

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE ESTABLISHMENT OF A TOWNSHIP ON PORTIONS 1 AND 2 (PORTIONS OF PORTION 118) OF THE REMAINDER OF FARM RUNDU TOWNLANDS NO. 1329, RUNDU, KAVANGO EAST REGION

2023

App - 231207002552



Project Name:	ENVIRONMENTAL IMPACT ASSESSMENT FOR THE ESTABLISHMENT OF A TOWNSHIP ON PORTIONS 1 AND 2 (PORTIONS OF PORTION 118) OF THE REMAINDER OF FARM RUNDU TOWNLANDS NO. 1329, RUNDU, KAVANGO EAST REGION	
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EXECUTIVE SUMMARY

Green Earth Environmental Consultants have been appointed by WFA Construction CC to attend to and complete an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) in order to obtain an Environmental Clearance Certificate for the completion of the town planning procedures and establishment of a township on Portion 1 and 2 (portions of Portion 118) of the Remainder of Farm Rundu Townlands No. 1329, Rundu, Kavango-East Region as per the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012).

It is the intention of the Proponent to subdivide Portion 118 of the Remainder of Farm Rundu Townlands No. 1329 into two new portions (Portion 1 and 2) and the Remainder of Portion 118. Portion 1, 2 and the Remainder of Portion 118 will be $\pm 50\ 025m^2$, 216 148m² and 251 407m² in extent respectively.

The Remainder of Portion 118 will remain the property of Council. It is Council's intension to accommodate the people currently occupying this portion illegally/informally by formalizing the uses and allocating plots to the people.

The Proponent intends to establish a township comprising 62 erven on Portion 1 and comprising of 325 erven on Portion 2. The proposed townships will include erven for residential, business and institutional uses as well as erven reserved for public open spaces and streets. The dominant land use will be single residential with a density of 1:300m².

The land within the immediate vicinity of the project site is predominately characterised by informal residential activities, institutional activities and new residential developments.

In terms of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012) an Environmental Impact Assessment (EIA) Report and an Environmental Management Plan is required as the following listed activities are involved:

LAND USE AND DEVELOPMENT ACTIVITIES

5.2 Establishment of land resettlement schemes.

ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES

1. The construction of facilities for -

(b) the transmission and supply of electricity;

WATER RESOURCE DEVELOPMENTS

8.6 Construction of industrial and domestic wastewater treatment plants and related pipeline systems.

INFRASTRUCTURE

10.2 The route determination of roads and design of associated physical infrastructure where -



a) It is a public road b) the road reserve is more than 30m wide, or c) the road caters for more than one lane of traffic in both directions

The proposed project is thus subject to obtaining an Environmental Clearance.

The positive impacts associated with the proposed development are the availing of additional land to be developed to relieve the backlog in the provision of residential erven and the opportunity for individuals to be able to purchase land as well as the creation of employment during the construction and operational phase of the development.

The negative impacts associated with the proposed development are the impact on the vegetation, trees, bushes, the natural drainage systems, noise and dust during construction, the transmission of diseases from people or to people involved in construction and the loss of land during the construction of the bulk municipal services (roads, sewer, electrical reticulation, water reticulation) and the construction of structures once the erven has been created. The development will also put further pressure on the water supply resources and infrastructure. Mitigation measures however 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 does not negatively affect the amenity of the locality and the activities do not adversely affect the environmental quality of the neighbouring farms, erven, portions 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 developers and the proponent (WFA Construction CC).

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 proposed Portions 1 and 2 of Portion 118, Rundu and for the following "listed activities":

LAND USE AND DEVELOPMENT ACTIVITIES

5.2 Establishment of land resettlement schemes.

ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES

The construction of facilities for (b) the transmission and supply of electricity;

WATER RESOURCE DEVELOPMENTS

8.6 Construction of industrial and domestic wastewater treatment plants and related pipeline systems.

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LIST OF ABBREVIATIONS

EC	Environmental Clearance
ECO	Environment Control Officer
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
I&APs	Interested and Affected Parties
MET	Ministry of Environment, Forestry and Tourism
SQM	Square Meters



1. INTRODUCTION

Green Earth Environmental Consultants have been appointed by WFA Construction CC to attend to and complete an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) in order to obtain an Environmental Clearance Certificate for the completion of the town planning procedures and establishment of a township on Portion 1 and 2 (portions of Portion 118) of the Remainder of Farm Rundu Townlands No. 1329, Rundu, Kavango-East Region as per the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Impact Assessment Regulations (GN 30 in GG 4878 of 6 February 2012).

The Proponent intends to establish a township comprising of 62 erven on Portion 1 and comprising of 325 erven on Portion 2. The proposed townships will include erven for residential, business and institutional uses as well as erven reserved for public open spaces and streets. The dominant land use will be single residential with a density of 1:300m².

The land within the immediate vicinity of the project site is predominately characterised by undeveloped land, informal residential activities, institutional activities and new residential developments.

The proposed development will be serviced by the normal bulk services including electrical and water reticulation systems, a sewer system and street network in accordance with the Municipal requirements.

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

5.2 Establishment of land resettlement schemes.

ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES

The construction of facilities for (b) the transmission and supply of electricity;

WATER RESOURCE DEVELOPMENTS

8.6 Construction of industrial and domestic wastewater treatment plants and related pipeline systems.

INFRASTRUCTURE

10.2 The route determination of roads and design of associated physical infrastructure where -

- a) It is a public road
- b) the road reserve is more than 30m wide, or
- c) the road caters for more than one lane of traffic in both directions

The Environmental Impact Assessment below contains information on the proposed project and the surrounding areas, the proposed development and 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, any potential ecological, environmental and social impacts.

2. TERMS OF REFERENCE

The proponent (WFA Construction CC) intends to develop Portions 1 and 2 of Portion 118, Rundu into a residential development. 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 have 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 need to be applied for by the proponent.

3. NEED, DESIRABILITY AND MOTIVATION

Need

Rundu is experiencing a high influx of people who urgently need housing. Although various new developments have been approved recently, these developments in the Town are struggling to keep up with the growing demand for housing. The demand is especially for low- and middle-income earners looking for free standing erven of 300m² in extent and upwards. The Town is also experiencing a lot of people putting up informal housing on open Council land which must be relocated to serviced and development areas as soon as it becomes available. The need of the proposed development is supported by the following establishments observed in proximity of Portion 118:

- The Vocational Training Centre of Rundu.
- The University of Namibia (UNAM) Rundu Campus.
- The Uvungu-Vungu Agricultural Irrigation Project site and the Kavango River.
- The Sarasungu Combined High School; and
- Good overall access to and from surrounding Portions.

These institutions employ a number of people who require housing. Therefore there is a definite need for additional serviced residential erven and housing.

Desirability

Portion 118 on which the residential developments will take place is ideally suited for the proposed residential development. It is relatively flat, has already properly constructed access roads, and can be connected to municipal infrastructure (sewer, water, and electricity) that already exists in the area. The site is characterised by relatively flat land with a mixture of mica and sand that makes the site ideal for development and construction. It is believed that the proposed development will not have a negative impact on the receiving environment.

The site is desirable for the proposed development. It is large enough to accommodate several residential erven plus erven zoned for business, institutional and open spaces to support the residential development.

From the above it is clear that there is a need for the proposed development and that the portion is desirable to accommodate the proposed development.

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

In 2011, the Rundu Council approved the allocation of Portion 1 and 2 of Portion 118 of the Remainder Farm Rundu Townlands No. 1329 to WFA Construction CC (Willie Fourie de Villiers and Annemarie de Villiers), the Proponent, for a Township Establishment on Portions 1 and 2 of Portion 118 of a housing development. Portions 1 and Portion 118 were surveyed in 2011 and approved as Kaisosi Extension 11 and was later transferred to the developer (Mpeace Holding Group (Proprietary) Limited) in 2018. See below the Townships Board (Ministry of Regional and Local Government, Housing and Rural Development) approval letter for Kaisosi Extension 11 which includes Portion 118:

	Republic of Namibia			
Ministry of Regional an	d Local Government, Housing and Rura	al Development		
Tel: (+264 61) 2975111 Fax: (+264 61) 2975305	Government Office Park Luther Street	Private Bag 13289 Windhoek Namibia		
Enquiries: H N Van Wyk Tel: (+264+61 2975230) E-mail: <u>hvanwyk@mrlgh.gov.na</u>	Our Ref: 17/1/81/3 Ext 11	Date: 21 November 2011		
Messrs. Stubenrauch Planning Consultants CC P O Box 11869 Windhoek				
Dear Sir,				
SUBJECT: PERMISSION TO 11.) ESTABLISH THE TOWNSHIP: K	AISOSI EXTENSION		
1. Your letter W/10039 dated	280March 2011 has reference.			
 Approval has been granted Division of Land Ordinanc township Kaisosi Extensio July 2011. 	l in terms of Section 6 (2) and 6 (3) of th e, 1963 (Ordinance 11 of 1963) for peri n 11 under Townships Board Resolution	te Townships and nission to establish the a Item 116/2011 dated 12		
Yours faithfully				
Shor				
TOWNSHIPS BOARD SECRE	TARIAT			
			3	



By the time the developer was ready to service the development site, encroachment by illegal occupation as can be seen on the image below, took place on the southern Portion of Portion 118 and the developer has since been forced to cancel the General Plan B 317.

The developer had since appointed a Town Planner (Petrine Sem of Dunamis Consulting (Pty) Ltd) to submit a new application to Rundu Town Council to obtain an amended approval for the area of the layout that remained unoccupied. Approval was granted vide OC Council Resolution No. 007/08/03/2023 in the attached allocation letter dated 2 June 2023 to WFA Construction CC. See below a copy of Rundu Town Council's resent approval letter:

OFFICE O	F THE CHIEF EXECUTIVE	OFFICER
(+264 66) 266 400 (+264 66) il: <u>pa.coolfin.nd.down.org</u> see www.rund.down.org	Erf 1212, Mana Mwengere Street	Private Bag 2128 Runda, NAMIBIA
uiries: (Adriano Abraham) I: (+264 66) (266400)	Our Ref: (21/09)	Date: 2 June 2023
eace Property Development	PTY Ltd	
D. Box 20261		
mibia		
tention: Mr. Fourie Devilliers		
		PORTION 118 OF RUNDU
E: REQUEST TO RE-SUBVIS	SION KAISOSI EXTENSION 11 ON	PORTION TIE OF ROMOO
a are pleased to inform you th	hat the Town Council of Rundu at its	meeting held on the 08th of
arch 2023, as per OC Resolu	tion No. 007/08/03/2023, resolved th	at-
1) That approval is ora	anted for the-	
Subdivision of	of Kaisosi Extension 11 into 2 portion	s and the remainder.
The Rundu T Property Dev	Fown Council rescinds the initial sale velopment Pty Ltd.	agreement between impeace
 Subdivided p 	portions to be allocated respectively t	o the below mentioned
individuals.	Holding Group of company Pty Ltd- 4	10000m ²
- Willie Fo	urie De Villiers - 221182m ²	Oundu Tauro Caunali assount
 An amount of N\$ 39 be refunded into Mr the client. 	8,988.68 which was overpaid to the Steven Muheto account as per claus	e 3.3.3 of the submission by
3) That the Rundu Tow	vn Council is indemnified against any	claims of transfers of the said
 All professional fees 	attached to the subdivision, EIA, Su	rvey and conveyancing be
borne by the client.		
fer to the contact details abo	we should you require any additional	Information
ours faithfully,	an Town Courses	
Malancel	Privata Bag 2128	
CONTRACTOR CONTRA	A C AM TON	



The final approval of the subdivision of Portion 118 into Portions 1, 2 and the Remainder is subject to obtaining an Environmental Clearance Certificate.

4.1.PROJECT DESCRIPTION

Portion 118 of Farm Rundu Townlands No. 1329 is on the eastern side of Rundu Town in the Kaisosi Area of Rundu Townlands. Portion 118 is 517 583m² (51,7583ha) in extent and is zoned 'undetermined'. The northern portion of Portion 118 is undeveloped and vacant. The southern portion of Portion 118 is currently undeveloped, but it is occupied by illegal/informal settlements. See photo and plans below showing the locality of Portion 118 of Farm Rundu Townlands No. 1329:



Figure 1: Photo showing the locality of Portion 118, Farm Rundu Townlands No. 1329

It is the intention of the Proponent to subdivide Portion 118 of the Remainder of Farm Rundu Townlands No. 1329 into two new portions (Portion 1 and 2) and the Remainder of Portion 118. See *Photo* below showing the intended subdivision:





Figure 2: Proposed subdivision of Portion 118 into Portions 1, 2 and the Remainder

The Remainder of Portion 118 will remain the property of Council. It is Council's intension to accommodate the people currently occupying this portion illegally/informally by formalizing the uses and allocating plots to the people and by asking them to move to the newly created erven on Portions 1 and 2 of Portion 118.

It is the intension of the Proponent to establish a township comprising of 62 erven on Portion 1 and comprising of 325 erven on Portion 2. Portion 1, 2 and the Remainder of Portion 118 will be $\pm 50\ 025m^2$, 216 $148m^2$ and 251 $407m^2$ in extent respectively. The proposed subdivision plan is shown below:





Figure 3: Subdivision layout of Portion 118 into Portions 1, 2 and the Remainder

The proposed townships will include erven for residential, business and institutional uses as well as erven reserved for public open spaces and streets. The dominant land use will be single residential with a density of 1:300m². See *Map* below showing the proposed zoning and intended uses of the erven to be created on Proposed Portion 1 of Portion 118:





Figure 4: Zoning and land use Plan of Portion 1 of Portion 118

Table 1 below shows how the land will be used in proposed Portion 1:

Portion 1/118 Layout Composition			
Zoning	Erven	Size m ²	%
Residential	54	21312	42,2
Business	5	12731	25,2
Institutional	1	2076	4,1
POS	2	4160	8,3
Rem. Str		10196	20,2
Total	62	50475	100

Table 1: The layout and land use composition of Portion 1

See *Map* below showing the proposed zoning and intended uses of the erven to be created on proposed Portion 2 of Portion 118:



Figure 5: Zoning and land use Plan of Portion 2 of Portion 118



Table 2 below shows how the land will be used in proposed Portion 2:

Portion 2/118 Layout Composition			
Zoning	Erven	Size m ²	%
Residential	309	111226	52
Business	1	2323	1
Institutional	2	7288	3
POS	13	18265	8
Street		4117	2
Rem. Str		72373	34
Total	325	215592	100

Table 2: The layout and land use composition of Portion 2

Both proposed Portions 1 and 2 are located in close proximity of the following establishments which supports the proposed residential development:

- The Vocational Training Centre of Rundu.
- The University of Namibia (UNAM) Rundu Campus.
- The Uvungu-Vungu Agricultural Irrigation Project site and the Kavango River.
- The Sarasungu Combined High School; and
- Good overall access to and from surrounding Portions.

These establishments employ a lot of staff who are in dire need of houses.

Rundu Town Council approved the subdivision of Portion 118 into Portion 1, 2 and the Remainder, the establishment of townships and the layout design of Portions 1 and 2 of Portion 118 at its Ordinary Meeting held on 30 October 2013 per Council Resolution 096/30/10/2023 and 097/30/10/2023 respectively when it resolved that. See copy of Council's signed Minutes below:



EXTRACT MINUTES OF AN ORDINARY MEETING OF THE LOCAL AUTHORITY COUNCIL OF RUNDU HELD ON THE 30th OCTOBER 2023 AT 10H00 IN THE COUNCIL CHAMBERS, BUNDU

ATTENDANCE:

Members:

Clir. G.M Kanyanga		His Worship The Mayor	
Clir. J. Kakondo		Deputy Mayor	
Clir. E. Muyenga	-	MC Chairperson	
Clir. R. Nekare		MC Member	
Clir, R. Ndara	-	MC Member	
Clir. R. Nanghuti		Council Member	
Cllr. N. Ndumba	0.00	Council Member	

Officials:

Mr. Olavi V.E Nathanael	CEO
Mrs. A.M Kalyangu	 SE: Corporate Services, HR and Admin
Mr Sam H Nekaro	SE: Finance & IT
Mr. J. Sinime	 Manager: Technical Service

1. OPENING AND WELCOMING:

The Chairperson opened the meeting with a prayer and requested the CEO to read the notice of the meeting. The Chairperson then welcomed the Honorable Members as well as Officials to the eighth Council Meeting of 2023.

2. ADOPTION OF THE AGENDA

The Chairperson requested for adoption of the agenda. Clir Kakondo moved for the adoption of the agenda with amendments as follows:

2.1 Item 6.4 to be moved to recommendation as item 11.13.
 2.2 Item 6.6 to be moved to recommendation as item 11.14.

ATTENDANCE / APPLICATIONS FOR LEAVE OF ABSENCE BY MEMBERS None.

4. CONFIRMATION OF MINUTES OF THE PREVIOUS MEETING:

Minutes of the Ordinary Council meeting of Rundu held on the 26th September 2023 were confirmed as submitted.

5. INTERVIEWS WITH DEPUTATIONS OR PERSONS SUMMONED OR REQUESTED TO ATTEND

NONE



EXTRACT MINUTES OF AN ORDINARY MEETING OF THE LOCAL AUTHORITY COUNCIL OF RUNDU HELD ON THE 30th OCTOBER 2023 AT 10H00 IN THE COUNCIL CHAMBERS, RUNDU

11. RECOMMENDATIONS TO THE COUNCIL:

11.4 PROPOSED SUBDIVISION OF PORTION 118 THE REMAINDER OF FARM RUNDU TOWNLANDS NO.1329 INTO PORTION 1 AND REMAINDER AND SUBSEQUENT TOWNSHIP ESTABLISHMENT AND LAYOUT APPROVAL ON PORTION 1 (A PORTION OF PORTION 118) OF THE REMAINDER OF FARM RUNDU TOWNLANDS NO. 1329

Through the Chairperson of MC, the CEO read out the item and the Chairperson declared it open for discussion. The Chairperson then requested all those in favor of the recommendation to indicate as such. By show of raised hands, all the Members voted in favor of the recommendation.

It was therefore resolved, vide -

OC RESOLUTION NO. 096/30/10/2023

That approval is granted for the: -

 Subdivision of Portion 118 of the Remainder of Farm Rundu Townlands No.1329 into Portion 1 and Remainder in terms of section 105(e) of the Urban and Regional Planning Act, (Act No.5 of 2018);

Permission to establish a township (need and desirability) on Portion 1 of Portion 118 of the Remainder of Farm Rundu Townlands No. 1329 in terms of section 133(3) of the Urban and Regional Planning Act, (Act No.5 of 2018);

Approval of the layout Plan for the new township on Portion 1 of portion 118 of the Remainder of Farm Rundu Townlands No.1329 in terms of section 105(b) of the Urban and Regional Act, (Act No.5 of 2018) and

- Approval of the proposed zoning of the new Erven on Portion 1 of portion 118 of the Remainder of Farm Rundu Townlands No.1329 in terms of section 105(a) of the Urban and Regional Act, (Act No.5 of 2018);
- That an Environmental clearance certificate is obtained before the submission of the application to the Ministry of Urban and Rural development;
- 4. That the applicant will bear all the cost inclusive of Town Planning, survey and registration.



EXTRACT MINUTES O	F AN ORDINAR	IN MEETING OF THE LO	CAL AUTHORITY COL	INCLOF RUNDU	HELD ON THE
	ION OCTOBER	2023 AT 10H00 IN THE	COUNCIL CHAMBER	RS, REINDU	

11.5	PROPOSED SUBDIVISION OF PORTION 118 THE REMAINDER OF FARM RUNDU
	TOWNLANDS NO.1329 INTO PORTION 2 AND REMAINDER AND SUBSEQUENT
	TOWNSHIP ESTABLISHMENT AND LAYOUT APPROVAL ON PORTION 2 (A PORTION
	OF PORTION 118) OF THE REMAINDER OF FARM RUNDU TOWNLANDS NO. 1329

Through the Chairperson of MC, the CEO read out the item and the Chairperson declared it open for discussion. The Chairperson then requested all those in favor of the recommendation to indicate as such. By show of raised hands, all the Members voted in favor of the recommendation.

It was therefore resolved, vide -

OC RESOLUTION NO. 097/30/10/2023

- 1. That approval is granted for the: -
- Subdivision of Portion 118 of the Remainder of Farm Rundu Townlands No.1329 into Portion 2 and Remainder in terms of section 105(e) of the Urban and Regional Planning Act, (Act No.5 of 2018);
- Permission to establish a township (need and desirability) on Portion 2 of Portion 118 of the Remainder of Farm Rundu Townlands No. 1329 in terms of section 133(3) of the Urban and Regional Planning Act, (Act No.5 of 2018);
- Approval of the layout Plan for the new township on portion 2 of portion 118 of the Remainder of Farm Rundu Townlands No.1329 in terms of section 105(b) of the Urban and Regional Act, (Act No.5 of 2018) and
- Approval of the proposed zoning of the new Erven on portion 2 of portion 118 of the Remainder of Farm Rundu Townlands No.1329 in terms of section 105(a) of the Urban and Regional Act, (Act No.5 of 2018)
- That an Environmental clearance certificate is obtained before the submission of the application to the Ministry of Urban and Rural development;
- That the applicant will bear all the cost inclusive of Town Planning, survey and registration.

Certified a true extract of the minutes of an ordinary meeting of the local authority Council of Rundu held on 30th October 2023 at 10:00 in the Council Chambers, Rundu.





5. BULK SERVICES AND INFRASTRUCTURE

Based on the approved layouts, WFA Construction CC, will submit detailed designs to Rundu Town Council for the design and construction of the bulk services including the sewer network, supply of electricity, water reticulation and internal and external access roads. The bulk services will be provided as follows:

5.1.ACCESS/ROADS

The Project Area is bounded by existing municipal roads on the Western side. Access to the proposed development will be from this road. The access design will consider the type of vehicle using the access, the approach gradient to the access, the distance from the nearest intersection, the speed limit on the road as well as the vertical and horizontal lines of sight. The designs will be submitted to the Municipality for approval.

The internal road network, as and where required, will be constructed according to the approved layout. Road types will be normal G2 gravel roads. Road bed preparation and compaction of the structural layers will be done to the standards as prescribed by SANS 1200 and will be monitored and controlled by means of regular control testing and analysis through an accredited Geo-Technical laboratory. Layer works will be according to the standards as depicted in *Table 3* below:

	LAYER	ELEMENT	GUIDELINE
1	Roadbed	Roadbed preparation	Compaction to 100% of modified
	preparation	150 mm depth.	AASHTO density (In-situ sand 150
			mm deep).
2	Sub-base/	150 mm thick on roads.	Imported gravel or suitable gravel
	Selected layer		taken from cut or borrow compacted
			to 98% of modified AASHTO
			density.
3	Wearing course	150 mm thick	Compacted to 100% of modified
		constructed from sub	AASHTO density, with minimum
		base material as	CBR = 45 at 95% of modified
		specified in SANS	AASHTO density. Nominal
		1200 ME clause 3.2.2.	maximum size of stone 37.5 mm.
4	Ancillaries		Provision must be made for Road
			Signs, Sleeve Pipe and Cable Duct
			Marker Blocks.

Tabla	2.	Stand	arde	for	Road	1 2	in	Mork	~
IaDle	υ.	Stariu	aius	IUI	nuau	La	vei	vvoin	5

5.2. BULK WATER SUPPLY

The supply of bulk water to Portions 1 and 2 of Portion 118 is the responsibility of Rundu Town Council. Water will be supplied to the relevant portions, from where the bulk water is supplied via internal water networks.

The calculation of the Annual Average Water Demand (AAWD) for the residential developments will be based on the "Red Book", with a consumption of 600 I/day per single residential plot.

5.3.INTERNAL WATER DISTRIBUTION NETWORK

The performance of a finished water distribution system is judged by its ability to deliver the required flows while maintaining desirable pressure and water quality. Customer water demands and fire flow requirements must therefore be met. Meeting these requirements depends upon the proper design and performance of bulk and distribution piping, ground storage facilities and booster pumping stations. The internal water distribution network of proposed Portions 1 and 2 of Portion 118 will be designed as to provide water at a volume and pressure to meet the demand.

The internal distribution network will consist of uPVC piping with specials and fittings meeting the requirements of Rundu Town Council. Construction of the network will be according to the prescribed standards of Rundu Town Council and will comply with SANS 1200. *Table 4* below provides a summary of the design standards for water supply reticulation that will be used as guidelines:

	PARAMETER	ELEMENT	GUIDELINE
1	Pressure	Maximum (Static)	9,0 bar (90m)
		Minimum (at peak flow)	1,5 bar (15m)
2	Flow	dia ≤150 mm	1,0 m/s – 3,5 m/s
	Velocities	dia ≥ 200 mm	1,5 m/s – 2,5 m/s
3	Peak Factor	Design peak (calculated using	4 minimum
		equivalent erven)	Dependant on size of
			development
4	Pipe Location	Reserve	Within road reserve at
			distance applicable to
			Rundu Town Council
5	Cover to pipes	Minimum: Gravel roads	1 000mm
		Tarred roads and traffic areas	800mm
		Other areas	600mm
		Maximum: All areas	1 500mm

Table 4: Design standards applicable to internal water reticulation



5.4. ELECTRICITY SUPPLY

There is an 11kV power line of NORED running along the D3402 to which the electrical supply will be connected via an 11kV:0.4kV transformer and further distributed to all the plots. The use of conventional techniques to provide electricity supply on site is proposed, which would limit cost and reduce implementation times. Energy efficiency may be used to allow for limited development in the current context, where there is a limited electricity supply capacity, while maintaining functionality. This will tend to be more expensive and would have to be considered at length.

It is also foreseen that the development would be provided with conventional streetlights and telecoms services. Should telecom services be required, each plot should apply to Telecom Namibia and these services will probably be provided to the homesteads via overhead lines.

5.5.SOLID WASTE DISPOSAL

The expected solid waste to be generated by the development can be classified as general municipal waste. Solid waste removal will be handled by the Rundu Town Council under their normal waste collection program and facilities and be disposed off at the Rundu solid waste site.

5.6. STORMWATER AND DRAINAGE MANAGEMENT

The design of the internal roads will include provision for storm water infrastructure to accommodate the storm water generated by the development as well as storm water received by the site from adjacent areas through natural cross drainage. Appropriate storm water infrastructure will be constructed to prevent any damage to the development or adjacent areas.

5.7.WASTEWATER/SEWERAGE

The wastewater/sewerage outfall generated by the development will be collected through a gravity flow water borne sewage network constructed in accordance with SANS 1200 and fully meeting the requirements of the Town Council of Rundu. The pipe network will consist of normal uPVC piping and specials with concrete manholes appropriately spaced to facilitate proper and easy maintenance on the network. The pipe network will connect to the existing Rundu Town network and transferred to the existing oxidation ponds.

The following design standards will be used as guidelines for the design and construction of the internal sewage collection network:



	PARAMETER	ELEMENTS	GUIDELINES
1	Minimum Velocity at full flow	Gravity Sewer	0.7 m/s
2	Peak Factors	Industrial	2.5
3	Stormwater Infiltration		15% of design flow
4	Pipe Capacity	Flow level as percentage of diameter	80% at design flow
5	Minimum Gradients for	110mm dia	1/120
	Pipes	160mm dia	1/200
		200mm dia	1/300
		225mm dia	1/350
		250mm dia	1/400
		300mm dia and	1/500
		bigger	
6	Hydraulic Calculations	Manning	n=0,012
		Equation	
7	Pipe Materials	All Pipes	uPVC - 400 kPa Hoop
			Stiffness
8	Location of Sewer	Street Layout	As prescribed by the Rundu
			Town Council
9	Connections	For Stands	110mm uPVC with slip on
			couplings
10	Cover over pipe	Road Reserves	800 mm (min)
11	Manholes	Spacing	80m maximum

Table 5: Design standards applicable to internal sewer reticulation

5.8. FIRE PROTECTION

The area, being a low income residential development, is viewed as a Low-Risk Group 3 fire risk area. The water mains will be designed that supply is assured at all times and will be correctly sized for a design flow equivalent to the sum of the design instantaneous peak domestic demand for the area and the design fire flow. "Guidelines for the Provision of Engineering Services in Residential Townships" by-laws relating to fire flow conditions will be adhered to.

Meeting the fire flow requirements depends upon the proper design and performance of bulk and distribution piping, ground storage facilities and booster pumping stations, which would form part of the internal reticulation design. Depending on the size of the general residential developments to be provided on each general residential plot, fire protection designs will be done and might require booster connections and/or booster pump stations for individual developments.

The minimum design fire flow will be 350 *l*/minute with all hydrants within a radius of 270 metres from the fire discharging simultaneously.

Provision will be made for proper firefighting through the installation of above ground pillar type fire hydrants fully complying with applicable legislation/regulations such as SANS 1128-1 and meeting the requirements of the Rundu Town Council Fire Department. The picture depicts a typical installation of the above. These hydrants will be appropriately spaced not to exceed a distance of 240 meters apart.

On-site fire protection will be dealt with on an individual basis through the submission of proper building plans to the Rundu Town Council for approval in compliance with Part T of SANS 0400 – 1990 and the national Building regulations. The water supply from the distribution lines to the individual plots will be individually metered and each installation will be registered with the Rundu Town Council.

6. 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 portions and area in general were reviewed in order to determine potential environmental issues and concerns.

b) Site assessment (site visit)

Proposed Portion 1 and 2 of Portion 118, Rundu 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. Meetings were conducted with the Town Planner (Petrine Sem of Dunamis Consulting (Pty) Ltd) and the developer to obtain specific information regarding the site and project proposed.

c) Public participation

Interested and affected parties were invited to register in terms of the assessment process to give input, comments and opinions regarding the proposed project. The last date for comments and/or registration was 24 November 2023.

A Background Information Document has been sent to Interested and Affected Parties (I&APs) and to relevant authorities. Notices were placed in two local newspapers (the Namibian and New Era of 6 and 13/ 14 November 2023) on two consecutive weeks inviting the public to participate and provide comments on the proposed project. Copies of the newspaper notices are attached to this report.

d) Scoping

Based on the desk top study, site visits 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.

7. ASSUMPTIONS AND LIMITATIONS

It is assumed that the information provided by the proponent (WFA Construction CC), the Town Planner (Petrine Sem of Dunamis Consulting (Pty) Ltd) and Rundu Town Council is accurate. Alternative sites were evaluated however the proposed site for the development was chosen because it was allocated to the Proponent by Town Council and that the site was already owned by the developer, it is the only site and portion of land that is large enough to be used for such a development. These sites are also located in the Rundu Municipal area earmarked for further development. 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.

8. 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 Rundu Town Planning Amendment Scheme (March 2004)
- 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, WFA Construction CC (the Proponent) should consider the following in devising an action plan in response to these articles:

- Implement a "zero-harm" policy 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

5.2 Establishment of land resettlement schemes.

ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES

The construction of facilities for (b) the transmission and supply of electricity;



WATER RESOURCE DEVELOPMENTS

8.6 Construction of industrial and domestic wastewater treatment plants and related pipeline systems.

INFRASTRUCTURE

10.2 The route determination of roads and design of associated physical infrastructure where -

a) It is a public road b) the road reserve is more than 30m wide, or c) the road caters for more than one lane of traffic in both directions

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 states 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.

THE RUNDU TOWN PLANNING AMENDMENT SCHEME (MARCH 2004)

The area to which this Scheme applies is the area as indicated on the scheme maps. The general purpose of the Scheme is the coordinated and harmonious development of the area of Rundu including where necessary the redevelopment of any part thereof which has already been subdivided and build upon, 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 and conservation of the existing character of the town, in the process of such development.

The Proponent appointed Petrine Sem of Dunamis Consulting (Pty) Ltd as Town Planner to attend to the town planning procedures to apply for the establishment of the townships, layout and land use planning of Portions 1 and 2 of Portion 118, Rundu. The Town Planner submitted an application to Rundu Town Council for evaluation and approval. Council approved the application as per the Council Minutes (see page 23 to 25 of this report). The Town Planner will now submit an application to the Urban and Reginal Planning Board for the final approval of the establishment of the townships as well as the land use and layout plan. The final approval is subject to obtaining the environmental clearance.

CONCLUSION AND IMPACT

The application for the establishment of townships and the land uses and layout on Potions 1 and 2 of Portion 118, Rundu was submitted to Rundu Town Council by a registered town planner. Rundu Town Council evaluated and approved the establishment of the townships, land use and layout plans as per the guidelines of the Rundu Town Planning Scheme. The proposed development is in the Rundu Municipal area and neighborhood characterized by similar uses and will thus have the minimum impact on the surrounding environment.

OTHER LAWS, ACTS, REGULATIONS AND POLICIES

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

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			

Table 1: Laws. Acts, Regulations and Policies

	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 (quideline	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 liconso issued under	
	contion 22 Part 2 also further	
	provides for procedures to be	
	followed in license application	
	followed in incense application,	
	lees to be paid and required terms	
	of conditions for air poliution	
	licenses. Part / states that any	
	person who sells, stores,	
	transports or uses any nazardous	
	substances or products containing	
	nazardous 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	The Water Resources	The Act must be consulted.
Resources	Management Act (No. 11 of	Fresh water abstraction and

Management	2013) stipulates conditions that	waste-water discharge
Act	ensure effluent that is produced to	permits should be obtained
	be of a certain standard. There	when required.
	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.	
Solid and	Provides for management and	The Proponent must abide to
Hazardous	handling of industrial, business	the solid waste management
Waste	and domestic waste.	provisions.
Management		
Regulations:		
Local		
Authorities		
1992		
Hazardous	The Ordinance applies to the	The Proponent must abide to
Substances	manufacture, sale, use, disposal	the Ordinance's provisions.
Ordinance	and dumping of hazardous	
(No. 14 of	substances, as well as their import	
1974)	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.	
Atmospheric	Part 2 of the Ordinance governs	The proponent should adhere
Pollution	the control of noxious or offensive	to the stipulations of the
Prevention	gases. The Ordinance prohibits	Atmospheric Pollution
Ordinance of	anvone from carrying on a	Prevention Ordinance.
Namibia (No.	scheduled process without a	
11 of 1976)	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 cases	
	produced by the scheduled	
	process.	
Nature	The Nature Conservation	The proposed project
Conservation	Ordinance (No. 4 of 1975) covers	implementation is not located
Ordinance	game parks and nature reserves,	in a demarcated conservation



	the hunting and protection of wild	area, national park or unique
	animals, problem animals, fish and	environments.
	indigenous plant species. The	
	Ministry of Environment, Forestry	
	and Tourism (MEFT) administer it	
	and provides for the establishment	
	of the Nature Conservation Board.	
Forestry Act	The Forestry Act (No. 12 of	No removal of protected tree
	2001) specifies that there be a	species or removal of mature
	general protection of the receiving	trees should happen. The
	and surrounding environment.	Ministry of Environment,
	The protection of natural	Forestry and Tourism should
	vegetation is of great importance,	be consulted when required.
	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.	
Labour Act	The Labour Act (No. 11 of 2007)	The proponent and contractor
	contains regulations relating to the	should adhere to the Labour
	Health, Safety and Welfare of	Act.
	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).	
Traditional	The Traditional Authorities Act	Traditional Authorities should
Authorities	(No. 17 of 1995) provide for the	be consulted when required.
Act (No. 17 of	establishment of traditional	
1995)	authorities, the designation and	
	recognition of traditional leaders;	
	to define their functions, duties	
	and powers; and to provide for	
	matters incidental thereto.	
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	'
	require a permit from the NHC	
	before it may be relocated. This	
	should be applied from the NHC	
National	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 petrodyph known or	material or sites or
10/0	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	
	maco used or erected by people	
	referred to in paragraph: or	
	(d) the anthropological or	
	(d) the antihopological of	
	archaeological contents of graves,	
	caves, rock shellers, middens,	
	by such people: or	
	(a) any other probabilities	
	(e) any other archaeological of	
	paraeonitological linus, material of	
	of and in accordance with a normit	
	issued under this section	
Dublic Health	Issued under this section.	The evenement will exerve
A et (No. 00 of	onder this act, in section 119: "No	the proponent will ensure
ACI (NO. 36 01	person shall cause a nuisance or	the project in relation to
1919)	shall suffer to exist on any land or	ne project in relation to
	bim or of which he is in charge	their employees and
	nin or or which he is in charge any	their employees and
	nuisance or other condition liable	surrounding residents is

	to be injurious or dangerous to health."	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	The objectives of this Act are to:	Only the area required for the
Conservation	Make provisions for the combating	operations should be cleared
ACT (NO. 76 OT 1969)	and prevention of soll erosion; Promote the conservation	minimum impact on the soil
	protection and improvement of the	through clearance for
	soil, vegetation, sources and	construction.
	resources of the Republic;	
Air Quality Act	The Air Quality Act (No. 39 of 2004) intends to provide for	The proponent and contractor
2004)	national norms and standards	Quality Act.
,	regulating air quality monitoring,	
	management and control by all	
	spheres of government; for	
	specific air quality measures; and for matters incidental thereto	
Vision 2030	Namibia's overall development	The proposed project is an
and National	ambitions are articulated in the	important element in
Development	Nation's Vision 2030. At the	employment creation.
Plans	operational level, five-yearly	
	(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	
	overarching goals for the	
	Namibian nation: high and	
	sustained economic growth;	
	increased income equality; and	
	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.





Figure 7: Flowchart of the Impact Process

9. AFFECTED RECEIVING ENVIRONMENT

9.1. BIODIVERSITY AND VEGETATION

Proposed Portions 1 and 2 of Portion 118, Rundu is located in the Tree and Scrub Savannah Biome which is characterized by woodland vegetation structure type with extremely high green vegetation biomass. The project site is showing evidence of some human inference namely informal tracks are present and vegetation was cleared on some areas of the Portion and a few gravel roads are present on the site.



Figure 8: Biomes in Namibia (Atlas of Namibia, 2002)

The natural terrain is relatively even as can be seen on the photos of the area and site. No protected trees (especially Acacia erioloba) may be removed without a permit. Any removal of vegetation should be done in a properly managed, planned and responsible manner to avoid the destruction of unnecessary ground cover. Birds and small insects were observed on and near the project site when the site visit was carried out, it is strongly recommended that any animal whether large or small be protected and safeguarded from the construction and operation activities that may be harmful. If required, the relocation of animals is the preferred choice. See below *Photos* of the site:





Figure 9: Vegetation near Project Site



Figure 10: Vegetation cleared for construction





Figure 11: Vegetation surrounding Project Site

Only the necessary plants/vegetation will further be removed for the construction phase. 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.

9.2.CLIMATE

The climate of the study area is summarized in the *Table* below:

Classification of climate	Semi-arid area
Average rainfall	Rainfall is averaged to be less than
	400mm - 450mm per year
Variation in rainfall	Variation is averaged to be 30 - 40% per
	year
Average evaporation	1960 - 2100mm per year
Precipitation	The highest rainfall is experienced in
	January/February
Water deficit	1500 - 1700mm per year
Temperatures	The average temperature is above 22°C
Wind direction	Predominantly easterly

Table 6: Climate data

9.3. GEOLOGY AND SOILS

The surface geology of the area consists of formations of 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.



Figure 12: 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 (*Grunert, 2003*).

The hydrogeology of the area prescribes that the sewer pipeline network, drains and ponds should be contained and lined with an impermeable liner to prevent any seepage of sewer into the groundwater which might eventually end up in the river or potable water extracted through borehole in the study area and immediate surroundings.





Figure 13: NamWater boreholes in Namibia

9.4.SURFACE WATER

Proposed Portions 1 and 2 of Portion 118, Rundu are drained by a surface drainage system. Surface water flow in a catchment is largely determined by rainfall (quantity and intensity), potential evapotranspiration and catchment relief. A drainage system comprises all the elements of the landscape through which or over which water travels within that drainage basin. These elements include the soil, vegetation growing on it, geological materials underlying the soil, stream channels carrying surface water and the zones where water is held in the soil and moves below the surface. It also includes constructed elements such as pipes and culverts, cleared and compacted land surfaces, and pavement and other impervious surfaces unable to absorb water. The hydrology of a region is thus characterised by the collection, movement and storage of water through a drainage basin.

Alteration of a natural drainage basin through for instance urbanisation can impose dramatic changes in the movement and storage of water. These changes can have negative impacts on other parties that use water for industrial, domestic and livestock watering purposes in the immediate vicinity or downstream.

9.5. SOCIAL-ECONOMIC COMPONENT

The proposed development will have a positive impact on the socio-economic environment. Apart from the developer's intension to make a profit out of the proposed

development, advantages to the area are numerous. The creation of an additional 62 erven on Portion 1 of Portion 118 and an additional 325 erven on Portion 2 of Portion 118 will lower the backlog in the provision of serviced erven and houses. The proposed development will create the need for more business activities such as medical care, building maintenance, vehicle maintenance, electrical, cabinet making and additional support for schools and other existing businesses etc.

The proposed project will create a large number of jobs during construction and there will also be permanent employment opportunities for people after completion. Full time employment opportunities will be created for domestic workers, gardeners and other related work. The development will give the area a much-needed economic injection which will have a multiplier effect in the community regarding sales and services. The development will also bring in investments and buying power. During construction stages the building industry will be well supported.

Most of all advantages will be the affordability of erven for the local and national community. For this to be achieved it is imperative to keep the costs to a minimum in the initial stages. Since most land use in and around the area is characterised by open land, residential developments and farms, it will not have a negative impact on the neighbours or the surrounding areas. The socio-economic characteristics of the area in which the project site is located, are in the Rundu Municipal Area in proximity to existing activities.

9.6. 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.

9.7. GROUNDWATER

Ground water pollution can have a negative effect on the receiving environment as well as on the surrounding areas. Soil, geological and geo-hydrological characteristics of the site indicate that the potential significance that water resources will be damaged is very small.

There are no still standing water ponds or artificial wetlands on the project site that had been identified. In order for ground water to be contaminated, large amounts of oil or fuel will have to seep through the soil over a period of time. The Water Resource Management Act (No. 24 of 2004) stipulates that even the potential sources of pollution still require attention namely planning, controlling and managing the possible pollution of the receiving environment as the cumulative impact of many environmentally harmful incidents will in the long run have a detrimental impact on the downstream water sources, resources and users.



With precautionary measures that are in place, groundwater contamination is easily prevented and the proposed development operations are not expected to have a detrimental impact on water resources in the area.

9.8. SEDIMENTATION AND EROSION

Erosion and sedimentation could result from soils that are being exposed during clearing of land, grading and the installation of underground utilities namely water pipes or related infrastructure, etc. Erosion and sedimentation could further result in the degradation of habitats in the rainy season. Severe impacts may occur if erosion and sedimentation impacts are not taken into consideration namely loss of valuable topsoil, vegetation and habitat. The infrastructure that will be constructed on the site is believed to have a limited impact on erosion and sedimentation. Drainage channels will be kept open and will be incorporated in the development.

9.9. SENSE OF PLACE

Proposed Portions 1 and 2 of Portion 118, Rundu are located inside the town of Rundu. The portions are also situated in reaching distance to bulk infrastructural networks consisting of roads and electricity. The proposed activities will not have a large/negative impact on the sense of place in the area. An untidy or badly managed site can detract from the ecological well-being and individuality of the area. Unnecessary disturbance to the surroundings could be caused by poorly planned or poorly managed operational activities. The project site should be kept neat and clean where possible. Vegetation should not be removed or harmed if not necessary since it covers topsoil which prevents erosion. Noise and dust should be limited in the construction phase because of the neighbouring residential and business activities.

9.10. HEALTH

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). 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 work place. The introduction of external workers into the area is sometimes accompanied with criminal activities posing security risks for neighbors. However, the proponent will take certain measures to prevent any activity of this sort. The welfare and quality of life of the neighbours and workforce needs to be considered in order for the project to be a success on its environmental performance. Conversely, the process should not affect the overall health of persons related to the project including the neighbours.



9.11. ROAD INFRASTRUCTURE

Development and operational activities are usually associated with an increase in vehicles to and from the site since worker busses, delivery vehicles and trucks are needed for construction. It is important that all vehicle drivers be informed of their potential impact on the environment and on the roads, and that the necessary measures should be taken to prevent any accidents as a result of increased traffic.

10. INCOMPLETE OR UNAVAILABLE INFORMATION

The exact number of people that will be employed will depend on the type and scope of the activities and the number of individuals needed at each phase of the development. The Environmental Management Plan (EMP) will therefore include all the possible negative effects of the development in general that could be operated on the site in order to prevent any pollution or harmful impacts whether to neighbors or the environment.

11. ENVIRONMETAL IMPACT ASSESSMENT EVALUATION

The Environmental Impact Assessment sets out potential positive and negative environmental impacts associated with the proposed project site which are located on proposed Portions 1 and 2 of Portion 118, Rundu. The following assessment methodology will be used to examine each impact identified, see *Table* below:

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

Table 7: Impact Evaluation Criterion (DEAT 2006)

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 project will have 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	М	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	Signific	ance
						Unmitigated	Mitigated
Ecology	-	1	2	4	2	М	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	Signific	ance
						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	Signi	licance
						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	Signif	icance
						Unmitigated	Mitigated
Groundwater	-	2	2	2	2	М	L



11.1.7. SEDIMENTATION AND EROSION

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.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
	71-					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	Signific	ance
						Unmitigated	Mitigated
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	Signific	ance
						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 firefighting devices are in good working order and they 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	Signific	ance
						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 infrastructure 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 erven / portions and it will not be visually unpleasing.

Impact Evaluation

Aspect	Impact Type	Scale	Duration	Magnitude	Probability	Signific	ance
						Unmitigated	Mitigated
Nuisance Pollution	-	1	1	2	2	М	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	Signific	ance
						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	
						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	Significa	ance
	71					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	Signific	ance
						Unmitigated	Mitigated
Failure of Reticulation Pipeline	-	1	1	4	2	L	L

11.2.6. FIRES AND EXPLOSIONS

Food will be prepared on gas fired 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	Signific	ance
						Unmitigated	Mitigated
Fires and Explosions	-	2	1	4	2	L	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	Signific	ance
						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	
	71-					Unmitigated	Mitigated
Cumulative Impacts	-	1	3	4	3	L	L

12. CONCLUSION

In line with the Environmental Management Act (No 7 of 2007), *Green Earth Environmental Consultants* have been appointed to conduct an Environmental Impact Assessment for the proposed residential development on proposed Portions 1 and 2 of Portion 118, Rundu that may not be undertaken without an Environmental Clearance Certificate.

It is the intention that proposed Portions 1 and 2 of Portion 118, Rundu be used for residential activities and its associated activities. The specific site has the full potential to be used for the proposed activities. It is also believed that the activities will not have a severe negative effect on the environment. There were no objections received during the public participation process. It is believed that this project can largely benefit the economic/residential needs of the area.

The negative environmental impacts that may be visible in the operational phase of the project include: increases in solid waste generation for example food and plastics, etc., increased stress on municipal waste disposal facilities, increase in water consumption and waste water generation, can result in an increase in traffic on the nearby roads and

there can be a impact on the occupational health and safety of workers. As a result of the above-mentioned possible negative impacts on the receiving and surrounding environment, an Environmental Management Plan (EMP) is required to eliminate and guide the operational phase of the project. This development is believed to be an asset to the area because erven, facilities and services will be made available for which there is a need.

After assessing all information available on this project, *Green Earth Environmental Consultants* are of the opinion that Portions 1 and 2 of Portion 118, Rundu are suitable for the proposed residential development. The accompanying EMP will focus on mitigation measures that will remediate or eradicate the negative or adverse impacts.

13. **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 completion of the town planning procedures and establishment of a township on Portion 1 and 2 (portions of Portion 118) of the Remainder of Farm Rundu Townlands No. 1329, Rundu, Kavango-East Region* and to issue an Environmental Clearance for the following 'Listed Activities':

LAND USE AND DEVELOPMENT ACTIVITIES

5.2 Establishment of land resettlement schemes.

ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES

1. The construction of facilities for -

(b) the transmission and supply of electricity;

WATER RESOURCE DEVELOPMENTS

8.6 Construction of industrial and domestic wastewater treatment plants and related pipeline systems.

INFRASTRUCTURE

10.2 The route determination of roads and design of associated physical infrastructure where -

- a) It is a public road
- b) the road reserve is more than 30m wide, or
- c) the road caters for more than one lane of traffic in both directions



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APPENDIX A: NEWSPAPER NOTICES



namibian

Classifieds

Tel: +264-61-279 632 / 279 646 • Fax: +264-61-22 9206 • email: classifieds@namibian.com.na







APPENDIX B: COMMENTS FROM I&APS

Comments			
Dear Green Earth Consultants			
I hereby request to be registered as an I&AP for the EIA: Environmental Impact Assessment to obtain an Environmental Clearance for the establishment of a township on Portions 1 and 2 (Portions of Portion 118) of the Reminder of Farm Rundu Townlands No.1329, Rundu, Kavango East Region, as issued in your public notice in the New Era newspaper on the 06th of November 2023. Kindly forward me the Background Information Documents (BID) and the site's coordinates if not stated in the BID			
Regards			
 Ndelimona lipinge EIA Tracking and Monitoring in Namibia (EIA Tracker) Namibian Environment and Wildlife Society Cell:+264814138822 <u>https://eia-tracker.org.na</u> <u>Like us on Facebook</u>			
The EIA Tracker Project keeps track and maps all EIAs countrywide with the aim of enhancing public access to EIA information and promoting transparency within the EIA sector. The information collected is only used for the public to access and the EIA Tracker has no intention and will not use these for financial or any other benefits.			

APPENDIX C: 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 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 Degree/Qualification Grade 12 Date Obtained 1974-1978
- 6. Membership of EAPAN Member (Membership Number: 112)
 Professional

Association:

7. Languages: Speaking Reading Writing English Good Good Good Afrikaans Good Good Good 8. Employment From То Employer Position(s) held 2009 Green Earth Record: Present Environmental Environmental Practitioner Consultants 2005 2008 Elmarie Du Toit Manager Town Planning Consultants 2003 2005 Pupkewitz General Manager Megabuild 1995 2003 Agra Cooperative Manager Trade Limited



		Namibia	Chief Agricultural
1989	1995	Development	Consultant
		Corporation	
		Ministry of	Agricultural
1985	1988	Agriculture	Researcher

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.

IM

Charl du Toit



APPENDIX D: 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:

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 E: ENVIRONMENTAL MANAGEMENT PLAN

