

ENVIRONMENTAL IMPACT ASSESSMENT

FOR THE
SUBDIVISION OF ERF 62, REHOBOTH EXTENSION 1 INTO 12
ERVEN AND REMAINDER AND THE CREATION OF A STREET
WITHIN REHOBOTH TOWN, HARDAP REGION, NAMIBIA



AUGUST 2020

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LIST OF ABBRECIATIONS

TERMS	DEFINITION
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
DEA	Department of Environmental Affairs
MET	Ministry of Environment and Tourism
PPPPs	Projects, Plans, Programmes and Policies
NDC	Namibia Development Consultants
SANS	South African National Standards
I&APs	Interested and Affected Parties

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1. INTRODUCTION AND BACKGROUND

Mr William Frank Izaacs proposes the subdivision of Erf 62, Rehoboth Extension 1 into 12 Erven and Remainder and the creation of a street within Rehoboth Town, Hardap Region in central Namibia, to cater for the development of 12 houses.

Nghivelwa Planning Consultant has been appointed to conduct an Environmental Impact Assessment and Environmental Management Plan (EMP) for the subdivision of Erf 62, Rehoboth Extension 1 and the creation of a street within Rehoboth Town, to cater for the development of 12 houses and a 13-meter street. The Environmental Impact Assessment has been conducted to meet the requirements of Namibia's Environmental Management Act, 2007 (Act No. 7 of 2007).

An EIA may be defined as: a formal process to predict the environmental consequences of human development activities and to plan appropriate measures to eliminate or reduce adverse effects and to augment positive effects.

EIA thus has three main functions:

- To predict problems,
- To find ways to avoid them, and
- To enhance positive effects.

1.1. Terms of Reference

The proposed project for the subdivision of Erf 62, Rehoboth Extension 1 into 12 Erven and Remainder and the creation of a street is a listed activity that cannot be undertaken without an Environmental Clearance Certificate. Therefore, as part of the commissioning process an Environmental Impact Assessment (EIA) is required. Thus Mr Izaacs appointed Nghivelwa Planning Consultant to provide consultancy services to undertake an environmental impact assessment compliant to Environmental Management Act, 2007 (Act No. 7 of 2007).

The Terms of Reference (ToR) for the consultants are, but not limited to the following:

- The collection of all possible data on the environmental, social and natural resource components and parameters of necessity;
- A description of the location of the proposed project including the physical area that may be affected by the project activities;
- Description of the design of the proposed project;
- Description of the activities that will be undertaken during the project construction, operation and decommissioning phases;
- Listing of the materials to be used, products and by products, including waste to be generated by the project and the methods of disposal;
- Identification of the potential environmental impacts of the proposed project and
- The mitigation measures to be taken during and after implementation of the project;
- Accidents during the project cycle;
- Establishment of a plan to ensure the health and safety of the workers and neighbouring communities;
- Identification of the economic and socio-cultural impacts of the proposed project;
- Economic and social analysis of the project including project risk and measures to mitigate them.
- Establishment of an action plan for the prevention and management of possible (EMP).
- The consultant will prepare recommendation on the project for its future use.

1.2. Acknowledgement

Nghivelwa Planning Consultant has prepared this EIA Report on behalf of the Mr William Isaacs. The Project proponent, Mr William Izaacs had been extremely positive in providing necessary information and documents and also in providing necessary guidance during the undertaking of the study and preparation of the report. The Consultant (Nghivelwa Planning Consultant) gratefully acknowledges the help, advice and information provided by Mt Izaacs as well as the support and interest shown by all the identified stakeholders.

2. PROJECT DESCRIPTION

The proposed development is for the subdivision of Erf 62, Rehoboth Extension 1 into 12 Erven and Remainder and the creation of a 13-meter street within Rehoboth Town, Hardap Region in central Namibia, to cater for the development of 12 houses.

The project involves the Constructions of Buildings and parking as well as the construction of the access road to the site from the main street, the constructions and installations of bulk services such as Sewer Water Reticulation, the connection and installation of Electricity, the connection and installation of Drinking water to the buildings and the maintenance of the storm water network which will be the responsibility of the proponent.

The proponent will also be responsible for the maintenance of the site during operational phase such as Waste management from site, Noise Pollution control, light pollution to save energy, safety as well as technical maintenance of the aforementioned services.

There are no specific details of the exact design of the development of the site due to the fact that the entire project is still in the designing phase. However, the layout of the site is shown in figure 2 above.

2.1. Site Locality

Erf 62 is located in Block G, Rehoboth Extension 1 and on the North side of Rehoboth Town, Hardap Region, Namibia.



Figure 1: Locality Map

2.2. Land Zoning and Ownership

Erf 62, Rehoboth Extension 1 is owned by Mr William Frank Izaacs and is currently zoned for “General Residential” purposes.

2.3. Site Descriptions

Erf 62, Rehoboth Extension 1 currently measure 7629m² and is currently vacant. It is located on the northern side of Rehoboth Town. There are residential erven around Erf 62, Rehoboth, thus the proposed development will blend in with the surrounding environment. There Erf is currently vacant and there are no buildings constructed on the property.



Figure 2: Heavy trucks parking on the site



Figure 3: Undeveloped Erf 62



Figure 4: Current status of the site no vegetation

2.4. Proposed Activities

The proposed activities entail the following:

- Subdivision of Erf 62, Rehoboth Extension 1 into 12 Erven and Remainder;
- Creation of a 13 Meter Street

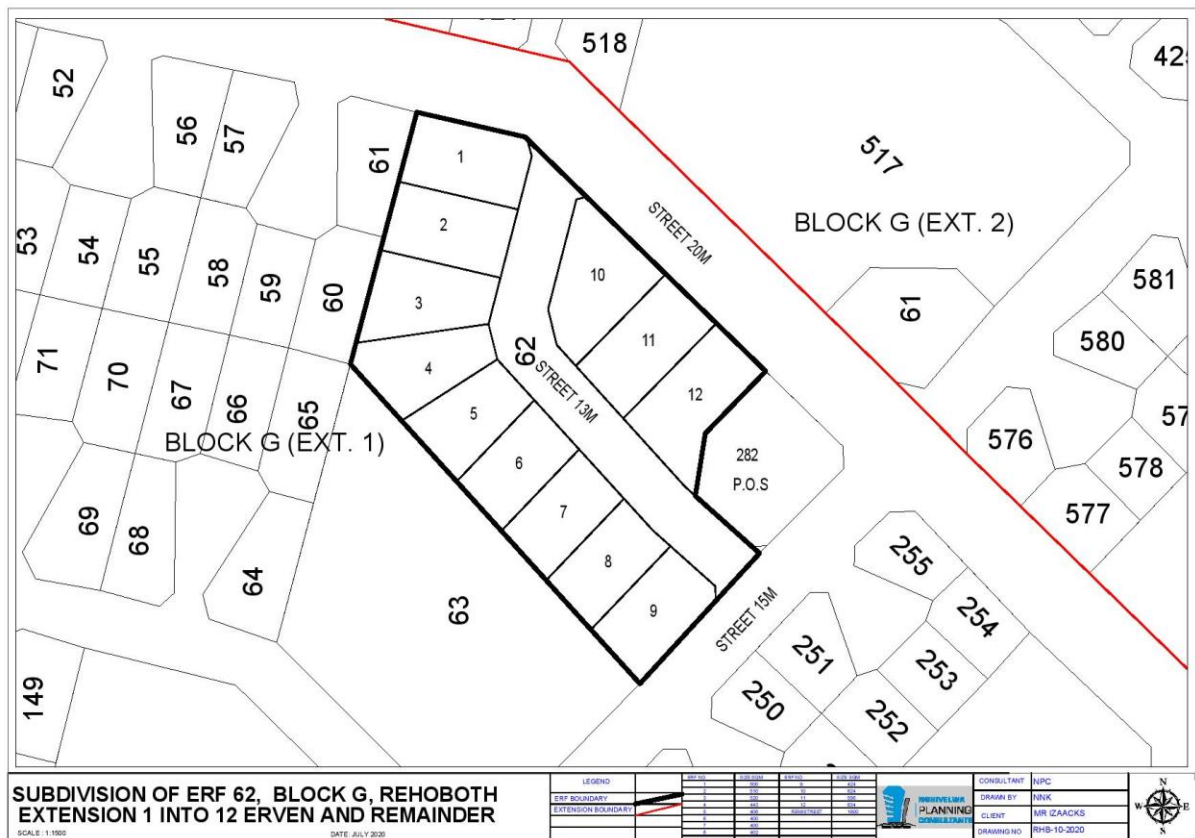


Figure 5: Layout Plan of the Site

After the successful implementation of the town planning and cadastral procedures, the 12 erven will be developed into houses and the remainder as a 13-meter street, no further subdivision will be done.

2.5. Need and Desirability of the Proposed Project

The proponent is desirous to subdivide Erf 62, Rehoboth into 12 Erven and Remainder and the creation of a 13-meter street to allow him to develop houses on the 12 erven. The Namibian Constitution guarantees the right to shelter to every Namibian and the Central Government has made housing a priority over the years. However, due to the lack of resources and poor coordination between central, regional and local government there is a significant shortfall in the provision of Housing in the country.

Some local authorities have engaged the private sector to help in the development of residential infrastructure in their towns. Thus, the proponent will not only be a beneficiary to the proceeds from the sale of the residential properties but will be

helping in the provision of a basic need of housing as guaranteed by the Constitution of the Republic of Namibia.

A new housing development will also increase the revenue of the Rehoboth Town Council as they will be able to collect rates and taxes and inter develop other services for the inhabitants of the town.

3. ANALYSIS OF ALTERNATIVES

In terms of environmental impact assessment best practice, assessment of potential impacts from a proposed activity must include the assessment of alternatives. Assessment of alternatives is undertaken to identify the option that will minimise harm to the environment and may include site, technology and other alternatives, but must always include the option of not implementing the activity, known as the “no-go” alternative.

3.1. Alternative Site

The proponent has the option of undertaking the proposed development in a different location other than the chosen site. This could also entail acquiring land elsewhere to carry out the development.

Due to land availability and the fact that this is the only portion of land the proponent owns, the proposed site, Alternative 1, is the only site that has been identified for the proposed development during the consultation process with the proponent and the Rehoboth Town Council. Therefore, no alternative site has been identified or considered during this study.

The following reasons justify the use of the proposed site for the development:

- The proponent owns the property and it will not make sense to purchase other land parcels for this project.
- The proposed site is easily accessible and close to existing municipal services such as roads, electricity, water and sewerage connection.

- The land is in a residential zone, therefore no red data recorded on the proposed land which might hinder the development on the proposed land.
- There is adequate space for the proposed development on the proposed land.
- It will create job opportunities for the local or Namibians in both construction and operational phases which will improve their skills.

3.2. The “No Project” Alternative

The No-Go Option is the option not to proceed with the proposed activity, implying a continuation of the current situation/ status quo. Therefore, the No-go Alternative would mean that the no subdivision of Erf 62, Rehoboth Extension 1 will take place). Should the proposed development not take place, serious consequences can be expected. In the environmental-socio-economic point of view, the no project option is the least preferred option due to the following factors:

- Currently the site pose as an eyesore and attracts illegal activities such as dumping therefore, leaving it in its current situation is not an option.
- The local skills would remain underutilized.
- No employment opportunities will be created for the locals who would work on the project.
- Poverty will not be eradicated in terms of job creations.

This is therefore not a desirable alternative as the option of not subdividing will be detrimental to the environment.

4. POLICY AND OTHER RELEVANT LEGISLATION

SUBJECT	INSTRUMENTS AND CONTENT	APPLICATION TO THE PROJECT
The Constitution of the Republic of Namibia	<p>General human rights – eliminates discrimination of any kind</p> <p>The right to a safe and healthy environment</p> <p>Affords protection to biodiversity</p>	<p>Ensure these principles are enshrined in the documentation of the exploration project</p>
Environmental Management Act EMA (No 7 of 2007)	<p>Requires that projects with significant environmental impact are subject to an environmental assessment process (Section 27). Details principles which are to guide all EAs.</p>	➤
Environmental Impact Assessment (EIA) Regulations GN 28-30 (GG 487)	<p>Details requirements for public consultation within a given environmental assessment process (GN 30 S21). Details the requirements for what should be included in a Scoping Report (GN 30 S8) and an Assessment Report (GN 30 S15).</p>	➤
Forestry Act No 27 of 2004	<p>Provision for the protection of various plant species</p>	<p>Some species that occur in the area are protected under the Forestry Act and a permit is therefore required to remove the species</p>
Hazardous Substances Ordinance 14 of 1974:	<p>Control of substances which may cause injury or ill-health or death of human beings because their toxic, corrosive, irritant, strongly sensitizing or flammable nature</p>	<p>The waste generated on site and at the campsite should be suitably categorised/classified and disposed of properly and in accordance with the measures outlined in the Ordinance and Bill</p>
The Nature Conservation Ordinance (No. 4 of 1975)	<p>Prohibits disturbance or destruction of protected birds without a permit. Requires a permit for picking (the definition of “picking” includes damage or destroy) protected plants without a permit</p>	<p>Protected plants will have to be identified during the planning phase of the project. In case there is an intention to remove protected species, then permits will be required</p>

Forestry Act 12 of 2001 Nature Conservation Ordinance 4 of 1975	<i>Prohibits the removal of any vegetation within 100 m from a watercourse (Forestry Act S22(1)). Prohibits the removal of and transport of various protected plant species.</i>	<i>Even though the Directorate of Forestry has no jurisdiction within townlands, these provisions will be used as a guideline for conservation of vegetation.</i>
Convention on Biological Diversity, 1992	<i>Protection of biodiversity of Namibia</i>	<i>Conservation-worthy species not to be removed if not absolutely necessary.</i>
Water Act 54 of 1956 Water Resources Management Act 24 of 2004	<i>The Water Resources Management Act 24 is presently without regulations; therefore the Water Act 54 is still in force The Act provides for the management and protection of surface and groundwater resources in terms of utilisation and pollution</i>	<i>Obligation not to pollute surface water bodies</i>
National Heritage Act 27 of 2004	<i>Section 48(1) states that "A person may apply to the [National Heritage] Council [NHC] for a permit to carry out works or activities in relation to a protected place or protected object</i>	<i>Any heritage resources (e.g. human remains etc.) discovered during construction requires a permit from the National Heritage Council for relocation</i>
Labour Act 11 of 2007	<i>Details requirements regarding minimum wage and working conditions (S39-47).</i>	<i>Employment and work relations</i>
Health and Safety Regulations GN 156/1997 (GG 1617)	<i>Details various requirements regarding health and safety of labourers.</i>	<i>Protection of human health, avoid township establishment at areas that can impact on human health.</i>
Public Health Act 36 of 1919	<i>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."</i>	<i>The proponent should ensure that all contractors involved during the construction, operation and maintenance of the proposed project comply with the provisions of these legal instrument</i>
Water Act 54 of 1956	<i>The Water Resources Management Act 24 of 2004 is presently without regulations; therefore the Water Act No 54 of 1956 is still in force: Prohibits the pollution of underground and surface water bodies (S23(1)). Liability of clean-up costs after closure/ abandonment of an activity (S23(2)).</i>	<i>The protection of ground and surface water resources should be a priority. The main threats will most likely be concrete and hydrocarbon spills during construction and hydrocarbon spills during operation and maintenance.</i>

Table 1: Tools advocating the development

5. BASELINE DATA

5.1. Climatic conditions

The Hardap Region is described as a semi-arid highland savannah with a rainfall average ranging from 300-350 mm per year. Its climate is classified as a subtropical stepper (low latitude dry) with a subtropical thorn woodland bio zone. The summer season of the region is described as hot with a maximum temperature between 30°C and 32°C during the hottest months and coldest winter temperatures are around 4°C to 6°C. In this Region, December is known as the hottest month of the year, while July is known as the coldest month of the year in the Region. The mean evaporation figure for the Region lies from 3000mm to 3200mm per annum.

5.2. Geology, Topography and drainage

The Region is located in the central highlands of the country and is bordered by the Erongo, Khomas, Omaheke Regions to the north and Karas Region to the South. The landscape in the Region is classified as being in the Khomas Hochland, high Plateau, which is characterised by rolling hills and many valleys. The topography of the proposed site is predominantly flat. The geology of the region is dominated by the Damara Sequence.

5.3. Soils

The Khomas Hochland is a deeply dissected mountain land of intermediate elevation, where the geomorphology is closely related to the underlying geology (Christelis and Struckmeier, 2001). The soil cover in the study area is the lithic leptosols referring to shallow soil cover over hard rocks. The main rock type is identified as biotite schist, but with minor strata of micaceous quartzite, feldspathic schist and amphibole schist (Labuschagne, 2004, and Mendelsohn, et al, 2002).

5.4. Fauna

During the site inspection, no animals were seen on the area due to the fact that the proposed site is in the residential zone.

5.5. Flora

According to Lawrence (1971), the vegetation of the region is classified as highland savannah and comprises a number of Acacia species and numerous species of perennial thorn trees in the valleys and shrubs and grass on the steep slopes. Based on the physical observations on the proposed site, it was observed that the proposed site is generally covered with soil only with no any vegetation type. Therefore, no clearing of land is going to be undertaken as the site has already been cleared and compacted and the Proponent has already acquired a site. No red data or endangered species were noted / recorded during the site visit on the 2nd of July 2020, therefore it was decided that it is unnecessary to include an ecological specialist study in the report.

6. SOCIO-ECONOMIC ENVIRONMENT

According to Namibia Population and Housing Census of 2011, Rehoboth is experiencing a relatively moderate rural-urban migration rate compared to other big town in Namibia. The following are demographic figures for the Hardap Region.

Demographic	Figures
Total	79 507
Females	38 935
Males	40 572
Head of households	Figures
Females	41
Males	59
Languages	Figures
Oshiwambo	19
Afrikaans	41

Nama/Damara	12
Otjiherero	10
Employment	Figures
Employed (15 year and older)	70
Unemployed	30
The population outside the labour force comprised of students, homemakers and retired or old age persons.	
Main source of income/Livelihood	Figures
Wages & salaries	73
Cash remittance	5
Business, non-farming	14
Pension	4
Farming	1

Table 2: Demographic figures on Socio-Economic Environment

According to the Educational Profile of the Hardap Region, the Region is well placed with regards to academic rates in the whole of Namibia. According to (EMIS, 2012) there are 34 Primary schools, 9 Combines school and 8 Secondary schools and 6 other schools in total. The percentage literacy rates for persons older than 15 years in the Region is 97% compared with that of Namibia which is 81%.

7. PUBLIC PARTICIPATION PROCESS (PPP)

This section of the report provides details of Public Participation Process (PPP) undertaken in the compilation of the EIA final report. Therefore, in terms of Section 26(1)(h) of the Namibian Environmental Assessment Regulations (2012), it is a requirement to provide details of the public participation process conducted in accordance with Section 32 of the Environmental Assessment Regulations. Furthermore, the Public Participation forms an important component of this EIA.

It has been defined by the Ministry of Environment and Tourism that an Environmental Assessment Regulations (2012) of the Environmental Management Act (2007), as a process in which potential interested and affected parties such as neighbouring landowners, local authorities, environmental groups, village councils and communities, to comment on the potential environmental impacts associated with the proposed activity and are given an opportunity to comment on, or raise issues relevant to the proposed project and its benefits to the nation and to Namibia's economy. Besides these legal requirements, it was also endeavoured to consult the public and other relevant stakeholders to ensure that their voices are heard and taken into account during the decision-making process.

7.1. Aim for Public Participation Process (PPP)

The aims for the Public Participation Process are but not limited to;-

- Informing Interested and Affected Parties (I&APs) of the proposed project;
- Identifying issues, comments and concerns as raised by I&APs;
- Promoting transparency and an understanding of the project and its consequences;
- Serving as a structure for liaison and communication with I&APs; and
- Providing local knowledge and input in identifying potential environmental (biophysical and social) impacts and “hotspots” associated with the proposed development.

7.2. Compilation of stakeholder database

The first step in the Public Participation Process (PPP) is to identify key stakeholders. A stakeholder database was compiled and the target groups for this project were invited to the public meeting, these were and not limited to:

- Mayor of Rehoboth Town Council;
- CEO of the Rehoboth Town Council;
- Rehoboth Urban East Constituency Councillor;
- General public

7.3. Background Information Document

This document provides a short summary of the project and the EIA process. Therefore, a background information document (BID) was prepared and was ready to be distributed to Interested & Affected Parties. However, no body requested for it. See a copy of the BID attached.

7.4. Notification of I&APs

The requirements for the notification of potentially interested and affected parties of this application are set out in detail in section 32(2)(b) of the EA regulation. These requirements have been addressed and include;-

- Forwarding letters to government authorities and other identified relevant stakeholders;
- Fixing a notice board at a place conspicuous to the public
- Placing advertisements twice in at least two local newspapers.

7.5. Advertisement

The advertisement of the public participation and public meeting for the proposed project were placed in two local newspapers, the New Era and the Confidante (dated: 9th and 16th July 2020). Proof of advertisements are attached.

7.6. Notice Board

An A3 size notice board detailing information about the project and the EIA process was erected at a recognised public area on 9th July 2020.



Figure 6: Proof of Notice boards notifications



Figure 7: Proof of Notification at the Site

7.7. Public Meeting

In compliance with the EIA Regulations (2012), public (I&AP) and all stakeholders were notified as a requirement for EIA process. Therefore, to incorporate the varying needs of stakeholders and I&APs, as well as to ensure the relevant interactions between stakeholders and the EIA specialist team; However due to the Government Regulations on COVID – 19 that restricts public gatherings, no public meeting was held.

7.8. Issues raised by interested and affected parties

No comments received on the project from interested and affected parties (stakeholders), although they were notified about the project.

8. ENVIRONMENTAL ASSESSMENT METHODOLOGY

An appraisal of the type of effect the proposed subdivision would have on the affected environment; rate as either positive (beneficial on the environment), neutral (no impact on the environment), or negative (adverse impact on at a cost to the environment).

Severity

Rating	Description
1	Negligible / non-harmful / minimal deterioration (0 – 20%)
2	Minor / potentially harmful / measurable deterioration (20 – 40%)
3	Moderate / harmful / moderate deterioration (40 – 60%)
4	Significant / very harmful / substantial deterioration (60 – 80%)
5	Irreversible / permanent / death (80 – 100%)

Table 3: Assessment and Rating of Severity

Duration

Rating	Description
1	Less than 1 month / quickly reversible
2	Less than 1 year / quickly reversible
3	More than 1 year / reversible over time
4	More than 10 years/ reversible over time/ life of project or facility
5	Beyond life of project or facility/ permanent

Table 4: Assessment and Rating of Duration

Extent

Rating	Description
1	Within immediate area of the activity
2	Surrounding area within project boundary
3	Beyond project boundary
4	Regional/ Provincial
5	National/ International

Table 5: Assessment and Rating of Extent

Consequence is calculated as the average of the sum of the ratings of severity, duration and extent of the environmental impact.

Determination of Consequence (C)	(Severity + Duration + Extent) / 3
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Table 6: Determination of Consequence

Frequency

Rating	Description
1	Less than once a year
2	Once in a year
3	Quarterly
4	Weekly
5	Daily

Table 7: Assessment and Rating of Frequency

Probability

Rating	Description
1	Almost impossible
2	Unlikely
3	Probable
4	Highly likely
5	Definite

Table 8: Assessment and Rating of Probability

Likelihood

Likelihood considers the frequency of the activity together with the probability of the environmental impact associated with that activity occurring.

Determination of Likelihood (L) =	(Frequency + Probability) / 2
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Table 9: Determination of Likelihood

Environmental Significance

Environmental significance is the product of the consequence and likelihood values.

Rating	Description
L (1 - 4.9)	Low environmental significance
LM (5 - 9.9)	Low to medium environmental significance
M (10 - 14.99)	Medium environmental significance
MH (15 - 19.9)	Medium to high environmental significance
H (20 - 25)	High environmental significance. Likely to be a fatal flaw

Table 10: Determination of Environmental Significance

8.1. Impacts Associated with Construction Phase

Potential effects on the environment and their mitigation measures during construction are:

Air Quality Impacts These are expected to be site specific and surrounding area, short-termed and will most probably pose a negligible nuisance and health threat to those residing nearby. The construction of the proposed facility will have impact on the surrounding air quality as construction vehicle will be frequenting the site and surrounding.

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	2	2	2	2	5	5	5	Negative	7(LM)
Mitigation measures:									
<ul style="list-style-type: none"> - Dust may be generated during the construction/decommissioning phase and might be aggravated when strong winds occur therefore; dust suppression during the construction process is advised if dust becomes an issue. - Vehicles travelling to and from the construction site must adhere to the speed limits so as to avoid producing excessive dust. A speed limit of 40 km/hr should be set for all vehicles travelling over exposed areas. - Loads could be covered to avoid loss of material in transport, especially if material is transported off site. 									
Mitigated	1	1	1	1	1	1	1	Negative	2 (L)

Noise caused by construction activities- Noise levels are expected to rise during the construction phase of the development. Construction activities that cause noise include vehicle trafficking, generator noise, pressure hammers and construction worker's voices, including earthmoving equipment which will be utilized during the construction phase.

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	3	4	3	3.33	5	3	4	Negative	8.33 (LM)
Mitigation measures:									
<ul style="list-style-type: none"> - Construction should be limited to normal working days and office hours from 08h00 to 17h00 and 7:30 – 13:00 on Saturdays. - Provide ear plugs and ear muffs to staff undertaking the noisy activity or working within close proximity thereof or alternatively, all construction workers should be equipped with ear protection equipment. - Noise pollution should be addressed and mitigated at an early stage of construction phase. 									
Mitigated	1	1	1	1	1	1	1	Negative	2 (L)

Employment Creation (Positive Impact) this is a job creation and economic benefit to local community since the construction activities associates with the installation of services infrastructure which will require labourers from the surrounding.

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	1	3	3	2.33	2	5	3.5	Positive	5.83 (LM)
Mitigation measures:									
<ul style="list-style-type: none"> - Various employment opportunities will be created during all phases of the development, ranging from highly skilled to unskilled. Preference should be given to Namibian Citizens residing in Rehoboth. - When recruiting, the responsible contractor should ensure gender equality is taken into consideration that both men and women are employed equally and treated equally. - No employment applications may take place at the entrance to the site, formal employment channels must be used. - In terms of human resource development and capacity building, the contractor must enforce training programs that skilled workers should always train unskilled workers when necessary, in order for them to enhance their performances and to gain more knowledge that they might demonstrate at other levels in future. 									
Mitigated	1	2	5	2.66	3	5	4	Positive	6.66 (LM)

Health and Safety- Health and Safety Regulations pertaining to personal protective clothing, first aid kits being available on site, warning signs, etc. is very important and should be adhered to. During construction phase, there is a possibility of injuries to occur if no measures are taken into consideration.

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	5	5	2	4	5	3	4	Negative	8 (LM)
Mitigation measures:									
<ul style="list-style-type: none"> - A health and safety plan is to be developed and implemented as soon as land clearing commences. - During construction, earthmoving equipment will be used on site. This increases the possibility of injuries and the responsible contractor must ensure that all staff members are briefed about the potential risks of injuries on site. - Ensure the appointment of a Safety Officer to continuously monitor the safety conditions during construction. - The contractor is further advised to ensure that adequate emergency facilities are available on site. - The construction staff handling chemicals or hazardous materials must be trained in the use of the substances and the environmental, health and safety consequences of incidents. - All construction staff must have the appropriate PPE. 									
Mitigated	2	1	2	1.66	1	2	1.5	Negative	3.16 (L)

Traffic - Potential impact due to increase in traffic because the site is in the urban area or industrial area. Construction related activities are expected to have a minimal impact on the movement of traffic along the road. Accidents might occur if no qualified drivers employed to drive vehicles for the project.

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	4	3	4	3.66	5	4	4.5	Positive	8.16 (LM)
Mitigation measures:									
<ul style="list-style-type: none"> - No diversion of traffic or closure of the road is expected the site will be cordoned off. - The responsible contractor must ensure that all drivers employed have valid driver's licenses of vehicle types they employed for, and that they have experience in driving those vehicles. - The contractor must ensure that there is always a supervisor on site to ensure that no driver under the influence of alcohol or narcotics to be authorized to drive company's vehicles. - The vehicle construction should limit speed to 40km/h and also be considerate of the surrounding land users. 									
Mitigated	1	1	1	1	1	2	1.5	Positive	2.5 (L)

Waste Impacts- The construction phase of the development is likely to generate waste from builder's rubble, general construction refuse and minor hazardous waste including paint tins, cleaning acids, asphalt's and oils. The development could therefore impact on the environment by generating solid waste pollution.

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	3	3	3	3	5	4	4.5	Negative	7.5 (LM)
Mitigation measures:									
<ul style="list-style-type: none"> - Ensure that no excavated soil, refuse or building rubble generated on site are placed or dumped on surrounding properties or land. - Contaminated wastes in the form of soil, litter, building rubble and other material must be disposed off at an appropriate disposal site. - The contractor and developer should ensure that all the waste generated by the development is appropriately disposed of at the recommended waste disposal sites close to the area. - Strictly, no burning of waste on the site or at the disposal site is allowed as it possess environmental and public health impacts; 									
Mitigated	1	1	1	1	4	2	3	Negative	4 (L)

Safety and Security- During the construction and decommissioning phase, earthmoving equipment will be used on site. This increases the possibility of injuries. Presence of equipment may encourage criminal activities (theft).

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	3	3	3	3	5	4	4.5	Negative	7.5 (LM)
Mitigation measures:									
<ul style="list-style-type: none"> - The site must be fenced off to prevent unauthorized access during construction. - All visitors must report to the site office. - Ensure that the contact details of the police or security company and ambulance services are available on site. - The contractor and developer should ensure that all the waste generated by the development is appropriately disposed of at the recommended waste disposal sites close to the area. - Strictly, no burning of waste on the site or at the disposal site is allowed as it possess environmental and public health impacts; 									
Mitigated	1	1	1	1	4	2	3	Negative	4 (L)

8.2. Impacts Associated with Operational Phase

Increased employment opportunities-

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	2	3	5	3.33	3	3	3	Positive	6.33 (LM)
Mitigation measures:									
<ul style="list-style-type: none"> - It is recommended to put local people at forefront when hiring or recruiting people, therefore unskilled people from the local community should be employed and semi-skilled from the region so that unskilled workers can be trained by semi-skilled for them to learn and be able to compete with others in future. - Jobs for the maintenance of infrastructure and services will be created following the completion of the development. These jobs might be made available to existing labour there creating long term employment. - Equity, transparency, should be put into account when hiring and recruiting and that committees should also take part in the recruiting process for decision makings. 									
Mitigated	1	4	4	3	2	5	4	Positive	6.5 (LM)

Improved aesthetic look of the area- The development of this project at this site is essential to improve the visual and aesthetics view of the area. This potential impact of the infrastructure on the economic structure is positive impact.

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	3	4	1	2.66	5	4	4.5	Positive	7.16 (LM)
Mitigation measures:									
<ul style="list-style-type: none"> - No mitigation required because it's a positive impact. However, the developer should create awareness among the staff working in the proposed offices about energy conservation, waste management, saving of water and other resources. - It should provide accessibility to the services provided in the building. - Parking areas will be provided with 1 parking bay per 25m². - Ensure proper and regular maintenance of the area. - No illegal dumping of waste should be allowed 									
Mitigated	1	4	2	2.33	5	5	5	Positive	7.33 (LM)

Water demand- Namibia is a water scarcity country, therefore, the additional development like this one will increase the water demand.

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	5	5	5	5	5	5	5	Negative	10 (M)
Mitigation measures:									
<ul style="list-style-type: none"> - This development will create employment to people from different backgrounds and with different perceptions on using water. Therefore, awareness should be created to inform people on the importance of saving water to reduce water consumption. 									
Mitigated	1	2	1	1.33	1	2	1.5	Negative	2.83 (L)

Power usage- Namibia is experiencing power shortage, therefore electricity should be used wisely in order to sustain the future generation.

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	2	5	5	4	5	3	4	Negative	8 (LM)
Mitigation measures:									
<ul style="list-style-type: none"> - Power should be off in areas that are not in use/avoid unnecessary lights - Avoid unnecessary printings - Unplug unused electronics - Ditch the desktop computers 									

- Encourage use of renewable energy i.e. Solar lights at parkings to supplement the electricity supply									
Mitigated	1	1	1	1	3	2	2.5	Negative	3.5 (L)

Waste management- Generation of domestic waste while sewage waste will be generated from toilets

	Severity	Duration	Extent	Consequence	Frequency	Probability	Likelihood	Status	Confidence/ Significance
Unmitigated	4	3	3	3.33	5	3	4	Negative	7.33 (LM)
Mitigation measures:									
<ul style="list-style-type: none"> - During the operations phase, the Rehoboth Town Council waste management will manage the waste disposal from the site while the proponent will ensure that waste are stored in correct waste storages. - Rehoboth Town Council to develop a formal waste collection strategy and that the waste is to be collected regularly by disposed of at authorized dumping site or disposal site. - Ensure maintenance of sewage system - Illegal dumping should be prohibited. 									
Mitigated	1	1	1	1	4	2	3	Negative	4 (L)

8.3. Impacts Associated with Decommissioning Phase

At this point, it is difficult to visualise and assess the decommissioning phase, although the procedures for decommissioning phase should be the same as for the construction phase however, there will be possible pollution the demolition of the project. However, Furthermore, during the decommissioning phase, an Environmental Impact Assessment (EIA) will be required and the disposal of decommissioned equipment and hazardous contaminated materials should be disposed following the disposal of hazardous material legislation.

9. CONCLUSION

Mr William Isaacs proposes the subdivision of Erf 62, Rehoboth into 12 Erven and Remainder and the creation of a 13-meter street within Rehoboth Town, Hardap Region in central Namibia, to cater for the development of 12 houses. Nghivelwa Planning Consultant has been appointed to conduct an Environmental Impact Assessment and Environmental Management Plan (EMP) for the proposed project.

The potential environmental issues associated with the proposed activities have been identified and assessed. Therefore, they are considered sufficient and no additional specialist study is required. Furthermore, a number of potential impacts were assessed and mitigation measures are provided. The area is generally suitable for the proposed project and there were no objections or critical issues have been raised by I&AP's. Hence, all environmental risks can be minimised and managed through implementing preventative measures and sound management systems. Therefore, the approval of this application would not compromise the integrity of the existing environmental management priorities for the area.

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