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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 AND SOCIAL MANAGEMENT PLAN (ESMP)

PREPARED FOR

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PROJECT NAME ENVIRONMENTAL IMPACT ASSESSMENT FOR THE

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DOCUMENT ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

(ESMP)

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LIST OF ACRONYMS

DEAF Directorate of Environmental Affairs and Forestry

EAP Environmental Assessment Policy

ECC Environmental Clearance Certificate

ECO: Environmental Control Officer

EIA Environmental Impact Assessment

EMA Environmental Management Act

ESMP Environmental and Social Management Plan

I&AP 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 (Pty). Ltd.

PHE Public Environmental Health Act

PM: Project Manager

RA Roads Authority

1. INTRODUCTION AND BACKGROUND

1.1 Introduction

The Dr. Erastus Shapumba, hereinafter referred to as the proponent, intends to construct a shopping business complex to be named "Las Vegas City Centre" 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. This will enable the harvesting of seasonal flood and rainwater for the benefit of the local community.

Green Gain Consultants cc has been appointed as an independent Environmental Consultant to undertake the Environmental Impact Assessment (EIA) for the proposed project. The purpose of the EIA study is to identify possible environmental and socio-economic impacts associated with the project and thus ensure that the negative impacts are mitigated and that positive impacts are enhanced. Potential environmental and socio-economic impacts associated with the proposed activities have been identified and are contained in the environmental assessment report.

Different mitigation measures to deal with potential impacts are outlined and contained in this report; Environmental and Social Management Plan (ESMP). This ESMP was prepared for the Planning & Design, Construction and Operation of the proposed Ls Vegas City Centre.

1.2 Purpose of the ESMP

The ESMP has the following objectives:

- To provide the proposed mitigations measures and actions to remedy the identified environmental issues.
- To provide guidelines for the management and monitoring of the identified environmental issues.
- Provide framework for monitoring of certain aspects to ensure effectiveness of the proposed mitigation measures.
- To provide guidelines to the responsible persons to follow appropriate contingency plans in the case of various possible impacts.

1.3 Project description

The idea is to establish a mixed used business complex for renting to interested businesses. 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 proponent is an experienced and renowned businessman who already operates similar projects in Namibia and in Oshana region. The proposed development will consist of following facilities.

i). Business complex

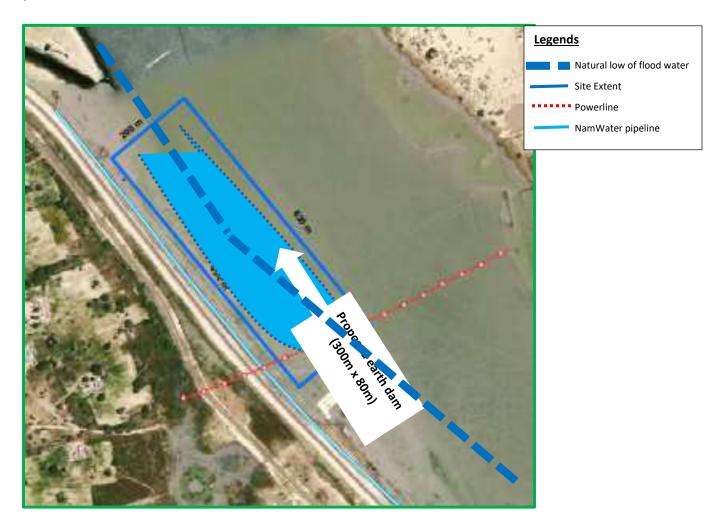
- Retail shops
- Restaurants
- Accommodation rooms
- Pharmacies
- Gym (fitness)
- Kindergarten (pre-primary school)

ii). Associated infrastructures

- Ablution facilities
- Septic Tank/s
- Telecommunication service lines
- Water supply lines
- Electricity supply
- Access road

iii). Earth dam

An earth dam will be constructed at the site with extent of 24,000 m² (300 meters long and 80 meters wide) and with a maximum dam wall of 2.5 meters and volume/capacity of approximately 24,000m³.



The proposed dam will be a typical earth dam with natural embarkments, and no lining or artificial water abstraction mechanisms will be used to reduce cost and ecological footprint. 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.

More information on the proposed development is contained in the Environmental Scoping report for this project.

2. RESPONSIBILITIES

It is the core responsibility of the proponent to ensure the successful implementation of this ESMP and any condition to be imposed by the Ministry of Environment, Forestry and Tourism. The implementation of the ESMP also requires the involvement of various role players, each with specific responsibilities to ensure that the development is operated in an environmentally sensitive manner. Once approved by MEFT, the ESMP will be legally bidding document and transgression is punishable by law as per the EMA requirements.

2.1 The Proponent

Responsibilities

- a). Implement the final ESMP after approval by MEFT and ensure the project comply with the conditions therein.
- b). Provide for Environmental Training and awareness of the ESMP to all contractors, subcontractors and employees
- c). Notify MEFT and EAP of any proposed changes to the proposed development.
- d). appoint the responsible person to take the responsibility of the following.
 - Conduct monitoring and review of the on-site environmental management and implementation of the ESMP by the Contractor and sub-contractors.
 - To audit the implementation of the ESMP on a regular basis
 - Compile and submit an Environmental Reports (biannual) to MEFT

2.2 Project Manager (PM) or Environmental Control Officer (ECO)

The proponent should appoint a project manager (PM) who should also act as an ECO to oversee the implementation of the project from the planning & design and construction phases. The project manager will ensure that all contractor and sub-contractors are complying with the content of this ESMP. The project manager must ensure that are contractors, sub-contractors and all employees involved are aware of this ESMP by providing a brief training. The project manager will also keep record of incidences during and take corrective actions i.e., issuing of penalties in case of transgressions etc. during project implementation.

2.3 The Contractor and Sub-contractors

It is expected that various contractors and sub-contractors will be appointed at various stages and for various tasks during different phases of this project. All appointed contractors and sub-contractors involved in the project shall ensure to comply with the ESMP and its conditions, thus the proponent must ensure that a copy of the ESMP is given to all contractors involved. The contractor upon receiving this ESMP should ensure.

- To undertake their activities in an environmentally sensitive manner and within the context of this ESMP
- To undertake good housekeeping practices during duration of their activities
- To ensure that adequate environmental awareness training takes place in the language of their employees.

2.4 The Environmental Assessment Practitioner (EAP)

The EAP shall be responsible for the submission of Environmental Reports to the competent Authority (MET) and provide additional information on this study whenever required by any party (IAPs, Stakeholders, Authority or Proponent) and be available to provide training on this ESMP on appointment by the proponent. Lastly the EAP should be available to make amendments or additions to this ESMP in accordance with the recommendations of the EIA study.

3. ENVIRONMENTAL MANAGEMENT REQUIREMNTS

The successful implementation of this ESMP is depends on various factors such as training and awareness, a good record keeping, enforcements and monthly reporting.

3.1 Environmental awareness training

All employees, contractors and sub-contractors involved in any work at the project should be briefed on their obligation towards environmental protection and methodologies in terms of the ESMP prior to work commencing. The briefing should be done by the proponent prior to any work in the form of an onsite talk. Record of such trainings should be kept.

3.2 Record keeping

There should be an up to date filing system for the project whereby method statements, environmental incidents report, training records, audit reports and public complaints register are kept. It is advised that photographs of the site should be taken as a visual reference. These records should be kept for a minimum of **two (2) years**.

3.3 Enforcements: Non-compliance and penalties

This ESMP upon approval by the MEFT shall be considered a legally bidding. In cases of transgressions and non-compliance to the ESMP, the transgressor should be liable to a penalty fine. Transgressions should be recorded in a dedicated register and be filed. The project manager shall issue the penalties in terms of the severity of the environmental damages.

Adherence to this ESMP during the operation of the project will ensure that the environmental impacts associated with the project will be mitigated to a greater extent thus promoting sustainable development. The commitment and co-operation of the identified responsible person(s) will ensure effective implementation of the ESMP.

3.4 Environmental Reports

The proponent shall, in the project completion report, indicate the environmental performance and matter of incidental. The EAP shall conduct regular monitor of project activities during all project phases and keep records.

4. LEGAL REQUIREMENTS

As part of implementation of this ESMP, the proponent must comply with the requirements of various national legislations as outlined in the EIA Report and briefly presented here below.

Table 1: Applicable National Laws

LEGISLATION	PROVISION AND REQUIREMENTS		
Constitution of the	National objectives		
Republic of Namibia (1990)	-Guarding against overutilization of biological natural resources,		
	- Limiting over-exploitation of non-renewable resources,		
	- Ensuring ecosystem functionality,		
	- Maintain biological diversity.		
	The proponent should strive to provide a development that is		
	environmentally friendly, socially acceptable, and economic viable.		
Pollution Control and	This Bill serves to regulate and prevent the discharge of pollutants to air and		
Waste Management Bill, 2003	water as well as providing for general waste management.		
2003	The bill provide framework for a multitude administration on pollution		
	control and waste management in the country. Each authority identified		
	by the bill shall play its respective roles.		
Environmental	Ensuring that the significant effects of activities on the environment are		
Management Act, No.07 of	considered carefully and in time. To promote the sustainable management of		
2007	the environment and the use of natural resources by establishing principles for		
	decision making on matters affecting the environment.		
	The proponent shall inform the competent authority of any changes to		
	the proposed facilities, to see if an EIA is required or not.		
Public Health and	The objectives of the PHE Act are to.		
Environmental Act, 2015	Promote public health and wellbeing		
	Prevent injuries, diseases, and disabilities		
	Protect individuals and communities from public health risks		
	Encourage community participation to create a healthy environment		
	Provide for early detection of diseases and public health risks		
	Section 2 requires that a). "The proponent must take necessary		
	reasonably and applicably measures to maintain its premises at all times		
	in a hygienic and clean condition" b). Prevent occurrence of a health		
	nuisance, unhygienic condition, an offensive condition or any condition		
	which could be harmful or dangerous to the health of a person within its		
Communal Land Deferme	local authority or the local authority area of another local authority"		
Communal Land Reform Act 5 of 2002	To provide for the allocation of rights in respect of communal land; to establish		
ACI 5 01 2002	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.		
	Finalize the application of the Leasehold from the MAWLR.		
Labour Act (No 11 of 2007)	To establish a comprehensive labour law for all employers and employees; to		
	entrench fundamental labour rights and protections. Regulate basic terms and		
	conditions of employment; ensure the health, safety, and welfare of employees;		
	to protect employees from unfair labour practices; to regulate the registration		
	of trade unions and employers' organisations; to regulate collective labour		
	relations; to provide or the systematic prevention and resolution of labour		
	disputes.		

	Any employment provided whether by the proponent or by contractor at this site i.e., Security Services must be in accordance with the Labour Act. All employees must be always provided with PPE.
	Act.
	All employees must be always provided with PPE.
	Noise generation should be minimized to the satisfactory of neighboring
	residents.
of 2011	To provide for the establishment of the National Employment Service; to impose reporting and other obligations on certain employers and institutions; to provide for the licensure and regulation of private employment agencies; and to deal with matters incidental thereto.
	Any employment provided whether by the proponent or by contractor at this site must be in accordance with the Labour Act.
	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.
	The proponent needs to obtain permission from the MAWLR for the construction of the proposed earth dam.
	The focus: the use of mobile toilets during construction phase should be properly positioned while placement of permanent ablution facilities and septic tank should be far from watercourse to avoid pollution. The proponent should obtain a Wastewater discharge permit from MAWLR.
	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; to establish a National Heritage Register; and to provide for incidental matters.
	Any material of cultural, heritage or archaeological importance shall be reported to the National Heritage Council (NHC).
Atmospheric Pollution	To provide for the prevention of the pollution of the atmosphere, and for matters
	incidental thereto. The Ordinance deals with administrative appointments and
11 of 1976	their functions; the control of noxious or offensive gases; atmospheric pollution
	by smoke, dust control, motor vehicle emissions; and general provisions.
	The proponent shall control and prevent atmospheric air pollution or emission of noxious or offensive gases by smoke.
Petroleum Products and	Regulations made under the Petroleum Products and Energy Act 13 of 1990
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 litters or less in any container kept at a
	place within a local Authority area or fuel in a quantity of 600 litters or less
	in any container kept at a place outside a local authority area.
	No storage of fuel above the limited threshold (600liter).
Hazardous Substance	This Ordinance provides for the control of toxic substance and thus also
Ordinance of 1974	relevant for pollution control. It covers for the manufacturing, sale, use, disposal, dumping, importing and exporting of hazardous waste. No hazardous waste will be stored, used, or handled at the site.

5. IMPLEMENTING THE ESMP: ROLES AND RESPONSILITIES

The proponent should play a pivotal role in implementing this ESMP. This section provides a way the ESMP is to be implemented and outlining responsibilities of all parties involved perform their respective roles.

Table 2: Management Plan: Planning and Design

Environmental Issue/Impacts	Mitigation Measures	Roles and Responsibilities	
		Implementation	Monitoring
Impact on Surface water and drainage	 The Dam should be planed in such a way that it does not obstruct natural flow of flood water. Obtain approval from MAWLR for the permission to construct an earth dam (permission to impound surface water body) The earth dam to be constructed should be according to specifications of the MAWLR. Ensure proper maintenance of the dam i.e., remove slit, embarkments etc. 	Architecture	Proponent
Visual intrusion	 Make provision for landscaping around the premises. Building design should blend in with the natural landscape 	Architecture	Proponent
Provision for Traffic management	 Make provision for an access road to the site. The access road should be wide enough to accommodate the envisaged traffic during operation phase. 	Architecture	Proponent
Water and Energy demand Management	 Make provision for Rainwater harvesting through gutters and storage drums. Make provision for renewable energy (Solar) Incorporate Green Building Codes 	Architecture	Proponent

Table 3: Management Plan: Construction

Environmental Issue/Impacts	Mitigation Measures	Roles and Responsibilities	
issue/iiipacts		Implementation	Monitoring
Biophysical Impact on biodiversity (flora and fauna)	 Only vegetation affected by the development maybe cleared. Plant indigenous plant species to make up for the vegetation lost due to construction. Use indigenous Plants instead of exotic 	Building Contractor	PM/ECO
Alteration of hydrological flow	 Do not obstruct the natural water flows. 	Building Contractor	PM/ECO
Pollution of surface water	 No direct discharge of pollution (wastewater or solid waste) into the drainage line or watercourse Avoid contamination of surface water body and drainage Contain all leaks i.e., oil, Clean-up all spillages and contaminated soil 	Building Contractor	PM/ECO
Pollution of groundwater	 No direct discharge of pollution (wastewater or solid waste) into the drainage line or watercourse With regards to temporary camps at the site (if need be), the project manager must ensure that contractors have proper sanitation measures on site and any spillage must be monitored and attended to. Underground storage of hazardous goods i.e., fuel should not be allowed onsite (otherwise a separate EIA is required for such). Wastewater should be contained and disposed off to the nearest Municipal wastewater treatment plant 	Building Contractor	PM/ECO
Impact on soil	 Minimize soil compaction of soil by setting designated access roads for heavy vehicles. Minimize soil exposure time during construction Minimize the use of chemicals such as lubricants, solvents, and petroleum products 	Building Contractor	PM/ECO

Waste generation	 All waste generated must be contained and properly dumped at waste disposal site. The contractor's managers must create awareness among all employees regarding waste disposal to avoid illegal dumping. 	Building Contractor	PM/ECO
Management of Dust and atmospheric pollution	 Avoid too much dust by sprinkling the construction site with water regularly. Ensure proper maintenance of vehicles and equipment to minimize release of fumes and other pollutants in the air. Mix material in an enclosed space Cover material when transporting Prohibit open burning in accordance with Air Pollution Control Ordinance 	Building Contractor	PM/ECO
Socio-economic Traffic Management	 Include in bidding documents that the contractor should: Limit the use of vehicles to the site and avoid unnecessary trips Set up a time schedule for transporting material with the purpose of avoiding traffic congestion Avoid using busy roads especially during rush hours, i.e., early mornings (06:00-08:00AM) and late afternoon (05:00-06:00PM). The contractors must ensure to use clear road signs at construction sites to minimize risks of accidents 	Building Contractor	PM/ECO
Noise and Vibration Management	 Abide by the time and noise limits specified in Noise Control Regulations Provide employees with PPE i.e., earmuffs 	Building Contractor	PM/ECO
Occupation health and Safety	 Personal protective equipment like dust masks must be provided to all employees working in the likely dusty areas. Proper signage at the construction site Provision of firefighting measures in accordance with Labor Act (Health Regulations) Appoint a safety officer onsite. 	Building Contractor	PM/ECO

	The construction site must be barricaded		
Increase crime rate	Ensure that there is 24hr security onsite.	Project Manager	PM/ECO
Spread of HIV/AIDS	Recruit as many local people as possibleProvide health education and awareness	Project Manager	PM/ECO
Workers' sanitation	 One sanitary facility (1 toilet with shower, 1 washing basin, 1 urinal) per 25 workers. Sanitary facilities to be covered, easily accessible, ventilated, well lit, maintained, and sanitized Ensure safe drinking water for employees 	Building Contractor	PM/ECO
Increase Water Demand	Include in bidding documents that the contractor should. O Commit to minimizing the use of water during construction works. O Recycle water for construction activities	Building Contractor	PM/ECO
Archaeological resources	 Should there be any suspected archaeological findings during construction, it must be reported to the NHC in accordance with National Heritage Act. 	Building Contractor	PM/ECO
Employment opportunities (+ve)	Give priority to local people	Building Contractor	PM/ECO

Table 4: Proposed Mitigation Measures: Operation

Environmental Issue/Impacts	Mitigation Measures	Roles and Responsibilities	
issue/iiiipacis		Implementation	Monitoring
Pollution of surface water from wastewater	 No direct discharge of pollution (wastewater or solid waste) into the watercourse Avoid contamination of surface water body and drainage Contain all leaks i.e., oil, Clean-up all spillages and contaminated soil 	Proponent	MoHSS Oshana Regional Council
Pollution of groundwater from contamination or leakages	 No direct discharge of pollution into the watercourse Ensure that sanitary facilities are frequently cleaned and regularly monitored. Monitor sewer system regularly Kitchens must have oil traps 	Tenants	MAWLR
Increase Water and Energy demand	 Ensure supply of potable water in accordance Water Demand Plan Harvest rainwater for use in gardening and other activities Encourage us of renewable energy i.e. solar geysers 	Proponent	NORED
Security of tenants	Ensure to install burglar doors and window facilities to secure properties and provide security services.	Tenants	Proponent
Risk of fire	Ensure all properties are provided with fire extinguishersInstall fire detection system	Tenants	Proponent
Traffic impacts	Ensure road signs at the intersections are maintained	Proponent	RA/NAMPOL
Waste generation	 All waste generated must be contained and properly gathered and collect as per local authority laws Encourage waste segregation through a 3bin system (Tins, Paper, Plastics) Encourage recycle of waste 	Tenants	MoHSS
Employment opportunities	Give priority to local people	Proponent	Oshana Regional Council

6. DECOMMISISONING PHASE

The decommissioning of the proposed Las Vegas City Centre is not foreseen during the validity of the environmental clearance certificate being applied for. However, should the decommissioning become pertinent at any stage, an EIA study should be undertaken and ESMP should be prepared prior to the commencement of any decommissioning works. The ESMP should entail the follow components.

- o The nature of the envisaged decommissioning and rehabilitation process
- Types and nature of components to be decommissioned i.e., buildings, piping, etc.
- Types and quantity of waste to be produced i
- Proposed waste management strategy.
- Envisaged environmental rehabilitation procedures.
- o Responsibilities of each party to be involved in the decommissioning process.

7. MONITORING

To ensure continual improvement in environmental performance and reduce adversity of potential negative impacts, it is advisable to keep monitoring the identified environmental receptors. The proponent must ensure that compliance monitoring is conducted at different interval/frequencies throughout the operation of the Las Vegas City Centre as indicated in the table below.

Table 5: Monitoring measures

Issue to be monitored	Monitoring Objectives	What need to be monitored	Frequency and means of Monitoring
Public Health risks	To operate the complex in an environmentally friendly and socially acceptable manner.	-cleanliness and general hygiene -nuisance production -fire fighting equipment -sewage system	Monthly inspections and physical observation.
Water and energy demand	Sustainable resources utilization	-water consumption -energy consumption	Monthly water balance checks
Waste management	-Prevent environmental pollution and contamination.	-liters -waste handling and disposal -types of waste produced	Daily inspections and physical observation.
Implementation of the ESMP	-Ensure compliance and adherence to the regulative measures	Implementation of specified measures and compliance to the EMP and other relevant legal requirements.	Biannual environmental report to MEFT.

8. CONCLUSION

The preparation of this ESMP is based on the initial designs and current information provided. Any changes or deviation from the initial plan of this project shall trigger changes to this ESMP. If all mitigation measures are implemented, it is anticipated that the consequences and/or probability of the predicted negative impacts will be managed/reduced. Although the implementation of this ESMP requires a multitude of administration, the proponent should play a pivotal role as outlined in this report.

Upon approval by the MEFT, this ESMP should be used as an on-site reference document for the proposed Las Vegas City Centre during planning & design, construction, operation and maintenance and decommissioning phases. It should be considered as a legally bidding document; thus, any deviation or transgression is punishable by law as per the Environmental Management Act, No. 07 of 2007. Parties responsible for transgressing should be held responsible for any rehabilitation that may need to be undertaken. A copy of this ESMP shall be always kept onsite by the proponent.

The proponent should therefore ensure proper coordination with all parties involved in the project activities during all project phases. The proponent should also ensure to avail necessary resources (i.e., human, financial etc.,) and training to enable the full implementation of this ESMP. Monitoring of certain environmental parameters must be conducted on regular bases as outlined in this ESMP. Environmental biannual reports must be kept available for possible submissions to the MEFT and ensure renewal of the project's ECC.