

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PERMANENT CLOSURE OF THE STREET PORTIONS A AND B OF ISMAEL ABRAHAM AND/OR MOSHITILA STREET, SUBDIVISION OF ISMAEL ABRAHAM AND/OR MOSHITILA STREET AND CONSOLIDATION OF PORTIONS A AND B OF ISMAEL ABRAHAM AND/OR MOSHITILA STREET WITH ERVEN 3209 & R1797, MONDESA, SWAKOPMUND.

SCOPING REPORT AND ENVIRONMENTAL MANAGEMENT PLAN



MAY 2024

Project Title: Environmental Impact Assessment for The Permanent Closure of The Street Portions A and B of Ismael Abraham and/or Moshitila Street, Subdivision of Ismael Abraham and/or Moshitila Street and Consolidation of Portions A and B of Ismael Abraham and/or Moshitila Street with Erven 3209 & R1797, Mondesa, Swakopmund.

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Table of Contents

EXECUTIVE SUMMARY	6
1. INTRODUCTION	7
1.1. Background.....	7
1.2. Terms of Reference	7
2. PROJECT DESCRIPTION.....	8
2.1. Site Locality.....	8
2.2. Land Use and Zoning	8
2.3. Existing Infrastructure.....	9
2.4. Proposed Activity	11
2.6. Project Alternative	13
3. LEGAL REQUIREMENTS	14
4. DESCRIPTION OF THE AFFECTED ENVIRONMENT	17
4.1 Biophysical Environment	17
4.2 Socio-Economic Profile.....	17
5. PUBLIC CONSULTATION	19
6. ENVIRONMENTAL IMPACTS IDENTIFIED	21
6.1 Changes in Land Use	21
6.2 Dust Impacts	21
6.3 Noise Impacts	21
6.4 Traffic Impacts	21
6.5 Health and Safety Impacts	21
6.6 Solid and Liquid Waste Management	22
6.7 Socio-economic Impacts.....	22
7 IMPACT ASSESSMENT.....	23
8 ENVIRONMENTAL MANAGEMENT PLAN	26
9. CONCLUSION AND RECOMMENDATIONS	32
10. REFERENCES	33
APPENDIX A: COUNCIL’S APPROVAL – MUNICIPALITY OF SWAKOPMUND.....	34
APPENDIX B: CONSULTANTS CURRICULUM VITAE	39
APPENDIX C: PROOF OF PUBLIC CONSULTATION.....	43

LIST OF TABLES

Table 1: Namibian legislation applicable to the proposed activity	14
Table 2: Environmental, Social and Economic evaluation of impacts using the MIA method	23
Table 3: Environmental Impact Assessment Rating	24
Table 4: Socio- economic Impact Assessment rating	24
Table 5: Proposed mitigation measures for the identified impacts, aspects and risks	29

LIST OF FIGURES

Figure 1: Locality Map (Google Earth, 2024)	8
Figure 2: Depicting the existing Erven zoning (encircled & bolded)	9
Figure 3: Photographs of the surrounding land use	10
Figure 4: Current Site (before closure)	11
Figure 5: Proposed Site after the Closure (in red)	12

LIST OF ABBREVIATIONS

DEAF	Department of Environmental Affairs and Forestry
ECC	Environmental Clearance Certificate
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
I&APs	Interested & Affected Parties
MEFT	Ministry of Environment, Forestry and Tourism
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
WHO	World Health Organization

EXECUTIVE SUMMARY

The Municipality of Swakopmund has in principle approved the sale of the two street portions (Portions A and B of Ismael Abraham Omundele and/or Moshitila Street) to Ms. A. Uushona (herein referred to as the Proponent). The proponent intends to permanently close off the Street Portions A and B of Ismael Abraham and/or Moshitila Street, subdivision of Ismael Abraham and/or Moshitila Street and consolidation of Portions A and B of Ismael Abraham and/or Moshitila Street with erven 3209 and R1797, Mondesa, Swakopmund. According to Section 27 of the Environmental Management Act No. 7 of 2007, land use and development activities may not be carried out without undertaking an Environmental Impact Assessment (EIA) and obtaining an Environmental Clearance Certificate (ECC).

Thus, SandSea Consulting cc was appointed to undertake the EIA process and to apply for an ECC, in terms of the Environmental Management Act No. 7 of 2007 and its Regulations of 2012 (GN No 30 of 2012). The proposed site is located on -22.666872,14.544164. The proposed area measures approximately 331m² and the zoning is Single Residential.

This study is conducted to determine all environmental, safety, health and socio-economic impacts associated with the construction and operation of the site. Relevant environmental data has been compiled by making use of secondary data and observations through site visits. Potential environmental impacts and associated socio-economic impacts identified during the scoping process are addressed in this report.

This development will create impacts such as air pollution, noise pollution, traffic disturbances and generation of solid and liquid waste during the construction and operational phases. If all mitigation measures of the potential impacts are implemented according to the recommendations given in the Environmental Management Plan, it is anticipated that the consequence and/or probability of the predicted negative impacts will be mitigated.

The EMP should be used as an on-site reference document during the construction and operation of the site. Parties responsible for transgression of the EMP should be held responsible for any corrective measures that may need to be undertaken. This study recommends that the environmental performances are monitored regularly to ensure compliance and that remedial measures are taken when necessary.

1. INTRODUCTION

1.1. Background

The Municipality of Swakopmund has, in principle, approved the sale of two street portions (Portions A and B of Ismael Abraham Omundele and/or Moshitila Street) to the Proponent, as per Council Resolution of 25/03/2021 under item 11.1.19. The proposed street is located in Ismael Abraham Omundele and/or Moshitila Street, Mondesa. The Council has also approved the permanent closure of these portions as "street" for the purpose of consolidating them with Erven 3209 and R1797. This 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.

Sand Sea Consulting cc has been appointed to conduct an EIA and develop an Environmental Management Plan (EMP) for the proposed project. Additionally, an application to the Ministry of Environment, Forestry and Tourism (MEFT): Department of Environmental Affairs and Forestry (DEAF) to obtain an ECC for the proposed project will be submitted.

1.2. Terms of Reference

The proposed project involves the closure of Portions A and B of Ismael Abraham Omundele and/or Moshitila Street, adjacent to Erf 3209 and the remainder of Erf 1797, designated as a "Street." This is a listed activity that cannot be undertaken without an Environmental Clearance Certificate. The Terms of Reference (TOR) for the proposed project is based on the requirements set out by the Environmental Management Act (No. 7 of 2007) and its EIA Regulations (GN No 30 of 2012). The process covered the following steps:

- Provide a detailed description of the proposed activity;
- Identify all policies, legislation and guidelines that are relevant to the proposed activity;
- Notify and consult relevant stakeholders and I&AP's regarding the proposed activity and provide them with reasonable opportunity to participate during the assessment process;
- Identify potential environmental impacts the proposed activity will have on the natural & urban environment and assess their significance;
- Collecting all possible data on the environmental, social, and natural resource components and parameters of necessity;
- Describing the location of the proposed project, including the physical area that may be affected by the project activities; and
- Outline management and mitigation measures in an EMP to minimize and/or mitigate potentially negative impacts, which cannot be avoided.

2. PROJECT DESCRIPTION

2.1. Site Locality

The proposed site is located in a residential area and the surrounding neighbours are mostly residential and retail shops. The site is currently zoned as “street”, as defined in the Swakopmund Town Planning Scheme and the proposed area measures approximately 331m². Presently, the area is undeveloped and the proposed site is located on -22.666872,14.544164 as depicted in **Figure 1**. The two street portions (Portions A and B) are in Ismael Abraham Omundele and/or Moshitila Street.



Figure 1: Locality Map (Google Earth, 2024)

2.2. Land Use and Zoning

The Proponent intends to permanently close the two street portions (Ismael Abraham Omundele and/or Moshitila Street), subdivide and consolidate the portions with erven 3209 and R1797 and assume the same zoning. The zoning is Single Residential as shown in Figure 2. The proposed area measures approximately 331m². The proposed street is in between single residential erven that are occupied.

The proposed site is currently zoned as “street, defined in the Swakopmund Zoning as “the whole or any portion of any street, road, bridge, subway, avenue, lane, sanitary lane or thoroughfare

shown on the general plan or the town where a right-of-way is registered in the favour of the general public or where the public has a right-of-way by prescription”.

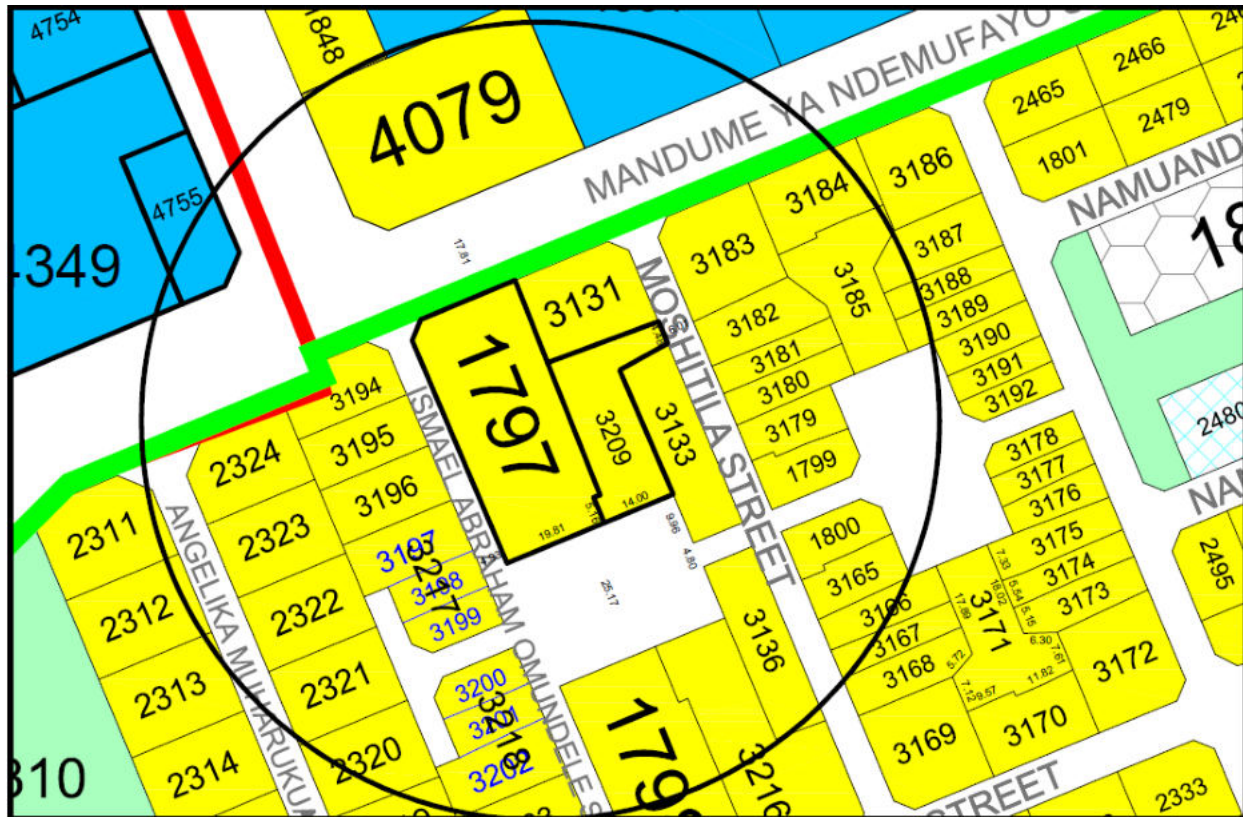


Figure 2: Depicting the existing Erven zoning (encircled & bolded)

2.3. Existing Infrastructure

Project site is within a built-up and serviced area. The existing infrastructure of Monda, primarily consisting of the "old Monda," still comprises of semi-formal housing where low-income families reside. These housing units typically comprise small rooms or flats rented out by landlords. Additionally, makeshift structures constructed from materials such as boxes, shutter boards and/or scrap metal sheets are scattered throughout the area, often serving as dwellings for residents.

The buildings in the “Old Monda” infrastructure were constructed during the segregation period to accommodate the majority population. This segregation, enforced during the colonial and apartheid eras, resulted in the establishment of areas like Monda for majority residents, separate from those designated for other advantaged racial groups.

Since independence, the surrounding area has undergone some changes, including the construction of a service station, as well as the addition of a KFC outlet, a community gym & multi-purpose center and a medical facility in proximity. All major and bulk services such as water, sewerage and electricity are readily available in the area.



Figure 3: Photographs of the surrounding land use

2.4. Proposed Activity

The Proponent intends to permanently close the two street portions (Portions A and B of Ismael Abraham Omundele and/or Moshitila Street), subdivide and consolidate the portions with erven 3209 and R1797 and assume the same zoning.



Figure 4: Current Site (before closure)



Figure 5: Proposed Site after the Closure (in red)

2.5. Need and Desirability of the Proposed Project

The intention of the proponent is to permanently close the two street portions, subdivide and consolidate the portions with erven 3209 and R1797, and assume the same zoning. The proposed area measures approximately 331m². The proponent wishes to extend the current apartment building to accommodate more rooms/flats.

The lack of affordable housing is a pressing issue that affects many Namibians, forcing many low-income individuals and families to reside in cramped, one-room apartments. As demand surges, especially in urban areas where people normally seek job opportunities, prices skyrocket, making housing unattainable for those with limited financial means.

Additionally, stagnant wages and the rising cost of living exacerbate the affordability crisis, leaving many low-income individuals struggling to make ends meet. With a significant portion of their income already allocated to essentials like food, healthcare, and transportation, they are left with little to afford adequate housing. Access to adequate housing is recognized as a fundamental human right. Affordable housing ensures that everyone has a decent, safe, and secure place to live, regardless of their income level.

2.6. Project Alternative

Environmental impact assessment best practices require evaluating potential impacts of proposed activities, including exploring alternatives. This process aims to identify options that minimize harm to the environment, which may involve assessing site, technology, and other alternatives. Crucially, it must also consider the "no-go" alternative, wherein the activity is not implemented.

To facilitate the construction of additional residential units, the proponent, who already owns adjacent erven (3209 and 1797), plans to consolidate the street portion measuring 331 square meters with these properties. This consolidation allows for the extension of existing apartments and rooms onto the newly acquired street portion. This approach is deemed more financially feasible than purchasing additional land parcels for the project. As such, closing off the street portion is the most practical and desirable option for achieving the proponent's development goals. The proponent has also already purchased the proposed site from the Municipality of Swakopmund. Therefore, no alternative site has been identified or considered during this study.

3. LEGAL REQUIREMENTS

This section depicts the relevant Namibian legislation and policies associated with the proposed activity.

Table 1: Namibian legislation applicable to the proposed activity

LEGISLATION/GUIDELINE	PROVISION	PROJECT IMPLICATION
The Constitution of Namibia 1990	The articles 91(c) and 95(i) commits the state to actively promote and sustain environmental welfare of the nation by formulating and institutionalizing policies to accomplish the sustainable objectives which include: - Guarding against overutilization of biological natural resources, - Limiting over-exploitation of non-renewable resources, - Ensuring ecosystem functionality, - Maintain biological diversity.	Through implementation of the environment management plan, the proponent shall be advocating for sound environmental management as set out in the Constitution.
Environmental Management Act No.7 of 2007 and the Environmental Management Act Regulations of 2012	The purpose of this Act is to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment; to provide for a process of assessment and control of projects which may have significant effects on the environment; and to provide for incidental matters. Requires that projects with significant environmental impacts are subjected to an environmental assessment process (Section 27).	An Environmental Impact Assessment is compulsory for listed activities. "The closure of a street" or in this case a portion of a street.
Local Authorities Act No. 23 of 1992	Define the powers, duties and functions of local authority councils. Regulations related to discharges into sewer networks, business registration, etc.	The Municipality of Walvis Bay is the responsible Local Authority of the area in which the proposed development will be located.
Town and Regional Planners Act No. 9 of 1996	This Act establishes the Namibian Council for Town and Regional Planners, defines functions and powers of the Council. The Act also provides for the establishment of national, regional and urban structure plans, and the development of zoning schemes.	The project layout must be done in accordance with the Swakopmund Town Planning Scheme.
The Water Act No. 54 of 1956	Prohibits the pollution of water and implements the principle that a person disposing of effluent or waste	The protection of ground and surface water resources should be a priority during the

	<p>has a duty of care to prevent pollution (S3 (k)).</p> <p>Provides for control and protection of groundwater (S66 (1), (d (ii)).</p> <p>Liability of clean-up costs after closure/abandonment of an activity (S3 (l)).</p>	construction and operation phase.
Water Resources Management Act No. 11 of 2013	The Act aims to provide for the management, protection, development, use and conservation of water resources; to provide for the regulation and monitoring of water services and to provide for incidental matters.	
Atmospheric Pollution Prevention Ordinance No. 11 of 1976	<p>Governs the control of harmful or offensive gasses and prohibits processes without registration certificate.</p> <p>Requires best practical means for preventing or reducing the escape into the atmosphere of harmful or offensive gasses produced by any process.</p>	All activities shall be conducted in an environmentally sensitive manner.
Public Health Act No. 36 of 1919	Provides for the protection of the health of all people	The Proponent and all its employees should ensure compliance with the provisions of these legal instruments.
Public and Environmental Health Act No. 1 of 2015	<p>Provides a framework for a structured more uniform public and for incidental matters.</p> <p>The objects of this Act are to:</p> <ul style="list-style-type: none"> ✓ Promote public health and wellbeing. ✓ Prevent injuries, diseases and disabilities. ✓ Protect individuals and communities from public health risks. 	
Labour Act No. 11 of 2007	<p>Provides for Labour Law and the protection and safety of the employees.</p> <p>Labour Act, 1992: Regulations relating to the health and safety of employees at work.</p>	Contractors, Sub-contractor shall be guided by this Act when recruiting or handling employment related issues.
WHO Guidelines for Community Noise	The guideline values consider all identified adverse health effects for the specific environment. An adverse effect of noise refers to any temporary or long-term impairment of physical, psychological or social functioning that is associated with noise exposure. Specific noise limits have been set for each health effect, using the lowest noise level that produces an adverse health effect.	Noise in all phases of the project should be kept as per the guideline.

Swakopmund Zoning Scheme as underwritten by the Urban and Regional Planning Act, 2018 (Act No.5 of 2018)	The proposed consolidation requires approval from the Local Authority (LA) and Urban and Regional Planning Board (URP Board).	Approval should be obtained from Municipality of Swakopmund and the Urban and Regional Planning Board
Swakopmund Municipality: Standard Building Regulations of 1975 as amended.	Provide matters to building approval and control of building activities to protect residents and the environment, offences and penalties and incidental matters. Any person who intends to erect any building, whether permanent or temporary, must make a written application to the Local Authority for approval	Adherences during the construction.
Swakopmund Urban Structure Plan	Plan indicates the future growth and structure plan of Swakopmund up to 2040 with policies on land use planning. The urban structure plan was reviewed to determine whether the proposed activity is broadly in line with the future planning of Swakopmund.	Adherences to the Swakopmund structure plan.

4. DESCRIPTION OF THE AFFECTED ENVIRONMENT

4.1 Biophysical Environment

a) Climate Conditions

Swakopmund town, is located within the Namib Desert, and benefits from the moderating influence of the cold Benguela current flowing south to north along Namibia's coastline. While temperatures in the interior can exceed 35 °C during summer, Swakopmund's climate is temperate, with average temperatures ranging between 15 °C and 25 °C. Rainfall is minimal, averaging 8 mm per annum and occurring less than 10 times a year between October and March. Moisture from the cold Benguela current manifests as fog, providing a vital water source for local fauna and flora, especially during the foggiest months from May to August. The climatic conditions at the proposed site should not pose any significant problems related to the constructions and operations of the facility. Flooding is not a concern in the area.

b) Geology and Hydrogeology

Deep unconsolidated sediments of Tertiary to Recent age underlie Swakopmund, with bedrock estimated at depths of 40 to 60 m below the surface. The deposits have been formed by a combination of fluvial, estuarine, coastal and Aeolian processes. Quaternary deposits are found in the area and consist of alluvium, gravel, calcrete, and windblown deposits from the Namib Desert Sand Sea. Groundwater flows westward towards the Atlantic Ocean, with no groundwater points within a 5 km radius from the site. Public water supply to Swakopmund and the surrounding development is provided by the Municipality of Swakopmund.

c) Flora and Fauna

Residential development dominates the project area, resulting in fragmented and degraded habitats almost immediately for flora and fauna. However, immediate threats to biodiversity are not expected due to the absence of flora and fauna on-site. The proposed site falls within the Southern Namib Dune Grassland biome, characterized by grassland and dwarf shrublands growing on dune sands. Plants in the area rely heavily on fog as their water source.

4.2 Socio-Economic Profile

According to the Namibia 2023 Population and Housing Census the total Population in Erongo Region is 240 206 (NSA, 2023) of which 75 921 make up the Population of Swakopmund. Swakopmund has a total population of 75 921 people, with a population density of 196.32 persons per km². The urban population of Swakopmund is 37,950 males and 37,971 females, totalling to 75,921 residents and the average household size in Swakopmund is 3.0 people per household (NSA, 2023).

Swakopmund is a coastal town in Erongo Region of western Namibia. It is located 30 km north of Swakopmund and is an important holiday destination. It lies on the B2 road which stretches further to the Trans Kalahari Highway. The Erongo desalination plant has been the region's highest achievement thus far in terms of economic growth. The town of Swakopmund is more of a tourist destination than a commercial town, with no fishing industry or local port. Tourism is important to the Namibian economy and is ranked third as a foreign exchange earner. Many view the coastal towns such as Swakopmund and Henties Bay as holiday towns, which see an influx of tourist during the holidays. As the tourism industry is expanding so is employment rate in the accommodation and catering industry.

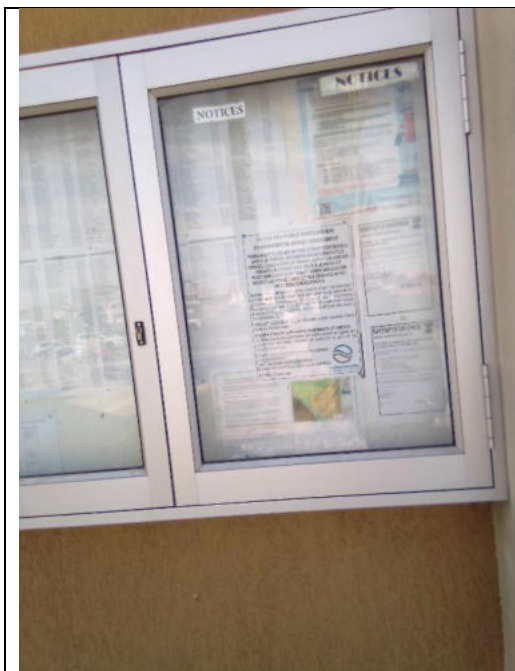
Despite the many recreational places and activities offered in Swakopmund the youth and local community still resort to frequenting shebeens/bars. Although most roads are tarred especially in the centre of the town, many roads in suburbs like DRC and Mondesa are still gravel/salt roads. A railway track from Swakopmund to Windhoek is also available. Other facilities like telecommunication and electricity in the town are well established. The proposed project will require construction and operation services which will provide additional economic benefits to the community through increased employment and accommodation availability. The mining development in the region resulted in an increased in-migration to the coastal towns putting pressure on available affordable accommodation.

5. PUBLIC CONSULTATION

This section of the report outlines the Public Consultation Process conducted during the assessment period, as required by Section 26(1)(h) of the Namibian Environmental Assessment Regulations (2012). The key objective is to allow stakeholders, neighbouring landowners and Interested and Affected Parties (I&APs) to raise issues of concern and suggestions for enhanced benefits as well as to comment on the findings and consultants' recommendations.

Public consultation was conducted as follows:

- Site notices were placed onsite on Portions A and B of Ismael Abraham Omundele and/or Moshitila Street and also at the Municipality of Swakopmund notice board.



Portions A and B of Ismael Abraham Omundele and/or Moshitila Street



Municipality of Swakopmund

- Direct neighbours were given the Background Information Document (BID) with a comment sheet attached to raise any comments, issues or concerns related to the proposed project. The BID and a list of I&APs generated from this exercise is appended to the report.
- Public consultation notices were also advertised in two (2) national newspaper for two consecutive weeks.
 - **Namib Times** 12 April 2024 and 19 April 2024
 - **CONFIDENTE** 12 – 18 April 2024; 19 – 25 April 2024

- The Municipality of Swakopmund was also consulted and the documentation resulting from this consultation are appended to this report.
- No objections against the proposed development were raised. In summary, the consulted I&APs are in support of the proposed development and consider the site to be suitable. Proof of public consultation is appended to the report.

6. ENVIRONMENTAL IMPACTS IDENTIFIED

Although the proposed project is within a built-up area, the environmental impacts may be less significant compared to undeveloped areas. However, it could still have potential environmental impacts. Some identified potential environmental impacts include:

6.1 Changes in Land Use

Consolidating street portions within the build-up area could still result in changes to land use patterns. The consolidating of the street portion with the existing erven changes how the land is used. A place that used to be a public street, will now become private property, changing how people access and use the area.

6.2 Dust Impacts

Potential air quality impacts from the construction works of the project would mainly arise from construction dust from site clearance, excavation, foundation and site formation works. These are expected to be site specific and will pose minimal nuisance to the residence and businesses in the surrounding area. Dust might be worse during the winter months when strong winds occur. The construction of the proposed development is envisaged to have minimal impacts on the surrounding air quality. It is recommended that regular watering of the construction site and adopt dust control measures. Special care must be taken during periods of strong wind in the area. During the operational phase, the only air emission source due to the project is the induced traffic along the traffic routes leading to or from the future development.

6.3 Noise Impacts

Earthmoving equipment passing or moving into a specific place at intervals may exert little influence on average noise levels over a period, but the effects on community health produced by the peaks that they create in the noise level are significant. Construction workers should be equipped with ear protection equipment and erect warning signs where necessary. Construction activities should be limited to 07H00 - 18H00 during weekdays and weekends. The facility must adhere to World Health Standards as specified in the EMP.

6.4 Traffic Impacts

The Construction related activities are expected to have a minimal impact on the movement of traffic along this street. No diversion of traffic or closures of the roads are expected.

6.5 Health and Safety Impacts

Safety issues could arise from earthmoving equipment that will be used on site during the construction period, this increases the possibility of injuries. This increases the possibility of injuries, and the responsible contractor must ensure that all staff members are made aware of the potential risks of injuries on site. The contractor is advised to ensure that the team is equipped with first aid kits and that they are always available on site. Workers should be equipped with

adequate personal protective equipment and properly trained, thus mitigating these impacts. Heavy vehicle makes excessive noise during loading, Excavating and transportation of material. Employees must not be exposed to noise levels above the required -85dB (A) limit over a period of 8 hours. Supply clean drinking water to the site, such as portable water tank and there must be two suitable, clean and user-friendly ablution facilities, with separate Male and Female toilets. Only qualified and licenced personnel must be allowed to operate machinery and vehicles and adequate safety signs must be displayed on site.

6.6 Solid and Liquid Waste Management

During the construction and operational phases, waste will be generated. In the construction phase, building rubble will be generated, while in the operational phase, the building will be occupied by people, leading to the generation of general and liquid waste. All waste must be collected, contained in skips and wheelie bins and disposed of at the Municipal waste disposal site. Do not burry waste on site. Building rubble, planks, metal offcuts, cement, wires and household waste such as plastic are common on most construction sites, and thus must be addressed. Sewage generated from the proposed project will be subsequently delivered to the Municipal Sewage Treatment Works for further treatment and disposal.

6.7 Socio-economic Impacts

The construction phase of the project will create job opportunities for residents, including labourers, skilled workers, and contractors, thereby contributing to local employment and income generation. The consolidation of the street portion with the existing erven and the subsequent development of the area could potentially increase property values in the vicinity, benefiting property owners but potentially making housing less affordable for some residents. Provide working contract to employees and gender mainstreaming must be considered during recruitment process.

7 IMPACT ASSESSMENT

The purpose of this section is to assess and identify possible and most significant environmental impacts and provide mitigation measures for the identified impacts.

The possible identified environmental impacts are:

- Changes in Land Use
- Solid and liquid waste management;
- Traffic impacts;
- Noise pollution;
- Dust pollution, and
- Socio-economic impacts.

The identified impacts will be assessed and evaluated in the phases (construction & operations) of the project. Mitigation measures are also proposed for the identified impacts. The Matrix Impact Assessment (MIA) method will be used during the assessment.

Table 2: Environmental, Social and Economic evaluation of impacts using the MIA method

ASSESSMENT CRITERIA	DESCRIPTION OR DEFINITION	RATING
LIKELIHOOD	The likelihood of the impact occurring, considering existing management measures	
Definite	It is certain that the impact will materialize regardless of any preventative measure	10
Probable	The likelihood that the impact will materialize exceeds 10%	7
Possible	The likelihood of the impact materializing <10%	3
Unlikely	Possibility of impact materializing is very low either because of design or historic experience (likelihood <1%)	1
SEVERITY	Severity of the Environmental impact (actual or potential)	
Very high	There is a total disruption of natural, social and cultural functions or processes to the extent that these functions would permanently cease.	80
High	There is a total disruption of natural, social and cultural functions or processes to the extent that these ceases functioning for the duration of the activity but resume functioning after the operation has been terminated.	40
Moderate	The natural, social and cultural functions or processes are notably altered but continue (albeit in a modified way). The effect is reversible within the	20
Low	The natural, social and cultural functions or processes are minimally affected (often only just measurable). Such effects are felt only during the life of the operation.	4
No effect	No measurable or observable effect.	1
EXTENT	The area over which the impact will be expressed	
International	Impact on a scale beyond Namibian boundaries	6
National	Impact on a scale within Namibian boundaries	5
Regional	Impact on a regional scale (Erongo Region)	2
Local & Immediate area	Impact extends to the immediate vicinity of the site and its surroundings	1
COMPLIANCE WITH LEGAL AND/OR OTHER REQUIREMENTS	Extent of compliance of activity/ aspect under normal and abnormal operating conditions	
Not compliant	Operation is currently not compliant under normal operating conditions	40

Occasionally not compliant	Operation is generally compliant but there is occasional non-compliance under normal operating conditions	20
Potentially not compliant	Operation is generally compliant but there is potential non-compliance under abnormal operating conditions	2
Compliant	Operation is compliant under normal AND abnormal operating conditions OR Compliance is NOT APPLICABLE to this impact	1
IMPROVEMENT OPPORTUNITY	Opportunity for reducing severity/ extent/ likelihood of impact by appropriate management	
High	Strong opportunity to improve management to reduce or eliminate impact.	40
Medium	Management measures are in place to manage impact. Improved management could further reduce or eliminate impact.	20
Low	The activity/ aspect is currently well managed. There is little or no scope for improving current management to further reduce impact.	2
Not required	No management is required	1
SIGNIFICANCE		
High negative (H N)	Requires immediate management and/ or may require further investigation and substantial mitigatory actions. Requires periodic review to test status.	93 - 176
Medium negative (M N)	Requires routine monitoring or action. Requires periodic review to test status.	30 - 92
Low negative (L N)	No further investigations required. With appropriate management there will be little or no impact.	8 - 29

Table 3: Environmental Impact Assessment Rating

	LIKELIHOOD	SEVERITY	EXTENT	COMPLIANCE	IMPROVEMENT	SIGNIFICANCE
Will the proposal negatively impact groundwater?	1	4	1	1	20	20
Will the proposal negatively impact surface water?	1	4	1	1	20	20
Will the proposal negatively impact seawater (Oceanographic changes)?	1	1	1	1	10	15
Will the proposal negatively impact the fauna?	1	4	1	1	10	15
Will the proposal negatively impact the flora?	1	4	1	1	10	15
Will the proposal have negative aesthetical impacts?	1	4	1	1	2	9
Will the proposal have any negative meteorological impacts?	3	4	1	1	2	11
Will the project have any negative archaeological impacts?	1	1	1	1	1	5
Any other ...	NONE	NONE	NONE	NONE	NONE	NONE

Table 4: Socio- economic Impact Assessment rating

LIKELIHOOD		SEVERITY	EXTENT	COMPLIANCE	IMPROVEMEN	SIGNIFICANCE
Will the proposal have any negative impacts on people's health?	7	20	1	1	20	35
Will the proposal have any negative impacts on people's safety?	7	20	1	1	20	35
Will the proposal have any negative impacts on people's financial statuses?	1	4	1	1	2	9
Will the proposal have any negative impacts on people or any other social activities?	7	4	1	1	2	25
Will the proposal have any negative impacts on people's cultural values?	1	1	1	1	1	5
Will the proposal have any negative political implications?	3	4	1	1	2	11
Any other...	NONE	NONE	NONE	NONE	NONE	NONE

Table 2 illustrates the evaluation of positive and negative impacts that are expected during the phases of the proposed development. The evaluation is done according to the likelihood, the severity and the extent of the impacts. The compliance of the proposed project with legal requirements is also evaluated as well as how the project can be improved to minimize or eliminate the impacts. The significance is determined by the evaluation of the likelihood, severity, extent, compliance and improvement, which will then determine whether the proposed project requires immediate management and/or may require further investigation and substantial mitigatory actions or it has no issues and thus no further investigations required, with appropriate management there will be little or no impact. **Table 3** depicts the environmental factors that will be affected by the project proposal, such as the groundwater, surface water, flora, fauna and the archaeological aspects. The proposed project will have a low negative significance to the environmental factors as shown in the table.

Impacts on the socio-economic aspects are evaluated in **Table 4**. The proposed project will have medium negative significant impacts on the local people's health and safety and very low negative significant impacts on their financial statuses, cultural values and on political implications. The project therefore requires routine monitoring on people's health and safety and periodic reviews to test the status of the impacts.

8 ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management Plan (EMP) is an environmental tool that is used to ensure that undue or reasonably avoidable adverse caused by the proposed project are minimized or prevented and the positive benefits of the project are enhanced. An EMP is important for ensuring that the management actions arising from Environmental Impact Assessment (EIA) processes are clearly defined and implemented through all phases of the project life cycle. All personnel taking part in the construction and operations of the proposed activity should be made aware of the contents of the EMP, to plan the relevant activities of the project accordingly and in an environmentally sound manner.

The objectives of an EMP:

- Ensuring compliance with regulatory stipulations and guidelines which may be national /local /international;
- Define details of who, what, where and when environmental management and mitigation measures are to be implemented;
- Formulate measures which will mitigate adverse impacts on various environmental components, protect environmental resources where possible, and enhance the value of environmental components where possible; and
- Providing feedback for continual improvement in environmental performance.

8.1. EMP Methodology

The stipulated EIA procedures outlined in the Environmental Management Act (No. 7 of 2007) and its Regulations (2012) were followed. The following key activities and tasks have been undertaken as part of the EIA and EMP development process:

- Initial input from main stakeholders, as their input is essential for developing an all-inclusive plan. Since no resource exists in isolation, an EMP can affect various other parties. Input is necessary to address concerns early in the planning process.
- Identify the problems and/or questions associated with the proposed development. Clearly defined objectives were identified to remain focused on a plan.
- Make a list of applicable criteria, standards, and principles for construction as required by legislation, regulations, policies, etc.
- Established the extent of the plan and the actions required by the proponent to ensure its execution.
- Sought public input through advertisement of the EIA process in widely circulated newspapers and continuous engagements with registering as I&APs.

This environmental management plan was developed to guide short-term goals and decision-making and will provide environmental-related guidelines. By having this plan in place, the proponent and contractors will have means to make informed decisions.

8.2. EMP Responsibilities

It is the core responsibility of the proponent to ensure the successful implementation of this EMP and any conditions imposed by the competent authorities (Municipality of Swakopmund) and the Ministry of Environment, Forestry and Tourism. The implementation of the EMP also requires the involvement of various role players, each with specific responsibilities to ensure that the proposed development is operated in an environmentally sensitive manner.

8.2.1. The Proponent

- Ensure that all required approvals, licenses, and permits are obtained before commencing work.
- Implement the final EMP after approval by the Department of Environmental Affairs and Forestry (DEAF) and ensure compliance with set conditions.
- Provide environmental training and awareness of the EMP to all contractors, subcontractors, and employees.
- Notify the Ministry of Environment, Forestry and Tourism (MEFT) and Environmental Assessment Practitioner (EAP) of any proposed changes to the development.
- Appoint personnel responsible for monitoring and reviewing on-site environmental management and EMP implementation by contractors and subcontractors.
- Conduct regular audits of EMP implementation.
- Compile and submit environmental reports annually to DEAF and the Municipality of Swakopmund.

8.2.2. Project Manager

The proponent should appoint a project manager responsible for overseeing project implementation during the construction phase. The project manager will ensure compliance with the EMP by all contractors and subcontractors, provide necessary training, keep records of incidents, and take corrective actions as needed. The project manager must ensure that all contractors, sub-contractors and all employees involved are aware of this EMP by providing a brief training.

8.2.3. The Contractor and Subcontractors

All contractors and subcontractors involved in the project must comply with the EMP and its conditions. They should undertake activities in an environmentally sensitive manner, practice good housekeeping, and provide environmental awareness training to employees. The contractor upon receiving this EMP should ensure:

- To undertake their activities in an environmentally sensitive manner and within the context of this EMP;
- To undertake good housekeeping practices during the duration of their activities; and

- To ensure that adequate environmental awareness training takes place in the language understood by the employees.

8.2.4. Authorities

The competent authority, through respective departments, should provide supervisory and monitoring roles to ensure compliance with national and local legislation. Other government ministries should offer necessary assistance for successful EMP implementation whenever deemed necessary.

8.2.5. The Environmental Assessment Practitioner (EAP)

The EAP is responsible for submitting environmental reports to the competent authority (MEFT) and providing additional information as required. They should also provide training on the EMP and make amendments or additions to it in accordance with EIA study recommendations on appointment by the proponent.

8.3. EMP Implementation

The construction phase is critical for environmental management, with several potential impacts occurring daily. This section outlines the way the EMP is to be implemented and specifies the responsibilities of all involved parties to ensure compliance. However, the proponent should play a pivotal role in implementing this EMP.

Table 5: Proposed mitigation measures for the identified impacts, aspects and risks

Nature of Environmental Impact/ Aspect/Risk	Mitigation Measures	Responsibility
Land Use	<ul style="list-style-type: none"> ▪ Conduct comprehensive land use planning to ensure that the consolidation aligns with existing zoning regulations and land use plans. 	Municipality of Swakopmund
<p>Noise Impacts</p> <p>Noise impact resulting from the construction activities There will be a considerable movement of vehicles to and from the site.</p>	<ul style="list-style-type: none"> ▪ Construction activities should be limited to 07H00 - 18H00 during weekdays and weekends. Employees should not make excessive noise especially during late hours. ▪ Equipment used in the operation of the proposed development must be kept in a good state of maintenance so that noise is minimized. ▪ WHO guidelines on maximum noise levels to prevent hearing impairment for workers on site should be followed. ▪ Noise level as recommended by the WHO guidelines should be adhered to during the operational phase. 	Proponent, Project Manager
<p>Air Quality</p> <p>Dust may be generated during the construction phase but this dust is expected to be dependent on the ambient weather conditions.</p>	<ul style="list-style-type: none"> ▪ It is recommended that regular dust suppression be included during the construction phase, when dust becomes an issue, dust generating activities should be limited. ▪ Ensure all employees have appropriate PPE in relation to dust. 	Proponent, Project Manager, Contractors
Solid Waste Pollution	<ul style="list-style-type: none"> ▪ The site should be always kept tidy, and no waste may be buried or burned on site. ▪ All domestic and general construction waste produced daily should be cleaned and contained in wheelie bins or skips daily. 	Proponent, Project Manager, Contractors & Municipality of Swakopmund

	<ul style="list-style-type: none"> ▪ Separate waste containers/bins for hazardous (if any) and domestic/general waste must be provided onsite. The waste containers should be emptied after construction and disposed of at the Municipal landfill site. ▪ Sufficient recycling containers should also be provided at suitable locations to encourage recycling of waste such as aluminium cans, plastics and glass bottles. 	
Water and Energy demand Management	<ul style="list-style-type: none"> ▪ Ensure supply of potable water and commit to minimizing the use of water during construction and operation activity. ▪ Make provision for renewable energy. ▪ Enforce energy and water conservation measures. ▪ Fit the toilets with efficient toilets and basins. 	Proponent, Project Manager,
Municipal Services Increase demand on municipal services i.e. sewer connection and maintenance, waste collection etc.	<ul style="list-style-type: none"> ▪ All the required services are readily available i.e. sewer, water, roads and electricity. ▪ Adhere to all national and local legislation during the construction and operation phase. ▪ Submit building plans to the Municipality of Swakopmund for approval and comply with international, national and local building regulations. 	Proponent, Project Manager
Effluent Load Once permission for construction & operations is granted by the Municipality, the activities may have adverse effect on the effluent load and reticulation network in the vicinity of the property and its surroundings.	<ul style="list-style-type: none"> ▪ Engineering alterations of any kind on the property should be in accordance with Municipal Regulations and should be approved by the Municipality, prior to commencement. ▪ Any business to be carried out onsite, should be registered with the Municipality and a fitness certificate to this effect should be sought prior to commencement of such activities. 	Proponent, Project Manager & Municipality of Swakopmund
Traffic Impacts Movement and presence of vehicles presents risks of accidents due to collisions. This poses a risk to personal safety and asset security.	<ul style="list-style-type: none"> ▪ Coordinate movement of vehicles and obey traffic rules. ▪ Ensure enough access road network and consider safety of users by utilizing safety signs and traffic control measures. ▪ Provide sufficient parking bays for the residents and clients. 	Proponent, Project Manager, Contractors

<p>Dust Generation</p>	<ul style="list-style-type: none"> ▪ Dust generating activities should be scaled down during strong windy conditions. ▪ It is recommended that regular watering of the construction site and adopt dust control measures. ▪ Ensure all employees have appropriate PPE in relation to dust. 	<p>Proponent, Project Manager and Contractor</p>
<p>Health and Safety</p> <p>Risk to the health and safety of employees</p>	<ul style="list-style-type: none"> ▪ Provision of appropriate PPE to all employees. ▪ Provide ablution facilities onsite during the phases of the proposed development. ▪ Conduct thorough safety training to personnel on the use the protective wears and the correct handling of material and the safe use of all equipment. ▪ First aid kits and emergency medical assistance must be available. ▪ A register for all the training offered and of all the incidents must be kept. ▪ Adhere to the national and local legislation. ▪ Prevent extended working hours and restrict public access by fencing the construction site. 	<p>Proponent</p>
<p>Employment opportunities</p> <p>Positive impact of short- and long-term employment for locals</p>	<ul style="list-style-type: none"> ▪ Local labour (consultants, engineering firms & building contractors) should be employed as a priority. ▪ Contractors should source materials from local supplier to enhance the local economy. 	<p>Proponent</p>
<p>Related to Cumulative Impacts</p>	<ul style="list-style-type: none"> ▪ Addressing each of the impacts individually as outlined and recommended in the EMP, would reduce the cumulative impact. 	<p>Proponent</p>

9. CONCLUSION AND RECOMMENDATIONS

In conclusion, if all mitigation measures are implemented according to the recommendations given in the EMP, it is anticipated that the consequence and/or probability of the predicted negative impacts will be managed/reduced. Through a comprehensive scoping exercise, various environmental, social, and economic aspects related to the project have been thoroughly examined and evaluated. Further detailed studies, stakeholder consultations, and ongoing monitoring will be essential to ensure that the project proceeds in compliance with regulatory requirements and best practices in environmental management.

The EMP should be used as an on-site reference document for the construction and operations of the proposed development. Parties responsible for transgressing of the EMP should be held responsible for any rehabilitation that may need to be undertaken. Monitoring reports must be kept available for possible submissions to the MEFT for future ECC renewal application.

The proponent is advised to utilize improved technology installations which will result in minor negative construction impacts and insignificant footprint to the environment. Furthermore, all engineering alterations and business activities to be carried out onsite should gather the requisite Municipal approval prior to commencement (approved building plans, business fitness certificates etc.). Thus, the EAP recommends that the ECC be granted for the **“permanent closure of the street portions A and B of Ismael Abraham and/or Moshitila Street, subdivision of Ismael Abraham and/or Moshitila Street and consolidation of portions A And B of Ismael Abraham and/or Moshitila Street with erven 3209 & R1797, Mondesa, Swakopmund”**.

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