

**UPDATED**

**ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE  
CONSTRUCTION AND OPERATION OF THE PROPOSED LAS  
VEGAS CITY CENTRE AND ASSOCIATED INFRASTRUCTURE  
AT ONASHIKU SHALABAN VILLAGE, OSHANA REGION.**



**ENVIRONMENTAL SCOPING REPORT**

**PREPARED FOR:**

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**PREPARED BY:**



**APRIL 2021**

# DOCUMENT DESCRIPTION

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PROJECT: Construction and operation of the proposed Las Vega City Centre and associated infrastructure

LOCATION: Onashiku shaLaban village, Oshana region

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## LIST OF ACRONYMS

DEA:	Directorate of Environmental Affairs
EAP:	Environmental Assessment Policy
ECC	Environmental Clearance Certificate
EIA:	Environmental Impact Assessments
EMA:	Environmental Management Act
ESMP:	Environmental and Social Management Plan
I&APs:	Interested and Affected Parties
MAWLR:	Ministry of Agriculture, Water and Land Reform
MEFT:	Ministry of Environment, Forestry and Tourism
MoHSS:	Ministry of Health and Social Services
NamWater:	Namibia Water Corporation (Pty) Ltd
NHC:	National Heritage Council
NORED	Northern Electricity Distributor
PPE:	Personal Protective Clothing
RA	Roads Authority
NCA:	North Central Area
GN:	Government Notice

## EXECUTIVE SUMMARY

The Dr. Erastus Shapumba, hereinafter referred to as the proponent, intends to construct a shopping business complex to be named “Las Vegas City Center” consisting of retail shops, accommodation entertainment, hospitality, pharmacies, and recreational facilities as well as associated infrastructures. Given the fact that the proposed development site is located on an area which is prone to seasonal flooding, an earth dam will be constructed at the site to enable the harvesting of seasonal flood and rainwater for the benefit of the local community.

The proposed development site is within the communal area under the Otuwala traditional administration of the Uukwambi Traditional Authority. Politically, the site is located under the Okatana Constituency of Oshana region. The proponent has already obtained the Consent letter from the village headman as well as recommendation letter from the Uukwambi Traditional Authority and is in the process of applying for the leasehold from the Oshana Communal Land Board as prescribed by the Communal Land Reform Act of 2002.

The proposed project falls within the requirements of the Environmental Management Act (Act. No. 07 of 2007) and its Regulations of February 2012. The main aim of the study was to investigate the environmental and socio-economic impacts associated with the proposed development. The study was conducted in a multi-disciplinary approach and in a consultative manner.

This Scoping report contains the baseline assessment which includes the description of the proposed project activities, the biophysical settings and socio-economic context of the affected environment. It also incorporates inputs from different interested & affected parties (I&APs) and relevant stakeholders and a review of relevant legislations to be complied with. The potential environmental and socio-economic impacts of the proposed development during the planning, construction, and operational phase have been identified. Possible mitigation measures have been proposed and are contained in the Environmental and Social Management Plan (ESMP).

# 1. INTRODUCTION

## 1.1 Background

The Dr. Erastus Shapumba, hereinafter referred to as the proponent, intends to construct a shopping center to be named “Las Vegas City Center” consisting of retails shops, accommodation, entertainment, hospitality, pharmacy, and recreational facilities as well as associated infrastructures. Due to the site proximity within the flood plain “oshana”, an earth dam will be constructed on site to enable harvesting and conservation of rainwater.

The proposed development will trigger certain activities listed under the Environmental Management Act (Act 07 of 2007) and the Environmental Impact Assessment Regulations of February 2021 as activities which may not be carried out without an EIA being undertrained. Hence, Green Gain Environmental Consultants cc has been appointed as an independent Environmental Assessment Practitioner (EAP) to undertake the EIA study and apply for the Environmental Clearance Certificate with the relevant competent authority and the Ministry of Environment, Forestry and Tourism.

## 1.2 Purpose of the study

The objective of the scoping process is:

- Evaluate the suitability of the proposed development against the biophysical and socio-economic of the area.
- To investigate any environmental and socio-economic impacts associated with this project’s activities.
- To suggest the most suitable mitigation measures to reduce the nature and extent of any negative impacts.
- To investigate the legal framework that this project is required to comply with.
- To consult I&APs and relevant stakeholders and to also ensure that their needs and concerns are considered; and
- Overall, to comply with the Environmental Management Act (EMA, No. 07 of 2007).

## 1.3 Scope of the study

The scope of this study is in line with the EIA process as set out in the Environmental Management Act (Act No. 07 of 2007) and its Regulations of February 2012. The study made use of multidisciplinary approach which includes baseline assessment of the project area through collection of both primary and secondary data, consulting relevant stakeholders and Interested and Affected Parties (I&APs) and review of relevant literatures and legal instruments. This resulted in the preparation of this Scoping Report. The main aim of the scoping report was to assess the scope of the study and thus determine the need for any specialist studies. Since there was no need for any specialist studies to be conducted, this report should be considered final. Appended to this report is also an Environmental Social Management Plan (ESMP) which upon approval by the authorities will be considered a legal bidding document to guide the planning & design, construction, and operation of the proposed development.



## **1.4 Methodology**

The environmental impact assessment study was conducted in line with the Namibia's Environmental Management Act of 2007 its Guidelines and Regulations (GN No. 30 February 2012). Various methods were used during the scoping process to collect baseline data and identified key issues about the project and the affected environment as follow:

The following baseline study was conducted:

### a) Site Visits

Several site visits were conducted to collect biophysical data.

- Flora and Fauna
- Roads and traffic
- Land use and adjacent areas
- Topographic features, etc.

### b). other methods

- Legal and policy review.
- Gleaning over existing information pertaining to similar developments and issues.
- Discussions, meeting, and site visits with authorities.
- Opinions and concerns raised by I&APs.
- Specialist studies and qualified opinions; and
- Professional judgment.

## **1.5 Environmental Assessment Practitioner (EAP)**

Green Gain Consultants cc is a Namibian based professional environmental and natural resources consulting firm established and driven through belief, passion, and dedication to sustainable development. Established in 2012, the team has grown into a substantial team of environmental practitioner in Namibia providing innovative and cost-effective solutions to environmental challenges and helping our clients meet regulatory and stakeholder expectations for environmental performances. Mr. Joseph Amushila is a co-owner and a Consultant Manager. He is an environmental specialist with a master's degree in environmental management coupled with many years of experience in the field of environmental consultancy.

## 2. PROJECT DESCRIPTION

### 2.1 The Site Context

The proposed development site is located at Onashiku shaLaban village, Okatana constituency in Oshana region. The site is located about 20 km north-east of Oshakati along the Oshakati-Oshikuku main road (C46) and can be found on the following coordinates -17.783825° S; 15.1706458° E.



Figure 1: Locality Map (Google earth -Green Gain, 2021)

As depicted in Figure 1 above, the proposed development site lies few meters from the Oshakati-Oshikuku main road (C46). On its western side, there is a NamWater supply pipeline (600 m) from Oshikuku to Oshakati while NORED overhead powerline is within the vicinity of the site.

## 2.2 The Site Context

The site is approximately 12.6 hectares in extent and has a rectangular shape (refer to Figure 2 below). The site falls under the communal area under the Otuwala traditional administration area of the Uukwambi Traditional Authority. The site belongs to Dr. Erastus Shikongo Shapumba, of which a letter of consent from the village headman as well a recommendation letter from the Uukwambi Traditional Authority have already been obtained. The proponent is in the process of applying for the leasehold from the Oshana Communal Land Board pending the ECC.

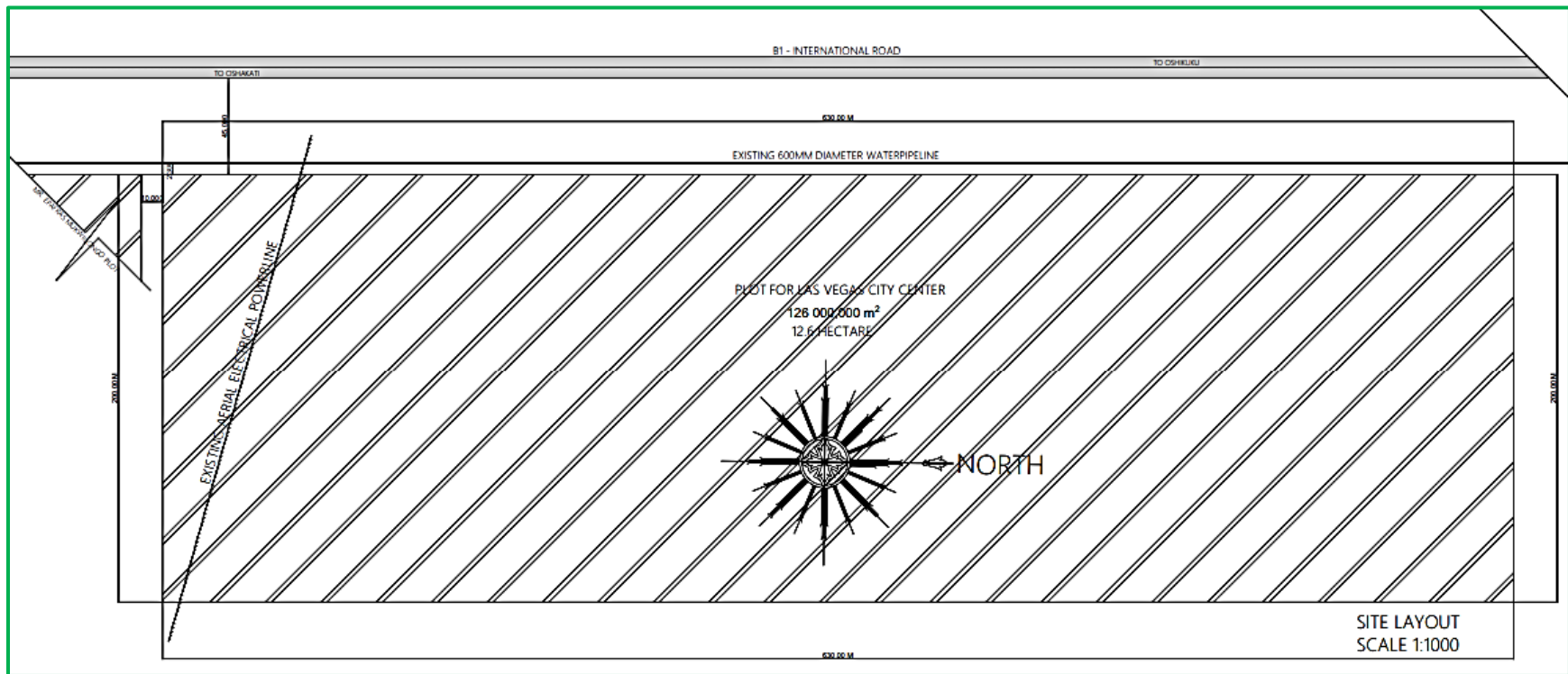


Figure 2: Site layout

### 2.3 Site overview

As depicted in Figure 3 below, the proposed development site lies few meters from the Oshakati-Oshikuku main road (C46). It is a characterized by an open flood plain (oshana) and prone to flooding due to rainfall and seasonal flooding. The site is currently vacant but is adjacent to several business plots.



Figure 3: Site overview



## 2.4 Surrounding land uses

The Onashiku shalaban village in which the site is located is made up of predominantly traditional homesteads, mahangu fields, livestock kraals and the grazing area. The area is also traversed by an array of ephemeral rivers, locally known as oshanas which form part of the Cuvelai wetland.



Figure 4: Site surrounding.

Due to its proximity to the town of Oshakati and to the main road, the area surrounding the proposed development site is dominated by existing and planned businesses of different kinds such as motor spares, gardens, sheebens, guesthouses etc.

## **3. Proposed Development**

### **3.1 Intended development.**

The proposed development will consist of following facilities:

- Building/complex consisting of
  - Retail shops
  - Restaurants
  - Accommodation rooms
  - Pharmacies
  - Gym (fitness)
  - Kindergarten (pre-primary school)
- Earth dam for water conservation
- Associated infrastructures
  - Ablution facilities
  - Septic Tank/s
  - Telecommunication service lines
  - Water supply lines
  - Electricity supply
  - Access road

The exact number of each of the above listed facilities will be determined at the beginning of the construction work. However, all developments are to take place within the boundaries of the development site.

### **3.2 The proposed building/complex.**

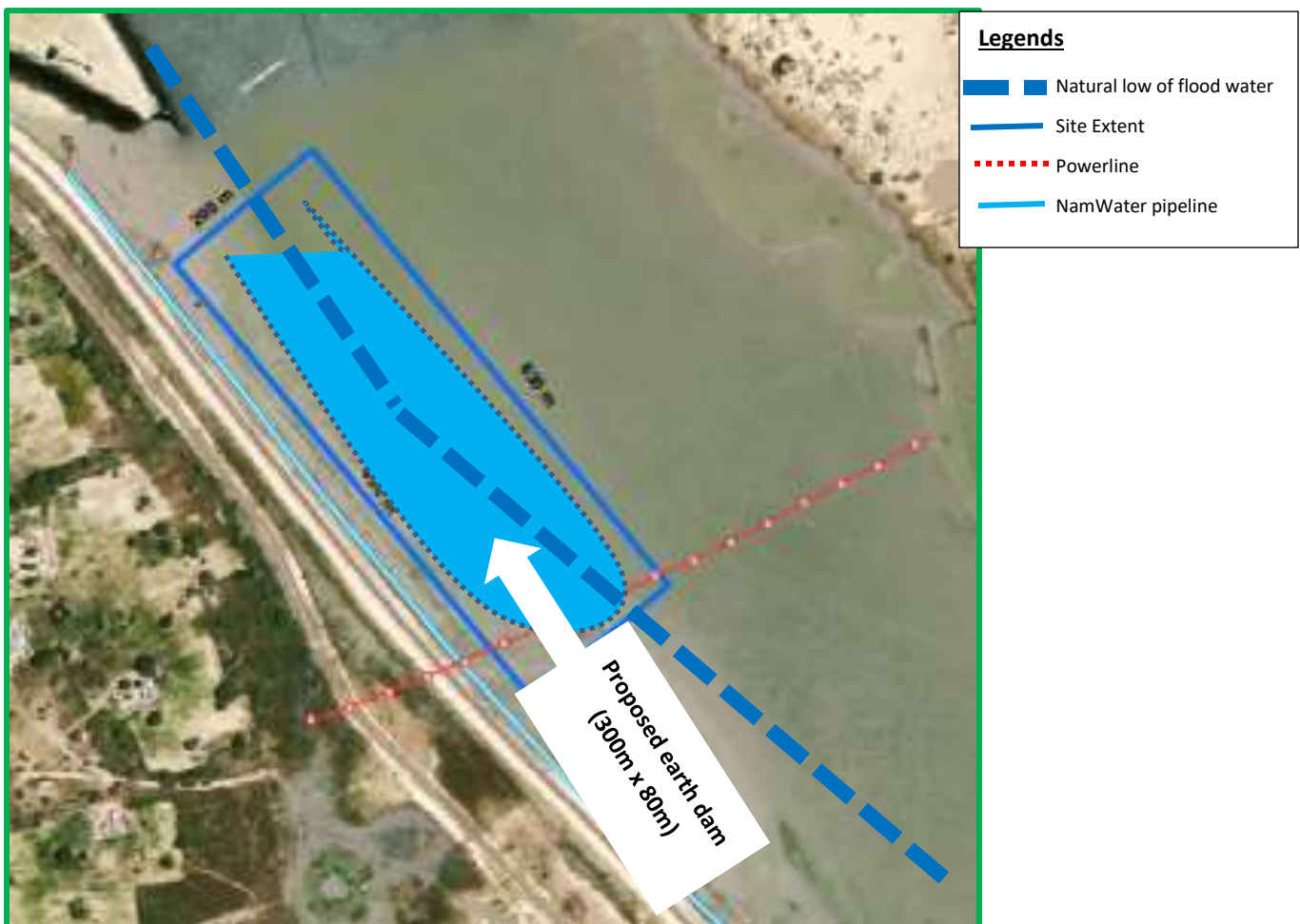
The proposed building design is not available at this moment; however, a qualified architecture will be appointed to plan and design a waterfront business complex considering the natural occurring landscape and environmental integrity of the site i.e., flood water, grazing etc. The design will be submitted to the Oshana Regional Council for approval prior to the construction and development. All buildings are to be constructed as per the local engineering standards and within the proposed development site. The proponent will also obtain an Environmental fitness certificate from the Ministry of Health and Social Services (MoHSS) before the operation.

### 3.3 The proposed earth dam.

Given the fact that the proposed development site is located on an area which is prone to seasonal flooding, an earth dam will be constructed at the site to enable the harvesting of seasonal flood and rainwater for the benefit of the local community.

#### a). Locality

The earth dam will be constructed in the middle of the site as depicted in Figure below. This will allow flood water to settle in the middle and for the side areas to remain elevated and keep it dry in order to protect the buildings from flooding. The dam will be constructed in a way that there is no major alteration to the natural flow of flood water and that water continue flowing toward the south.



#### b). Size and dimensions of the earth dam

The proposed earth dam will cover an area of about 24,000 m<sup>2</sup> (300 meters long and 80 meters wide) and with a maximum dam wall of 2.5 meters. The volume of the proposed dam is approximately 24,000m<sup>3</sup> (volume (m<sup>3</sup>) = surface area (m<sup>2</sup>) × max depth (m) × 0.4 (batter slope)).

*c). Dam structure and maintenance*

The proposed dam will be a typical earth dam with natural embankments, and no dam lining or artificial water abstraction mechanisms will be used. This will help to mining cost of project implementation as well as reduce the ecological footprint. The natural type of an earth dam also be easy to maintain. Maintenance activities will include reinforcement of the embankments and removal of alluvial sand to maintain the original depth (2.5m).



**Figure 5: Typical example of an earth dam**

*d). Use of the dam*

Water from the dam will be used mainly for domestic use for the surrounding community i.e., domestic, animal, etc. and not for commercial purpose. The dam will also be used to grow locally available species of freshwater fish i.e., three spot tilapia and catfish which are currently delicacy in the local community but often become scarce due to limited availability of water and sporadic rainfall patterns.



**Figure 6: Current practice of freshwater fishing**



### **3.4 Operational procedures**

The proponent is an experienced and renowned businessman who already operates a chain of retail and property businesses in Namibia and in Oshana region. The idea is to rent the business spaces to interested businesses, including local people. The proposed shopping complex will be operating within the existing legal framework in consideration of aspects such as operating hours, public holidays, liquor licence, etc.

The proposed earth dam will be open for the community as source of water for domestic use and animal as well as for freshwater fish. However, the dam area will be out of bound for underage children and livestock for safety and health reasons.

### **3.5 Utilities**

The complex will be connected to the national electricity grid through the existing NORED powerline. A standby power generator will be installed to be used in case of emergencies. Freshwater will be sourced from the NamWater pipeline. Connection points for all these services are within the reachable distances from the development site.

### **3.6 Waste Management**

#### **a). Wastewater**

The complex will be served with ablution blocks with separate male and female toilets. The accommodation facilities will also be served with showers and laundry rooms. The facilities will be designed and constructed as per required engineering and health standards. Considering issues such as sewage leakage, health, safety, ventilations etc. Ablution facilities are to be connected to a septic tank. The septic tank will be designed and constructed as per engineering standards. The septic tank will be emptied on monthly basis to prevent overflows of sewage water and effluent will be discharged into the Oshakati Council wastewater treatment plant, of which agreement is yet to reached with the town council.

#### **b). Solid waste Management**

The proposed development is expected to generate a considerable amount of solid waste during construction and operation phases. Solid waste to be generated will be managed as follows.

##### *❖ Construction phase*

Solid waste expected during construction phase includes, building rubble and general household waste or normal litter such as plastic tins, bottles, etc. Building rubble will be contained in skip containers and disposed of to the Oshakati disposal site. These should be collected and disposed of within five days of generation. General household solid waste is to be contained in litter bins/bags and disposed of to the Oshakati disposal site on daily basis.

### ❖ Operation phase

Different types of solid waste are expected during operation phase, these are such as.

- Kitchen waste i.e., waste food, kitchen scrap etc.
- Household waste i.e., tins, plastic, paper, bottles etc.
- E-waste i.e., printing cartilages, broken electronics
- Garden waste, i.e., tree branches, lawn/grass clips etc.
- Hazardous waste from laboratories, car batteries, paints etc.

**Collection:** It is the responsibility of the proponent to ensure a clean and safe business environment. All shops and offices as well as the complex yard and parking area will be served with collection bins. These bins will be emptied on weekly basis. It is recommended for the business complex to adopt a three-bin system when designing a waste collection system as depicted in figure below.



**Figure 7: Proposed waste management practices**

**Disposal:** Each waste type will be collected in a separate skip container and disposed of separately. Waste streams from each skip container will be further segregated and sorted by the housekeeping employees during collection. The proponent or operator should engage the service of the waste recycling companies such as Rent-A-Drum for collection of recyclables waste materials.

Organic waste from the kitchen i.e., food items can be supplied to local pig farmers on request. Other types of waste such as electronic waste, scrap metal, hazardous waste is expected to be produced in low quantity and will be collected in separate bins and disposed separately or send to respective recycling company i.e., scrap salvage, Transworld, Wesco etc.

### **3.7 Need and Desirability of the project**

The need and desirability of the proposed development is based on the following reasons.

- The proposed development site is located within a walking distance from the town of Oshakati which is one of fastest growing urban centers in Oshana region. Hence, given the scarcity of suitable development land in and around Oshakati, the proposed development site is considered ideal and within the expansion zone of Oshakati town.
- The proposed development will also include the construction of an earth dam for harvesting and conservation of rainwater. The harvesting and conservation of rainwater is of paramount importance to the local community. This is because seasonal flood water is only available for a short period of time (rainy season) but often becomes a scarce commodity during dry season.
- The proposed development will bring about the much-needed job opportunities for the local people as well enhance the local economic spin offs and business prosperity for the area and region at large.

## 4. LEGAL REQUIREMENTS

### 4.1 Environmental Management requirements

The proposed activities (construction, operation and decommissioning of the proposed Las Vegas City Center will trigger activities listed under the Environmental Management Act 7 of 2007 and the EIA Regulations (GG 03 of February 2012) as follows.

Project activities	Activities triggered		
	Category		Specific activity
<ul style="list-style-type: none"> <li>• <b>Proposed business complex within Oshana</b></li> </ul>	8.	Water Resource Developments	8.8 Construction and other activities in watercourses within flood lines
<ul style="list-style-type: none"> <li>• <b>Construction of an earth Dam</b></li> </ul>	8.	Water Resource Developments	8.5 Construction of dams, reservoirs, levees, and weirs
<ul style="list-style-type: none"> <li>• <b>Hospitality/accommodation facilities</b></li> </ul>	6.	Tourism Development Activities.	6.1 The construction of resorts, lodges, hotels or other tourism and hospitality facilities
<ul style="list-style-type: none"> <li>• <b>management/handling of sewage/wastewater</b></li> </ul>	2.	Waste Management, Treatment, handling, and disposal activities	2.1 The construction of facilities for waste sites, treatment of waste and disposal of waste  2.3 The import, processing, use and recycling, temporary storage, transportation, or export of waste
<ul style="list-style-type: none"> <li>• <b>access road to the site</b></li> </ul>	10.	Infrastructure	(c) The road caters for more than one lane of traffic in both directions.

## 4.2 Applicable legislations

Below is a list of applicable and relevant Namibian legislation, policies and guidelines regarding the environment which were considered while conducting the Scoping/EIA for the proposed development.

**Table 1: Namibian Legislation relevant to the project**

LEGISLATION	PROVISION	PROJECT IMPLICATION
<b>1. National Legislation</b>		
<b>Constitution of the Republic of Namibia (1990)</b>	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: <ul style="list-style-type: none"> <li>- Guarding against overutilization of biological natural resources,</li> <li>- Limiting over-exploitation of non-renewable resources,</li> <li>- Ensuring ecosystem functionality,</li> <li>- Maintain biological diversity.</li> </ul>	Through implementation of the environment management plan, the proponent shall be advocating for sound environmental management as set out in the constitution.
<b>Environmental Management Act No. 07 of 2007</b>	The purpose of this Act is to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment; to provide for a process of assessment and control of projects which may have significant effects on the environment; and to provide for incidental matters. 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 for the interested and affected parties to voice and register their opinions and concern about the proposed project.	“Construction activities” is one of the listed activities hence this EIA study.
<b>Water Resources Management Act 2004</b>	This Act provides provision for the control, conservation and use of water for domestic, agricultural, urban, and industrial purposes. In addition, the Act clearly gives provision that pertain with license or permit that required abstracting and using water as well as for discharge of effluent.	A Waste discharge permit for a septic tank should be obtained from MAWLR. The final wastewater be discharged in the Oshakati wastewater treatment plant.  Application for permission to impound surface water
<b>Communal Land Reform Act 5 of 2002</b>	To provide for the allocation of rights in respect of communal land; to establish	The proponent has already obtained a Consent letter from

	Communal Land Boards; to provide for the powers of Chiefs and Traditional Authorities and boards in relation to communal land; and to make provision for incidental matters.	the village headman and recommendation letter from the Uukwambi TA.
<b>Pollution Control and Waste Management Bill of 1999</b>	This Bill serves to regulate and prevent the discharge of pollutants to air and water as well as providing for general waste management. The bill provide framework for a multitude administration on pollution control and waste management in the country.	The proponent shall be responsible for collection and disposal of solid waste regularly. Waste can be disposed of at an approved Municipal landfill site (Oshakati).
<b>National Heritage Act 27 of 2004</b>	The Act provide for the protection and conservation of places and objects of heritage significance and the registration of such places and objects; to establish a National Heritage Council (NHC) to establish a National Heritage Register; and to provide for incidental matters.	In case of any material of cultural, heritage or archaeological importance unearthed during construction phase, it must be reported to the NHC.
<b>Labour Act (No 11 of 2007)</b>	<p>135 (f): “the steps to be taken by the owners of premises used or intended for use as factories or places where machinery is used, or by occupiers of such premises or by users of machinery in connection with the structure of such buildings of otherwise in order to prevent or extinguish fires, and to ensure the safety in the event of fire, of persons in such building;” (Ministry of Labour and Employment Creation).</p> <p><b>Noise Control Regulations</b> It is essential to ensure that before any development project is approved and undertaken, an assessment or evaluation of expected noise level is done.</p>	<p>All employment issues should be handled in accordance with this Act.</p> <p>Employees must also be provided with PPE.</p> <p>Noise generation should be minimized to the satisfactory of neighboring residents.</p>
<b>Public and Environmental Health, 2015</b>	<p>Section 119 of this Act prohibits the existence of a nuisance on any land owned or occupied by the proponent. The term nuisance is important for the purpose of this EIA, as it is specified, where relevant in Section 122 as follows:</p> <p>any dwelling or premises which is or are of such construction as to be injurious or dangerous to health or which is or are liable to favour the spread of any infectious disease.</p>	The proponent must avoid any nuisance such as noise, vibration, dust and also remove any time that is injurious.

	<p>any dung pit, slop tank, ash pit or manure heap so foul or in such a state or so constructed as to be offensive or to be injurious or dangerous to health.</p> <p>any area of land kept or permitted to remain in such a state as to be offensive, or liable to cause any infectious, communicable, or preventable disease or injury or danger to health; or</p> <p>Any other condition whatever which is offensive, injurious, or dangerous to health.</p> <p>Furthermore, in terms of Section 8 of the Public Health Proclamation 16 of 1936, where a local authority is of the opinion that a nuisance is seriously offensive or a serious menace to health, it may serve a notice on the owner or occupant of the nuisance to immediately remove the nuisance. Failure to abide by this provision is an offence. Of relevance is the location of the mine, and the fact that mining activities will overlap with the activities of the community currently on the land.</p>	
<p><b>Atmospheric Pollution Prevention Ordinance no. 11 of 1976</b></p>	<p>This Ordinance generally provides for the prevention of the pollution of the atmosphere and for matters incidental thereto. The Ordinance deals with administrative appointments and their functions; the control of noxious or offensive gases; atmospheric pollution by smoke, dust control, motor vehicle emissions; and general provisions.</p> <p>Part IV of this ordinance deals with dust control. The Ordinance is clear in requiring that any person carrying out an industrial process which is liable to cause a nuisance to persons residing in the vicinity or to cause dust pollution to the atmosphere, shall take the prescribed steps or, where no steps have been prescribed, to adopt the best practicable means for preventing such dust from becoming dispersed and causing a nuisance.</p>	<p>Prevent any generation of air pollution.</p>

	<p>Of applicability to the envisaged project, is dust generated by vehicles or equipment as well as dust generated during mining. The risk of dust generation is high at the envisaged site. This deals with air pollution as it affects occupational health and safety, and no consideration is given to the natural environment.</p>	
<p><b>Soil Conservation Act 76 of 1969</b></p>	<p>The objectives of the Soil Conservation Act 76, 1969 are to make provision for the combating and prevention of soil erosion, and for the conservation, protection and improvement of the soil, the vegetation and the sources and resources of the water supplies.</p> <p>Part II, deals with soil conservation works and it further states that in section 4(1) The Minister may by means of a direction order the owner of land to construct the soil conservation works referred to in such direction either on land belonging to such owner or on land belonging to another person, in such manner and within such period as may be mentioned in such direction, if the Minister is of the opinion that the construction of such soil conservation works is necessary in order to achieve any object of this Act in respect of the land belonging to such owner.</p>	<p>Avoid or prevent soil erosion during construction and operation phase.</p>
<p><b>Hazardous Substance Ordinance 14 of 1974</b></p>	<p>This Ordinance provides for the control of toxic substance and thus also relevant for pollution control. It covers for the manufacturing, sale, use, disposal, dumping, importing, and exporting of hazardous waste.</p>	<p>Avoid using and storage of hazardous substances</p>
<p><b>Petroleum Products and Energy Act 13 of 1990</b></p>	<p>Regulations made under the Petroleum Products and Energy Act 13 of 1990 states that: A license or certificate is required for purposes of storing or keeping fuel in a quantity of 200 liters or less in any container kept at a place within a local Authority area or fuel in a quantity of 600 liters or less in any container kept at a place outside a local authority area.</p> <p>These regulations apply, in the case of an above-ground tank, to a storage tank with a capacity of 2,200litres or more and in the case of all below-ground tank, to a capacity with a</p>	<p>Should not allow storage of fuel above the recommended limits (600l) onsite or apply for a licence if need be.</p>



	<p>capacity of 4,560 liters or more. Every license-holder or certificate holder shall about any replacement or installation of a storage tank, or a remaining storage tank, which this regulation applies, and which is in the possession of such license-holder or certificate holder, annually not later than 28 February, duly complete Form PP/10 as set out in Annexure B and shall submit such form together with the information requested therein by the Ministry of Mines and Energy.</p>	
<p><b>Roads Ordinance 17 of 1972</b></p>	<p>Provide the Regulation for any activities within the Trunk or proclaimed road. The followings sections are of importance in this project.  Vi (38) Distance from proclaimed roads at which fences, and gates are erected.  X (63) Minor roads and private roads shall turn off from trunks and main roads at approved places only.</p>	<p>Permission must be obtained from RA and servitude must be registered for any access road connected to the National Road.</p>

## 5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

### 5.1 Biophysical

#### a) Climate overview (Regional)

The climatic condition of the northern central of Namibia is described as semi-arid to sub-humid with the rainfall confined mainly in summer months (November-March). The area receives a significantly greater amount of precipitation, averaging around 400 mm (15.7 in) per year. The rainfall pattern is highly variable in amount and distribution. The wet and dry spells are thus a normal climatic feature of this environment and it has been persistent for millions of years. Temperatures are also cooler and more moderate, with approximate seasonal variations of between 10 and 30 °C (Kangombe, 2010).

#### b) Topography and landscape

The northern central of Namibia is referred to as the Cuvelai-Etoshia Basin. The basin is part of a transboundary catchment shared by Angola and Namibia and most of the land surface is very flat dipping from some 1150 m above sea level (m.a.s.l.). This Cuvelai wetland extends from southern Angola into north-central Namibia before terminating in the Etosha Pan which is the base level for the water flow system in the basin.

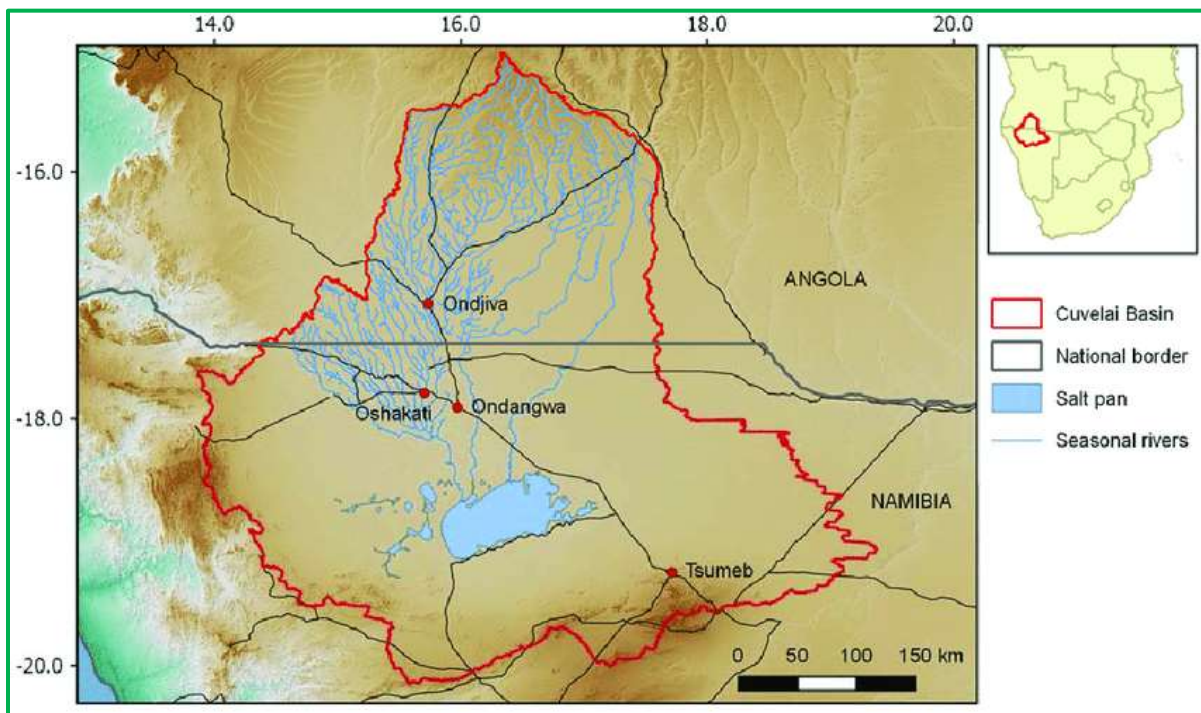


Figure 8: Hydrology of Cuvelai basin (Source: MAWLR)

### c) Hydrology

Due to the structure of the basin, all surface water within the basin flows through a myriad of shallow channels known as iishanas which carries major floods (called “efundja”) towards the Etosha Pan. These seasonal flows provide fishing grounds, renew pasture and recharge ground water supplies. The natural flows also feed a long-distance canal (Ruacana to Oshakati) and a pipeline system which provides drinking water in the NCA.



**Figure 9: View of local Oshanas during rainy season**

The major challenges of using the Oshana water are high evaporation rates and rapid quality degradation of the water due to uncontrolled use by humans and animals.

### d) Soil and Geology

The soil of the northern Namibia is dominated by deep Kalahari and Namib sand that mostly occur in the formation of sands and other sedimentary materials, while the *clay sodic* sands dominate in the Oshanas. The soil type classification is termed to be favorable for crop cultivation and plant grow in general. This is determined by its physical properties to the nature of water retention, lower salinity, and high nutrient level. The geology of the territory is characterized by sandstone and calcrete (Mendelssohn, 2002).

### e) Groundwater

The groundwater of the Cuvelai-iishana Sub-Basin is found in shallow discontinuous aquifers (Perched Aquifers) and is mostly brackish or saline. Due to the flat topography of the north-central regions of Namibia, the floodwaters serve as a major source of groundwater recharge.

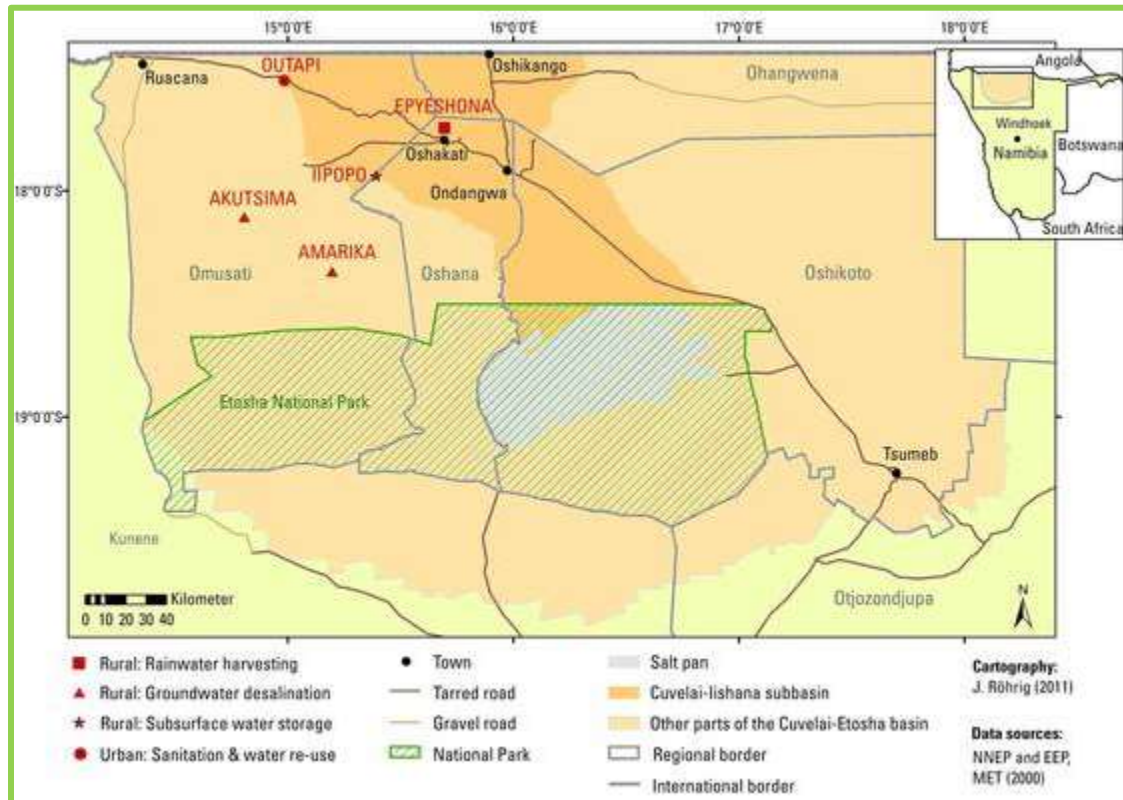


Figure 10: Groundwater map of the Cuvelai basin

**f) Flora and fauna**

The vegetation type of the site is of a typical flood plain ‘oshana’ of the Cuvelai basin which is influenced mainly by the hydrological feature of the area. It consists mainly of herbaceous grass species i.e., reeds, sedges, and seasonal water loving plants which mostly occur during rainy season i.e., water lilies, etc. There are also few *makalani palms trees* and *makalani saplings* and *bitter bushes* which are found next to the road.



**Figure 11: Flora and fauna of the site**

The local occurring faunas are mainly domestic animals, such as *cattle, sheep, goat, and donkeys* which frequent the area for grazing. Moreover, some seasonal occurrence of *freshwater fish, frogs, reptiles, birds, and many aquatic invertebrates* are expected during the rainy seasons.



## 5.2 Socio-economic profile of the area

### a) About the area

The closest town to the development site is Oshakati town which is about 20 km south-east. The town is regarded as the commercial centre of the north and is home to more than 40,000 people with an estimated growth rate of 5.5% per annum.

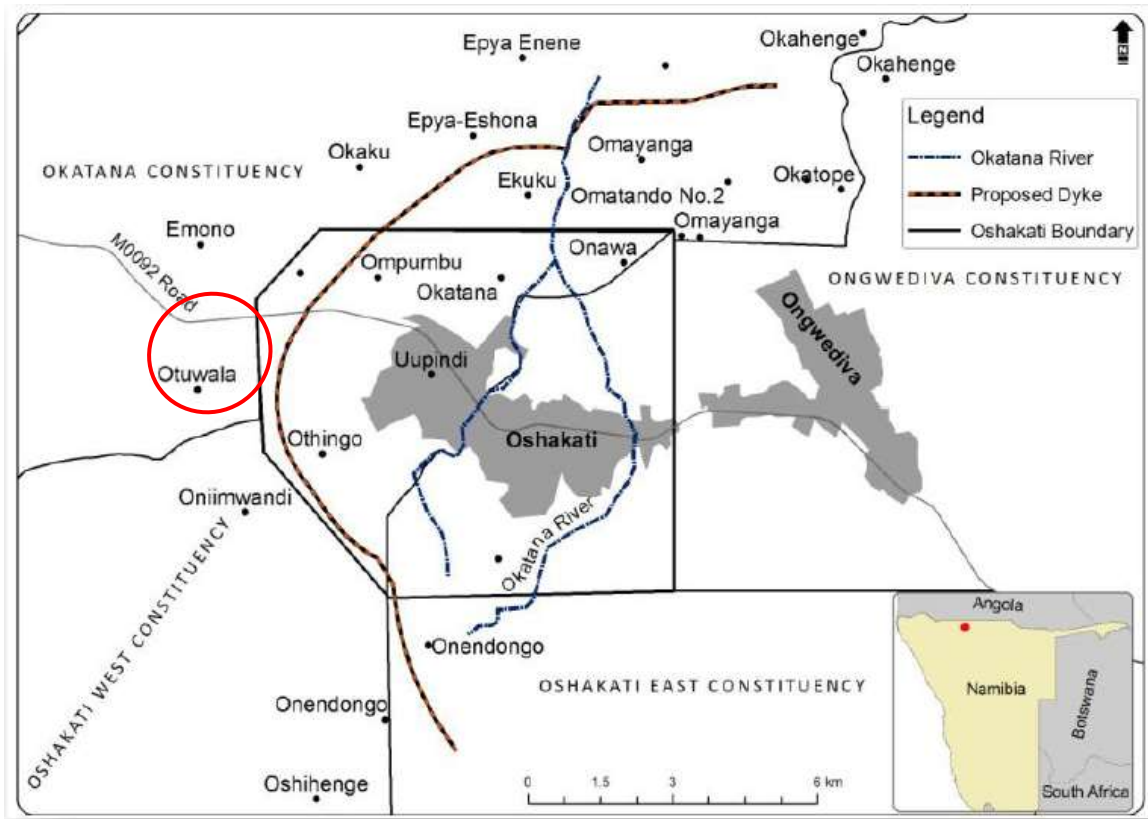


Figure 12: Surrounding areas

### b) Demographics

The indigenous inhabitant of the Oshana region is predominantly Ovambos/Aawambo who speak three language of the Oshiwambo Languages – Oshikwanyama, Oshindonga and Otshikwambi. The proposed development site is within the Uukwambi tribal area; hence, the native speakers of the surrounding area are mostly of the Aakwambi sub-tribe.

### **c) Economic and social development**

Oshakati is a fast-growing town in terms of development by virtue of its strategic location, excellent infrastructure, and unique market to support any investment initiative. The town offers all essential professional services to make it the service hub of northern Namibia and, creates investment opportunities for all business purposes.

There are several commercial enterprises in and around Oshakati with the main shops being wholesalers, supermarkets, general dealers, and dry cleaners while most workshops are garages, services stations, brick making factory and cloth making enterprises as well as hotels. The town is also home to several shopping malls as well as a private recreational park. Given the population growth, the demand for these services has also increased, thus creating new opportunities. However, one of the limiting factors to these new opportunities is the availability of suitable developable land as most of it is in lower lying areas and sometimes even within the oshanas, hence prone to seasonal flooding.

### **d) Land availability**

Since independence in 1991, Oshakati grew from a relatively small and poorly developed town into a large urban settlement with modern buildings and services. The continued growth of the town meant that the pressure for suitable land in the town increased to a point where many people settled in lower lying areas on the edges of the higher lying land portions and sometimes even within the oshanas.

## 6. PUBLIC PARTICIPATION PROCESS

### 6.1 Public participation process

The study was subjected to a public participation process (PPP) as defined in section 21 (2) of the Environmental Regulations of (GG 6 of February 2012) Environmental Management Act 7 of 2007 and EIA Regulations of February 2012.

#### 6.1.1 Notifications

Potential interested and affected parties (I&APs) were notified through newspaper advertisements and public notices which provided brief information about the proposed project and the EIA process. Public notices were advertised twice in two local Newspapers; New Era 12<sup>th</sup> and 19<sup>th</sup> of March 2021 and the Confidante newspaper for the 11<sup>th</sup> and 18<sup>th</sup> of March 2021 (See attached proof of consultations). Some public notices were also displayed at public notice boards within Oshakati and at the development site. Residents were also invited by the village headman through the local radio station.

#### 6.1.2 Public meeting

A public meeting was held on the 20<sup>th</sup> of March 2021 at the Community Meeting Center at 14:30. During the meeting, the EAP made a presentation on the intended development and the EIA study being undertaken. He also presented the locality map of the proposed development site. Attendees were requested to ask questions and give their inputs on the proposed development. These inputs were compiled and will be incorporated in the Scoping report.



Figure 13: Public meeting



## **6.2 Soliciting of Inputs from relevant stakeholders.**

The identified key stakeholders were given notification letters that were sent to them. The stakeholders that were consulted are as follow:

- Government Ministries
- Okatana Constituency Councilor
- Neighboring properties
- Oshana Regional Council
- Road Authority,
- NamWater
- NORED

A full list of I&APs and stakeholders is appended to this report, (refer to Annexure A).

## **6.3 Background Information Document (BID)**

The background information document was compiled in English and distributed to all registered I&APs and stakeholders. The BID provided a brief introduction to the proposed project and the background information on the project, proponents, consultants, scoping process, and the public consultation process to be followed.

## 7. IDENTIFICATION OF ENVIRONMENTAL IMPACTS

This section provides the reasonable anticipated environmental impacts (short-term and long-term) associated with construction and operation of the proposed development. Various mitigation measures have also been developed to mitigate the anticipated negative impacts and enhance the positive impacts.

### 7.1 Planning and Design Phase

The first step in avoiding and preventing any possible negative impacts associated with any project should start with the planning and designing phase. The following issues should be considered at the planning and design phase:

- *Placement and Design of facilities*

Consideration must be given to the placement of different facilities to prevent impacts such as.

- *Contamination of surface water*
- *Pollution of groundwater*
- *Compromise on health and safety*

Moreover, provision must be made for ample parking zone for delivery vehicles and customers.

- *Types of construction materials*

Care needs to be given on the types of construction materials to be used. The pipeline materials to be used for sewage lines should be made from non-hazardous materials and must be easily repair-able. Avoid using materials such as asbestos pipes or metals, instead use polythene materials.

- *Visual impacts*

The design of the proposed development should blend in with the natural landscape. Provision must also be made for landscaping around the site to enhance visual appearance.

- *Indoor and outdoor safety issues*

The proposed complex will be open for different groups of people, including people with disabilities. The following measures are essential to ensure a safe environment for the visitors.

- Entrances must be accessible to handicapped and people with special needs.
- There should be several entrances/exits including the emergency exit to the complex.

- *Traffic impacts*

Provision must be made for ample parking space for delivery vehicles, customers, and visitors. If possible, there should be a separate entrance for delivery vehicles.

## 7.2 Impacts during construction.

The construction of the proposed development is associated with certain environmental and socio-economic concerns. Most of these impacts are temporary and can be significantly mitigated through proper planning and best management practices.

### **a). Anticipated negative impacts.**

- *Disturbance of local flora and fauna*

The construction works will cause disruption to the local ecological setting. The ecological setting refers to the biophysical characteristics that strongly influence the composition, structure and functioning of a particular ecosystem. Ecological setting is vital for sustaining life of trees, wild animals, livestock, and people. Impacts on flora will occur through site clearance while impacts on local fauna could occur through disturbance from noise, vibration, dust etc.

Mitigation: Vegetation clearance during site preparation is inevitable. However, only the vegetation that are affected by the development should be cleared. No animal must be trapped or killed for any purpose of whatsoever. The construction site must be barricaded to prevent domestic animals from entering the site.

- *Soil compaction and contamination*

Removal and compaction of soil during construction is a serious concern and could be more serious during rainy season when the soil is wet and highly vulnerable which could lead to other impacts such as erosion or sedimentation etc. Other impact on soil is contamination from spillage i.e., oil, grease etc.

Mitigation: Although soil compaction is a requirement for construction works the disturbance must be limited to the construction site and the number of heavy implements at the site must be limited. If possible, land clearance should be done at least during dry season. Vehicles with oil leaks must be covered with drip trays and contaminated soil must be removed and dumped at the Oshakati landfill site.

- *Pollution of natural watercourses (surface and groundwater)*

Possible pollution of the water sources both surface and groundwater from leakages, spills, or direct discharge of pollutant in the watercourses or drainage.

Mitigation: No direct discharge of pollution (wastewater or solid waste) into the oshana. Do not park vehicles or implement with leaking oil in the vicinity of watercourse. In case of spillage, the contaminated soil must be properly rehabilitated.

- *Disturbance of local geology*

The alteration of topography due to excavations and bulk earth works may disturb the surface geology.

Mitigation: All site disturbances should be limited to the areas where structures will be constructed. Moreover, a geotechnical assessment should be conducted before establishment of building foundations.

- *Dust and air pollution*

Excavation and construction related activities will generate dust that will have a negative impact on the surrounding area and beyond. Moreover, trucks transporting construction material to the disposal site, will cause dust pollution to streets they would be passing through, unless they are properly covered. However, the worst case of dust pollution would be during windy conditions. Other atmospheric pollution is in the form of fumes and noxious gases i.e., hydrocarbon vapours, carbon monoxide and sulphur oxides released from vehicles and construction equipment.

Mitigation: Ensure dust control measures such as sprinkler all haulage roads and construction areas with reused water. All construction vehicles and machineries must be road worthy and driven within the maximum driving speed limits. Cover dump trucks loaded with sand or other building materials with tarpaulin.

- *Worker's Sanitation*

Workers' sanitation on site poses a serious impact on the surrounding environment. Poor sanitation at the construction camping site may result in environmental pollution and contamination of watercourse.

Mitigation: Provision of sanitary facilities onsite should be made available as it is considered critical to avoid these health hazards on the surrounding residents.

- *Migrant construction workers*

Temporary construction activities may cause movement of people from different parts of the country in search for employment opportunities. Migrant construction workers are likely to engage in casual relationships with locals. This will result in unplanned pregnancies and may contribute to the spread of HIV/AIDS, especially among youth and school children.

Mitigation: Recruit local people as far as possible to avoid migration of people from other areas. Provide health education and awareness on the risk of HIV/AIDS.

- *Traffic disturbances*

The negative traffic impact resulting from construction activities is mainly due to movement of vehicles in and out of the site.

Mitigation: Avoid peak hours (06h00 – 08:h00) and 16:30-18:30. Erect construction signage at construction site. Vehicles must be driven by authorized drivers only and adhere to the speed limit.

- *Noise and vibration*

Noise pollution is a negative impact that will surely result from operating construction equipment such as bulldozers, loaders, trucks, drillers, etc. The major negative impact that could result is the noise and vibration generated during night hours or midday. This impact can be a nuisance to employees, animals, and neighboring residents.

Mitigation: This impact will only be temporary and can be mitigated by adhering to the noise reduction instructions. Construction activities must be limited to normal working hours and avoid operating during odd hours.

- *Visual impacts*

Visual intrusion of construction activities (untidy building sites, denuded areas, material stockpiles, dust etc.).

Mitigation: All waste materials should be collected regularly. Materials stored onsite must be properly packed.

- *Waste generation*

The construction activities will generate different types of waste such as building rubble, spoil material, domestic waste, hazardous waste, and liquid waste from ablution facilities. Waste generated from construction activities will have a negative impact on surrounding areas if not disposed of properly and regularly. In addition, the process of transporting all construction debris may also disturb neighbouring areas and constitute a nuisance to residents around the site and is not aesthetically accepted.

Mitigation: All waste generated at the site must be gathered and disposed to municipal disposal sites. Trucks carrying waste materials should be properly sealed to avoid waste being blown away by wind.

- *Occupational Safety and Health*

Safety and health risks are expected during the construction period. This is particularly true in relation to the construction workers who will be present at the site. Workers will be exposed to dust, high noise levels, sun exposure (sun stroke) and dehydration during summer months, and other potential hazards associated with the use of heavy construction machinery.

Mitigation: All employees must be provided with Personal Protective Equipment (PPE). Employees must also be trained on the nature of their job as well as on First Aid. Ensure the First Aid kit is available at the construction site all times.

## **b). Anticipated positive impacts.**

The construction activities will also generate several positive impacts to the surrounding community and the region at large.

- *Employment opportunity*

A positive impact would arise regarding employment opportunities for the local community upon proceeding with the project. However, this is true during operation more than during construction, since foreign workers are usually assigned for construction works. Moreover, families of workers would predominately benefit from work generated during construction.

- *Business prosperity*

Construction activities will create business opportunities for local businesses.

### 7.3 Operational Phase

The operation phase of the proposed business complex is associated with positive and negative impacts to the biophysical as well as to the socio-economic economic environment of the area in which is located.

#### **a). Anticipated negative impacts.**

- *Impact on groundwater*

Depending on the types of material used for construction and flooring. Leakage and spill of chemicals i.e., cleaning detergents can find its way into the soil. This could easily pollute the nearby river system and the underground water sources. Leaking sewage pipes could also easily contaminate drainage watercourse.

Mitigation The complex should be floored with concrete cast instead of blocks and should be tiled properly to avoid any seepage of chemicals. The outdoor of the premises must also be interlocked to reduce possibility of seepage of pollutants. Proper and timely maintenance of sewage lines and manholes in term of blockages.

- *land use competitions.*

The development site is surrounded by open grazing area which is frequent by domestic animals. Uncontrolled movement of animals in and around the site could cause some conflicts if not properly handled.

Mitigation: The site must be fenced off to prevent animal from entering the business premises.

- *Traffic disturbance*

During the operational phase there will be an increase in traffic exiting the main Road (C46) because of delivery vehicles/trucks and customers vehicles. The main concern the capacity and design of the road/s leading the new business center.

Mitigation: The access road to be provided must be sufficient to accommodate the anticipated traffic flows of delivery vehicles and customers vehicles using the business complex.

- *Noise pollution*

Operation activities such as vehicle, packing, maintenance of facilities could generate noise which could be a nuisance to the neighboring properties.

Mitigation: The residential areas (homesteads) are located a safe distance from the development site; hence this impact could be avoided. However, the business operation hours should be preferably from 08:00 to 22:00.

- *Waste generation*

During the operation phase of the project, there will be a generation of different types of waste from different business activities. Improper handling of business waste will cause environmental pollution and spread of diseases and contamination of soil and water sources.

Mitigation: Provide sufficient waste collection facilities at the complex and promote a waste management hierarchy which include, Avoid, Reduce, Re-use, Recycle and Dispose. Encourage segregation of different types of waste at the source of production and manage waste accordingly.

- *Competition on available resources*

The operation of the proposed development will increase demand on available resources mainly water and electricity.

Mitigation: Promote alternative energy sources i.e., solar and promote energy saving techniques. Accommodations and public ablution facilities should be fitted with water saving flush toilets and showers for water conservation. Encourage rainwater harvesting and water saving techniques i.e., using rainwater for watering gardens, planting indigenous plants instead of exotic plants.

## **b). Anticipated positive impacts.**

- *Employment*

The proposed complex will create numerous permanent job opportunities for local people.

- *Economic prosperity*

Small and Medium Enterprises (SME's) will be catered for via exceptional and affordable rentals to setup their businesses in the proposed complex.



## 8. ASSESSMENT OF IDENTIFIED IMPACTS

### 8.1 Risk Assessment and Rating

The scoping process has identified potential project impacts during its planning and operation phase and examined each of these issues. In assessing the impact of the proposed development, four rating scales were considered. Each issue identified was evaluated in terms of the most important parameter applicable to environmental management. These include the **extent, intensity, probability, and significance** of the possible impact on the environment. The rating scales used are as follows:

Table 2: Rating criteria

CRITERIA	DESCRIPTION			
EXTENT	<b>National (4)</b> The whole country	<b>Regional (3)</b> Oshana region and neighbouring regions	<b>Local (2)</b> Within a radius of 2 km of the proposed site	<b>Site (1)</b> Within the proposed site
DURATION	<b>Permanent (4)</b> Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	<b>Long-term (3)</b> The impact will continue/last for the entire operational life of the development but will be mitigated by direct human action or by natural processes thereafter.	<b>Medium-term (2)</b> The impact will last for the period of the construction phase, where after it will be entirely negated	<b>Short-term (1)</b> The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
INTENSITY	<b>Very High (4)</b> Natural, cultural, and social functions and processes are altered to extent that they permanently cease	<b>High (3)</b> Natural, cultural, and social functions and processes are altered to extent that they temporarily cease	<b>Moderate (2)</b> Affected environment is altered, but natural, cultural, and social functions and processes continue albeit in a modified way	<b>Low (1)</b> Impact affects the environment in such a way that natural, cultural, and social functions and processes are not affected
PROBABILITY	<b>Definite (4)</b> Impact will certainly occur	<b>Highly Probable (3)</b> Most likely that the impact will occur	<b>Possible (2)</b> The impact may occur	<b>Improbable (1)</b> Likelihood of the impact materialising is very low
SIGNIFICANCE	Is determined through a synthesis of impact characteristics. Significance is also an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The total number of points scored for each impact indicates the level of significance of the impact.			

**Table 3: Significance rating**

<b>Low impact</b> 1-4	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction, or operating procedure.
<b>Medium impact</b> 5-8	Mitigation is possible with additional design and construction inputs.
<b>High impact</b> 9-11	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
<b>Very high impact</b> 12-16	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a “very high impact” is likely to be a fatal flaw.
<b>Status</b>	Denotes the perceived effect of the impact on the affected area.
<b>Positive (+)</b>	Beneficial impact
<b>Negative (-)</b>	Deleterious or adverse impact.
<b>Neutral (/)</b>	Impact is neither beneficial nor adverse
It is important to note that the status of an impact is assigned based on the status quo – i.e., should the project not proceed. Therefore, not all negative impacts are equally significant.	

## 8.2 Planning and Design

Table 4: Risk Assessment Planning & Design Phase

ASPECT	POTENTIAL IMPACTS	RATINGS (without mitigation)				
Planning and Design		Extent	Duration	Intensity	Probability	Significance
<b>Bio-physical</b>	<ul style="list-style-type: none"> <li>Poor Placement of facilities could result into many environmental and socio-economic impacts. Pollution of surface water, alternation of hydrological flow etc.</li> </ul>	2	2	2	1	moderate
	<ul style="list-style-type: none"> <li>Using certain construction materials could pose environmental risks during construction and operation.</li> </ul>	1	1	1	1	low
<b>Socio-economic</b>	<ul style="list-style-type: none"> <li>Poor Building design could cause visual intrusion and reduce aesthetic value</li> </ul>	2	2	1	1	moderate
	<ul style="list-style-type: none"> <li>Poor property design could disadvantage certain group of people i.e., people with disabilities.</li> </ul>	1	1	1	1	low
	<ul style="list-style-type: none"> <li>Insufficient access roads could cause serious traffic impacts</li> </ul>	2	2	2	1	moderate

### 8.3 Construction Phase

Table 5: Potential impacts during construction phase

ASPECT	POTENTIAL IMPACTS	RATINGS (Before mitigation)				
		Extent	Duration	Intensity	Probability	Significance
Bio-physical	• Disturbance of local flora and fauna	1	2	2	2	moderate
	• Soil compaction	1	2	1	2	moderate
	• Alteration of hydrological flow (floodwater)	1	2	2	1	moderate
	• Pollution of natural watercourse	2	1	2	1	moderate
	• Disturbance of local geology	1	1	1	1	Low
	• Dust and air pollution	1	1	1	1	Low
	• Worker's sanitation	1	1	1	1	Low
	• Migrant workers	1	1	1	1	Low
	• Noise and vibration	1	1	1	1	Low
	• Waste generation	2	1	1	2	moderate
	• Occupational health and safety	1	1	1	1	Low
Socio-economic	• Visual intrusion	2	1	1	2	moderate
	• Traffic disturbance	1	1	1	1	low
	• Employment creation (+ve)	2	1	1	2	moderate
	• Business prosperity (+ve)	2	1	1	2	moderate

## 8.4 Operational Phase

Table 6: Potential impacts during Operation phase

ASPECT	POTENTIAL IMPACTS	RATING				
		Extent	Duration	Intensity	Probability	Significance
Bio-physical	• Pollution of surface water	2	1	1	1	moderate
	• Pollution of groundwater due from sewage pipes, spillage, or leakage	2	1	1	1	moderate
	• Land use competition	1	1	1	1	low
Socio-economic	• Traffic impacts	2	1	1	1	moderate
	• Noise and vibration	1	1	1	1	low
	• Waste generation	2	2	2	2	High
	• Increase demand and pressure on resources (water and electricity)	1	1	1	1	low
	• Employment	2	2	2	2	High (+ve)
	• Economic prosperity	2	2	2	2	High (+ve)

## 9. CONCLUSION AND RECOMMENDATIONS

### 9.1 Conclusions

The objective of the Scoping phase of the EIA study was to define the range of the impact assessment and determine the need to conduct any specialist study. It is believed that this objective has been achieved and adequately documented in the Scoping Report. All possible environment aspects have been adequately assessed and necessary control measures have been formulated to meet statutory requirements thus implementing this project will have little appreciable negative impacts. It is thus concluded that.

- All information provided by the proponent is deemed valid and correct at the time it was provided.
- The information received is sufficient to conclude the study at the Scoping level and no additional specialist studies is required.
- Since there were no objections received, the project is well received by the potential I&APs, stakeholders, and relevant authorities.
- The proposed development will not result in undesirable or unmanageable environmental impacts; hence, the proposed development will not compromise the environmental integrity of the area.

### 9.2 EAP recommendations

It is therefore recommended that, the proponent shall obtain the following authorization prior to the construction and operation of the proposed development.

- Obtain permission to impound surface water body from MAWLR (Hydrology)
- Obtain approval of Building Plan from the Oshana Regional Council
- Obtain Environmental Fitness Certificate from the MoHSS
- Obtain Water Discharge Permit (septic tank) from MAWLR
- Obtain registration of Servitude for an access road from RA

Lastly, the Environmental Commissioner should consider the findings and recommendations of this scoping process with mitigation measures outlined in the ESMP and consider issuing an Environmental Clearance Certificate to authorize the establishment the proposed **Las Vegas City Centre at Onashiku shaLaban village, Oshana region.**

## 10. REFERENCES

- Kangombe, Nd. F, 2010. The vegetation of Omusati and Oshana regions, central north Namibia (Research Thesis for M.Sc. Plant Science). University of Pretoria.
- Marsh, A., & Seely, M. (2002). Sustaining People, Environment and Development in Central Owambo. Windhoek: Desert Research Foundation of Namibia.
- Mendelsohn, J., Jarvis, A., Roberts, C., & Robertson, T. 2002. Atlas of Namibia. New Africa Books (Pty) Ltd: Cape Town.
- Namibia Statistic Agency, 2001, Population and Housing Sensus [Report]. - Oshana: [s.n.], 2003.
- Tamayo V, et al, Flood risk management Plan, 2011. Ministry of Regional, Local Government, Housing and Rural Development
- Urban population by Census years, (2011), (PDF). Namibia 2011 - Population and Housing Census Main Report. Namibia Statistics Agency.

## 11. APPENDICES

**Appendix A: List of I&APs**

**Appendix B: Proof of land ownership**

**Appendix C: Proof of Consultation**

**Appendix D: ESMP**



## Appendix A: List of I&APs

ORGANIZATION	REPRESENTATIVE AND TITLE	CONTACT DETAILS
Proponent	Dr. Erastus Shapumba	<b>+264811280192</b>
TOYA Urban and Regional Planner	Planner Mr. Simon Shinguto	<b>+2648113099839</b>
Trinational Authority	Onashiku shaLaban village headman Mr. Findelis Laban	<b>+264818096749</b>
	Village Secretary Mr. Ileni David	<b>+264813828528</b>
	Uukwambi Traditional Authority Mr. Bara Shivute	<b>+264811273673</b>
MAWLR	Hydrology Mr. Beajah Wohler	<a href="mailto:Beajah.Wohler@mawlr.gov.na">Beajah.Wohler@mawlr.gov.na</a> , <b>061-208 7220.</b>
	Land Reform	<b>+264 65 22 88 200</b> <a href="mailto:eashikoto@oshanarc.gov.na">eashikoto@oshanarc.gov.na</a>
Okatana Constituency Council	Constituency Councilor Hon. Edmund Ilishuwa (MC)	<b>Tel: +264 - 65 225 447</b>
Oshana Regional Office		<b>+264-65-22 88 200.</b>
Roads Authority	Mr. Petro Vermeulen	<a href="mailto:vermeulenP@ra.org.na">vermeulenP@ra.org.na</a>
NORED	Mr. Isac Nekwaya	<a href="mailto:i.nekwaya@nored.com.na">i.nekwaya@nored.com.na</a>
NamWater	Dr. Kambanda Northern Regions	<a href="mailto:kambandak@namwater.com.na">kambandak@namwater.com.na</a>
	Mr. Johannes K. Shigwedha PRO	Tel: 264 61 71 2277 Cell: 264 81 122 2858 Email: <a href="mailto:shigwedhaj@namwater.com.na">shigwedhaj@namwater.com.na</a>
<b>Other I&amp;APs</b>		