JANUARY 2025

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

FOR THE PROPOSED TOWNSHIPS IN AMINUIS ON THE FOLLOWING PORTIONS:

- PORTION A AND B OF PORTION 6 OF PORTION 5 OF FARM AMINUIS NO.330 (AMINUIS EXTENSION 1 AND 2).
- PORTION A OF PORTION 5 OF FARM AMINUIS RESERVE NO.330 (RIETQUELLE PROPER)

OMAHEKE REGION, NAMIBIA

Final Scoping Report

APP-006908

PROPONENT: Omaheke Regional Council

PREPARED BY:

Turnix
Environmental Consulting

PROJECT INFORMATION

PROPONENT:	Omaheke Regional Council Private Bag 2277, Gobabis, Namibia
PROJECT TITLE:	**EIA FOR THE PROPOSED TOWNSHIPS IN AMINUIS ON THE FOLLOWING PORTIONS:** • Portion A and B of Portion 6 of Portion 5 of Farm Aminuis No.330 (Aminuis Extension 1 and 2). • Portion A of Portion 5 of Farm Aminuis Reserve NO.330 (Rietquelle Proper)
PROJECT TYPE:	Environmental Impact Assessment Study
PROJECT LOCATION:	Aminuis, Omaheke Region, Namibia
ENVIRONMENTAL ASSESSMENT PRACTITIONER	Turnix Environmental Consulting cc **Contact person:** Mr. Olavi Makuti **Cell:** +264 811405033 **E-mail:** olavi.makuti@gmail.com P.O Box 27488, Windhoek, Namibia
DATE OF RELEASE	January 2026
AUTHOR **(LEAD ENVIRONMENTAL ASESSMENT PRACTITIONER)**	Mr. Olavi Makuti 

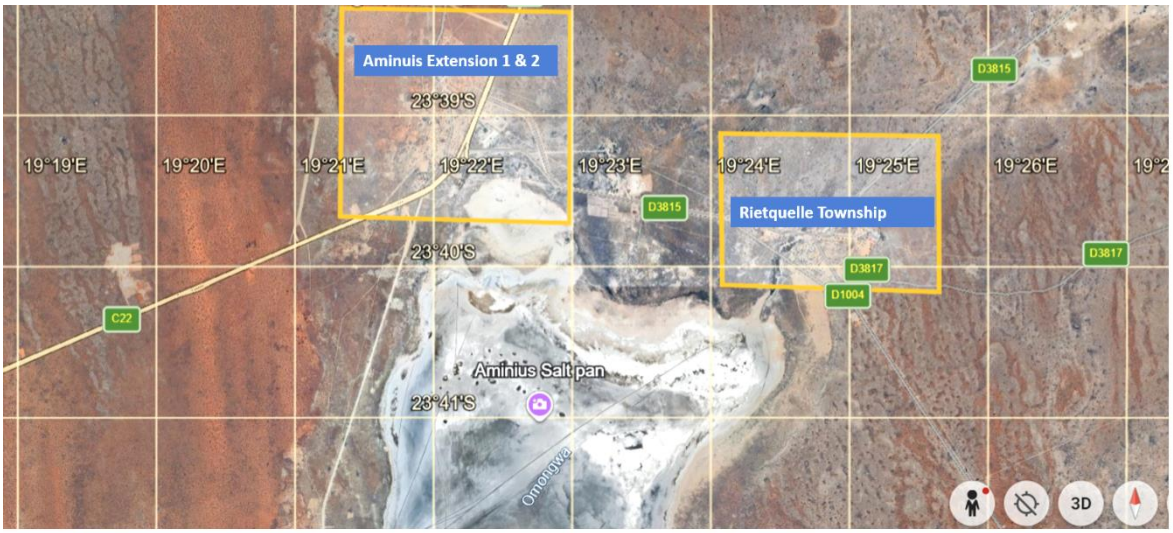
NON-TECHNICAL SUMMARY

The Omaheke Regional Council (Proponent) plans to develop new townships in Aminuis. The Proponent intends to establish three townships to be known as Aminuis Extension 1 and 2 and Rietquelle Proper. The townships will be developed from portions of Farm Aminuis No.330 as follows:

- Portion A and B of Portion 6 of Portion 5 of Farm Aminuis No.330 (Aminuis Extension 1 and 2).
- Portion A of Portion 5 of Farm Aminuis Reserve NO.330 (Rietquelle Proper)

Aminuis is located about 200 km south of Gobabis in the Omaheke Region of Namibia. The settlement can be accessed via the C22 Road from Gobabis as show on the figure below. The Aminuis Settlement is located in the Aminuis Constituency of the Omaheke Region at the following coordinates: **-23.654879, 19.363563.**

Location of Aminuis in the Omaheke Region



Location of Aminuis Extension 1 &2 and Rietquelle Township

This project is part of the Government of the Republic of Namibia's commitment to address land shortage through NDP 6 and other developmental plans. Through NDP 6 the GRN intends to reduce the proportion of households living in informal settlements by almost 50% by 2030.

This project is necessitated by the fact that 46.8% of people in the Omaheke Region dwells in informal dwellings or shacks (Namibia Statistics Agency, 2024). This is very high and concerted effort is required to formalize urban centers and provide decent housing and access to bulk services such as water and electricity.

The Proponent appointed Kakero Urban Planning Consultant to facilitate the planning and approval process of the proposed townships. The development of townships and associated services is listed in accordance with Government Notice No. 29 of 6 February 2012, which requires that an Environmental Clearance Certificate (ECC) be obtained from the Office of the Environmental Commissioner, hence requiring an Environmental Impact Assessment (EIA) to be conducted. In order to fulfil the requirements of the Environmental Management Act No.7 of 2007 and its 2012 EIA Regulations, Kakero Urban Planning Consultant has subcontracted Turnix Environmental Consulting to undertake this EIA and apply for ECC for the proposed townships.

The construction activities at the proposed townships will entail the construction of bulk infrastructure (roads, water reticulation, sewer system, electricity bulk infrastructure) and subsequently, the construction of actual buildings such as houses. **The three proposed townships occupy a total area of 1,651,484.17 (m^2) which is equivalent to 165 ha as calculated below:**

- Aminuis Extension 1: 204234.9 (m^2) – **20 ha**
- Aminuis Extension 2: 326837.79 (m^2) – **33 ha**

- Rietquelle: 1120411.48 (m^2) – **112 ha**
  Total: 1,651,484.17 (m^2)

The proposed layout plans of the three townships provides for various land uses as indicated on the two tables below.

Summary of land use allocation for Aminuis Extension 1 & 2

Land use	Aminuis Extension 1 (m^2)	Aminuis Extension 2 (m^2)	Total size of allocation (m^2)	percentage
Residential	74917.07	100820.04	**175737.11**	**33.09%**
General Residential	300.91	41360.74	**41661.65**	**7.84%**
Business	59039.02	3691.31	**62730.33**	**11.81%**
Local Authority	3411.31	3551.13	**6962.44**	**1.31%**
Institutional	0	25774.8	**25774.8**	**4.85%**
Urban Agriculture	0	65327.82	**65327.82**	**12.30%**
Office	4265.23	0	**4265.23**	**0.80%**
Hospitality	0	13812.34	**13812.34**	**2.60%**
Public Open Space	32460.34	28655.37	**61115.71**	**11.51%**
Remainder Street	29841.02	43844.24	**73685.26**	**13.87%**
TOTAL	204234.9	326837.79	**531072.69**	**100.00%**

Summary of land use allocation for Rietquelle township

Land use	Proper (m^2)	Percentage
Residential	141316.90	12.61%
General Residential	27642.23	2.47%
Business	50812.97	4.54%
Local Authority	2188.48	0.20%
Institutional	3478.70	0.31%
Office	1129.50	0.10%
Public Open Space	73617.13	6.57%
Private Open Space	159542.85	14.24%
Undetermined	169581.52	15.14%
Remainder Street	491101.20	43.83%
TOTAL	1120411.48	**100.00%**

The significance of all the impacts identified and assessed for this project can be effectively mitigated through the implementation of mitigation measures recommended in the Environmental Management Plan (EMP). No impacts with a "*high*" significance rating are expected on this project. The few impacts that were rated "*medium*" before mitigation for both the construction and operational phase of the townships can be successfully reduced to "*low*" with the implementation of the recommended mitigation measures.

Impacts with a "medium" rating and their source.

IMPACT	SOURCE
CONSTRUCTION PHASE	
RELOCATION OF AFFECTED RESIDENTS	Part of the area where the proposed townships will be located is inhabited on an informal basis. There is therefore a need to relocate some residents that are in the way for the bulk infrastructure. This will result socio-economic impacts for the affected residents if it is not undertaken in coordinated manner.
CONSTRUCTION NOISE AND VIBRATIONS	Construction vehicles and equipment such as drillers, compactors and other machineries used to install services during the construction phase can be a nuisance and disturbance to the people that currently reside in the area.
TRAFFIC SAFETY	Major construction involved a large number of big trucks that moves up and down the construction site. If not managed properly, this can result in accidents.
DISTURBANCE OF NATURAL SLOPE AND HABITAT	The construction process will involve the clearing of some areas to make way for the proposed bulk infrastructure. The removal of vegetation and disturbance to the natural slope can facilitate soil erosion if not done properly.
POLLUTION	There are various types of pollution associated with construction activities. The most important one is probably chemical pollution from oil spills resulting from the handling of various machineries used during the construction of bulk services. Other sources of pollution include building rubble and empty bags and containers. Construction workers can also pollute the surrounding environs if they are not provided with adequate toilet facilities.
DUST AND EMISSIONS	Construction activities are generally associated with dust as the substrate is loosened during construction. Activities such as the clearing of vegetation and levelling of land where the bulk services will be constructed will generate dust affecting surrounding communities and construction workers.
OCCUPATIONAL HEALTH AND SAFETY	Like any construction project, occupational health hazards are expected on this project. Workers will be exposed to various situations that can put their safety at risk.
EMPLOYMENT OPPORTUNITIES	The construction of bulk services and subsequently the housing units will provide a few temporary jobs.
OPERATIONAL PHASE	
WASTE MANAGEMENT	Pollution from the operational phase of the project might emanate mainly from untreated effluent and solid waste from the residential and business erven. This can happen if the wastewater treatment facilities in the area are

	not upgraded to a standard that can accommodate the houses and businesses that will be developed in the new townships.
INCREASED DEMAND FOR RESOURCES (DEMAND VS SUPPLY)	The area of Aminuis relies on underground water resources to meet the demand of the settlement. Underground water is limited under natural conditions. This is a scarce resource that needs to be used sparingly. The development of the proposed townships will result in an increase in the demand for water and electricity.

The project will also result in secondary benefits to the community as listed below:

- Provision of housing
- Improved access to bulk services
- Enhanced Business Opportunities

This study concludes the proposed development of townships in Aminuis does not pose any serious environmental concerns, except those mentioned in this report, which can be satisfactorily addressed through the implementation of mitigation measures recommended in the Environmental Management Plan. The positive environmental and socio-economic impacts that the project will realize far out scales the negative ones.

It is therefore recommended that an Environmental Clearance Certificate be issued for the development of townships and associated listed activities on Portion A and B of Portion 6 of Portion 5 of Farm Aminuis No.330 (Aminuis Extension 1 and 2) and Portion A of Portion 5 of Farm Aminuis Reserve NO.330 (Rietquelle Proper), subject to the fulfilment of the mitigation measures provided in this report and Environmental Management Plan.

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LIST OF ACRONYMS

BID	Background Information Document
CENORED	Central North Regional Electricity Distributor
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
GRN	Government of the Republic of Namibia
I&AP	Interested and Affected Parties
MEFT	Ministry of Environment, Forestry and Tourism
Namwater	Namibia Water Corporation
NDP	National Development Plan
ORC	Omaheke Regional Council
Ptn	Portion
RE/	Remainder
ToR	Terms of Reference

1. BACKGROUND AND INTRODUCTION

Urbanization in Namibia has resulted in an acute shortage of serviced land and housing. The Omaheke Region and the Aminuis settlement is no exception. The Government of the Republic of Namibia (GRN) has committed to address land shortage through NDP 6 and other developmental plans. Through NDP 6 the GRN intends to reduce the proportion of households living in informal settlements by almost 50% by 2030.

As such, the Omaheke Regional Council (ORC) plans to develop new townships in Aminuis. Kakero Urban Planning Consultant has been appointed to facilitate the planning and approval process of the proposed townships.

The Omaheke Regional Council (The Proponent) proposes to establish three townships to be known as Aminuis Extension 1 and 2 and Rietquelle Proper, Aminuis. The townships will be developed from portions of Farm Aminuis No.330 as follows:

- Portion A and B of Portion 6 of Portion 5 of Farm Aminuis No.330 (Aminuis Extension 1 and 2).
- Portion A of Portion 5 of Farm Aminuis Reserve NO.330 (Rietquelle Proper)

The proposed developments include the creation of various erven for different land uses such as residential erven, general residential, office, business, institutional, local authority, agriculture and public open space. Various bulk services will be installed within the proposed townships.

The development of townships and associated services is listed in accordance with Government Notice No. 29 of 6 February 2012, which requires that an Environmental Clearance Certificate (ECC) be obtained from the Office of the Environmental Commissioner, hence requiring an Environmental Impact Assessment (EIA) to be conducted.

In order to fulfil the requirements of the Environmental Management Act No.7 of 2007 and its 2012 EIA Regulations, Kakero Urban Planning Consultant has subcontracted Turnix Environmental Consulting to undertake the EIA and apply for ECC for the proposed townships.

2. STUDY APPROACH AND METHODOLOGY

The following method was used to investigate the potential impacts of the proposed development on the socio-economic and biophysical environment:

- Baseline information about the proposed township area was obtained from existing secondary information such as ORC items, reports from Town Planners and draft layout plans, policies and other documents in ORC's possession and other EIAs in the project area.
- Reconnaissance site visits to the proposed project area was undertaken to collect baseline information on physical, biological, cultural, social, economic, policy and health and safety aspects of the affected environment.
- A comprehensive public consultation process with interested and affected parties was undertaken as provided for in the EMA and EIA Regulations.
- The comments and questions of interested and affected parties (I&APs) were gathered throughout the public consultation process and recorded in an Issues and Responses Trail.

This Scoping Report was compiled in line with the requirements of the Environmental Management Act No. 7 of 2007 and as set out in Section 8 of the Environmental Impact Assessment Regulations. The table below illustrates how and where the various components of a scoping report are addressed in this report.

Table 1: Scoping report requirements stipulated in the EIA regulation

REQUIREMENTS FOR A SCOPING REPORT IN TERMS OF THE FEBRUARY 2012 REGULATIONS	REFERENCE IN REPORT
(a) the curriculum vitae of the EAPs who prepared the report;	Section 3 and Appendix B
(b) a description of the proposed activity;	Section 4
(c) a description of the site on which the activity is to be undertaken and the location of the activity on the site;	Section 4
(d) a description of the environment that may be affected by the proposed activity and the manner in which the geographical, physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed listed activity;	Section 8
(e) an identification of laws and guidelines that have been considered in the preparation of the Scoping Report;	Section 7
(f) details of the public consultation process conducted in terms of regulation 7(1) in connection with the application, including –	Section 9 and Appendix E

(i) the steps that were taken to notify potentially interested and affected parties of the proposed application; (ii) proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the proposed application have been displayed, placed or given; (iii) a list of all persons, organizations and organs of state that were registered in terms of regulation 22 as interested and affected parties in relation to the application; and (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;	
(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;	Section 4.1 (Need and Desirability) and Section 6 (Assessment of alternatives)
(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 construction, erection or decommissioning associated with the undertaking of the proposed listed activity;	Section 10
(i) terms of reference for the detailed assessment; and	Section 2
(j) a management plan, which includes – (i) information on any proposed management, mitigation, protection or remedial measures to be undertaken to address the effects on the environment that have been identified including objectives in respect of the rehabilitation of the environment and closure; (ii) as far as is reasonably practicable, measures to rehabilitate the environment affected by the undertaking of the activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and (iii) a description of the manner in which the applicant intends to modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation remedy the	EMP attached to this report (Appendix A)

cause of pollution or degradation and migration of pollutants	

3. ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Turnix Environmental Consulting cc (Reg. No. CC/2012/7856) is a wholly Namibian owned company, established in 2012 to provide consulting services to various public and private sectors in areas such as Strategic Environmental Assessments (SEA) & Environmental Impact Assessments (EIA), development of Environmental Management Systems, Environmental Auditing, Monitoring and Evaluation, Water Management, Solid Waste Management and Project Management.

The Environmental Assessment Practitioner (EAP) for this study was Mr. Olavi Makuti. Mr. Makuti's main area of expertise includes Urban Environmental Management, Biodiversity Conservation, Strategic Environmental Assessments (SEA), Environmental Impact Assessments (EIA), and Environmental Management Systems (EMS). Olavi has 18 years' experience in the field of environmental management and has a Master's Degree in Environmental Management (University of the Free State, South Africa), B.Tech Degree in Natural Resources Management (Polytechnic of Namibia) and National Diploma in Nature Conservation (Polytechnic of Namibia). He has also done the MDP (Management Development Program) with the University of Stellenbosch and other short courses. His CV is attached for further information on his educational qualifications and experience.

4. PROPOSED PROJECT DESCRIPTION

4.1 PROJECT RATIONALE

According to the Institute for Public Policy, 2018 the demand for formal housing in Namibian urban areas has by far exceeded the supply of housing and land in urban areas. This has resulted in the proliferation of informal settlements.

In the Omaheke Region the relative number of inhabitants in urban areas has increased from 29.8% in 2011 to 43.8% in 2023. This was as low as 20.4% in 2001 (Namibia Statistics Agency, 2024). This implies that more residents of the Omaheke Region are now seeking refuge in urban centers. This contributes to the high demand of housing and other services.

46.8% of people in the Omaheke Region dwells in informal dwellings or shacks (Namibia Statistics Agency, 2024). This is very high and concerted effort is required to formalize urban centres and provide decent housing and access to bulk services such as water and electricity.

The Aminuis settlement is growing very fast. Currently, there is only one (1) declared township that accommodate 5,297 residents. Many people resort to land grabbing due to an acute shortage of serviced land. The provision of services to informal settlement that is currently underway may have a negative impact on orderly infrastructure development if the area is not planned and proclaimed as a township.

It is against the above background that the Omaheke Regional Council have decided to plan and subsequently develop the three townships addressed in this report to curb the current shortage of serviced land and housing in Aminuis.

4.2 LOCATION

Aminuis is located about 200 km south of Gobabis in the Omaheke Region of Namibia. The settlement can be accessed via the C22 Road from Gobabis as show on figure 1 below. The Aminuis Settlement is located in the Aminuis Constituency of the Omaheke Region. Aminuis is located at the following coordinates: **-23.654879, 19.363563.**

Figure 1: Location of Aminuis in the Omaheke Region

5. TOWNSHIP DEVELOPMENT ACTIVITIES

5.1 CURRENT LAND-USE OF THE PROPOSED AREA

The area of the proposed townships is currently used for informal dwellings. It the intention of the Omaheke Regional Council to formalize the area as discussed in this report. This will pave a way for the residents to have legal land tenure through title deeds and have access to formal housing and bulk services.

5.2 PROPOSED TOWNSHIPS

The proposed townships layout provides for various land uses that are required in a township of this nature. The various land uses catered for in the proposed layout plans are outlined and described on the table below.

Table 2: Land uses and their description

LAND USE	DESCRIPTION
Residential	This land use caters for free standing dwelling units.
General Residential	This land use is for the development of a block of flats, town houses or other high density dwelling units.
Business	This land use is for business such as shops and other businesses needed in the townships.
Local Authority	Reserved for the use by local authority to cater for services such as water, electricity and other bulk infrastructure.
Institutional	For institutions such as schools, churches, early childhood development centers and others.
Urban Agriculture	Will cater for an existing urban agriculture activity.
Office	Caters for office needs.
Hospitality	For hospitality facilities such as guesthouses.
Public Open Space	Reserved for divergent functions such recreational activities facilities such as playparks, pedestrian walkways, and other public uses.
Private Open Space	Caters for restricted public facilities such as sports fields, multipurpose centers and others.
Undetermined	Reservation of land to cater for future development needs that might arise.

The three proposed townships occupy a total area of 1,651,484.17 (m^2) which is equivalent to 165 ha as calculated below:

- Aminuis Extension 1: 204234.9 (m^2) – **20 ha**
- Aminuis Extension 2: 326837.79 (m^2) – **33 ha**
- Rietquelle: 1120411.48 (m^2) – **112 ha**
  Total: 1,651,484.17 (m^2)

5.2.1 Aminuis Extension 1 & 2

Portion A and B of Portion 6 of Portion 5 of Farm Aminuis No.330 where Aminuis Extension 1 & 2 will be developed is located in the south of Aminuis Proper and south west of the highway to Aranos as shown on figure 2 below. 90% of the area is a brownfield and only a mere 10% is a greenfield. The combined size of the two townships is about 53 ha.

The layout plan of the proposed township was developed following a detailed survey of the Aminuis area by surveyors appointed by the Omaheke Regional Council. This made it easier for the town planners to take existing infrastructure and services into

consideration. furthermore, a physical site inspection was undertaken by the town planners.

The land use allocations for the proposed Aminuis Extension 1&2 townships are summarized on table 3 and the layout plan is depicted on figure 2 below.

Table 3: Summary of land use allocation for Aminuis Extension 1 & 2

Land use	Aminuis Extension 1 (m^2)	Aminuis Extension 2 (m^2)	Total size of allocation (m^2)	percentage
Residential	74917.07	100820.04	**175737.11**	**33.09%**
General Residential	300.91	41360.74	**41661.65**	**7.84%**
Business	59039.02	3691.31	**62730.33**	**11.81%**
Local Authority	3411.31	3551.13	**6962.44**	**1.31%**
Institutional	0	25774.8	**25774.8**	**4.85%**
Urban Agriculture	0	65327.82	**65327.82**	**12.30%**
Office	4265.23	0	**4265.23**	**0.80%**
Hospitality	0	13812.34	**13812.34**	**2.60%**
Public Open Space	32460.34	28655.37	**61115.71**	**11.51%**
Remainder Street	29841.02	43844.24	**73685.26**	**13.87%**
TOTAL	204234.9	326837.79	**531072.69**	**100.00%**

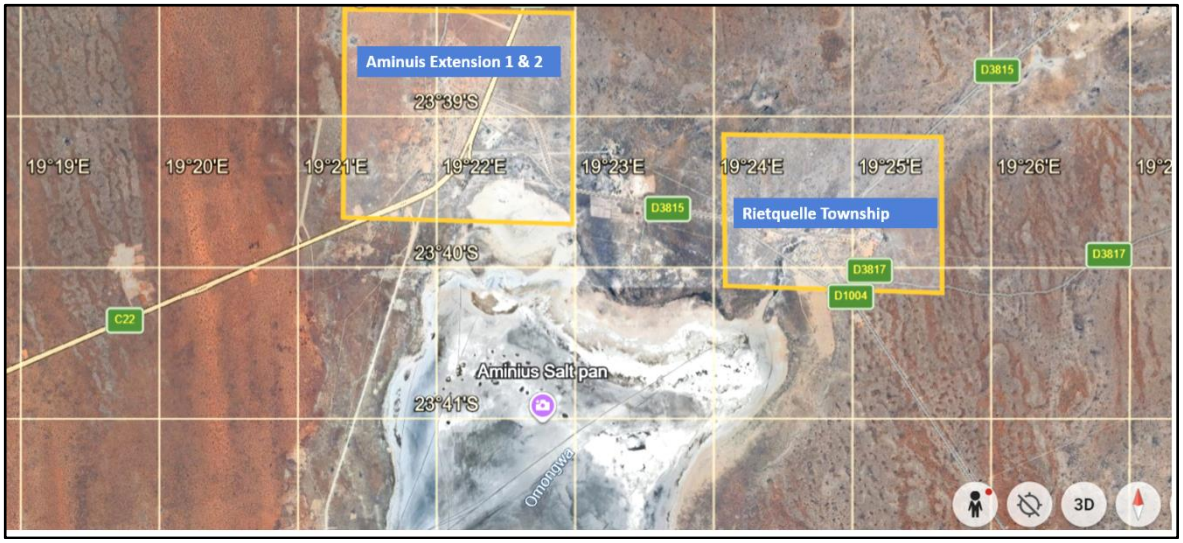

Figure 2: Location of Aminuis Extension 1 &2 and Rietquelle Township

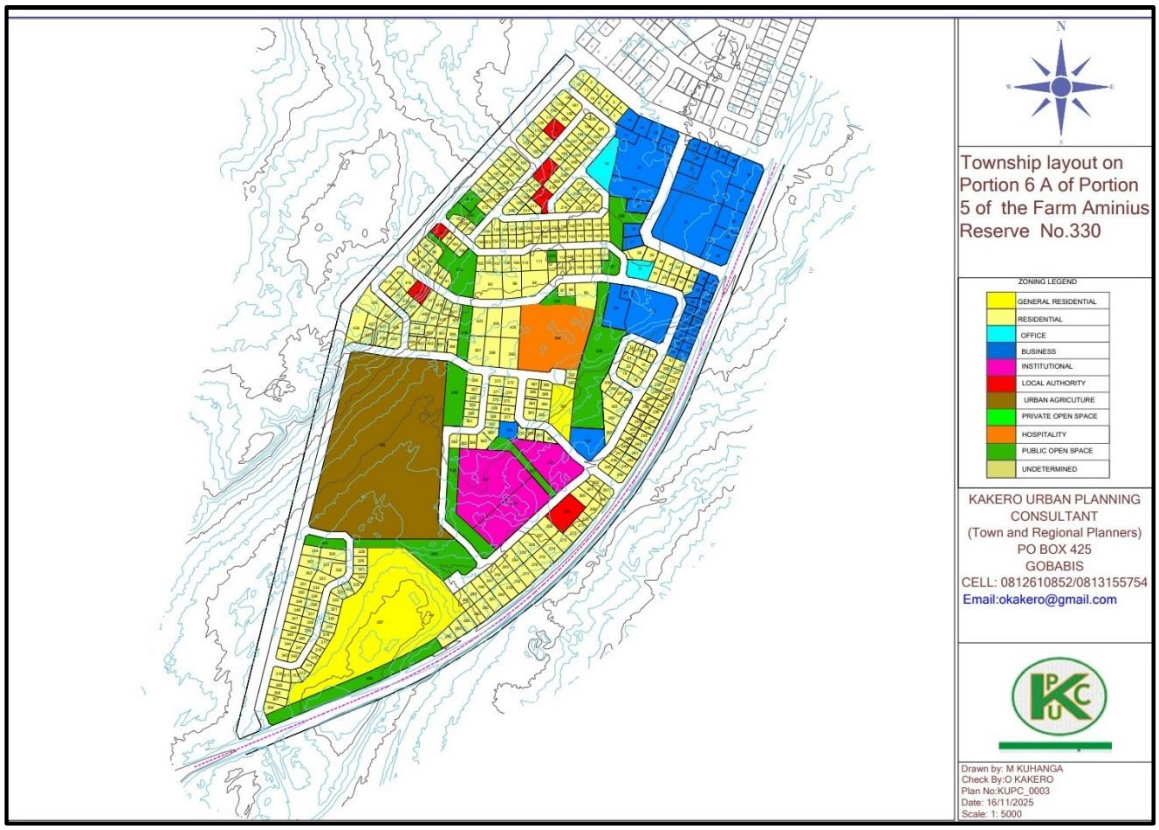

Figure 3: Township Layout for Aminuis Extension 1 & 2

5.2.2 Rietquelle Township

Portion A of Portion 5 of Farm Aminuis Reserve NO.330 where the Rietquelle township will be developed is located in the South Eastern side of Aminuis Proper and North Eastern side of the Salt Pan (Otjikango) as shown on figure 2 above. The site is about **112 ha** in size. About 80% of the area is a brownfield and only about 20% is a greenfield. Rietquelle started as a site for the two schools namely Rietquelle Secondary School and Hosea Kutako Primary School. As such, the area is currently resided by civil servants like teachers, police officers, cleaners, entrepreneurs and parents of learners attending the above-mentioned schools.

The layout plan of the proposed township was developed following a detailed survey of the Aminuis area by surveyors appointed by the Omaheke Regional Council. This made it easier for the town planners to take existing infrastructure and services into consideration. furthermore, a physical site inspection was undertaken by the town planners.

The land use allocations for the proposed Rietquelle township are summarized on table 4 and the layout plan is depicted on figure 3 below.

Table 4: Summary of land use allocation for Rietquelle township

Land use	Proper (m^2)	Percentage
Residential	141316.90	12.61%
General Residential	27642.23	2.47%
Business	50812.97	4.54%
Local Authority	2188.48	0.20%
Institutional	3478.70	0.31%
Office	1129.50	0.10%
Public Open Space	73617.13	6.57%
Private Open Space	159542.85	14.24%
Undetermined	169581.52	15.14%
Remainder Street	491101.20	43.83%
TOTAL	1120411.48	**100.00%**

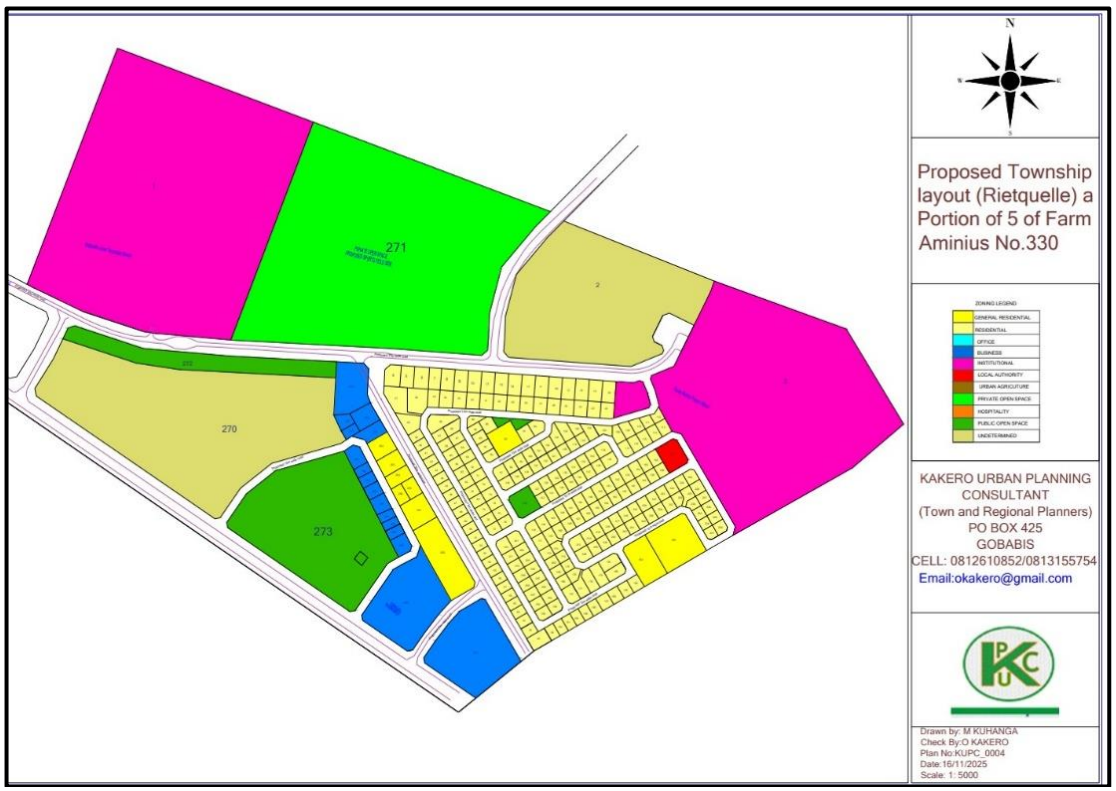

Figure 4: Proposed Township Layout for Rietquelle

5.3 PROVISION OF BULK SERVICES TO THE PROPOSED TOWNSHIPS

5.3.1 WATER SUPPLY

Water to the Aminuis Settlement is currently supplied by Namibia Water Corporation (Namwater) via the Aminuis Scheme. The groundwater supply scheme in Aminuis has a depth of 186 m. Water from this scheme will be extended to the proposed townships.

5.3.2 ELECTRICITY

Electricity to the proposed townships will be supplied through the Central North Regional Electricity Distributor (CENORED). CENORED already has installed bulk infrastructure at Aminuis that will accommodate the increased electricity demand as a result of the proposed townships.

5.3.3 SEWAGE MANAGEMENT

All the proposed erven of the new townships will be connected to a sewer system that will drain sewerage to a centralized treatment facility. Currently, sewage drain to existing ponds. The ponds need to be upgraded to properly handle the increased inflow as a result of the proposed townships and any future expansion of the Aminuis Settlement. This recommendation will be submitted to the Omaheke Regional Council for consideration.

5.3.4 ACCESS ROAD

The three townships will be accessed from D3821 and D3815 which then links to C22. C22 road connects Aminuis to Gobabis and the rest of the Omaheke Region. Various internal roads will also be developed within the proposed townships. The main roads that will carry high volumes of traffic will be ±30 meters wide. The collector streets within the townships will be ±15 and ±20 meters wide. The local streets that will offer direct access to the individual erven will be ±13 meters wide.

5.4 CONSTRUCTION ACTIVITIES

The construction activities at the proposed townships will entail the construction of bulk infrastructure (roads, water reticulation, sewer system, electricity bulk infrastructure) and subsequently, the construction of actual buildings such as houses. As such, the specific activities on the site will include amongst others:

- **Relocation of affected residents** – This will involve the removal of any informal structure that is in the way of the proposed services. The affected residents would need to be relocated to an alternative suitable site.

- **Setting up of temporary contractors' camp**: The contractors appointed to install the bulk services at the proposed townships would need a site to operate from. The development of this site will include the construction of perimeter fence, site office, workshop and stores, ablution facilities and temporary accommodation for workers if required.

- Movement of construction vehicles.

- Clearance of vegetation and earthworks: The area where the bulk services will be laid first need to be cleared of any vegetation and substrate.

- Dumping of unsuitable material.

- Digging of trenches and possible blasting of rocks.

- Generation of construction waste.

- Usage of water for construction activities (e.g., dust suppression and road compaction).

5.5 WASTE MANAGEMENT

Various waste streams will emanate from this project especially during the development of bulk services such as roads, sewer system, electricity and the clearing of land. During the operational phase of the project the main waste stream will be from the houses and businesses that will be developed at the townships. Waste from the two development phases of the townships will be managed as follow:

5.5.1 Construction Phase

The waste to be generated from the construction activities will be stored in skip containers. Once the containers are full, they will be transported to a designated waste disposal facility for proper disposal. Construction workers will also be encouraged to refrain from littering. Hazardous waste generated from construction activities such as used oil and grease will be stored in specialized containers and transported a facility that can handle hazardous waste.

5.5.2 Operational Phase

During the operational phase, waste will emanate from the various land uses provided for in the proposed layout plan mainly from residential erven. A waste management system that will be based on environmental sustainability principles will be introduced by the Omaheke Regional Council (in collaboration with the Aminuis Settlement). Waste from the various erven will be collected and deposited in centralized bins. The bins will be emptied once a week by a contractor appointed by the Aminuis Settlement. The waste will then be transported to a designated waste disposal facility. It is worth noting that Aminuis, like many local authorities in the country is still in the process of developing a waste disposal facility that meets the requirements set out by the MEFT.

In its pursuit of a clean and sustainable environment, the Omaheke Regional Council through the Aminuis Settlement, will strive to implement the universally recognized Integrated Waste Management Hierarchy as shown on figure 4 below. In the Integrated Waste Management Hierarchy the emphasis should first be to avoid the production of waste, were the avoidance of waste is not possible the amount of waste produced should be minimized, reuse and recycle before disposal is contemplated. This is the approach that is been promoted worldwide.

Figure 5: Waste Management Hierarchy

6. DESCRIPTION OF ALTERNATIVES

6.1 THE "NO GO" ALTERNATIVE

This option implies that the proposed township establishment does not go ahead. Choosing this option means that the identified positive and negative environmental impacts will be avoided. However, the prevailing shortage of formal housing and serviced land will continue to hamper socio-economic development in the area. It might also further compound environmental impacts associated with the proliferation of informal settlements such as pollution from poor sanitation services and land degradation. Residents will also lose out from the potential employment that will be provided during the construction of services in the proposed townships.

As such, the *"*No Go*"* alternative is not the preferred option as proceeding with the proposed townships development will result in a lot of positive outcomes for the community and will positively contributes to the country's attainment of its developmental objectives. The positive impact far outweighs any negative impacts associated with this development.

6.2 SITE ALTERNATIVE

The portions of Farm Aminuis No.330 where the proposed townships will be developed is already owned by the Omaheke Regional Council. This will avoid the long and costly process of land acquisition. The location of the portions will also make it easier to integrate with the existing part of the settlement and makes it easier to extend existing services. These portions are large brownfields (70%) as they have been disturbed by human activities. The ecological impacts here would therefore be minimal. Therefore, no other alternative site was considered for the development of the proposed township.

7. LEGAL REQUIREMENTS

This section provides an analysis of the policies and legislations that are relevant to the proposed development of the townships and associated infrastructure. This section aims to inform the proponent about the requirements to be fulfilled in undertaking the proposed project.

The table below lists the various environmental and developmental policies and legislations that have relevance to the project.

Table 5: Legal framework of the project.

LEGISLATION	PROVISION	REGULATORY AUTHORITY	APPLICATION TO THE PROJECT
The Constitution of the Republic of Namibia	Article 91 (c) and 95 (i) which commit the state to actively promote and maintain environmental welfare of all Namibians by promoting sustainable development	Government of the Republic of Namibia	The project should not pose a threat to the natural and human environment.
Environmental Management Act No.7 of 2007 and EIA Regulations (2012)	Provides principles of environmental management in Namibia.	Ministry of Environment, Forestry and Tourism (Office of the Environmental Commissioner)	Environmental sustainability principles should be observed when undertaking this project.
Namibia Urban and Regional Planning Act No 5 of 2018	The Act regulates all activities related to spatial planning in Namibia.	Ministry of Urban and Rural Development	The application for approval of the townships is to be compiled and submitted in accordance with the provisions of this Act.
Water Resources Management Act 11 of 2013	Control of disposal of sewage, the purification of effluent, the prevention of surface and groundwater pollution, and the sustainable use of water resources.	Ministry of Agriculture, Fisheries, Water and Land Reform	The Proponent should ensure that wastewater generated from the proposed townships is properly disposed of in a designated wastewater treatment facility.
Forestry Act No 27 of 2004	The Act affords protection to certain indigenous plant species.	Ministry of Environment, Forestry and Tourism (Directorate of Forestry)	No protected tree species should be removed without a permit during the construction of services at the townships.
Nature Conservation	Forms the legislative basis for the establishment of private game reserves and	Ministry of Environment,	The provisions of this ordinance should be observed to ensure that the

Ordinance No. 4 of 1975	provides for legislation regarding the protection and management of game species such as rhinos	Forestry and Tourism	development of the townships does not affect biodiversity negatively.
Convention of Biological Diversity (CBD)	Namibia is a signatory to this convention that provides a framework for and principles for conservation of biodiversity, sustainable uses and fair and equitable sharing of benefits from biodiversity.	Ministry of Environment, Forestry and Tourism	Provision of this convention should be fully observed.
Atmospheric Pollution Prevention Ordinance No. 11 of 1976	Part II - control of noxious or offensive gases, Part III - atmospheric pollution by smoke, Part IV - dust control, and Part V - air pollution by fumes emitted by vehicles.	Ministry of Health and Social Services	During the construction of services at the proposed townships dust will be generated. Measures should therefore be put in place to ensure that dust emanating from construction activities does not become a nuisance to the nearby communities.
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	Ministry of Health and Social Services	The handling, usage and storage of hazardous substances from construction activities should be carefully controlled according to this Ordinance.
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.	Ministry of Urban and Rural Development	The development of the proposed townships has to comply with provisions of the Local Authorities Act.
The Labour Act of 1992	Employees are subject to the terms of the Labour Act. The act also contains the Health and Safety Regulations.	Ministry of Justice and Labour Relations	• Health and safety conditions provided by the act should be adhered to during the construction of services at the townships. • The Act should be adhered to in all employment contracts that will be entered into.
Public and Environmental Health Act of 2015	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;	Ministry of Health and Social Services	The development of the proposed townships must comply with the provisions of this Act.

	water and food supplies; waste management; health nuisances; public and environmental health planning and reporting. It repeals the Public Health Act 36 of 1919 (SA GG 979)		
National Heritage Act, 2004 (Act N0.27 of 2004)	This Act calls for the protection, conservation and registration of places and objects of heritage significance.	National Heritage Council of Namibia	Even though the scoping exercise did not discover any archaeological material on the site of the proposed townships, should there be any such discovery (e.g., graves) the National Heritage Council should be informed immediately.
Soil Conservation Act No 76 of 1969	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	Ministry of Agriculture, Fisheries, Water and Land Reform	The Proponent should ensure that soil erosion and soil pollution is avoided during construction of services at the proposed townships.
Roads Ordinance 17 of 1972	• Section 3.1 deals with width of proclaimed roads and road reserve boundaries • Section 27.1 is concerned with the control of traffic on urban trunk and main roads • Section 36.1 regulates rails, tracks, bridges, wires, cables, subways or culverts across or under proclaimed roads	Ministry of Works and Transport	The project should adhere to all applicable provisions of the Roads Ordinance.

8. DESCRIPTION OF THE RECEIVING ENVIRONMENT

8.1 CLIMATE

The mean annual rainfall in the area of Aminuis is in the order of 250 to 300 mm per annum. Potential annual evaporation is around 3800 mm per annum. The average maximum temperature in summer in Aminuis is approximately 34-36°C (December) and the minimum is less than 2°C in winter with July as the coldest month (Mendelsohn, *et al* 2002).

8.2 HYDROGEOLOGY AND SOILS

There are no permanent rivers in the area. Groundwater is one of the most important sources of water in the Aminuis area and for this reason, the protection of ground water sources is of high priority when considering any form of development in this area.

The vast area surrounding Aminuis and the Omaheke Region lithology is characterized as Unconsolidated to semi-consolidated sand and gravels and local calcrete. This is the infill of the Kalahari Basin. Aminuis falls within the Stampriet Artesian Basin which consists of the catchments of the Auob and Nossob and stretches into Botswana. The surface of this basin is mainly covered by the calcrete and dune sand. In the Trans- Nossob area of the basin, stored groundwater flows into Botswana to the east and southerly towards the Aminuis area (Government of the Republic of Namibia, 2021).

The general soils in this area are classified as Ferralic Arenosols. Arenosols soils are formed from wind-blown sand with a depth of at least one meter. These soils have a sand content of more than 70%. Ferralic refers to the high content of combined oxides of iron and aluminium.

The Omongwa salt pan is a prominent feature of Aminuis. The Omongwa pan has a coverage of 3 by 5 km (about 20 km^2). The pan is largely void of any vegetation. The classification of this area as a salt pan stems from the seasonal to ephemeral inundation events followed by drying and build-up of evaporite-rich sediments (Milewski *et al*., 2020). The soils in the Omongwa salt pan are Petric Calcisols which are found in low lying areas and has an accumulation of calcium carbonate (calcrete). These soils have a solid layer that remains hard even when wet (Mendelsohn *et al*., 2002).

Due to a combination of factors such as low rainfall, high evaporation and low runoff the quality of groundwater in the Aminuis area is generally not very good. This is further compounded by the fine sand, silt and clayey deposits found in the area.

According to the Ministry of Agriculture operational guidelines, the groundwater quality in the aminuis area is rated as category B - fit for smaller communities (Government of the Republic of Namibia, 2021).

The groundwater supply scheme in Aminuis has a depth of 186 m. this scheme is located in an area with a geology dominated by sandstone, shale (Karoo) (Government of the Republic of Namibia, 2021).

The proposed development of townships in this area would not have any major impacts on the underground water resources and soils. However, some impacts might emanate from the management of sewage if it is not handled properly. It is therefore recommended that sewage ponds in the area must be upgraded to meet appropriate national standards. The area of Aminuis is fairly flat, soil erosion will be minimal. However, care should be taken when undertaking earthworks on steep slopes to ensure that the area is not rendered prone to erosion.

8.3 BIODIVERSITY AND ECOLOGY

The vegetation around Aminuis is characterized as Camelthorn Savanna. This vegetation type is characterized by open savanna with the camelthorn (*Acacia erioloba*) as the dominant tree species. The following shrub species are dominant in the area: *Acacia hebeclada*, *Ziziphus mucronata*, *Tarchonanthus camphoratus*, *Grewia flava*, *Ozoroa paniculosa*, *Rhus ciliata*. The grass species that are common in the area include: *Eragrostis pallens*, *Aristida stipitata*, *Schmidtia kalahariensis*, *Stipagrostis uniplumis*, *Schmidtia pappophoroides*, *Anthephora* species and *Brachiaria* species (Muller, 1984).

The area where the proposed townships are located are generally considered as brown fields. This therefore implies that most of the original biodiversity in the area has been already disturbed. However, measures will be recommended in the EMP to ensure that the remaining trees species and other forms of biodiversity is protected. Any protected tree species in the area must not be removed without prior approval as provided for in the Forestry Act No 27 of 2004.

8.4 SOCIO-ECONOMIC SETTING

According to the Namibia Statistics Agency, 2024, the Aminius Constituency has a total population of 13 801(Male- 7 565 and Female - 6 236). Aminuis Constituency borders the Republic of Botswana to the east. The area of Aminuis is inhabited mainly by Ovambanderu, Tswana and the San minority. Aminuis settlement has a population of has a population of 5,297 residents.

Subsistence farming mainly livestock farming is the main source of income in the Aminuis area. There are auction pans at Aminuis that facilitate livestock marketing in the area. There are also accommodation establishment at Aminuis that contributes to tourism activities in the area.

In terms of transportation, Aminuis is connected to Gobabis (the biggest urban Centre in the Omaheke Region) through the C22 Road.

Like many settlements and urban areas in Namibia, access to formal housing and basic services is a big challenge in Aminuis. Currently about 46.8% of people in the Omaheke Region dwells in informal dwellings or shacks (Namibia Statistics Agency, 2024). The Aminuis settlement only has one (1) declared township that accommodate is struggling to accommodate all the residents.

Various public offices operate at Aminuis. These include amongst others the constituency and settlement offices, Aminuis Farmers Association, Ministry of Agriculture, Fisheries, Water and Land Reform, Ministry of Gender, Equality and Child Welfare, Ministry of Home Affairs, Ministry of Youth, National Service and Sport. These offices provide various services to the residents and also employs some residents.

The proposed development of townships will generally improve the socio-economic status of the residents of Aminuis. The positive socio-economic impacts will outweigh any negative impacts on the biophysical environment by far.

8.5 ARCHAEOLOGY

The scoping exercise did not discover any archaeological material on the site where the proposed townships will be developed. Should there be any such discovery during the course of the development, the National Heritage Council of Namibia should be informed immediately. The National Heritage Council will assess the discovery and based on the findings of their assessment they will advise on the way forward.

9. PUBLIC CONSULTATION

9.1 OBJECTIVES OF PUBLIC CONSULTATION

The Public Participation Process is undertaken in response to the requirements of Regulation/Part 21 of the Environmental Management Act. Regulation 21 require that a person who undertakes an environmental impact assessment process to obtain an Environmental Clearance Certificate, must do the public participation process.

Public participation is the cornerstone of the EIA process as this is the stage were Interested and Affected Parties are considered and involved in the decision-making process. Its key objective is to assist stakeholders to raise issues of concern and suggestions for enhanced benefits, and to comment on the findings of the EIA.

9.2 PUBLIC PARTICIPATION DURING THE SCOPING PHASE

Information to Interested and Affected Parties regarding the proposed development of townships in Aminuis was disseminated through the following means:

- **Newspaper notices**

  Newspaper notices were placed in the *Namibian Sun, Republikein* and *Allgemeine Zeitung* dated 9 September 2025 and 16 September 2025. The notices were placed once a week for two consecutive weeks as required by the EIA Regulations. The newspaper notices are attached as **Appendix E.**

  The newspaper notices stated that an application for an Environmental Clearance is to be submitted to the Environmental Commissioner, provided information on the nature of the activity and location, invited I&AP to register as such and provided contact details where further information on the application or activity can be obtained.

- **Background Information Document (BID)**

  A BID was prepared for the proposed project (Appendix D). The BID was intended to provide information about the EIA being undertaken for the proposed project and provided: an overview of the project; a description of the manner in which the EIA was undertaken, an indication of how Interested and Affected Parties (I&AP) may become involved in the EIA process; and provided contact details of the person to whom I&APs may submit their comments.

- **Public Meeting**

A public meeting was organized at Aminuis Settlement on 22 October 2025. The main issues that emanated from the public meeting are summarized below:

- *Relocation of affected residents*
  The affected residents will be allocated to areas catered for in the layout plan. the majority of the people that are affected by the proposed layout reside in informal structures and it would therefore be easier to relocated them. The residents we have permanent structures are catered for in the layout plan and would not be relocated.

- *Brown field development*
  The area covered by the proposed layouts is generally a brown field that has been disturbed already by anthropogenic activities. The impacts on the natural environment would therefore be minimal.

- *Employment opportunities*
  The local residents should be considered for any employment opportunities that will emanate from the servicing of the proposed townships. This will improve the socio-economic situation of the area.

Picture 1: Interested and Affected Parties attending a public meeting at Aminuis

10.ENVIRONMENTAL IMPACT ASSESSMENT

10.1 METHOD OF ASSESSMENT

The significance of the identified impacts of the proposed development of townships was assessed using the criteria discussed on table 6 below.

Table 6: Criteria used to determine the significance of impacts and their definitions.

CRITERIA	DESCRIPTION
NATURE	This criterion indicates whether the proposed activity has a **positive** or **negative** impact on the environment (environment comprises both socio-economic and biophysical aspects).
EXTENT	This criterion measures whether the impact will be site specific; local (limited to within 15 km of the area); regional (limited to about 100 km radius); national (limited to within the borders of Namibia) or international (beyond Namibia's borders).
DURATION	This criterion looks at the lifetime of the impact, as being short (days, less than a month), medium (months, less than a year), long (years, less than 10 years), or permanent (more than 10 years).
INTENSITY	This criterion is used to determine whether the magnitude of the impact is destructive and whether it exceeds set standards, and is described as none (no impact); low (where the environmental functions are negligible affected); medium (where the environment continues to function but in a noticeably modified manner); or high (where environmental functions and processes are altered such that they temporarily or permanently cease).
PROBABILITY	Considers the likelihood of the impact occurring and is described as improbable (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will happen regardless of prevention measures).
DEGREE OF CONFIDENCE IN PREDICTION	This is based on the availability of information and knowledge used to assess the impacts.

The significance of the potential impacts identified for this project is determined using a combination of the criteria discussed on the above table. The significance rating of impacts is described on the table below.

Table 7: Definition of the various significance ratings

SIGNIFICANCE RATING	CRITERIA
Low	Where the impact will have a negligible influence on the environment and no mitigations are required.
Medium	Where the impact could have an influence on the environment, which require some modifications on the proposed project design and/or alternative mitigation.
High	Where the impact could have a significant influence on the environment and, in the case of a negative impact, the activity causing it, should not be permitted.

10.2 POTENTIAL IMPACTS IDENTIFIED AND ASSESSED

10.2.1 CONSTRUCTION RELATED IMPACTS

Construction impacts are generally short-term in nature but might result in permanent detrimental impacts on the environment. The impact considered here includes both from the construction of bulk services (i.e., sewer, potable water, roads, stormwater and electricity) and the subsequent construction of buildings (i.e., Houses and businesses).

- **Relocation of affected residents**

Part of the area where the proposed townships will be located is inhabited on an informal basis. There is therefore a need to relocate some residents that are in the way for the bulk infrastructure. This will result socio-economic impacts for the affected residents if it is not undertaken in coordinated manner.

To mitigate negative impacts that might emanate from any relocations the following is recommended:

- The ORC in consultation with the Aminuis Settlement must devise a Relocation Plan to ensure that any relocation is done in an orderly manner.
- Avail land that has some services where the affected residents will be relocated to.
- The affected residents must be assisted financially and materially wherever possible to minimize any financial loses associated with the relocation.
- Where possible, the affected residents must be allocated erven in the formal township.
- This process must be communicated properly to avoid any misinformation.

Table 8: Assessment of impacts associated with relocations

IMPACT TYPE	EXTENT	DURATION	INTENSITY	PROBABILITY	DEGREE OF CONFIDENCE	SIGNIFICANCE	
						PRE-MITIGATION	POST MITIGATION
Negative	Local	Permanent	Low	Probable	Medium	Medium	Low

- **Construction Noise and Vibrations**

Construction vehicles and equipment such as drillers, compactors and other machineries used to install services during the construction phase can be a nuisance and disturbance to the people that currently reside in the area. At the moment, the only source of noise in the area is vehicular movements and sporadic

music from businesses such as bars. Noise and vibrations will also have an impact on animals such as birds and reptiles. Birds are known to abandon their nests if subjected to continuous noise.

To mitigate negative impacts that might emanate from any relocations the following is recommended:

- All workers on site must be equipped with earplugs to be used when the noise becomes unbearable.
- If need be, residents must be informed to take precautionary measures that generate excessive noise such as blasting and measure drilling and limit these activities between 08h00-17h00 weekdays only.
- Switch off machines that are not used as this unnecessarily increase noise.
- Noise equipment should not be used at night to avoid disturbing the residents.

Table 9: Assessment of impacts associated with noise and vibrations

IMPACT TYPE	EXTENT	DURATION	INTENSITY	PROBABILITY	DEGREE OF CONFIDENCE	SIGNIFICANCE	
						PRE-MITIGATION	POST MITIGATION
Negative	Local	short	Low	Probable	Medium	Medium	Low

- **Traffic Safety**

Major construction involved a large number of big trucks that moves up and down the construction site. If not managed properly, this can result in accidents. The risk is to both the construction workers and the nearby residents who might share roads with construction vehicles. The risk is further exacerbated by dust generated by construction trucks.

To mitigate negative impacts that might emanate from the frequent movement of construction vehicles the following is recommended:

- Strictly enforce speed limit of construction vehicles to avoid accidents.
- Proper and visible traffic signs must be placed along all routes used by construction vehicles.
- The project manager must ensure that all drivers have valid licenses and are in a state to operate construction vehicles.
- The movement of construction vehicles must be confined to times after peak hours.

Table 10: Assessment of impacts associated with construction traffic

IMPACT TYPE	EXTENT	DURATION	INTENSITY	PROBABILITY	DEGREE OF CONFIDENCE	SIGNIFICANCE	
						PRE-MITIGATION	POST MITIGATION
Negative	Local	short	Low	Probable	Medium	Medium	Low

- **Disturbance of natural slope and habitat**

The construction process will involve the clearing of some areas to make way for the proposed bulk service infrastructure. The removal of vegetation and disturbance to the natural slope can facilitate soil erosion if not done properly. It should however be noted that a big part of the area is already disturbed by anthropogenic activities such as informal housing structures.

To mitigate negative impacts on the natural habitat and landscapes the following is recommended:

- All roads and other infrastructure should be constructed in such a way that it does not promote erosion especially on steeper slopes.
- Big trees in the area should only be removed if it is in the way of services.
- Indigenous vegetation should be used in the landscaping around the townships to promote biodiversity.
- Refrain from using alien invasive species such as *Prosopis* species in landscaping.

Table 11: Assessment of impacts associated with disturbance of natural slope and habitat

IMPACT TYPE	EXTENT	DURATION	INTENSITY	PROBABILITY	DEGREE OF CONFIDENCE	SIGNIFICANCE	
						PRE-MITIGATION	POST MITIGATION
Negative	Local	Permanent	Low	Probable	Medium	Medium	Low

- **Pollution**

There are various types of pollution associated with construction activities. The most important one is probably chemical pollution from oil spills resulting from the handling of various machineries used during the construction of bulk services. Other sources of pollution include building rubble and empty bags and containers. Construction workers can also pollute the surrounding environs if they are not provided with adequate toilet facilities. Waste emanating from construction activities

although not in large quantities can pollute underground water especially during the rainy season.

To mitigate negative impacts that might emanate from various sources of pollution the following is recommended:

- Keep all waste generated at the construction site in closed containers. Hazardous should be kept in dedicated closed containers and disposed of at an appropriate site that handles hazardous waste.
- The Environmental Control Officer (ECO) should conduct regular inspections of the construction site to ensure no waste is left in the open.
- The ECO in collaboration with the Project Manager should draft a Waste Management Plan that should guide the contractors on how to handle waste. To make the Waste Management Plan effective it should be accompanied with strict punitive measures such as fines to those that do not adhere to its provisions.

Table 12: Assessment of impacts associated with pollution

IMPACT TYPE	EXTENT	DURATION	INTENSITY	PROBABILITY	DEGREE OF CONFIDENCE	SIGNIFICANCE	
						PRE MITIGATION	POST MITIGATION
Negative	Local	Medium	Low	Probable	Medium	Medium	Low

- **Dust and Emissions**

Construction activities are generally associated with dust as the substrate is loosened during construction. Activities such as the clearing of vegetation and levelling of land where the bulk services will be constructed will slightly affect the air quality. This will especially be an issue during windy days. The construction vehicles also emits fumes from their exhausts which can also contribute to the deterioration of air quality in the area.

To mitigate negative impacts that might emanate from the generation of dust and emissions the following is recommended:

- Equip all the workers exposed to dust with dust masks.
- Spray the areas that are most affected with water to minimize dust.
- Minimize activities that can generate dust during windy days.
- Limit the speed within the whole ranch to a maximum of 40 km/h

Table 13: Assessment of impacts associated with dust and emissions

IMPACT TYPE	EXTENT	DURATION	INTENSITY	PROBABILITY	DEGREE OF CONFIDENCE	SIGNIFICANCE	
						PRE-MITIGATION	POST MITIGATION
Negative	Local	Medium	Low	Probable	Medium	Medium	Low

- **Occupational Health and safety**

Like any construction project, occupational health hazards are expected on this project. Workers will be exposed to various situations that can put their safety at risk. It is therefore important to put measures in place to avoid any accidents at the construction site.

Projects that bring many people together such as the construction of bulk services at the proposed townships, creates an environment where workers have the opportunity to interact with local community, a significant risk is created for the development of social conditions and behaviors that contribute to the spread of HIV/AIDS.

<u>To mitigate negative impacts associated with occupational health and safety the following is recommended:</u>

- Movement of construction workers should be confined to the project site as far as possible.
- First Aid kits should be kept on site to attend to any injured workers.
- No open flames, smoking or any potential sources of ignition should be allowed at the construction site.
- Hold HIV/AIDS Awareness sessions as part of the scheduled site meetings.
- Ensure that the workers have access to condoms and other forms of protection.
- Provide care and support for the infected and affected.
- The Project Management should compile a Health and Safety Plan that should address as a minimum the mitigation measures, as well as the Regulations Pertaining to Health and Safety at the Workplace.
- Health and safety conditions provided by in the Labour Act of 1992 should be adhered to during the construction of services at the townships.

Table 14: Assessment of impacts associated with occupational health and safety

IMPACT TYPE	EXTENT	DURATION	INTENSITY	PROBABILITY	DEGREE OF CONFIDENCE	SIGNIFICANCE	
						PRE-MITIGATION	POST MITIGATION
Negative	Local	Medium	Low	Probable	Medium	Medium	Low

- **Employment Opportunities**

The construction of bulk services and subsequently the housing units will provide a few temporary jobs. This will be a welcomed relief considering the high rate of unemployment in the Aminuis area and the Omaheke Region as a whole.

To further enhance the employment opportunities emanating from this project the following is recommended:

- To enhance the socio-economic benefits of the surrounding communities from the project development, the Project Manager should make it mandatory to all contractors that all unskilled work should be given to the residents of Aminuis and surrounding areas.

Table 15: Assessment of impacts associated with employment

IMPACT TYPE	EXTENT	DURATION	INTENSITY	PROBABILITY	DEGREE OF CONFIDENCE	SIGNIFICANCE	
						PRE-MITIGATION	POST MITIGATION
Positive	National	Medium	Low	Probable	Medium	Medium	Low

10.2.2 OPERATIONS RELATED IMPACTS

- **Waste Management**

Pollution from the operational phase of the project might potentially emanate mainly from untreated effluent and solid waste from the residential and business erven. This can happen if the wastewater treatment facilities in the area are not upgraded to a standard that can accommodate the houses and businesses that will be developed in the new townships.

Solid Waste generated from the serviced erven will be collected on a weekly basis and disposed of at a designated site. This will reduce littering and illegal dumping which has detrimental impacts on the environment.

Table 16: Assessment of impacts associated with waste management

IMPACT TYPE	EXTENT	DURATION	INTENSITY	PROBABILITY	DEGREE OF CONFIDENCE	SIGNIFICANCE	
						PRE-MITIGATION	POST MITIGATION
Positive	National	Medium	Low	Probable	Medium	Medium	Low

- **Increased Demand for Resources (Demand vs Supply)**

The area of Aminuis relies on underground water resources to meet the demand of the settlement. Underground water is limited under natural conditions. This is a scarce resource that needs to be used sparingly. The development of the proposed townships will result in an increase in the demand for water resources.

To ensure that current sources sustain the additional demand as a result of the proposed townships, the following is recommended:

- Sustainable practices and water demand management strategies should be implemented during the operational phase.
- Awareness campaigns to encourage residents to use water sparingly.

Table 17: Assessment of impacts associated with increased demand for resources

IMPACT TYPE	EXTENT	DURATION	INTENSITY	PROBABILITY	DEGREE OF CONFIDENCE	SIGNIFICANCE	
						PRE-MITIGATION	POST MITIGATION
Positive	National	Permanent	Low	Probable	Medium	Medium	Low

The project will also result in secondary benefits to the community as listed below:

- **Provision of Housing**

The provision of formal houses at the proposed townships will significantly address the negative impacts associated with informal settlements in the area. Residents will have an opportunity to own their own houses with a secured land tenure. This will improve their economic situation and dignity.

- **Improved Access to Bulk Services**

The residents of Aminuis will have access to bulk services such water, electricity and flashing toilets. This will improve the social well-being of the residents. It will also reduce the occurrence of communicable diseases that thrives in informal set up due to poor sanitation services. This will also provide environmental benefits such as reduced pollution as residents will now have access to flashing toilets that are connected to sewer systems. The sewage generated in the area will now be centrally collected and treated instead of the traditional decentralized systems that poses a threat to the environment. The provision of grid electricity will reduce the reliance on natural resources such as firewood for heating and cooking.

- **Enhanced Business Opportunities**

Formalization brings a lot of business opportunities in an area. Such opportunities include the up businesses in the area. This will in turn provide primary and secondary economic benefits to the residents through direct employment and small business opportunities (i.e., vendors near established businesses).

Formalization will make the area attractive to people that wants to migrate to the Aminuis area. This will lead to the increase of the population of the area. This is good for economic growth as investors mainly look at the population of an area before they invest there. The economies of scale will also take effect.

11.CONCLUSIONS & RECOMMENDATIONS

11.1 CONCLUSIONS

The study concludes that the benefits to be derived from the development of these townships and associated bulk services will out-weigh the few negative impacts identified. The project will address the housing shortages experienced in the area and will provide bulk services to the residents thus improving the overall socio-economic status of the area. It will also address environmental impacts associated with informality.

The impacts associated with the construction phase of this project are mainly generic impacts that comes with any construction project of bulk infrastructure. Although these impacts are short term in nature some like the clearing of vegetation and pollution mainly from hydrocarbons might have long-term detrimental impacts on the environment if they are not managed properly.

Impacts expected during the operational phase of the project will mainly center around the use of resources and management of waste (both solid and liquid) that will emanate from the new townships. The development of the townships will lead to an increase in water and electricity consumption. It is important for the service providers to ensure that this does not have a negative impact on the long-term sustainability and security of supply by instituting effective demand management strategies.

All the impacts identified and assessed during this study are generic impacts associated with the development of bulk services. With strict adherence to the recommended mitigation measures, the significance of the assessed impacts can be reduced to a “low” significance rating.

11.2 RECOMMENDATIONS

It is recommended that an Environmental Clearance Certificate be issued for the development of townships and associated listed activities on Portion A and B of Portion 6 of Portion 5 of Farm Aminuis No.330 (Aminuis Extension 1 and 2) and Portion A of Portion 5 of Farm Aminuis Reserve NO.330 (Rietquelle Proper), subject to the following recommendations:

- An independent Environmental Control Officer (ECO) must be appointed by the Proponent during the construction phase of the project to ensure that mitigation measures recommended in this Scoping Report and associated Environmental Management Plan are fully implemented.

- The project should look at integrating renewable energy into the project to reduce the electricity consumption and reduce reliance on grid electricity. This will also help increase the project resilience to the impacts of climate change.

- The Proponent (Omaheke Regional Council) should ensure that waste management facilities (Waste Disposal Site and Wastewater Treatment Facility) are upgraded and approval obtained from the MEFT before the townships are inhabited by the residents.

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APPENDICES

APPENDIX A: ENVIRONMENTAL MANAGEMENT PLAN

APPENDIX B: CV OF ENVIRONMENTAL ASSESSMENT PRACTITIONER

APPENDIX C: INTERESTED AND AFFECTED PARTIES REGISTER

APPENDIX D: BACKGROUND INFORMATION DOCUMENT

APPENDIX E: PRESS NOTICES

APPENDIX F: LAYOUT PLANS