vulnerability to natural or induced hazards</p>	<p>Possible, distinct possibility, frequent. Low to medium risk or vulnerability to natural or induced hazards.</p>	<p>Probable if mitigating measures are not implemented. Medium risk of vulnerability to natural or induced hazards.</p>	<p>Definite (regardless of preventative measures), highly likely, continuous. High risk or vulnerability to natural or induced hazards.</p>

**7.3.3 Significance**

Impact significance is determined through a synthesis of the above impact characteristics. The significance of the impact “without mitigation” is the main determinant of the nature and degree of mitigation required. As stated in the introduction to this section, for this assessment, the significance of the impact without prescribed mitigation actions is measured.

Once the above factors (**Table 6, Table 7, Table 8** and **Table 9**) have been ranked for each potential impact, the impact significance of each is assessed using the following formula:

**SIGNIFICANCE POINTS (SP) = (MAGNITUDE + DURATION + SCALE) X PROBABILITY**

The maximum value per potential impact is 100 significance points (SP). Potential impacts were rated as high, moderate or low significance, based on the following significance rating scale (**Table 8**).



**Table 8: Significance rating scale**

<b>Significance</b>	<b>Environmental Significance Points</b>	<b>Colour Code</b>
High (positive)	>60	H
Medium (positive)	30 to 60	M
Low (positive)	1 to 30	L
Neutral	0	N
Low (negative)	-1 to -30	L
Medium (negative)	-30 to -60	M
High (negative)	-60<	H

**Positive (+)** – Beneficial impact

**Negative (-)** – Deleterious/ adverse+ Impact

**Neutral** – Impacts are neither beneficial nor adverse

For an impact with a significance rating of high (-ve), mitigation measures are recommended to reduce the impact to a medium (-/ve) or low (-ve) significance rating, provided that the impact with a medium significance rating can be sufficiently controlled with the recommended mitigation measures. To maintain a low or medium significance rating, monitoring is recommended for a period to enable the confirmation of the significance of the impact as low or medium and under control.

The assessment of the reforestation phases is done for pre-mitigation and post-mitigation.

The risk/impact assessment is driven by three factors:

**Source:** The cause or source of the contamination.

**Pathway:** The route taken by the source to reach a given receptor

**Receptor:** A person, animal, plant, ecosystem, property, or a controlled water source. If contamination is to cause harm or impact, it must reach a receptor.



A pollutant linkage occurs when a source, pathway, and receptor exist together. Mitigation measures aim firstly, to avoid risk and if the risk cannot be avoided, mitigation measures to minimize the impact are recommended. Once mitigation measures have been applied, the identified risk would reduce to lower significance (Booth, 2011).

This assessment focuses on the potential negative impacts stemming from the proposed activities of the site are described, assessed, and mitigation measures provided thereof. Further mitigation measures in the form of management action plans are provided in the Draft Environmental Management Plan.

### 27.3.2 Assessment of Potential Negative Impacts

The main potential negative impacts associated with the operation and maintenance phase are identified and assessed below:

#### 7.3.3 Physical Disturbance to Soil

The project activities will involve the movement of heavy vehicles and equipment onsite during construction (compaction of soils) and digging during operational phase will potentially result in soil disturbance. Activities such as stockpiling the soils during construction and operational phase for longer periods would leave the already exposed soils vulnerable to erosion. This impact is probable because the proposed cemeteries site is vacant (bare), i.e., few vegetation cover. The impact can be rated as low if no mitigation measures are implemented. However, with the implementation of mitigation measures, the impact significance will reduce to very low. The impact is assessed in Table **Table 9** below

**Table 9: Assessment of the project impact on soil (physical disturbance) during construction**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 2	M/H - 2	L/M - 3	M/H - 3	M - 21
Post mitigation	L/M - 1	L/M - 1	L - 2	L/M - 2	L - 8





### 7.3.3 Soil and Water Resources Pollution

The proposed activities are associated with less potential pollution sources that may contaminate/pollute soils, and eventually, surface and groundwater. The anticipated potential source of pollution to water resources from the project activities would be hydrocarbons (oil) from project vehicles, machinery, and equipment as well as potential wastewater/effluent from construction of cemeteries and the street related activities.

The spills (depending on volumes spilled on the soils) from machinery, vehicles, and equipment could infiltrate into the ground and pollute the fractured or faulted aquifers on site, and with time reach further groundwater systems in the area. However, it should be noted that the scale and extent/footprint of the activities where potential sources of pollution will be handled is relatively small. Therefore, the impact will be moderately low.

Pre-implementation of any mitigation measures, the impact significance is moderate low and upon implementation, the significance will be reduced to low. The impact is assessed in **Table 10** below.

**Table 10: Assessment of the project impact on soils and water resources (pollution)**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M/L - 2	M/L - 3	M - 4	M - 32
Post mitigation	L - 1	M - 2	L - 1	L/M - 2	L - 8

### 7.3.3 Waste Generation

Domestic and general waste is produced on-site. If the generated waste is not disposed of responsibly, land pollution may occur around the sites. The site is in an area of moderate sensitivity to pollution. Improper handling, storage, and disposal of hydrocarbon products and hazardous materials at the site may lead to soil and groundwater contamination, in case of spills and leakages. Therefore, there is a need for appropriate waste management for the site. To prevent these issues, any hazardous waste that may have an impact on animals, vegetation, water resources, and the general environment should be handled cautiously. Without any mitigation measures, the general impact of waste generation has a medium significance. The



impact will reduce to low significance, upon implementing the mitigation measures. The assessment of this impact is given in **Table 11**.

**Table 11: Assessment of waste generation impact**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	L/M - 2	L/M - 2	M - 6	M - 5	M - 50
Post mitigation	L - 1	L - 1	L - 2	L/M - 2	L - 8

### 7.3.3 Water Resources Use

Water resources is impacted by project activities in two ways, namely through pollution (water quality) or over-abstraction (water quantity) or at times both. For this project, the water supplied to the site will be from the municipal supply line, therefore, direct impact on the water resources through supply (quantity) by the project is none. The impact is assessed in **Table 12** below.

**Table 12: Assessment of the impacts of reforestation on grazing areas**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M: -3	M: -2	M: -2	M/H: 3	M: -21
Post mitigation	L/M: -1	L/M: -1	L/M: -1	L/M: 2	L: -6

### 7.3.3 Occupational Health and Safety Risks (i.e., Veld Fire)

Project personnel (workers) involved in these activities may be exposed to health and safety risks. These may result from accidental injury, owing to either minor (i.e., superficial physical injury) or major (i.e., involving machinery or vehicles) accidents. The site safety of all personnel is the Proponent's responsibility and should be adhered to as per the requirements of the Labour Act (No. 11 of 2007) and the Public Health Act (No. 36 of 1919). Vehicles, equipment, and fuel storage Rehoboth Town Council Cemeteries (Phase A & B) and Street



areas should be properly secured to prevent any harm or injury to the project workers or local animals.

The presence of hydrocarbons on sites may result in accidental fire outbreaks, which could pose a safety risk to the project personnel, equipment, and vehicles. It may also lead to widespread veld fires if an outbreak is not contained and if machinery and equipment are not properly stored, the safety risk may be a concern for project workers and residents.

The impact is probable and has a low significance rating. However, with adequate mitigation measures, the impact rating will be reduced to very low/little. This impact is assessed in **Table 13** below and mitigation measures are provided.

**Table 13: Assessment of the impacts of reforestation on health and safety**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M/L - 2	M - 2	M/H - 3	M - 21
Post mitigation	L/M - 1	L/M - 1	L - 2	L/M - 2	L - 8

### 7.3.3 Disturbance to Archaeological and Heritage resources

The site is on a vacant piece of land and there was no presence of archaeological resources. However, during construction where earthworks will be carried out, there is a potential of discovering such resources such as unmarked old graves through inadvertent destruction during trenching onsite.

The impact is assessed in **Table 14**.

**Table 14: Assessment of the impacts of reforestation on archaeological & heritage resources**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 3	M/H - 4	M - 6	M/H - 4	M - 52
Post mitigation	L/M - 2	L/M - 2	L - 2	L/M - 2	L - 12



### 7.3.3 Social Nuisance: Local Property Intrusion and Disturbance/Damage

The presence of workers may lead to social annoyance to the local community. This could particularly be a concern if they enter or damage private property. The private properties of the locals may include houses, fences, vegetation, livestock, wildlife, or any properties of economic or cultural value to the farm/land owners or land users. Unpermitted and unauthorized entry to private property may cause clashes between the affected property (land) owners and the Proponent.

The impact is rated as of low significance. However, upon mitigation (post-mitigation), the significance will change from a low to a very low/little rating. The impact is assessed and presented in Table 15.

**Table 15: Assessment of the social impact of community property damage or disturbance**

Mitigation Status	Extent	Duration	Intensity	Probability	Significance
Pre mitigation	M - 2	M - 3	M - 4	M/H - 3	M - 27
Post mitigation	L - 1	L - 1	M/L - 4	M/L - 2	L - 12

#### 37.3.2 Cumulative Impacts Associated with Proposed Construction, Operational , and maintenance of Cemeteries (Phase A and B), and the Street

According to the International Finance Corporation (2013), cumulative impacts are defined as “impacts that result from the successive, incremental, and/or combined effects of an action, project, or activity (collectively referred to in this document as “developments”) when added to other existing, planned, and/or reasonably anticipated future impacts”.

Like many other projects, one of the cumulative impacts to which the proposed project and associated activities potentially contribute, are the:

- **Use of water:** While the contribution of this project will not be significant, mitigation measures to reduce water consumption during the project are essential.



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## 8 RECOMMENDATIONS AND CONCLUSION

### Recommendations

The potential positive and negative impacts of the proposed activities in Rehoboth Town were identified and assessed, and appropriate management and mitigation measures were provided thereof, for implementation by the Proponent, their contractors, and project-related employees.

Mitigation measures to the identified impacts have been provided in the Environmental Management Plan, in order for the Proponent to avoid and/or minimize their significance of impacts on the environmental and social components. Most of the potential impacts were found to be of medium-rating significance. With effective implementation of the recommended management and mitigation measures, a reduced rating in the general significance of adverse impacts is expected from Medium to Low. To maintain the desirable rating, the implementation of management and mitigation measures should be monitored by the Proponent directly, or their Environmental Control Officer. Monitoring of implementation will not only be done to maintain low ratings, but also to ensure that all potential impacts identified in this study, and other impacts that might arise during implementation are properly identified in time and addressed right away.

The Environmental Consultant is confident that the potential negative impacts associated with the proposed project activities can be managed and mitigated by effective implementation of the recommended management and mitigation measures, and with effort and commitment towards monitoring the implementation of these measures.

It is, therefore, recommended that in the case of granting an ECC for this project, the proposed construction, operational and maintenance of the proposed cemeteries (phase A and B) and street may be granted an ECC, provided that:

- All the management and mitigation measures provided in the EMP are effectively and progressively implemented.
- All required permits, licenses, and approvals for the proposed activities should be obtained as required. These include permits and licenses for land use access agreements to explore and ensure compliance with these specific legal requirements.
- The Proponent and all project workers and contractors must comply with the legal requirements governing the project and ensure that all required permits and or approvals are obtained and renewed as stipulated by the issuing authorities.



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### **18.3.2 Conclusion**

Based on the assessment done for the proposed cemeteries and the street establishment, the project and its associated activities do not pose a significant risk to the environment that would prompt the no-go option. Therefore, EDS Consultants are confident that the potential negative impacts associated with the project activities can be managed and mitigated by the effective implementation of the recommended management and mitigation measures. This would also be improved by more effort and commitment towards monitoring the implementation of these measures. It is therefore, recommended that the project activities be granted an Environmental Clearance Certificate. The recommendation is set alongside high priority on effective and correct implementation of the mitigation measures provided in the Draft EMP. The monitoring of this implementation is recommended to ensure compliance, thus protecting the biophysical and social environment throughout the project duration.



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