

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE REZONING OF ERF 1139, ORANJEMUND EXTENSION 3, IIKARAS REGION FROM 'SINGLE RESIDENTIAL' WITH A DENSITY OF 1:600 TO 'OFFICE' WITH A BULK OF 1.5

2024

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Project Name:	ENVIRONMENTAL IMPACT ASSESSMENT FOR THE REZONING OF ERF 1139, ORANJEMUND EXTENSION 3, IIKARAS REGION FROM 'SINGLE RESIDENTIAL' WITH A DENSITY OF 1:600 TO 'OFFICE' WITH A BULK OF 1.5
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Release Date:	August 2024
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EXECUTIVE SUMMARY

Green Earth Environmental Consultants were appointed by the Proponent, Andrew Mostert Properties, to conduct an Environmental Impact Assessment to obtain an Environmental Clearance for the rezoning of Erf 1139, Oranjemund Extension 3, IlKaras Region from 'single residential' to 'office' with a bulk of 1.5. The land within the immediate vicinity of the project site is predominately characterized by institutional, business and residential uses. In terms of the Regulations of the Environmental Management Act (No 7 of 2007) an Environmental Impact Assessment must be done to address the following 'Listed Activities':

LAND USE AND DEVELOPMENT ACTIVITIES

- 5.1 The rezoning of land from -
- (a) residential use to business (commercial) use.

The key characteristics/environmental impacts of the proposed project are as follows:

Impact on environment	Nature of impact
More efficient and intensive use of land.	Positive for Oranjemund and Namibia
	in general.
Creation of employment and transfer of	Positive as employment will be
skills.	created during construction and
	operation.
Impact on utilization of municipal and other	Positive due to the better utilization of
infrastructure and facilities.	existing infrastructure.
There will be an impact on traffic.	Negative during construction and
	operational as it will result in the increase in traffic and on the main
	roads in the area.
The creation of noise.	On par with the noise levels
The distillation of tholes.	associated with the neighbouring
	uses.
Possible impact on cultural/heritage	No items of archeologic value or
aspects.	graves were observed during the site
	visit which means the impact will be
	low. If any items or graves are found,
	the impact will be high and
loon and an factor and floor	irreversible.
Impact on fauna and flora.	All vegetation and plants were already removed when the facility was
	removed when the facility was constructed therefore no additional
	vegetation, trees, plants or bushes will
	be removed.
There might be a possible visual impact.	The office portion is completed and
	the residential unit is under
	construction. The structures fit in with
	the surrounding buildings.
Impact on groundwater, surface water and	The impact will be negative in case of
soil.	spilling of hazardous materials during
	construction and operation. The facility
	is linked with the town's sewer system.

No further negative impacts on the vegetation and the natural drainage systems are expected. The noise and dust during construction and operation are in line with the activities from the neighbouring erven. However, mitigation measures will be provided that can control the extent, intensity, and frequency of these named impacts in order not to have substantial negative effects or results.

The type of activities that will be carried out on the site will not negatively affect the amenity of the locality and the activities do not adversely affect the environmental quality of the neighbouring erven or areas. None of the potential impacts identified are regarded as having a significant impact to the extent that the proposed project should not be allowed. However, the operational activities further on need to be controlled and monitored by the assigned subcontractors and the proponent.

The Environmental Impact Assessment which follows upon this paragraph was conducted in accordance with the guidelines and stipulations of the Environmental Management Act (No 7 of 2007) meaning that all possible impacts have been considered and the details are presented in the report. Based upon the conclusions and recommendations of the Environmental Impact Assessment Report and Environmental Management Plan following this paragraph, the Environmental Commissioner of the Ministry of Environment, Forestry and Tourism is herewith requested to:

- 1. Accept the Environmental Impact Assessment;
- 2. Approve the Environmental Management Plan;
- 3. Issue an Environmental Clearance for the rezoning of Erf 1139, Oranjemund Extension 3, IlKaras Region from 'single residential' to 'office' with a bulk of 1.5 and for the following "listed activities":

LAND USE AND DEVELOPMENT ACTIVITIES

- 5.1 The rezoning of land from -
- (a) residential use to business (commercial) use.

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LIST OF ABBREVIATIONS

CAN Central Area of Namibia EC Environmental Clearance

ECO Environment Control Officer

EIA Environmental Impact Assessment
EMP Environmental Management Plan
I&APs Interested and Affected Parties

MEFT Ministry of Environment, Forestry and Tourism

SQM Square Meters

1. INTRODUCTION

The Proponent, Andrew Mostert Properties, appointed Green Earth Environmental Consultants to conduct an Environmental Impact Assessment and develop an Environmental Management Plan to obtain an Environmental Clearance for the rezoning of Erf 1139, Oranjemund Extension 3, IlKaras Region from 'single residential' to 'office' with a bulk of 1.5.

The Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012) stipulates that an Environmental Impact Assessment (EIA) report and management plan is required as the following 'Listed Activities' are involved:

LAND USE AND DEVELOPMENT ACTIVITIES

- 5.1 The rezoning of land from -
- (a) residential use to business (commercial) use.

The Environmental Impact Assessment below contains information on the proposed project and the surrounding areas, the proposed activities, the applicable legislation to the study conducted, the methodology that was followed, the public consultation that was conducted, and the receiving environment's sensitivity and any potential ecological, environmental, and social impacts.

2. TERMS OF REFERENCE

To be able to implement the proposed project, an Environmental Impact Assessment and Environmental Clearance is required. For this environmental impact exercise, Green Earth Environmental Consultants followed the terms of reference as stipulated under the Environmental Management Act.

The aim of the environmental impact assessment was:

- To ascertain existing environmental conditions on the site to determine its environmental sensitivity.
- To inform I&APs and relevant authorities of the details of the proposed development and to provide them with an opportunity to raise issues and concerns.
- To assess the significance of issues and concerns raised.
- To compile a report detailing all identified issues and possible impacts, stipulating the way forward and identify specialist investigations required.
- To outline management guidelines in an Environmental Management Plan (EMP) to minimize and/or mitigate potentially negative impacts.
- To comply with Namibia's Environmental Management Act (2007) and its regulations (2012).

The tasks that were undertaken for the Environmental Impact Assessment included the evaluation of the following: climate, water (hydrology), vegetation, geology, soils, socio economic impact, cultural heritage, groundwater, sedimentation, erosion, biodiversity, sense of place, socio-economic environment, health, safety and traffic.

The EIA and EMP from the assessment will be submitted to the Environmental Commissioner for consideration. The Environmental Clearance will only be obtained (from the DEA) once the EIA and EMP has been examined and approved for the listed activity.

The public consultation process as per the guidelines of the Act has been followed. The methods that were used to assess the environmental issues and alternatives included the collection of data on the project site and surrounding area, info obtained from the proponent and the Ministry of Environment, Forestry and Tourism and identified and affected stakeholders. Consequences of impacts were determined in five categories: nature of impact, expected duration of impact, geographical extent of the event, probability of occurring and the expected intensity.

All other permits, licenses or certificates that are further on required for the operation of the proposed project still needs to be applied for by the proponent.

3. NEED, DESIRABILITY AND MOTIVATION

The proclamation of Oranjemund as a town resulted in an influx in investors and people to establish businesses, offices and industries. The proposed rezoning from 'residential' to 'office' serves as a strategic response to the increasing demand for office spaces within the town. As urbanization progresses, there is a growing requirement for commercial hubs to accommodate businesses, institutions, and services. The reassigning of the land use designation aims to optimize the utilization of this prime location, fostering economic growth and enhancing the urban fabric. The above confirms that there is a need for the creation of additional erven zoned for office use.

The Erf is desirable for the proposed rezoning to office. The Draft Structure Plan compiled by Stubenrauch Planning Consultants for Oranjemund Town Council in 2015 which is used as a guideline, indicate the area where Erf 1139 is suitable for a mixed-use area with a bulk factor of 0.5 (the Zoning Scheme still indicate a bulk factor of 1.5).

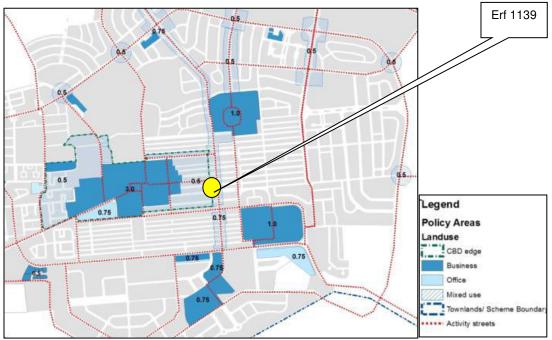


Figure 1: Extract from Draft Structure Plan 2015

Recognizing the importance of providing housing options within proximity to employment centres, it is envisioned to integrate the dwelling unit seamlessly into the proposed office use. This mixed-use approach not only enhances the liveability of the area but also promotes sustainable urban living by reducing commute times and fostering vibrant, inclusive communities.

Finally, obtaining consent to utilize the Erf for office purposes during the rezoning process is imperative to ensure operational continuity and minimize disruptions for existing stakeholders. Given the strategic location of the property within an approved office policy area, temporary approval for office use enables the maintenance of productivity while the regulatory procedures for rezoning are diligently pursued.

Determining what the impact of the operations would be are broken down into different categories and environmental aspects and dealt with in the Environmental Management Plan (EMP). As per the ISO 14001 definition: an environmental aspect is an element of an organization's activities, products and/or services that can interact with the environment to cause an environmental impact e.g., land degradation or land deterioration among others, that will cause harm to the environment.

All concerns and potential impacts raised during the public participation process and consultative meetings were evaluated. Predictions were made with respect to their magnitude and an assessment of their significance was made according to the following criteria:

The Nature of the activity: The possible impacts that may occur are that water will be used in the operational phase, wastewater will be produced that will be handled either by the Town Council or by the proponent, land will be used for the proposed activities, a sewage system will be used, and general construction activities will take place, namely the building of infrastructure.

The Probability of the impacts to occur: The probability of the above-named impacts to occur and have a negative or harmful impact on the environment and the community is small since the Environmental Management Plan will also guide these activities. Water will still be used, and wastewater produced, however guidelines will be set that will ensure the impact is minimum.

The Extent of area that the project will affect: The specific project will most likely only have a small impact on the proposed project site itself and not on the surrounding or neighbouring land except for noise, traffic, roads, electricity and dust and there may be a visual impact because of the size of the proposed development. Therefore, the extent that the project will have a negative impact on is not extensive.

The Duration of the project: The duration of the project is uncertain. Water will still be used, and waste produced on a continuous basis and the structures that were constructed will remain and may be visually unpleasing to surroundings.

The Intensity of the project: The intensity of the project is mostly limited to the site however for the above-named items/processes where the intensity of the project will be felt outside the borders of the project site.

According to the information that was present while conducting the Environmental Impact Assessment for the construction and operation of the project, no high-risk impacts were identified and therefore it is believed that the operations will be feasible in the short and long run. Most of the impacts identified were characterized as being of a low impact on the receiving and surrounding environment and with mitigation measures followed, the impacts will be of minimum significance or avoided.

4. BACKGROUND INFORMATION ON PROJECT

4.1.PROPOSED PROJECT

The owner intends to utilize the property for office purposes. However, the current zoning of the property classifies it as 'single residential', limiting its primary use to residential purposes. Therefore, to align with the intended office use, the property must undergo rezoning to 'office' with a bulk of 1.5. Additionally, consent is required in accordance with Table B of the Oranjemund Zoning Scheme to use the Erf for a 'dwelling unit'. The owner of the Erf appointed Du Toit Town Planning Consultants to complete the town planning procedures required by the Town Council and the Urban and Regional Planning Board for the rezoning and consent for Erf 1139, Oranjemund Extension 3. Once the rezoning is completed, additional buildings will be constructed to accommodate the office and residential uses. The owner already started with the renovations as can be seen on the office building on the *Photo* below:



Figure 2: Office building on Erf 1139, Oranjemund Ext 3



Figure 3: Images of Project Site

4.2.ERF LOCALITY, SIZE AND ZONING

Erf 1139 is located along Seventh Avenue in Extension 3 of the Town of Oranjemund, IIKaras Region. The Erf is 985m² in extent and zoned 'single residential' with a density of 1 dwelling per 600m². The Erf was previously used for residential purposes. See below *Plans* showing the location of the Project Site:

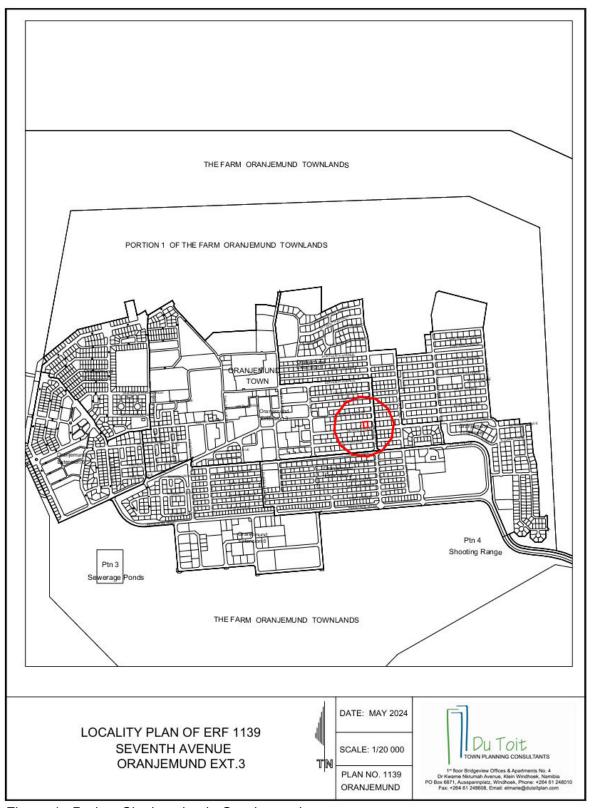


Figure 4: Project Site location in Oranjemund

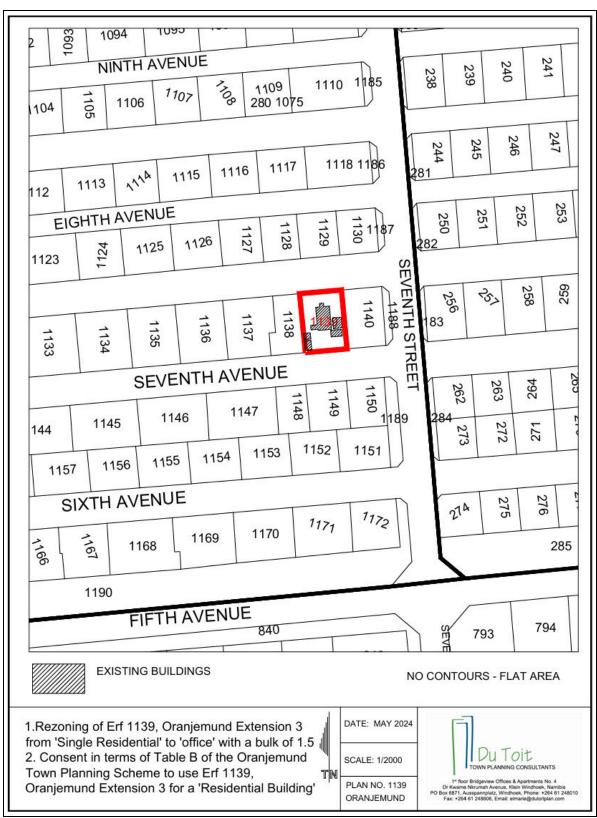


Figure 5: Erf 1139, Oranjemund Locality Plan



Figure 6: Erf 1139, Oranjemund Locality Map with Photo

4.3. SURROUNDING USES AND COUNCILS' POLICY

The character of the area where Erf 1139 is located is gradually changing from a purely residential area to an area of mixed use. It is in the same street where the Oranjemund Spar Supermarket and an established restaurant and coffee shop are located. Other residential dwellings in the street have been converted to business and offices. The following businesses and offices were observed in the same street:

- Home and Kitchen Center
- A Medical Center
- A Pharmacy
- Offices used by an Insurance Company



Figure 7: Google Earth screenshot with nearby non-residential uses

The change in character of the area is supported by the Draft Structure Plan compiled by Stubenrauch Planning Consultants for Oranjemund Town Council in 2015 which is used as a guideline and indicate the area where Erf 1139 is located as suitable for a mixed-use area with a bulk factor of 0.5. Thus, the proposed zoning and use are in line with Oranjemund Town Council's Policies and Plans.

See below the zoning maps showing the current zoning of Erf 1193 and the map showing the future zoning:

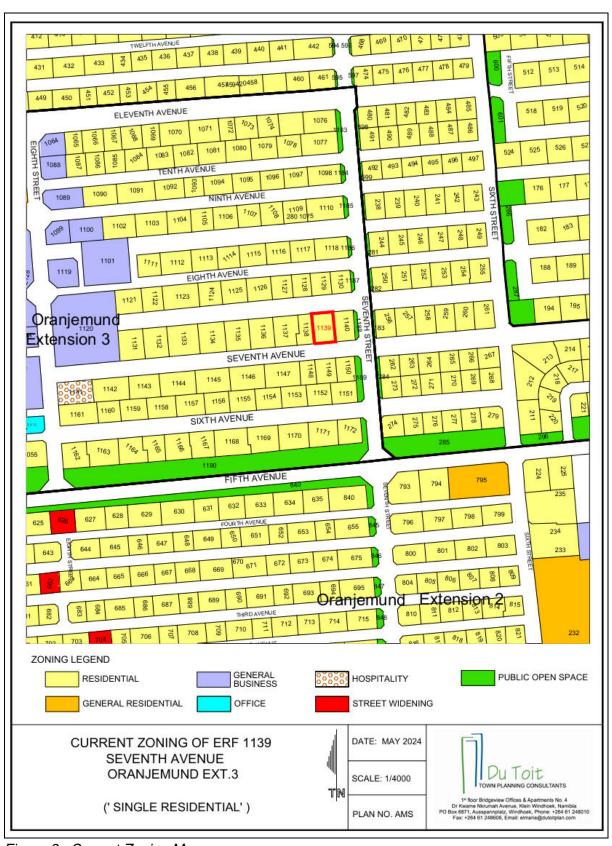


Figure 8: Current Zoning Map

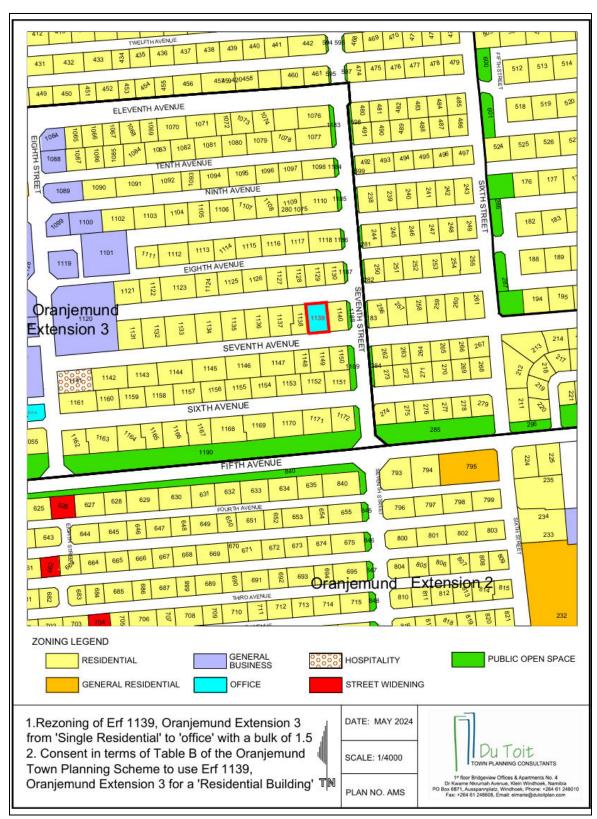


Figure 9: New Zoning Map

5. BULK SERVICES AND INFRASTRUCTURE

The Erf and proposed use will be supported by the following municipal/bulk services:

5.1.ACCESS REQUIREMENTS

Erf 1139, Oranjemund Extension 3 is from Seventh Avenue from the south and an unnamed street from the north. Sufficient parking will be provided for according to the requirements of the Oranjemund Zoning Scheme and Council's requirements. See below road that leads to the Project Site:



Figure 10: Road leading to Project Site (Seventh Avenue)

5.2.WATER SUPPLY

Water is supplied directly from the municipality's water reticulation system.

5.3.ELECTRICITY

Electricity is supplied by the municipality's electrical distribution network.

5.4.SEWAGE DISPOSAL

The sewage is connected to the sewer system of the municipality.

5.5.SOLID WASTE

Solid waste disposal is handled in accordance with the regulations of the municipality and via their weekly sold waste removal program to be disposed of at the Municipal Landfill site.

5.6.FIRE PROTECTION

The Proponent has the necessary fire protection infrastructure / extinguishers as per the building requirements of the Town Council. A Fire Protection Specialist was contracted to introduce a proper fire protection plan with the required infrastructure and to oversee the annual auditing and maintenance of the infrastructure. The site operates under the fire control measures as per the Fire Regulations.

5.7.STORMWATER

The stormwater management system is accommodated in the building plans.

6. APPROVALS OBTAINED

The Oranjemund Town Council approved the rezoning of Erf 1139, Oranjemund. See Approval Letter below:



Oranjemund Town Council

C/o 8th and 12th Avenue, P.O Box 178, Oranjemund | Tel: +264 63 233 500 Fax: +264 63 233501

Enquiries: Abner Imene

Tuesday, July 30 2024

The Environmental Commissioner
The Ministry of Environment, Forestry and Tourism
Department of Environmental Affairs
Private Bag 13306
Windhoek, Namibia

Dear Mr. T Mufeti

SUBJECT: REZONING OF ERF 1139, ORANJEMUND EXTENSION 3, FROM 'SINGLE RESIDENTIAL' WITH A DENSITY OF 1:600 TO 'OFFICE' WITH A BULK OF 1.5

To comply with the Urban and Regional Planning Act No 5 of 2018 and its Regulations of September 2020, an application has been submitted to the Oranjemund Town Council related to the above development.

Once the notification process has been completed as per the prescribed manner in the act, the application will be tabled by the Oranjemund Town Council for approval.

In light of the above we, the Oranjemund Town Council, hereby do not object to the Proposed Rezoning of Erf 1139, Oranjemund extension 3, from 'Single residential' with a density of 1:600 to 'Office' with a bulk of 1.5; Oranjemund Extension 3. //Karas Region.

For more clarity, please do not hesitate to contact our office.

Charles Kakuru

ACTING CHIEF EXE

All official correspondence must be addressed to the Chief Executive Officer.

The final approval of the Rezoning of Erf 1139, Oranjemund, by the Urban and Regional Planning Board, is subject to obtaining an Environmental Clearance for the proposed activity.

7. APPROACH TO THE STUDY

The assessment included the following activities:

a) Desktop sensitivity assessment

Literature, legislation and guidance documents related to the natural environment and land use activities available on the site and area in general were reviewed to determine potential environmental issues and concerns.

b) Site assessment (site visit)

The proposed project site and the immediate neighbourhood and surrounding area were assessed through several site visits to investigate the environmental parameters on site to enable further understanding of the potential impacts on site.

c) Public participation

The public was invited to give input, comments and opinions regarding the proposed project. Notices were placed in the Namibian and New Era (see Appendix) on two consecutive weeks (15, 16 and 22 July 2024) inviting public participation and comments on the proposed project. A notice was also placed on the site and on the Notice Board of the Town Council of Oranjemund. The closing date for any questions, comments, inputs or information was 2 August 2024.

d) Scoping

Based on the desk top study, site visit and public participation, the environmental impacts were determined in five categories: nature of project, expected duration of impact, geographical extent of the event, probability of occurring and the expected intensity. The findings of the scoping have been incorporated in the environmental impact assessment report below.

e) Environmental Management Plan (EMP)

To minimize the impact on the environment, mitigation measures have been identified to be implemented during planning, construction, and implementation. These measures have been included in the Environmental Management Plan to guide the planning, construction and operation of the development which can also be used by the relevant authorities to ensure that the project is planned, developed, and operated with the minimum impact on the environment.

8. ASSUMPTIONS AND LIMITATIONS

It is assumed that the information provided by the proponent (Andrew Mostert Properties) and Oranjemund Town Council is accurate. No alternative erven for the proposed project were examined. The site was visited several times and any happenings after this are not mentioned in this report. (The assessment was based on the prevailing environmental conditions and not on future happenings on the site.) However, it is assumed that there will be no significant changes to the proposed

project, and the environment will not adversely be affected between the compilation of the assessment and the implementation of the proposed activities.

9. ADMINISTRATIVE, LEGAL AND POLICY REQUIREMENTS

To protect the environment and achieve sustainable development, all projects, plans, programs and policies deemed to have adverse impacts on the environment require an EIA according to Namibian legislation. The administrative, legal and policy requirements to be considered during the Environmental Assessment are the following:

- The Namibian Constitution
- The Environmental Management Act (No. 7 of 2007)
- The Oranjemund Town Planning Scheme
- Other Laws, Acts, Regulations and Policies

THE NAMIBIAN CONSTITUTION

Article 95 of Namibia's constitution provides that:

"The State shall actively promote and maintain the welfare of the people by adopting, inter alia, policies aimed at the following:

Management of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future; in particular, the Government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian territory." This article recommends that a relatively high level of environmental protection is called for in respect of pollution control and waste management.

Article 144 of the Namibian Constitution deals with environmental law and it states:

"Unless otherwise provided by this Constitution or Act of Parliament, the general rules of public international agreements binding upon Namibia under this Constitution shall form part of the law of Namibia". This article incorporates international law, if it conforms to the Constitution, automatically as "law of the land". These include international agreements, conventions, protocols, covenants, charters, statutes, acts, declarations, concords, exchanges of notes, agreed minutes, memoranda of understanding, and agreements (Ruppel & Ruppel-Schlichting, 2013). It is therefore important that the international agreements and conventions are considered (see section 4.9).

In considering these environmental rights, Andrew Mostert Properties (the Proponent) should consider the following in devising an action plan in response to these articles:

- Implement a "zero-harm" policy at that would guide decisions.
- Ensure that no management practice or decision result in the degradation of future natural resources.

 Take a decision on how this part of the Constitution will be implemented as part of the Proponent's Environmental Control System (ECS).

ENVIRONMENTAL MANAGEMENT ACT (NO. 7 OF 2007)

The Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012) of the Environmental Management Act (No. 7 of 2007) that came into effect in 2012 requires/recommends that an Environmental Impact Assessment and an Environmental Management Plan (EMP) be conducted for the following listed activities to obtain an Environmental Clearance Certificate:

LAND USE AND DEVELOPMENT ACTIVITIES

- 5.1 The rezoning of land from -
- (a) residential use to business (commercial) use.

Cumulative impacts associated with the development must be included as well as public consultation. The Act further requires all major industries and mines to prepare waste management plans and present these to the local authorities for approval.

The Act, Regulations, Procedures and Guidelines have integrated the following sustainability principles. These need to be given due consideration, particularly to achieve proper waste management and pollution control:

Cradle to Grave Responsibility

This principle provides that those who handle or manufacture potentially harmful products must be liable for their safe production, use and disposal and that those who initiate potentially polluting activities must be liable for their commissioning, operation and decommissioning.

Precautionary Principle

It provides that if there is any doubt about the effects of a potentially polluting activity, a cautious approach must be adopted.

The Polluter Pays Principle

A person who generates waste or causes pollution must, in theory, pay the full costs of its treatment or of the harm, which it causes to the environment.

Public Participation and Access to Information

In the context of environmental management, citizens must have access to information and the right to participate in decisions making.

CONCLUSION AND IMPACT

Some of the surrounding erven have been cleared from vegetation and structures have been constructed on the sites or are in the process of being constructed. The proposed activity will thus fit in with the surrounding activities and not have a negative impact on the prevailing environment. It will be ensured that all protected trees and plant species will be retained where possible.

THE ORANJEMUND TOWN PLANNING SCHEME

The Oranjemund Town Planning Scheme (as amended in Oranjemund Amendment Scheme – approved 15 July 2019) applies to the area as indicated on the scheme maps and corresponds with the Townlands Diagram for Oranjemund Town and Townlands. Erf 1139 is located within the area of the Scheme.

The general purpose of this Scheme is the coordinated and harmonious development of the area of Oranjemund (including, where necessary, the reconstruction and redevelopment of any part which has already been subdivided whether there are buildings on it or not) in such a way as will most effectively tend to promote health, safety, order, amenity, convenience and general welfare as well as efficiency and economy in the process of development and improvement of communications, and where it is expedient in order to promote proper planning or development, may provide for the suspending the operation of any provision of law or any bylaw or regulation made under such law, in so far as such provision is similar to or inconsistent with any of the provisions so the Scheme.

According to the Town Planning Scheme, Erf 1139, Oranjemund Extension 3, is 985m² in extent and zoned 'single residential' with a density of 1 dwelling per 600m². To be able to use the Erf for office and residential purposes it must be rezoned to office and Council's consent must be obtained for the residential use. See below a copy of Clause 8.6 of the Town Planning Scheme which stipulates the primary and consent uses allowed under the zoning 'office'.

	1	2	3	4	5
	ZONE	MAP REFERENCE	PRIMARY USE (purposes for which land may be used)	CONSENT USE (purpose for which land may be used and building may be erected and used with consent of the Council after compliance of Clause 7 of the scheme)	OWNER CONSENT (a consent use only applies to the owner of a property and with consent by Council after compliance of Clause 7)
F	Office	Light blue fill	Offices	Dwelling unit, Block of flats, Place of worship, Place of instruction, Day care centre, Restaurant, Hotel Pension, Guest house, Funeral parlour and chapel, Tourist facility, Driving school, Convention centre, Museum.	None
3.6.1	Land Use Res	striction:			
a)	Coverage:		70%		
b)	Building heig	ht:	No buildin	g may exceed three:	storeys
c)	Floor Area Ra	itio:	1.5		
d)	Building Line	s:			
	Street boundar	ry:	3 metres		
	Off Cot Dods Ida				
	Rear boundary	Γ.	3 metres		
			3 metres 3 metres		

CONCLUSION AND IMPACT

It is believed that the proposed rezoning of Erf 1139, Oranjemund to 'office' to be used for administrative offices can be accommodated under the stipulations of the Oranjemund Town Planning Scheme. The proposed use will fit in with Council's Policies and the current land uses in this area.

OTHER LAWS, ACTS, REGULATIONS AND POLICIES

The laws, acts, regulations, and policies listed below have also been considered during the Environmental Assessment.

Table 1: Laws, Acts, Regulations and Policies

Table 1: Laws, 7	Acts, Regulations and Policies			
	Laws, Acts, Regulations & Policies consulted:			
Electricity Act	In accordance with the Electricity	The Proponent must abide to		
(No. 4 of 2007)	Act (No. 4 of 2007) which provides	the Electricity Act.		
	for the establishment of the			
	Electricity Control Board and			
	provide for its powers and			
	functions; to provide for the			
	requirements and conditions for			
	obtaining licenses for the provision			
	of electricity; to provide for the			
	powers and obligations of			
	licenses; and to provide for			
	incidental matters: the necessary			
	permits and licenses will be			
	obtained.			
Pollution	The Pollution Control and Waste	The Proponent must adhere		
Control and	Management Bill is currently in	to the Pollution Control and		
Waste	preparation and is therefore	Waste Management Bill.		
Management	included as a guideline only. Of			
Bill (guideline	reference to the mining, Parts 2, 7			
only)	and 8 apply. Part 2 provides that			
	no person shall discharge or			
	cause to be discharged, any			
	pollutant to the air from a process			
	except under and in accordance			
	with the provisions of an air			
	pollution license issued under			
	section 23. Part 2 also further			
	provides for procedures to be			
	followed in license application,			
	fees to be paid and required terms			
	of conditions for air pollution			
	licenses. Part 7 states that any			
	person who sells, stores,			
	transports or uses any hazardous			

	substances or products containing hazardous substances shall notify the competent authority, in accordance with sub-section (2), of the presence and quantity of those substances. The competent authority for the purposes of section 74 shall maintain a register of substances notified in accordance with that section and the register shall be maintained in accordance with the provisions. Part 8 provides for emergency preparedness by the person handling hazardous substances, through emergency response plans.	
Water Resources Management Act	The Water Resources Management Act (No. 11 of 2013) stipulates conditions that ensure effluent that is produced to be of a certain standard. There should also be controls on the disposal of sewage, the purification of effluent, measures should be taken to ensure the prevention of surface and groundwater pollution and water resources should be used in a sustainable manner.	The Act must be consulted. Fresh water abstraction and waste-water discharge permits should be obtained when required.
Solid and Hazardous Waste Management Regulations: Local Authorities 1992	Provides for management and handling of industrial, business and domestic waste.	The Proponent must abide to the solid waste management provisions.
Hazardous Substances Ordinance (No. 14 of 1974)	The Ordinance applies to the manufacture, sale, use, disposal and dumping of hazardous substances, as well as their import and export and is administered by the Minister of Health and Social Welfare. Its primary purpose is to prevent hazardous substances from causing injury, ill-health or the death of human beings.	The Proponent must abide to the Ordinance's provisions.
Atmospheric Pollution Prevention Ordinance of	Part 2 of the Ordinance governs the control of noxious or offensive gases. The Ordinance prohibits anyone from carrying on a	The proponent should adhere to the stipulations of the Atmospheric Pollution Prevention Ordinance.

Namibia (No. 11 of 1976)	scheduled process without a registration certificate in a controlled area. The registration certificate must be issued if it can be demonstrated that the best practical means are being adopted for preventing or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process.	
Nature Conservation	The Nature Conservation Ordinance (No. 4 of 1975) covers	The proposed project implementation is not located
Ordinance	game parks and nature reserves, the hunting and protection of wild animals, problem animals, fish and indigenous plant species. The Ministry of Environment, Forestry and Tourism (MEFT) administer it and provides for the establishment of the Nature Conservation Board.	in a demarcated conservation area, national park or unique environments.
Forestry Act	The Forestry Act (No. 12 of 2001) specifies that there be a general protection of the receiving and surrounding environment. The protection of natural vegetation is of great importance, the Forestry Act especially stipulates that no living tree, bush, shrub or indigenous plants within 100m from any river, stream or watercourse, may be removed without the necessary license.	No removal of protected tree species or removal of mature trees should happen. The Ministry of Environment, Forestry and Tourism should be consulted when required.
Labour Act	The Labour Act (No. 11 of 2007) contains regulations relating to the Health, Safety and Welfare of employees at work. These regulations are prescribed for among others safety relating to hazardous substances, exposure limits and physical hazards. Regulations relating to the Health and Safety of Employees at Work are promulgated in terms of the Labour Act 6 of 1992 (GN156, GG1617 of 1 August 1997).	The proponent and contractor should adhere to the Labour Act.
Traditional Authorities Act (No. 17 of 1995)	The Traditional Authorities Act (No. 17 of 1995) provide for the establishment of traditional authorities, the designation and recognition of traditional leaders; to define their functions, duties	Traditional Authorities should be consulted when required.

	and powers; and to provide for	
Dublic or d	matters incidental thereto.	The property and and account
Public and	The Public and Environmental	The proponent and contractor
Environmental	Health Act (No. 1 of 2015)	should adhere to the Public
Health Act	provides with respect to matters of	and Environmental Health
	public health in Namibia. The	Act.
	objects of this Act are to: (a)	
	promote public health and	
	wellbeing; (b) prevent injuries,	
	diseases and disabilities; (c)	
	protect individuals and	
	communities from public health	
	risks; (d) encourage community	
	participation in order to create a	
	healthy environment; and (e)	
	provide for early detection of	
	diseases and public health risks.	
National	All protected heritage resources	The National Heritage Council
Heritage Act	discovered need to be reported	should be consulted when
(No. 27 of	immediately to the National	required.
2004)	Heritage Council (NHC) and	roquirou.
2004)	require a permit from the NHC	
	before it may be relocated. This	
	•	
National	should be applied from the NHC.	The proposed site for
	No person shall destroy, damage,	The proposed site for
Monuments	excavate, alter, remove from its	development is not within any
Act of	original site or export from	known monument site both
Namibia (No.	Namibia:	movable or immovable as
28 of 1969) as	(a) any meteorite or fossil; or	specified in the Act, however
amended until	(b) any drawing or painting on	in such an instance that any
1979	stone or a petroglyph known or	material or sites or
	commonly believed to have been	archeologic importance are
	executed by any people who	identified, it will be the
	inhabited or visited Namibia before	responsibility of the developer
	the year 1900 AD; or	to take the required route and
	(c) any implement, ornament or	notify the relevant
	structure known or commonly	commission.
	believed to have been used as a	
	mace, used or erected by people	
	referred to in paragraph; or	
	(d) the anthropological or	
	archaeological contents of graves,	
	caves, rock shelters, middens,	
	shell mounds or other sites used	
	by such people; or	
	(e) any other archaeological or	
	palaeontological finds, material or	
	object; except under the authority	
	of and in accordance with a permit	
	issued under this section.	
Public Health	Under this act, in section 119: "No	The proponent will ensure
Act (No. 36 of	person shall cause a nuisance or	' '
AUT (110: 00 01	GPEEN FAPTH Environmental Cons	G (

1919)	shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health."	the project in relation to protection of the health of their employees and surrounding residents is protected and will be included in the EMP. Relevant protective equipment shall be provided for employees in construction. The development shall follow requirements and specifications in relation to water supply and sewerage handling and solid waste management so as not to threaten public health of future residents on this piece of land.
Soil Conservation Act (No. 76 of 1969)	The objectives of this Act are to: Make provisions for the combating and prevention of soil erosion; Promote the conservation, protection and improvement of the soil, vegetation, sources and resources of the Republic; The Air Quality Act (No. 39 of	Only the area required for the operations should be cleared from vegetation to ensure the minimum impact on the soil through clearance for construction. The proponent and contractor
(N0. 39 of 2004)	2004) intends to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto.	should adhere to the Air Quality Act.
Vision 2030 and National Development Plans	Namibia's overall development ambitions are articulated in the Nation's Vision 2030. At the operational level, five-yearly national development plans (NDP's) are prepared in extensive consultations led by the National Planning Commission in the Office of the President. Currently the Government has so far launched a 4th NDP which pursues three overarching goals for the Namibian nation: high and sustained economic growth; increased income equality; and employment creation.	The proposed project is an important element in employment creation.

CONCLUSION AND IMPACT

It is believed the above administrative, legal and policy requirements which specifically guide and governs development will be followed and complied with in the planning, implementation and operations of the activity.

A flowchart indicating the entire EIA process is shown in the *Figure* below.

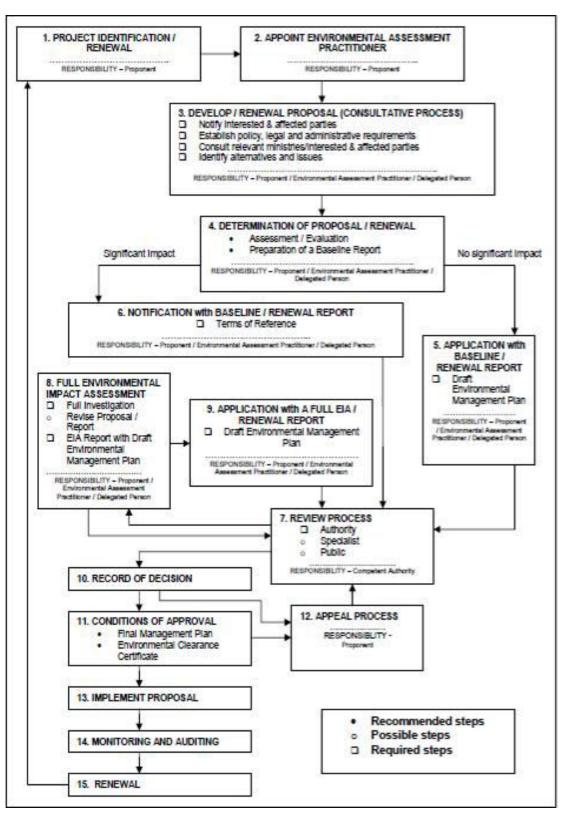


Figure 11: Flowchart of the Impact Process

10. AFFECTED RECEIVING ENVIRONMENT

10.1. BIODIVERSITY AND VEGETATION

Erf 1139, Oranjemund is part of the Namib Desert and Succulent Karoo Biomes. The project site is showing evidence of some human interference as it was used for residential purposes for a number of years. Therefore it has been cleared from vegetation to accommodate the buildings and to landscape the garden. The erf has limited vegetation currently.

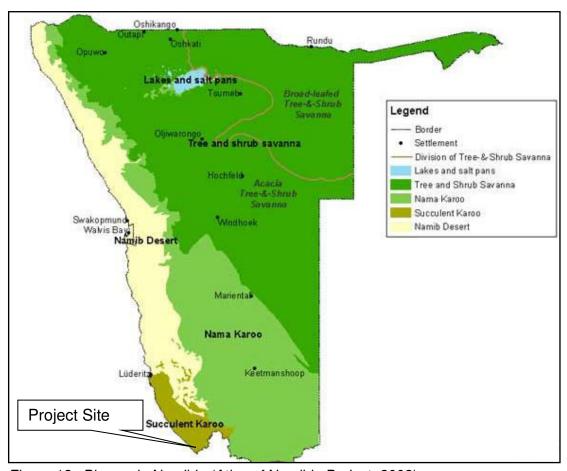


Figure 12: Biomes in Namibia (Atlas of Namibia Project, 2002)

The natural characteristics of the project site namely the vegetation clearance and the destruction of habitats is expected to further on have a low impact on the environment before the mitigation measures are taken and after the mitigation measures are taken, the impact will be very low.

10.2. GEOLOGY AND SOILS

The surface geology of the area consists of formations of mainly the Kalahari Group which has a thickness of up to 30m in the study area. Within the Kalahari Group the following six lithological classifications are recognized: Duricrusts, Kalahari sand, Alluvium and lacustrine deposits, Sandstone, Marl, Basal conglomerate and gravel. The Karoo Supergroup is also present in the study area. See map below:

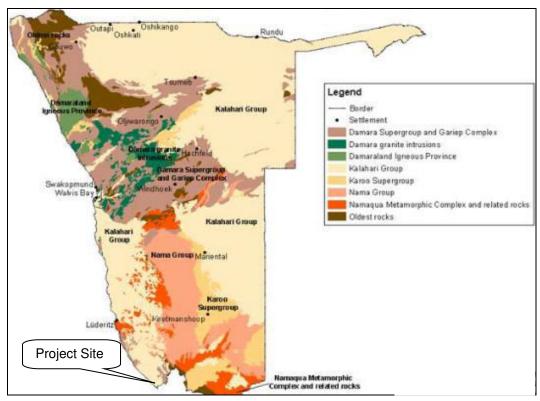


Figure 13: Geology of Namibia (Atlas of Namibia Project, 2002)

Surficial Kalahari sand covers almost the entire land surface. These lithologies comprise of fine to medium grained quartz sand, off-white in colour and typically clay-free in the upper 5m. These aeolian sands represent reworked Kalahari sediments. Though red sands occur, much of the surface sand in the study area is leached of any iron straining.

The transition from the so-called Kalahari sand to the older, underlying sandstone is often not clear, but seems to be gradational. Below the surficial horizon, similar sands are found, but often with varying clay content that may reach significant (>10%) proportions.

The Kalkrand Formation of the Karoo Supergroup is expected to underlie the Kalahari Group. Groundwater flow would be mostly through primary porosity but flow along fractures, faults and other geological structure present within the formations might take place where consolidated layers are present.

10.3. SOCIO ECONOMIC ENVIRONMENT

This area of Oranjemund is mainly used for residential/business/institutional purposes. Since the proclamation of Oranjemund as a formal Town, a lot of opportunities for the settlement of new business, offices and industries have been created attracting investors to the town. The development will not have a negative impact on the social environment. The socio-economic characteristics of the area changed as more economic and business activities were established within Oranjemund. The proposed development will not alter the sense of place.

The proposed development will have a positive impact on the socio-economic environment. Positive impacts associated with the project will be in the form of additional job opportunities during construction as well as in operation. The

community will also benefit from skills and technology transfer. The spending power of locals is likely to increase because of employment during the construction and operational phase. The construction impacts will be minimum if mitigated by the Environmental Management Plan.

10.4. CLIMATE

Wind: The climate of Oranjemund is dominated by its proximity to the South Atlantic high pressure cell which is situated offshore to the west and south, acting like a giant fan blowing air from the south and driving the Benguela Current northwards. Calm conditions occur rarely and winds blow predominantly from the south and to a lesser extent from the southwest and west (*Town of Oranjemund, 2014*). Winds typically pick up during the course of the day and are strongest in the afternoon and early evening. Occasional off-shore (easterly) winds blow warm and dusty during the winter months (*Town of Oranjemund, 2014*). The prevailing wind direction is expected to prevent the spread of any nuisance namely noise and smell.

Temperature: Average temperatures are mild throughout the year, with slightly cooler days in winter. The cool dry air is maintained by the South Atlantic pressure cell, and cold fronts moving up the coast from the Cape in winter contribute to occasional cold snaps (*Town of Oranjemund, 2014*). The average daily maximum temperature recorded over 27 years up to 1990 in Alexander Bay in summer was 23°C with the highest temperatures just over 40°C (*Town of Oranjemund, 2014*). In winter the average maximum was two degrees lower. Minimum temperatures during June, July and August almost reach zero degrees but do not drop below that (*Town of Oranjemund, 2014*).

Rainfall: Rain falls predominantly in the winter but summer rain is not uncommon. The average annual rainfall is 52 mm, the median annual rainfall is 46 mm and the highest rainfall months are February – October (*Town of Oranjemund, 2014*).

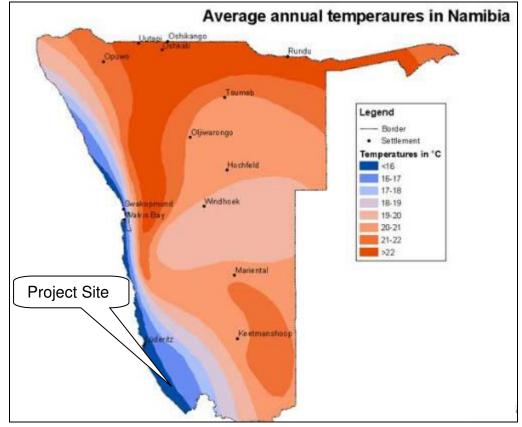


Figure 14: Temperatures in Namibia (Atlas of Namibia Project, 2002)

10.5. CULTURAL HERITAGE

The proposed project site is not known to have any historical significance prior to or after Independence in 1990. The specific area does not have any National Monuments and the specific site has no record of any cultural or historical importance or on-site resemblance of any nature. No graveyard or related article was found on the site.

11. IMPACT ASSESSMENT AND EVALUATION

The Environmental Impact Assessment sets out potential positive and negative environmental impacts associated with the proposed project, which is located on Erf 1139, Oranjemund. The following assessment methodology will be used to examine each impact identified, see *Table* below:

Table 1: Impact Evaluation Criterion (DEAT 2006)

Criteria	Rating (Severity)	
Impact Type	+	Positive
	0	No Impact
	-	Negative
Significance of impact being either	L	Low (Little or no impact)
	М	Medium (Manageable impacts)

Н	High (Adverse impact)
---	-----------------------

Probability:	Duration:
5 – Definite/don't know	5 - Permanent
4 – Highly probable	4 – Long-term (impact ceases)
3 – Medium probability	3 – Medium term (5 – 15 years)
2 – Low probability	2 - Short-term (0 - 5 years)
1 – Improbable	1 - Immediate
0 - None	
Scale:	Magnitude:
5 – International	10 – Very high/don't know
4 – National	8 - High
3 – Regional	6 - Moderate
2 – Local	4 - Low
1 – Site only	2 - Minor
	0 - None

The impacts on the receiving environment are discussed in the paragraphs below:

11.1. IMPACTS DURING THE CONSTRUCTION ACTIVITY

Some of the impacts that the development has on the environment includes water will be used for the construction and operation activities, electricity will be used, a sewer system will be constructed and wastewater will be produced on the site that will have to be handled.

11.1.1. WATER USAGE

Water is a scarce resource in Namibia and therefore water usage should be monitored and limited in order to prevent unnecessary wastage. The proposed project might make use of water in its construction phase and operations.

Impact Evaluation

Aspect	. Impact Type	. Scale	. Duration	. Magnitude	. Probability	Signific	ance
						. Unmitigated	. Mitigated
Water	-	2	2	4	2	L	L

11.1.2. ECOLOGICAL IMPACTS

The proposed infrastructure will be constructed in a semi disturbed natural area which is partly covered with vegetation. Special care should be taken to limit the destruction or damage of the vegetation. However, impacts on fauna and flora are expected to be minimal. Disturbance of areas outside the designated working zone is not allowed.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Ecology	-	1	2	4	2	L L	

11.1.3. DUST POLLUTION AND AIR QUALITY

Dust generated during the transportation of building materials; construction and installation of bulk services, and problems thereof are expected to be low and site specific. Dust is expected to be worse during the winter months when strong winds occur. Release of various particulates from the site during the construction phase and exhaust fumes from vehicles and machinery related to the construction of bulk services are also expected to take place. Dust is regarded as a nuisance as it reduces visibility, affects the human health and retards plant growth. It is recommended that regular dust suppression be included in the construction activities, when dust becomes an issue.

Impact evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	7.					Unmitigated	Mitigated
Dust & Air Quality	-	2	2	2	2	М	L

11.1.4. NOISE IMPACT

An increase of ambient noise levels at the proposed site is expected due to the construction activities. Noise pollution due to heavy-duty equipment and machinery might be generated. It is not expected that the noise generated during construction will impact any third parties due to the distance of the neighbouring activities. Ensure all mufflers on vehicles are in full operational order; and any audio equipment should not be played at levels considered intrusive by others. The construction staff should be equipped with ear protection equipment.

Impact evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
	,,					Unmitigated	Mitigated
Noise	-	2	1	4	2	М	L

11.1.5. HEALTH, SAFETY AND SECURITY

The safety, security and health of the labour force, employees and general public are of great importance. Workers should be orientated with the maintenance of safety and health procedures and they should be provided with PPE (Personal Protective Equipment). A health and safety officer should be employed to manage, coordinate and monitor risk and hazard and report all health and safety related issues in the workplace.

Safety issues could arise from the earthmoving equipment and tools that will be used on site during the construction phase. This increases the possibility of injuries and the contractor must ensure that all staff members are made aware of the potential risks of injuries on site. The presence of equipment lying around on site may also encourage criminal activities (theft).

Sensitize operators of earthmoving equipment and tools to switch off engines of vehicles or machinery not being used. The contractor is advised to ensure that the team is equipped with first aid kits and that these are available on site, at all times. Workers should be equipped with adequate personal protective gear and properly trained in first aid and safety awareness.

No open flames, smoking or any potential sources of ignition should be allowed at the project location. Signs such as 'NO SMOKING' must be prominently displayed in parts where inflammable materials are stored on the premises. Proper barricading and/or fencing around the site especially trenches for pipes and drains should be erected to avoid entrance of animals and/or unauthorized persons. Safety regulatory signs should be placed at strategic locations to ensure awareness. Adequate lighting within and around the construction locations should be erected, when visibility becomes an issue.

Impact evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signif	icance
						Unmitigated	Mitigated
Safety & Security	-	1	2	4	2	М	L

11.1.6. CONTAMINATION OF GROUNDWATER

Care must be taken to avoid contamination of soil and groundwater. Use drip trays when doing maintenance on machinery. Maintenance should be done on dedicated areas with linings or concrete flooring. The risk can be lowered further through proper training of staff. All spills must be cleaned up immediately. Excavations

should be backfilled and sealed with appropriate material, if it is not to be used further.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
	,,					Unmitigated	Mitigated
Groundwater	-	2	2	2	2	М	L

11.1.7. SEDIMENTATION AND EROSION

The surrounding area is partly covered by vegetation. The vegetation is stabilizing the area against wind and water erosion. Vegetation clearance and creation of impermeable surfaces could result in erosion in areas across the proposed area. The clearance of vegetation will further reduce the capacity of the land surface to slow down the flow of surface water, thus decreasing infiltration, and increasing both the quantity and velocity of surface water runoff. The proposed construction activities will increase the number of impermeable surfaces and therefore decrease the amount of groundwater infiltration. As a result, the amount of storm water during rainfall events could increase. If proper storm water management measures are not implemented this will impact negatively on the water courses close to the site.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	cance
	,,					Unmitigated	Mitigated
Erosion and Sedimentation	-	1	2	4	2	М	L

11.1.8. GENERATION OF WASTE

This can be in a form of rubble, cement bags, pipe and electrical wire cuttings. The waste should be gathered and stored in enclosed containers to prevent it from being blown away by the wind. Contaminated soil due to oil leakages, lubricants and grease from the construction equipment and machinery may also be generated during the construction phase.

The oil leakages, lubricants and grease must be addressed. Contaminated soil must be removed and disposed of at a hazardous waste landfill. The contractor must provide containers on-site, to store any hazardous waste produced. Regular inspection and housekeeping procedure monitoring should be maintained by the contractor.

The Proponent intends to appoint and contract specialist waste managers to collect and dispose of the waste generated on the site. The proponent must ensure that the subcontractors complied with the applicable Namibian Legislation, Policies and Practices.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
	,,					Unmitigated	Mitigated
Waste	-	1	2	4	2	М	L

11.1.9. CONTAMINATION OF SURFACE WATER

Contamination of surface water might occur through oil leakages, lubricants and grease from the equipment and machinery during the installation, construction and maintenance of bulk services at the site. Oil spills may form a film on water surfaces in the nearby streams causing physical damage to water-borne organisms.

Machinery should not be serviced at the construction site to avoid spills. All spills should be cleaned up as soon as possible. Hydrocarbon contaminated clothing or equipment should not be washed within 25m of any surface water body.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	,,					Unmitigated	Mitigated
I0. Surface water	-	2	2	4	3	М	L

11.1.10. TRAFFIC AND ROAD SAFETY

All drivers of delivery vehicles and construction machinery should have the necessary driver's licenses and documents to operate these machines. Speed limit warning signs must be erected to minimise accidents. Heavy-duty vehicles and machinery must be tagged with reflective signs or tapes to maximize visibility and avoid accidents.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	,,					Unmitigated	Mitigated
Traffic	-	2	2	4	3	М	L

11.1.11. FIRES AND EXPLOSIONS

There should be sufficient water available for firefighting purposes. Ensure that all fire-fighting devices are in good working order and are serviced. All personnel have to be trained about responsible fire protection measures and good housekeeping such as the removal of flammable materials on site. Regular inspections should be carried out to inspect and test firefighting equipment by the contractor.

The Proponent will put in the necessary fire protection infrastructure / extinguishers as per requirements. It is advised that a specialist Fire Protection Specialist is

contracted to introduce a proper fire protection plan with the required infrastructure and to oversee the annual auditing and maintenance of the infrastructure.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	,,					Unmitigated	Mitigated
Fires and Explosions	-	2	2	4	2	М	L

11.1.12. SENSE OF PLACE

The placement, design and construction of the proposed project should be as such as to have the least possible impact on the natural environment. The proposed activities will not have a large/negative impact on the sense of place in the area since it will be constructed in a manner that will not affect the neighbouring portions and it will not be visually unpleasing.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Nuisance Pollution	-	1	1	2	2	L	L

11.2. IMPACTS DURING THE OPERATIONAL PHASE

11.2.1. ECOLOGICAL IMPACTS

Staff and visitors should only make use of walkways and existing roads to minimise the impact on vegetation. Minimise the area of disturbance by restricting movement to the designated working areas during maintenance and drives.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
						Unmitigated	Mitigated
Ecology Impacts	-	1	2	4	2	L	L

11.2.2. DUST POLLUTION AND AIR QUALITY

Vehicles transporting goods and staff will contribute to the release of hydrocarbon vapours, carbon monoxide and sulphur oxides into the air. Possible release of sewer odour, due to sewer system failure of maintenance might also occur. All maintenance of bulk services and infrastructure at the project site has to be designed to enable environmental protection.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	,					Unmitigated	Mitigated
Dust & Air Quality	-	2	2	4	4	М	L

11.2.3. CONTAMINATION OF GROUNDWATER

Spillages might also occur during maintenance of the sewer system. This could have impacts on groundwater especially in cases of large sewer spills. Proper containment should be used in cases of sewerage system maintenance to avoid any possible leakages. Oil and chemical spillages may have a heath impact on groundwater users. Potential impact on the natural environment from possible polluted groundwater also exists.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	71					Unmitigated	Mitigated
Groundwater contamination	-	2	2	4	2	L	L

11.2.4. GENERATION OF WASTE

Household waste from the activities at the site and from the staff working at the site will be generated. This waste will be collected, sorted to be recycled and stored in on site for transportation and disposal at an approved landfill site.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	,,					Unmitigated	Mitigated
Waste Generation	-	1	2	2	2	М	L

11.2.5. FAILURE IN RETICULATION PIPELINES

There may be a potential release of sewage, stormwater or water into the environment due to pipeline/system failure. As a result, the spillage could be released into the environment and could potentially be health hazard to surface and groundwater. Proper reticulation pipelines and drainage systems should be installed. Regular bulk services infrastructure and system inspection should be conducted.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	,,,,					Unmitigated	Mitigated
Failure of Reticulation Pipeline	-	1	1	4	2	М	L

11.2.6. FIRES AND EXPLOSIONS

Food will be prepared on stoves. There should be sufficient water available for firefighting purposes. Ensure that all fire-fighting devices are in good working order and are serviced. All personnel have to be trained about responsible fire protection measures and good housekeeping such as the removal of flammable materials on site. Regular inspections should be carried out to inspect and test firefighting equipment by the contractor.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	,,,					Unmitigated	Mitigated
Fires and Explosions	-	2	1	4	2	М	L

11.2.7. HEALTH, SAFETY AND SECURITY

The safety, security and health of the labour force, employees and neighbours are of great importance, workers should be orientated with the maintenance of safety and health procedures and they should be provided with PPE (Personal Protective Equipment). Workers should be warned not to approach or chase any wild animals occurring on the site. No open flames, smoking or any potential sources of ignition should be allowed at the project location. Signs such as 'NO SMOKING' must be prominently displayed in parts where inflammable materials are stored on the premises.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	,,					Unmitigated	Mitigated
Safety & Security	-	1	2	4	2	М	L

11.3. CUMULATIVE IMPACTS

These are impacts on the environment, which results from the incremental impacts of the construction and operation of the proposed project when added to other past, present, and reasonably foreseeable future actions regardless of what person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. In relation to an

activity, it means the impact of an activity that in it may not become significant when added to the existing and potential impacts resulting from similar of diverse activities or undertakings in the area.

Possible cumulative impacts associated with the proposed project include sewer damages/maintenance, vegetation and animal disturbance, uncontrolled traffic and destruction of the natural environment. These impacts could become significant especially if it is not properly supervised and controlled. This could collectively impact on the environmental conditions in the area. Cumulative impacts could occur in both the operational and the construction phase.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Significance	
	,,					Unmitigated	Mitigated
Cumulative Impacts	-	1	3	4	3	L	L

12. ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management Plan (EMP) provides management options to ensure impacts of the proposed construction and operation are minimised. An EMP is an environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the operations are prevented, and the positive benefits of the projects are enhanced.

The objectives of the EMP are:

- ✓ to include all components of the proposed project.
- ✓ to prescribe the best practicable control methods to lessen the environmental impacts associated with the project.
- ✓ to monitor and audit the performance of the project personnel in applying such controls.
- ✓ To ensure that appropriate environmental training is provided to responsible project personnel.

The EMP acts as a document that can be used during the various phases of the proposed project. The contractor as well as the management and staff should be made aware of the contents of the EMP. See Appendix for EMP.

13. CONCLUSION

In summary, the environmental impact assessment reflects commitment to responsible urban planning and development in Oranjemund. By prioritizing diverse land use, supporting residential growth, and facilitating office activities, thus striving to positively impact the town's socio-economic dynamics while respecting regulations and community preferences.

The EIA has been completed in line with the requirements of the Environmental Management Act, 2007 and Regulations and it is concluded and recommended that the specific site identified namely Erf 1139, Oranjemund Extension 3, has the full

potential to be used for the proposed activities. The identified environmental and social impacts can be minimized and managed through implementing preventative measures and sound management systems. It is recommended that the environmental performance be monitored regularly to ensure compliance and that corrective measures be taken if necessary.

In general, the operation of the proposed project would pose limited environmental risks, provided that the EMP for the activity is used properly. The EMP should be used as an onsite tool during the operation of the project. Parties responsible for non-conformances of the EMP should be held responsible for any rehabilitation that has to be undertaken. After assessing all information available on this project, Green Earth Environmental Consultants are of the opinion that the proposed project site is suitable for the proposed activities. The accompanying EMP will focus on mitigation measures that will remediate or eradicate the negative or adverse impacts.

14. RECOMMENDATION

It is therefore recommended that the Ministry of Environment, Forestry and Tourism through the Environmental Commissioner support and approve the Environmental Clearance for the rezoning of Erf 1139, Oranjemund Extension 3, IIKaras Region from 'single residential' to 'office' with a bulk of 1.5 and to issue an Environmental Clearance for the following 'Listed Activities':

LAND USE AND DEVELOPMENT ACTIVITIES

- 5.1 The rezoning of land from -
- (a) residential use to business (commercial) use.

LIST OF REFERENCES

Atlas of Namibia Project, 2002. *Directorate of Environmental Affairs, Ministry of Environment, Forestry and Tourism.*http://www.unikoeln.de/sfb389/e/e1/download/atlasnamibia/pics/climate/temperature-annual.jpg [accessed: February 19, 2014].

Christelis, G.M. & Struckmeier, W. 2001. Groundwater in Namibia, an Explanation of the Hydrogeological Map. *Ministry of Agriculture, Water and Rural Development*. Windhoek. Namibia, pp 128.

Commencement of the Environmental Management Act, 2012. *Ministry of Environment, Forestry and Tourism*. Windhoek. Namibia, pp. 3 – 22.

Constitution of the Republic of Namibia, 1990. National Legislative Bodies. Namibia, pp. 6 – 63.

DEAT. 2006 Guideline 4: Public Participation in support of the Environmental Impact Assessment Regulations, 2006. Integrated Environmental Management Guideline Series, Department of Environmental Affairs and Tourism (DEAT), Pretoria.

DEAT. 2006 Guideline 5: Assessment of Alternatives and Impacts in support of the Environmental Impact Assessment Regulations, 2006. Integrated Environmental Management Guideline Series, Department of Environmental Affairs and Tourism (DEAT), Pretoria.

Environmental Management Act, 2007. *Ministry of Environment, Forestry and Tourism*. Windhoek. Namibia, pp. 4 - 32.

Forestry Act, 2001. Office of the Prime Minister. Windhoek. Namibia, pp. 9 – 31.

Grunert, N. 2003. Namibia Fascination of Geology: A Travel Handbook. Windhoek. Klaus Hess Publishers. pp. 35 – 38.

Mannheimer, C. & Curtis, B. 2009. *Le Roux and Muller's Guide to the Trees & Shrubs of Namibia*. Windhoek: Macmillan Education Namibia, pp. 249 – 439.

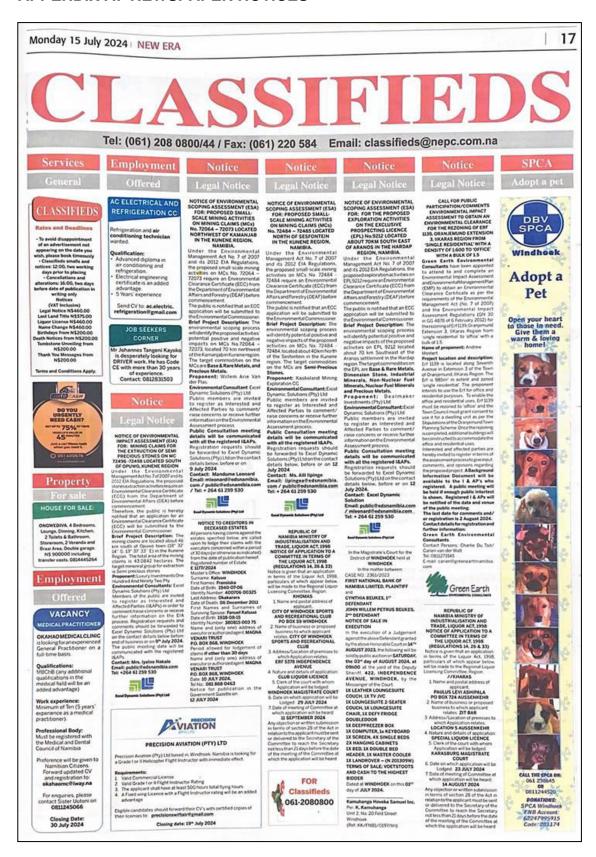
Namibian Environmental Assessment Policy, 1995. *Ministry of Environment, Forestry and Tourism*. Windhoek. Namibia, pp. 3 – 7.

Nature Conservation Ordinance, 1975. Windhoek. Namibia, pp. 4 – 47.

Soil Conservation Act, 1969. Office of the Prime Minister. Windhoek. Namibia, pp. 1 – 14.

Water Resource Management Act, 2004. *Office of the Prime Minister*. Windhoek. Namibia, pp. 6 – 67.

Weather - the Climate in Namibia, 2012. http://www.info-namibia.com/en/info/weather [accessed: June 24, 2013].





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PROJECT INVOLVEMENT: Proponent: Roads Authority of Namibia Environmental Assessment Practitioner (EAP): Ritta Khiba Planning Coroultants Occupants

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Notice

CALL FOR PUBLIC PARTICIPATION/COMMENTS
ENVIRONMENTAL IMPACT ASSESSMENT TO OBTAIN AN
ENVIRONMENTAL CLEARANCE FOR THE REZONING OF ERF 1139
ORANJENUNG EXTENSION 3, IKARAS REGION FROM 'SINGLE
RESIDENTIAL' WITH A DENSITY OF 1.500 TO 'OFFICE' WITH A
BULK OF 1.5

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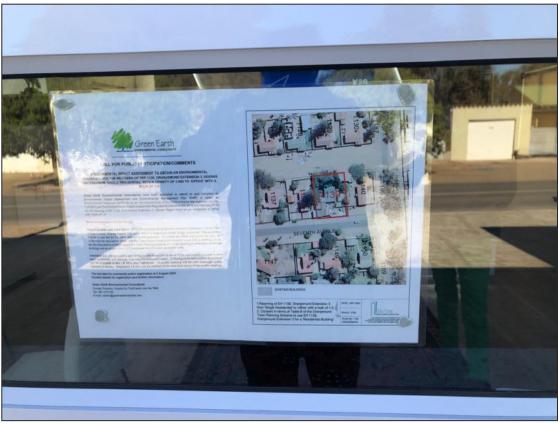


APPENDIX B: NOTICE AT MUNICIPALITY



APPENDIX C: NOTICE ON SITE





APPENDIX D: INTERESTED AND AFFECTED PARTIES

COMMENTS

Dear Green Earth Environmental Consultants

Sorry for the late request. Could you please add me to the list of Interesting Party for the EIA:

-Environmental Impact Assessment to obtain an Environmental Clearance for the rezoning of Erf 1139, Oranjemund Extension 3, //Karas Region from "Single Residential with a bulk density of 1:600" to "Office with a density of 1:5", advertised in the New Era on the 15th of July 2024

Could you also forward me the BID?

Regards

Ndelimona lipinge

EIA Tracking and Monitoring in Namibia (EIA Tracker)

Namibian Environment and Wildlife Society

Cell:+264814138822

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APPENDIX E: CURRICULUM VITAE OF CHARLIE DU TOIT

1. Position: **Environmental Practitioner**

2. Name/Surname: Charl du Toit 3. Date of Birth: 29 October 1960

4. Nationality: Namibian

5. Education: Name of Institution University of Stellenbosch, South Africa

> Degree/Qualification Hons B (B + A) in Business

> > Administration and Management

Reading

Date Obtained 1985-1987

Name of Institution University of Stellenbosch, South Africa Degree/Qualification BSc Agric Hons (Chemistry, Agronomy

and Soil Science)

Date Obtained 1979-1982

Name of Institution Boland Agricultural High School, Paarl,

South Africa

Speaking

Grade 12 Degree/Qualification **Date Obtained** 1974-1978

6. Membership of

EAPAN Member (Membership Number: 112)

Association:

7. Languages:

Professional

Languages.		<u> </u>	peaking	rteaurig	writing
	English	G	ood	Good	Good
	Afrikaans	G	ood	Good	Good
Employment	<u>From</u>	<u>To</u>	Employer		Position(s) held
Record:	2009	Present	Green Ear	th	Environmental
			Environme	ental	Practitioner
			Consultants		
	2005	2008	Elmarie Du Toit		Manager
			Town Plan	ning	
			Consultant	ts	
	2003	2005	Pupkewitz		General Manager
			Megabuild		
	1995	2003	Agra Coop	erative	Manager Trade
			Limited		
			Namibia		Chief Agricultural
	1989	1995	Developme	ent	Consultant
			Corporatio	n	
			Ministry of		Agricultural
	1985	1988	Agriculture)	Researcher
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Writing

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Charl du Toit

APPENDIX F: CURRICULUM VITAE OF CARIEN VAN DER WALT

1. Position: Environmental Consultant

2. Name/Surname: Carien van der Walt

3. Date of Birth: 6 August 1990

4. Nationality: Namibian

5. Education:

Institution	Degree/Diploma	Years
University of Stellenbosch	B.A. (Degree) Environment and	2009 to 2011
	Development	
University of South Africa	B.A. (Honours) Environmental	2012 to 2013
	Management	

6. Membership of Professional Associations:

EAPAN Member (Membership Number: 113)

7. Languages:

Language	Speaking	Reading	Writing
English	Good	Good	Good
Afrikaans	Good	Good	Good

8. Employment Record:

From	То	Employer	Positions Held
07/2013	Present	Green Earth Environmental Consultants	Environmental
			Consultant
06/2012	03/2013	Enviro Management Consultants Namibia	Environmental
			Consultant
12/2011	05/2012	Green Earth Environmental Consultants	Environmental
			Consultant

9. Detailed Tasks Assigned:

Conducting the Environmental Impact Assessment, Environmental Management Plan, Public Participation, Environmental Compliance and Environmental Control Officer

Certification:

Certification.
I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engage.
Carien van der Walt

APPENDIX G: ENVIRONMENTAL MANAGEMENT PLAN