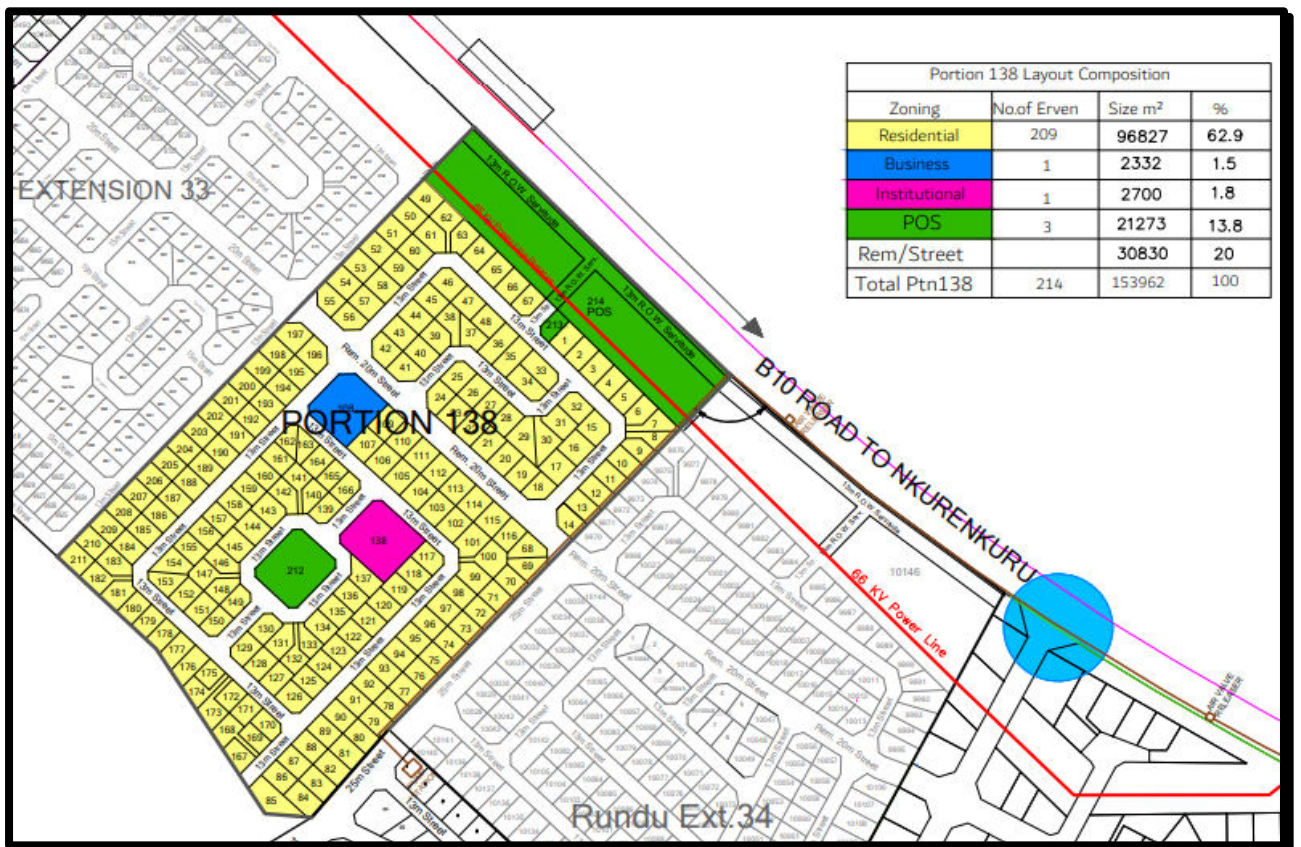


ENVIRONMENTAL SCOPING REPORT: PROPOSED TOWNSHIP ESTABLISHMENT ON PORTION 138 OF RUNDU TOWN AND TOWNLANDS NO.1329 RUNDU, KAVANGO EAST REGION – NAMIBIA



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PROPONENT: ACEMAC CONSTRUCTION CC

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Definitions

TERMS	DEFINITION
BID	Background Information Document
DEFRA	The Department for Environment, Food and Rural Affairs
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
ESA	Environmental Scoping Assessment
ESIA	Environmental and Social Impact Assessment
EMP	Environmental Management Plan
FLTS	Flexible Land Tenure System
I&APs	Interested and Affected Parties
MAWLR	Ministry of Agriculture, Water and Land Reform
MEFT: DEAF	Ministry of Environment, Forestry and Tourism's Department of Environmental Affairs and Forestry
NHC	National Heritage Council
N(EMA)	Namibia Environmental Management Act
PRP	Pit Rehabilitation Plan
ToR	Terms of Reference
UNFCCC	United Nations Framework Convention on Climate Change

1 CHAPTER ONE: BACKGROUND

1.1 Introduction

Acemac Construction cc, proponent and prospective owners of Portion 138 Rundu Town and Townlands No.1329, appointed Plan Africa Consulting cc to undertake an Environmental Scoping Assessment (ESA), compile an Environmental Management Plan (EMP), and apply for an Environmental Clearance Certificate (ECC) at the Ministry of Environment, Forestry and Tourism (MEFT): Directorate of Environmental Affairs and Forestry (DEAF).

In this regard, this Environmental Scoping Report forms part of the application to be made to the Environmental Commissioner's office for an ECC for the proposed township establishment on portion 138 of Rundu Town and Townlands No.1329. The proposed township establishment shall be developed according to the guidelines on the statutes of the Environmental Management Act No.7 of 2007 and the Environmental Impacts Regulations (GN 30 in GG 4878 of 2012).

1.2 Project Location

Portion 138 Rundu is located approximately 6km west of Rundu Town along the B10 road to Nkurenkuru, south of the Kavango River and Kasote Settlement, and adjacent to Sauyemwa. Furthermore, an ephemeral river, the Ndonga-Linena River, can be observed on the south of the portion proposed for the development. The Rundu Military Base and the Rundu Airstrip are situated further to the south of the portion.



Figure 1: Project locality

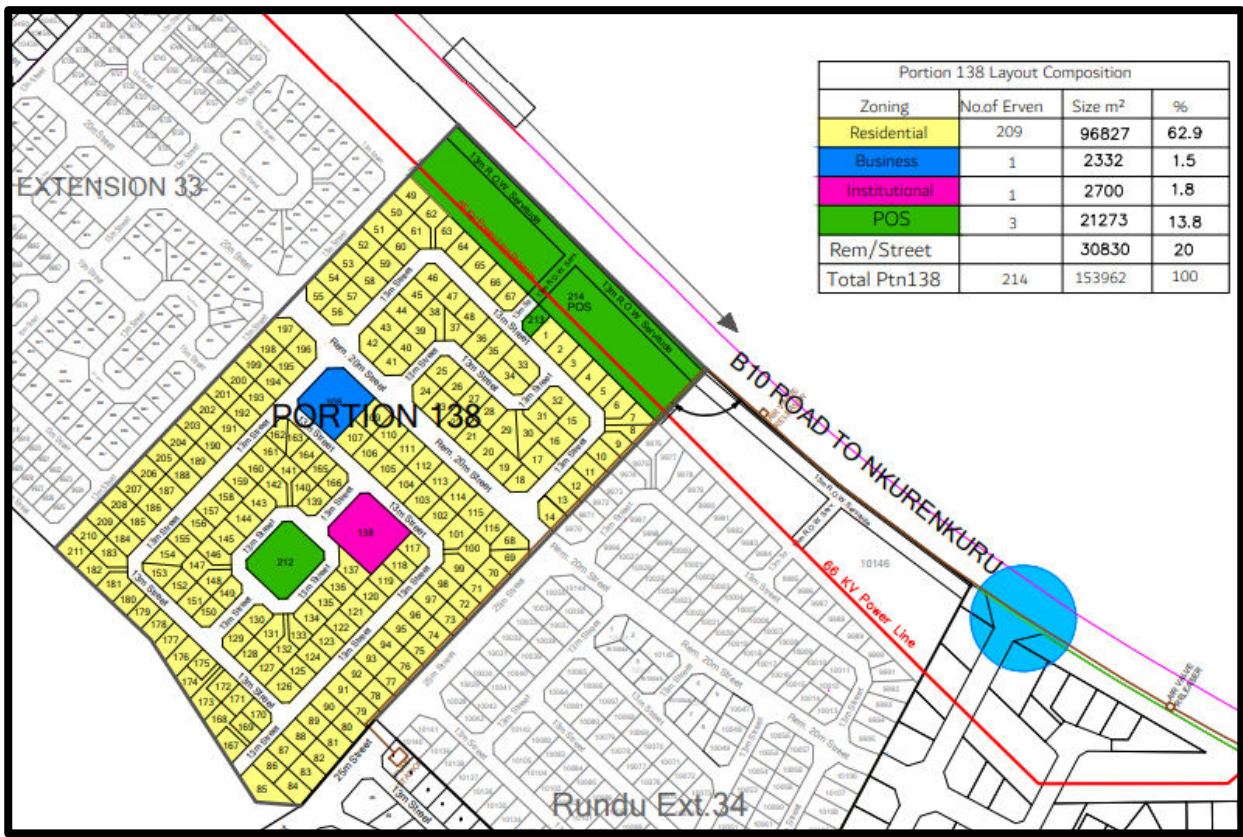


Figure 2: Proposed Layout

1.3 Project Description

The proposed project site is Portion 138 located in Rundu Town and Townlands No.1329. The portion has already been surveyed and measures 15ha in extent and is currently zoned ‘undetermined’. The site is easily accessible to the existing, adjacent Sauyemwa suburb and can be easily connected to the existing service infrastructure (water, electricity, sewer and roads).

The population of Rundu is growing rapidly, and the general shortage of urban housing within the country demands that land and the capacity of the existing infrastructure be utilized to its full potential. Portion 138 is has great potential to contribute to optimal utilization of land in Rundu, attract investors and further promote the growth of the town. The proposed township establishment can only have positive impacts to the town’s development as it increases the number of individual erven in the area, thereby contributing to effective and efficient use of land.

As the town expands, there is a need to ensure good urban planning and design, which provides for the needs of all citizens, minimizes conflicting land uses, integrates the built environment with the natural environment, and ensures new development fits in with the surrounding community. The project aims to create access to affordable housing. Such development paves way to affordable housing as it is one of the driving incentives to increase economic and investment opportunities to the town.

The proposed development emphasizes primarily on low-cost residential development. Portion 138 has the potential to accommodate 209 single residential erven, 1 business erf, 1 institutional erf, 3 Public Open Spaces and internal streets for access. The prototype layouts for low cost residential units to be constructed by the proponent are illustrated below.

1.3.1 Infrastructure and Services

The proponent shall liaise with the municipality of Rundu for the provision of municipal services such as electricity, water reticulation, sewerage reticulation and domestic waste management. The services (water, electricity and sewer) are already available in the adjacent already developed townships such as Hilka Park and other settlements such as Kasote and Sauyemwa, and can be easily connected to the proposed project site.





Figure 3: Residential Unit Prototype

1.3.2 Roads and Stormwater

Access to the site is through the Rundu-Nkurenkuru highway (B10). Since the main access road already exists, only the road/streets network within the proposed portion need to be constructed. Internal roads of a minimum width of 12m to 15m shall be constructed. The roads would be constructed in line with municipal engineering standards and specifications and all traffic signs and road markings provided.

Storm water would be taken off from surface run-off and drain towards the bottom of the site/township. Adequate and proper drainage that avoid instances of waterlogging and flooding of the township shall be commissioned and installed. It would be attempted to maintain the natural flow of storm water flow with minimum disruptions.

2 CHAPTER TWO: POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

2.1 Introduction

An important part of the EIA is identifying and reviewing the administrative, policy and legislative situation concerning the proposed activity, to inform the proponent about the requirements to be fulfilled in undertaking the subdividing and servicing activities. The section is a presentation of the legislative framework within which the proposed development related activities will be established and operate under.

The focus is on compliance with the legislation during the planning, construction and operational phases. All relevant legislation, policies and international statutes applying to the project are

highlighted in Table 1. below as specified in the Environmental Management Act, 2007 (Act No.7 of 2007) and the regulations for Environmental Impact Assessment as set out in the Schedule of Government Notice No. 30 (2012).

Table 1: Applicable policies, legal and administrative regulations governing the proposed project

Legislation / Policy / Guiding document	Provision	Project implication
<p>The Constitution of the Republic of Namibia (1990)</p>	<p>The articles 91(c) and 95(i) commits the state to actively promote and sustain environmental welfare of the nation by formulating and institutionalizing policies to accomplish the sustainable objectives which include:</p> <ul style="list-style-type: none"> - Guarding against overutilization of biological natural resources, - Limiting over-exploitation of non-renewable resources, - Ensuring ecosystem functionality, - Maintain biological diversity. 	<p>Through implementation of the environmental management plan the proposed development will be in conformant to the constitution in terms of environmental management and sustainability.</p>
<p>Vision 2030 and National Development Plans</p>	<p>Namibia’s overall Development ambitions are articulated in the Nations Vision 2030. At the operational level, five-yearly national development plans (NDP’s) are prepared in extensive consultations led by the National Planning Commission in the Office of the President. Currently the Government has so far launched a 5th NDP that pursues three overarching goals for the Namibian nation: high and sustained economic growth; increased income equality; and employment creation.</p>	<p>The proposed project will increase availability of accommodation in Rundu as well as creating employment in construction, which will be in fulfilment to the NDP and Vision 2030.</p>
<p>Environmental Assessment Policy of Namibia 1994</p>	<p>The Environmental Assessment Policy of Namibia requires that all projects, policies, Programmes, and plans that have detrimental effect on the environment must be accompanied by an EIA. The policy provides a definition to the term “Environment” broadly interpreted to include biophysical, social, economic, cultural, historical and political</p>	<p>The development establishment will only commence after being awarded an environmental clearance certificate, thus by abiding to the requirements of the Environmental Assessment Policy of Namibia. The EIA and EMP will cater for the sustainable management of bio-physical environment.</p>

Legislation / Policy / Guiding document	Provision	Project implication
	<p>components and provides reference to the inclusion of alternatives in all projects, policies, programmes and plans.</p>	
<p>Environmental Management Act No. 7 of 2007</p>	<p>The Act aims at</p> <ul style="list-style-type: none"> ✓ Promoting the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment; ✓ To provide for a process of assessment and control of projects which may have significant effects on the environment; ✓ To provide for incidental matters. <p>The Act gives legislative effect to the Environmental Impact Assessment Policy. Moreover, the act also provides procedure for adequate public participation during the environmental assessment process.</p>	<p>This document is compiled in a nature that project implementation is in line with the objectives of the EMA Act. Guiding procedures were also drawn from the act to facilitate for the carrying out of the EIA and drafting the EMP for the proposed development.</p>
<p>The National Solid Waste Management Strategy, 2018</p>	<p>Having identified solid waste as a hazard, the Ministry of Environment, Forestry and Tourism developed the Solid Waste Management Strategy (SWMS) to guide future directions, develop regulations. The SWMS has also been aimed at funding strategy and action plans to improve solid waste management and ensure these are properly coordinated and are consistent with national policy to facilitate cooperation among stakeholders.</p>	<p>In terms of the subdivision the SWMS would be enforced to ensure that the risks to the environment and public health emanating from waste disposal sites and illegal dumping in Namibia. This will include complete improvement of waste collection at all local authorities, in particular in the informal housing settlements, etc.</p>

Legislation / Policy / Guiding document	Provision	Project implication
	<p>The objectives of this Strategy are:</p> <ul style="list-style-type: none"> (a) to strengthen the institutional, organisational and legal framework for solid waste management, including capacity development; (b) to instil a culture of waste minimisation and expand recycling systems; (c) to implement formalised waste collection and management systems in all populated areas; (d) to enforce improvements in the municipal waste disposal standards; and (e) to plan and implement feasible options for hazardous waste management. 	
<p>Local Authorities Act No. 23 of 1992</p>	<p>To provide for the determination, for purposes of local government, of local authority councils; the establishment of such local authority councils; and to define the powers, duties and functions of local authority councils; and to provide for incidental matters.</p>	<p>The Proponent should ensure that the subdivision and related activities are in compliance with the relevant requirements the local authority by-laws.</p>

Legislation / Policy / Guiding document	Provision	Project implication
<p>Public and Environmental Health Act No. 1 of 2015</p>	<p>The Act serves to protect the public from nuisance and states that no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.</p>	<p>The Proponent and their contractors should ensure that the project infrastructure, vehicles, equipment, and machinery are designed and operated in a way that is safe, or not injurious or dangerous to public health and that the noise which could be considered a nuisance remain at acceptable levels.</p> <p>The Proponent should ensure that the public as well as the environmental health is preserved and remain uncompromised.</p>
<p>Public Health Act No. 36 of 1919</p>	<p>Under this act, in section 119: “No person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.”</p>	<p>The project Proponent will ensure that all legal requirements of the project in relation to protection of the health of their employees and surrounding residents is protected.</p> <p>-Personal protective equipment shall be provided for employees in construction.</p> <p>-The development shall follow requirements and specification in relation to water supply and sewerage handling so as not to threaten public health of future residents on this land portion.</p>
<p>Soil Conservation Act No. 76 of 1969</p>	<p>The objectives of this Act are to:</p> <ul style="list-style-type: none"> ✓ Make provisions for the combating and prevention of soil erosion, 	<p>The project will have a rather localized impact on soils and on the soil through construction and access roads construction hence soil protection measures will be employed and preservation of trees as much as possible.</p>

Legislation / Policy / Guiding document	Provision	Project implication
	<p>✓ Promote the conservation, protection and improvement of the soil, vegetation, sources and resources of the Republic.</p>	
<p>Nature Conservation Ordinance 1996</p>	<p>To consolidate and amend the laws relating to the conservation of nature; the establishment of game Parks and nature reserves; the control of problem animals; and to provide for matters incidental thereto.</p>	<p>The proposed project implementation is not located in any known or demarcated conservation area, national park or unique environments. The project site was selected with this ordinance in mind to ensure that Namibian nature is conserved.</p>
<p>Protected Areas and Wildlife Management Bill</p>	<p>This bill, when it comes into force, will replace the Nature Conservation Ordinance 4 of 1975. The bill recognizes that biological diversity must be maintained, and where necessary, rehabilitated and that essential ecological processes and life support systems be maintained. It protects all indigenous species and control the exploitation of all plants and wildlife.</p>	<p>The project has ensured that their activities do not fall within the boundaries of any protected area and that the project will not affect heavily endangered vegetation and animals on its site.</p>
<p>Forest Act No. 12 of 2001</p>	<p>The Act gives provision for the protection of various plant species through the Ministry of Agriculture, Water and Forestry (MAWF), Directorate of Forestry).</p>	<p>- The Proponent will also have to ensure that there is no indiscriminate cutting down of trees. -The proposed site is sparsely vegetated with white thorn tree species, which are not threatened or protected.</p>
<p>National Biodiversity Strategy and Action Plan (NBSAP2)</p>	<p>The action plan was operationalised in a bid to make aware the critical importance of biodiversity conservation in Namibia putting together management of matters to do with ecosystems protection, biosafety, biosystematics protection on both terrestrial and aquatic systems.</p>	<p>The proponent has been advised by the EIA Team and recognises the need for ecosystems protection to manage the changing climatic environment. -Through this project, there will be reforestation and fostering of green development, which will be promoting the protection and</p>

Legislation / Policy / Guiding document	Provision	Project implication
		conservation of the biophysical environment, and with this EIA, it will be ensured that almost 40% of grown tree species on site will not be removed but rather will be part of the development, to promote Greed development.
National Policy on Climate Change for Namibia, 2010	In harmony with the findings of the IPCC over time and the Earth Summits being held annually the policy seeks to outline a coherent, transparent and inclusive framework on climate risk management in accordance with Namibia’s national development agenda, legal framework, and in recognition of environmental constraints and vulnerability. Furthermore, the policy pursues the strengthening of national capacities to reduce climate change risk and build resilience for any climate change shocks.	The proposed project will ensure that there will be limited release of greenhouse gasses such as methane, carbon dioxide, nitrous oxides. Methods such as wet surface operations to reduce dust emissions will be utilised to remove aerosols emitted into the near-surface atmosphere.
The National Land Policy, 1998	<p>The National Land Policy provides for a unitary land system for Namibia in which all citizens have equal rights, opportunities and security across a range of tenure and management systems. The policy has specific gender provisions consistent with the Namibian Constitution. Women are accorded the same status as men with regards to all forms of land rights, either as individuals or as members of family land ownership trusts.</p> <p>The Policy also provides for multiple forms of land rights, including customary, leaseholds, freeholds, licences, certificates or permits and state ownership. It has provisions on the urban poor, providing that</p>	<p>The subdivision project will need to adhere to the requirements of this Policy by ensuring that the:</p> <ul style="list-style-type: none"> -establishment and proclamation of urban areas as townships and municipalities to promote decentralisation and the close involvement of communities in their own administration. -need to pay attention to the establishment of a transparent, flexible and consultative local authority planning system and development regulations.

Legislation / Policy / Guiding document	Provision	Project implication
	informal settlements need to be given attention through appropriate planning, land delivery, tenure, registration and finance in an environmentally sustainable manner.	
Wetland Policy, 2004	The policy provides a platform for the conservation and wise use of wetlands, thus promoting inter-generational equity regarding wetland resource utilization. Furthermore, it facilitates the Nation's efforts to meet its commitments as a signatory to the International Convention on Wetlands (Ramsar) and other Multinational Environmental Agreements (MEA's).	In compliance to this policy the development will ensure a standard environmental planning such that it does not affect any wetlands within its locale through recognition of wetlands to promote the conservation and wise utilization of wetlands resources.
Water Resources Management Act No. 11 of 2013	This Act provides for the management, protection, development, use and conservation of water resources and the regulation and monitoring of water services and to provide for incidental matters. (Department of Water Affairs).	The protection (both quality and quantity/abstraction) of water resources should be a priority. Water usage during construction will be supplied by Okahandja Town Council.
National Heritage Act 27 of 2004	Heritage resources to be conserved in development. (National Heritage	During the project implementation as soon as objects of cultural and heritage interests are observed such as graves, artefacts and any other object believed to be older than 50 years, all measures will be taken to protect these objects until the National Heritage Council of Namibia have been informed, and approval to proceed with the operations granted accordingly by the Council.

Legislation / Policy / Guiding document	Provision	Project implication
<p>National Monuments Act of Namibia (No. 28 of 1969) as amended until 1979</p>	<p>“No person shall destroy, damage, excavate, alter, remove from its original site or export from Namibia:</p> <p>(a) any meteorite or fossil; or</p> <p>(b) any drawing or painting on stone or a petroglyph known or commonly believed to have been executed by any people who inhabited or visited Namibia before the year 1900 AD; or</p> <p>(c) any implement, ornament or structure known or commonly believed to have been used as a mace, used or erected by people referred to in paragraph (b); or</p> <p>(d) the anthropological or archaeological contents of graves, caves, rock shelters, middens, shell mounds or other sites used by such people; or</p> <p>(e) any other archaeological or palaeontological finds, material or object; except under the authority of and in accordance with a permit issued under this section.</p>	<p>The proposed site of development is not within any known monument site both movable or immovable as specified in the Act, however in such an instance that any material or sites or archeologic importance are identified, it will be the responsibility of the Proponent to take the required route and notify the relevant commission.</p>

Legislation / Policy / Guiding document	Provision	Project implication
<p>Pollution Control and Waste Management Bill</p>	<p>This bill has not come into force. Amongst other the bill aims to “prevent and regulate the discharge of pollutants to the air, water and land” Of particular reference to the Project is: Section 21 “(1) Subject to subsection (4) and section 22, no person shall cause or permit the discharge of pollutants or waste into any water or watercourse.”</p> <p>Section 55 “(1) No person may produce, collect, transport, sort, recover, treat, store, dispose of or otherwise manage waste in a manner that results in or creates a significant risk of harm to human health or the environment.”</p>	<p>To control air, water and land pollution as agitated by the Act the project proponent will ensure that erven will have approved drainage on site and that sanitation facilities do not threaten public health, adding on an integrated pollution management strategy following the EMP and will be operationalised on site.</p> <p>Adequate stormwater drainage systems will be designed for the project area.</p>
<p>Convention on Biological Diversity (CBD)</p>	<p>Namibia is a signatory of the Convention on Biological Diversity and thus is obliged to conserve its biodiversity.</p>	<p>The project will preserve tree species on as part of their plans for green and sustainable development.</p>
<p>United Nations Convention to combat Desertification</p>	<p>Namibia is bound to prevent excessive land degradation that may threaten livelihoods.</p>	<p>It will be the responsibility of the Proponent and future land title holders to conserve vegetation on and around the portions.</p>

3 CHAPTER THREE: RECEIVING ENVIRONMENT

3.1 Biophysical conditions

3.1.1 Climate

Classification of climate: Rundu is subjected to a humid subtropical climate, with hot summers and mild winters. During the austral winter, the days are warm and nights cool to cold.

Average rainfall: The annual rainfall ranges between 500 and 550mm with June normally reporting the lowest and January the highest (Mendelsohn et al., 2002)

Temperature: Daytime temperatures exceed 30°C throughout the year, except during May, June and July. Average maximum temperatures fluctuate between 32°C and 34°C and average minimum temperatures between 8°C and 10°C.

Humidity: The average level of humidity ranges from 10 to 20% during winter with the highest humidity normally recorded in March (70-80%).

3.1.2 Geology and Soils

The area consists of completely weathering reddish sandy soils. The area was thoroughly investigated through transects walks and no noticed rocks on site. The area is underlain by the Kalahari and Namib sands, which are dominated by cambic arenosols, albic arenosols and calcic xerosols (Mendelsohn & el Obeid, 2003). This indicates the completely weathering of the existed rocks long time back to give that Kalahari sand soils as shown on the images below. According to the Agro-Ecological Zoning Programme (AEZ) of the Ministry of Agriculture, Water and Forestry and the World Reference Base for Soil Resources (FAO, 1998), the arenosols contain sandy soil with poor retained nutrient capacity. The sand further is slightly acidic which also results in nutrient deficiency. Generally, soils are deep and purely sandy with average soil fertility.

3.1.3 Hydrology

A reconnaissance level field assessment was conducted to confirm the current hydrologic conditions at the proposed area and to identify potential hydrologic risks associated with establishment of the proposed township development. The site is relatively flat, and due to its gradient the site can have

minor drainage issues but this will be compensated by adequate drainage systems in the layout designs/plans. The potential hydrologic features at risk are the two rivers on the northern and southern vicinities of the site - the Kavango and Ndonga-Linena rivers, respectively.

The project development and operation phases must be developed in a way that does not pollute or interfere with the flow and health of the rivers and their ecosystems. This means proper installation, sufficient and adequate drainage systems in the township to ensure that all the stormwater collected is safely discharged. The area shows very low evidence of surface erosion. The surrounding area is relatively flat, giving limited chance for surface drainage thence the need of good drainage system to avoid waterlogging problems in the township.

3.2 Terrestrial Ecology: Fauna and Flora

3.2.1 Fauna

MAMMALS

A variety of mammals exists in the region. However, the disappearance of these mammals in the vicinity of the project site could be due to the driven by developmental activities happen in existing Sauyemwa suburb and other nearby areas. Species deemed to be prevalent in the region at large include African Buffalo, Tsessebe, Blue wildebeest, Common reedbuck, giraffe, kudu, sable antelope, roan antelope, and red lechwe. Endangered species in the region include hippopotamus, elephant, spotted hyena, chapman's zebra, and African leopard.

BIRDS

Some environs near the Okavango River in western Bwabwata of the region are listed as an internationally recognized bird's area hosting bird species that are threatened at global level and range as avian diversity hotspots. However, the project site is not part of the demarcated areas bird's area hosting bird species since it is right in townlands. The list below is for bird species occurring in the region.

Species	Common Name	Conservation Status
<i>Rhynchope Flavirostris</i>	African Skimmer	Endangered
<i>Glareola nordmanni</i>	Black-winged Pratincole	Endangered
<i>Egretta vinaceigula</i>	Slaty Egret	Endangered
<i>Bugeranus carunculatus</i>	Wattled Crane	Endangered
<i>Nettapus auritus</i>	African Pygmy Goose	Endangered
<i>Centropus cupreicaudus</i>	Coppery-tailed coucal	Endangered
<i>Gorsachius leuconotus</i>	White Banked Night Heron	Endangered
<i>Ardeola rufiventris</i>	Rufous-bellied Heron	Endangered
<i>Porphyrio alleni</i>	Allen`s Gallinule	Endangered
<i>Falco dickisoni</i>	Dicksino`s Kestrel	Endangered
<i>Turdoides melanops</i>	Black-faced Babbler	Endangered
<i>Laniarius bicolor</i>	Swamp Boubou	Endangered
<i>Cichladusa arquata</i>	Collared Palm Thrush	Endangered
<i>Lamprotornis mevesii</i>	Meves`s Glossy Starling	Endangered
<i>Burcorvus leadbeateri</i>	Southern Ground Hornbill	Endangered
<i>Glaucidium cuculoides</i>	Asian Barred Owlet	Endangered
<i>Campethera bennettii</i>	Bennett`s Woodpecker	Endangered
<i>Phylloscopus sibilatrix</i>	Wood Warbler	Endangered
<i>Phyllocuspus bonelli</i>	Leaf Warbler	Endangered
<i>Cisticolidae juncidis</i>	Cisticola	Endangered

AMPHIBIANS, REPTILES AND INVERTEBRATES

The region has a high occurrence of reptiles, snakes. This includes cobras, puff adders (inhabit grasslands and bush ecosystems) and the black and green mamba (inhabiting the riverine ecosystems). The region generally is a habitat of a wide number of lizard species and tortoises. However, on the baseline study conducted on site shows that none of the above reptiles and snakes are prevalent on site, the baseline revealed existence of snails, centipedes, spiders and scorpions. However, the proposed project site is currently affected by human activities occurring in the area as well as illegal dumping of waste in its vicinity. It is as such that the area is not pristine and it does not pose a great threat to the environment.

3.2.2 Flora

Trees / Shrubs and Grasses

Areas near the Kavango River are covered by high to very high vegetation density of considerable diversity. However, because of Rundu town development in the area it has been reduced considerably. The further inland is more densely vegetated and is prone to bush fires. Plant species in the area form part of the extensive Kalahari sand basin which is characterized by grassland and encompassing plant species such as *Vossia Cuspidata*, *Cynodon Dactylon* and *Setaria Sphacelata* (Burke, 2002). The project site has minimal vegetation cover cover. Composing of of mahangu fields (bare and sandy).

3.3 Socio-economic Status

According to the 2011 census, Rundu had a population of 63 430, which has now increased to 118 632, as according to the 2023 population census. The Kavango regions (including Rundu Town) are ranked among the poorer regions in the country with a prevailing high unemployment rate despite some agricultural activities happen in the regions. Rundu is the capital of the Kavango East region and links to the Capital City of Namibia-Windhoek by tarred B series national road network. This infrastructure serves as the main supply line for the region. All the other population centres in the region are linked with Rundu by road.

The major economic activities sustaining Rundu is the existence and operation of both communal and commercial farming specialising in cultivation of different crops. Main agriculture activities are small scale crop farming (53%)-growing Mahangu, livestock (23%) –farming goats, donkeys and cattle, and poultry farming (8%) (Enviro Dynamic 2014). These farming systems provide a degree of food self- sufficiency with a few provisions of economic development of the region. However, most of the crop-growing activities in the region generate little income because fields are small, soils have limited fertility, yields are low, surplus harvests are rare and markets are small (Mendelsohn and El Obeid 2003: 92ff Brown 2010: 25).

4 CHAPTER FOUR: PUBLIC CONSULTATION

Public Consultation forms an important component of the Environmental Assessment process. It is agitated for in the EIA Regulations (2012), Section 21 of the Regulations details steps to be taken during a given public consultation process and these have been used in guiding the EIA process.

Formal public involvement has taken place via newspaper adverts, site notice, registering I&APs and door to door consultation. The public consultation process has been guided by the requirements of Environmental Management Act (EMA) No. 7 of 2007 and the process has been conducted in terms of regulation 7(1) as well as in terms of the EMA Regulations of GN 30 of 6 February 2012.

4.1 Public Consultation Activities

The following tasks have been undertaken during public consultation process which started on the 10th of March 2024.

Identification of Interested and Affected Parties (I&APs)

After the scoping process, the EIA team identified I&APs and key stakeholders of the proposed project. The public participation activities to be undertaken for this EIA process were incorporated into the overall approach of the EIA background information. Among key stakeholders identified were Rundu Town council and neighbours. Other I&APs could register to the EIA team and a special database created capturing all their names and correspondence details.

Distribution of BID

A Background Information Document (BID) was distributed on request by I&A Parties and it was distributed to key stakeholders identified during the scoping process. The BID provided a description summary of the proposed project, the project proponent and the whole procedure of the EIA to be followed.

Public Announcement.

A public announcement was done to make sure the public is aware of the development proposed by The Proponent. The EIA study was announced publicly through the following means presented in **Error! Reference source not found..**

Table 2: Public notification details

Method / Mode	Area of Distribution	Language	Placement Date
Republikein	Country Wide	English	10 March 2023 17 March 2023
Namibian Sun	Country Wide	English	10 March 2023 17 March 2023
Site Notice	Project site	English	10 March 2023

4.2 Key Stakeholders and public Engagement

4.2.1 Identification of Interested and Affected Parties (I&APs)

The EIA team identified and consulted the following I&APs & key stakeholders for the proposed project:

- Community members,
- Rundu Town Council

Other I&APs were allowed to register to the EIA team and compiled a database containing their names and correspondence details. The registration was accomplished over a period of 14 days. The public did not show up for the arranged consultation meeting therefore, no meeting was held.

5 CHAPTER FIVE: ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS

The project Proponent is committed to sustainability and environmental compliance through coming up with a corrective action plan for all the anticipated environmental impacts associated with the project. This is also in line with the Namibian Environmental Management legislation and International best practices on township establishment and associated activities.

The Proponent shall implement the hereto attached Environmental Management Plan (EMP) in order to prevent, minimise and mitigate negative impacts. The EMP developed by Plan Africa Consulting CC to address all the identified expected impacts, the plan will be monitored and updated on a continuous basis, with aim for continuous improvement to addressing impacts.

5.1 Key Potential Positive and Negative Impacts

The township establishment and associated activities have certain potential (positive and negative) environmental and social impacts. The key impacts relevant to and identified for the proposed township establishment are as follows:

Positive impacts

The project is set to improve the socio-economic development of Rundu Town through the:

- Access to affordable housing
- Temporary employment creation during the development.

Negative (adverse) impacts

- Vegetation removal (Deforestation), i.e., loss of Biodiversity,
- Pollution (Solid waste, hazardous and wastewater),
- Soil Erosion and Disturbance,

- Health and Safety Risks
- Generation of dust
- Noise and vibrations during construction

5.2 Impact Assessment Methodology

An impact assessment matrix was used to assess all possible impacts of the project on the environment. In line with NEMA No. 7 of 2007 and the Environmental Impacts Regulations (GN 30 in GG 4878 of 6 February 2012) with the direction on impacts analysis the following impact assessment criteria was identified by the team and deemed suitable.

Table 3: Impact screening criteria

Aspect	Description
Nature	Focuses on the type of effect that the proposed project will have on environmental components. Addresses questions related to “what will be affected and how?”
Extent	Spatial extend of the project and anticipated spatial extend of impacts indicating whether the impact will be within a limited area (on site where construction is to take place); local (limited to within 15km of the area); regional (limited to ~100km radius); national (extending beyond Namibia’s borders).
Duration	This looks at the temporal issues pertaining to time frames e.g. whether the impact will be temporary (during construction only), short term (1-5 years), medium term (5-10 years), long term (longer than 10 years, but will cease after operation) or permanent.
Intensity	Establishes whether the magnitude of the impact is destructive or innocuous and whether it exceeds set standards, and is described as none (no impact); low (where natural/ social environmental functions and processes are negligibly affected); medium (where the environment continues to function but in a noticeably modified manner); or high (where environmental functions and processes are altered such that they temporarily or permanently cease and/or exceed legal standards/requirements).

Aspect	Description
Probability	Considers the likelihood of the impact occurring and is described as uncertain, improbable (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of prevention measures).
Significance	Significance is given before and after mitigation. Low if the impact will not have an influence on the decision or require to be significantly accommodated in the project design, Medium if the impact could have an influence on the environment which will require modification of the project design or alternative mitigation (the route can be used, but with deviations or mitigation) High where it could have a “no-go” implication regardless of any possible mitigation (an alternative route should be used).

The application of the above criteria will be used to determine the significance of potential impacts using a combination of duration, extent, and intensity/magnitude, augmented by probability, cumulative effects, and confidence. Significance is described as follows:

Table 4: Impact Rating Criteria

Significance Rating	Criteria
Low	Where the impact will have a negligible influence on the environment and no modifications or mitigations are necessary for the given development description. This would be allocated to impacts of any severity/ magnitude, if at a local scale/ extent and of temporary duration/time.
Medium	Where the impact could have an influence on the environment, which will require modification of the development design and/or alternative mitigation. This would be allocated to impacts of moderate severity/magnitude, locally to regionally, and in the short term.

High	<p>Where the impact could have a significant influence on the environment and, in the event of a negative impact the activity(ies) causing it, should not be permitted (i.e. there could be a 'no-go' implication for the development, regardless of any possible mitigation). This would be allocated to impacts of high magnitude, locally for longer than a month, and/or of high magnitude regionally and beyond.</p>
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5.3 Impact Assessment

By subjecting each of the potential impacts to the matrix above, the EIA team established the significance of each impact prior to implementing mitigation measures and then after mitigation measures have been implemented. Some of the mitigation measures are mentioned but detailed descriptions of management actions are contained in the accompanying EMP.

Table 5: Environmental Impact Assessment Matrix

Impact	Status/nature	Extent	Duration	Intensity	Probability	Significance		
						Before Mitigation	Mitigation applied	Post Mitigation
Servicing and Construction Phase								
-Physical disturbance to soils, and land degradation during servicing of the land and construction activities	-Erosion -Proliferation of tracks -Negative excavation methods such as blasting.	Local	Short	Medium	Definite	High	-Restrict construction activities on defined areas. -Proper management of stockpiles. Excavated material must be covered in stockpiles until reuse and backfilling. -Restrict movement to defined areas. Use existing roads until access require limited new roads.	Low

Impact	Status/nature	Extent	Duration	Intensity	Probability	Significance		
						Before Mitigation	Mitigation applied	Post Mitigation
							-Use surface anchored foundations with very limited rock breaking.	
Urbanization/ urban growth	Physical expansion of the Town	Regional	Long	Medium	Definite	Low	-All built structures should be constructed according to the local Authority bylaws to guarantee strength and longevity of structures built.	Low
Noise from land servicing activities and construction vehicles and equipment	<p>-Nuisance and disturbance.</p> <p>-Noise and vibrations will also have an impact on animals such as birds and reptiles.</p> <p>-Birds may abandon their nests if subjected to continuous noise. Noise to the nearby</p>	Local	Short	Medium	Definite	High	<p>-All workers on site must be equipped with ear plugs to be used when the noise is excessive.</p> <p>-Switch off machines that are not in use.</p> <p>-All locals must be notified about the noise construction activities on time during excavations and ground preparation, servicing of the land and any constructions beyond.</p> <p>- All noisy construction activities must not be carried during night time, early</p>	Low

Impact	Status/nature	Extent	Duration	Intensity	Probability	Significance		
						Before Mitigation	Mitigation applied	Post Mitigation
	locals and to construction workers.						morning and evenings, they must be done during daytime to ensure minimum disturbance of the nearby residents.	
Physical destruction of vegetation through land servicing, construction activities and the upgrading and opening of new roads	-These activities may result in the removal and destruction of few trees species on site.	Local	Long Term	High	Definite	High	<p>-Limit activity footprint and limit movement to designated areas only.</p> <p>-Implement and monitor the Vegetation Management Plan if there is a significant destruction of the on-site and surrounding areas.</p> <p>-Protected trees must be marked (e.g. with hazard tape) and planning and pegging personnel must know that marked trees are no-go zones (to be left untouched for continued preservation).</p> <p>-No destruction or disturbance to the protected species such as Baobab trees found within the project sites.</p>	Medium/ Low

Impact	Status/nature	Extent	Duration	Intensity	Probability	Significance		
						Before Mitigation	Mitigation applied	Post Mitigation
Disturbance and killing of both reptiles, and small animals' activities	-reptiles and small animals in the locality are bound and likely to be affected.	Local	Temporary term	Low	probable	Medium	-The discriminate killing of animals and reptiles is prohibited.	Low
Disturbance through noise, movement and temporary occupation of an otherwise less disturbed habitat	-Negatively affect local animals and birds if any	Regional	Temporary	Medium	Highly probable	High	-Minimum disturbance of local environment by ensuring operations do not produce extreme noise that negatively affect nearby animals and birds. -Switch off machines that are not used.	Medium
Archaeological Landscape	-Visual degradation	Local	Long term	Medium	Improbable	Medium	-Demarcate, protect and avoid development near heritage sites. If removal is inevitable, a Consent Letter should be applied for from the Heritage Council via an Archaeologist.	Low

Impact	Status/nature	Extent	Duration	Intensity	Probability	Significance		
						Before Mitigation	Mitigation applied	Post Mitigation
Change in topography/ landscape character	-Use of construction vehicles and equipment for servicing (roads construction and paving of the site)	Local	Long term	Medium	Probable	High	-Refill all the excavated pits and trenches to ensure that there are no pits left open on site and creating a new paved landscape (use of cement interlocks)	Low
Environmental contamination by hydrocarbons released into the environment (grease, oils, fuel spills and leakages from machinery and spills.)	Risk of spillage of hydrocarbons from vehicles and machinery operations, maintenance through leakages and spillages which may result in: -Washing away of contaminated soils by rains into nearby rivers -Pollution of soil and affecting small living	local	Short Term	Medium	Probable	Medium	-Implement a maintenance programme to ensure all vehicles, machinery and equipment are and remain in proper working order -Vehicle maintenance should be Conducted in designated areas only, preferably off-site. If maintenance is to be conducted on site, these areas should be designed to contain spillages i.e. maintenance site must be bundled and paved and the use of chemicals must be controlled.	-Low

Impact	Status/nature	Extent	Duration	Intensity	Probability	Significance		
						Before Mitigation	Mitigation applied	Post Mitigation
	<p>organisms inhabiting the soils</p> <p>-Result in possible groundwater pollution.</p> <p>-Possible fire risk on and around the site</p>						<p>-Waste oil, fuels and other chemicals from drip trays on stationery vehicles and machinery will be disposed of as hazardous waste at a licensed facility by a specialist hazardous waste handler.</p> <p>-Oil residue will be treated with oil absorbent material such as Drizit or bio-remediation and removed to an approved waste disposal site</p> <p>-Spill kits will be easily accessible and workers will be trained in the use thereof.</p> <p>-Staff and contractors will be trained in the handling and storage of oils, fuels, chemicals and other hazardous substances</p> <p>-No bins containing organic solvents such as paint and thinners shall be cleaned on site, unless containers for</p>	

Impact	Status/nature	Extent	Duration	Intensity	Probability	Significance		
						Before Mitigation	Mitigation applied	Post Mitigation
							liquid waste disposal are provided on site.	
Land Pollution	-Negative effects on the ecosystem when waste emanating from construction activities is not managed properly.	Local	Temporary	Medium	Probable	Medium	-Ensure that all waste from construction activities is stored and contained in designated containers and transported to the nearest Waste Disposal Site for proper disposal. - Adequate mobile toilets and ablution facilities must be provided at the construction camps for the use of the workers.	Low
Dust from the general servicing of the land and construction activities	-Respiratory sicknesses can result from prolonged exposure to dust -Dust can negative affect the ecosystem in general and the nearby residents	Local	Temporary	High	Probable	Medium	-Equip all the workers exposed to dust with dust masks -Water spray all the areas that are sources of excessive dust. - Minimize activities that can generate dust during windy days.	Low

Impact	Status/nature	Extent	Duration	Intensity	Probability	Significance		
						Before Mitigation	Mitigation applied	Post Mitigation
	-Reduced air quality						- Limit the speed within the whole construction area to a maximum of 30 km/h to avoid excessive generation of dust - Dust will significantly be reduced if excavation and land clearing is carried out after it has rained and the soil is wet or dust suppression can be done	
Employment opportunities during the servicing and construction phases of the development	-The general servicing and all construction activities create job opportunities both to the locals, regional and national, this will have a positive economic impact on surrounding Communities and technical companies involved	Regional	Temporary	Low	Highly probable	High	-The Project Manager should make it mandatory to contractors that all unskilled and semi-skilled work should be given to the locals.	high

Impact	Status/nature	Extent	Duration	Intensity	Probability	Significance		
						Before Mitigation	Mitigation applied	Post Mitigation
Operational Phase								
Pollution from solid waste and sewerage	-Poor waste management results in general pollution of the environment and this might have a detrimental impact on the people's well-being and the quality of the environment	Local	Long term	Low	Highly probable	Medium	-The Erven must be serviced and connected to the Rundu Town Council Sewer reticulation system. -Regular collection of solid waste by the municipal (either directly or through the appointed contractor) -Provisions of domestic solid waste collection services for the residents	Low
Social integration	Potential for conflict between people of different backgrounds and cultural beliefs.	Local	Short Term	Medium	Probable	Medium	-Public relations should adequately address the integrated societal values and morals	Low
Community development	Employment creation	Regional	Long term	High	Definite	High	-Promote local businesses and employ locals	High

1.1. RISK ANALYSIS

Based on the impacts identified by this study during site visit, process analysis, desk study and stakeholder consultations conducted, an integrated environmental risk analysis was carried out using the DEFRA Guidelines for Environmental Risk Assessment and Management 'Green Leaves III' (latest edition) as well as the international Procedures for best practices. The risk analysis shows that the township establishment and related project activities will have some negative impacts on the biophysical and socio-economic environment. However, based on the impacts' description and assessment, the impacts' significance is rated moderate and can therefore, be reduced by the effective implementation of the provided management and mitigation measures. It has also been noted that the project will bring about some positive impacts on the social and economic aspects. However, it is imperative to note that the project is being undertaken within an already functional urban locale. To prevent or mitigate negative impacts and to increase positive impacts, a coordinated project management strategy according to an Environmental Management Plan developed for the proposed township establishment in Rundu.

Public & Stakeholders' Consultation and Engagement and Feedback

The public and stakeholders (I&APs) were consulted through the used means, i.e. newspaper adverts, public notices, and face-to-face meetings held in Okahandja. The I&APs have raised few but significant comments and these have been incorporated into the EIA documents for consideration and inform the planning & design phase of the subdivision in Okahandja.

To ensure that the significant components of the environment as well as issues raised by I&APs are considered and addressed, a Report was compiled for this EIA/ESA Study. The aim was to assess the proposed subdivision establishment and related activities and provide measures to mitigate the potential impact thereto.

No further specialist studies were necessary for the Detailed ESA, as the potential risks and impacts will be managed and mitigated by the effective implementation of measures contained in the EMP.

To ensure that the EMP implementation is effective and yields the desired management results/indicators, monitoring of such implementation should be done by an Environmental Control

Officer and Competent Authority during project implementation (specifically construction or upgrading stage). Therefore, the Environmental Clearance Certificate (ECC) may be issued by the Environmental Commissioner for the subdivision of erf Portion 162 of the consolidated farm Okahandja Townlands No.277 and conditions adhered to by the Proponent and their associated contractors on both sites (selected localities).

6 REFERENCES

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