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YOUR REF: ZEMA/FAC/105/12/05/1/7

10th July, 2023

The Director General
Zambia Environmental Management Agency
Corner of Church Rd and Suez Roads
P.O Box 35131
Lusaka, Zambia

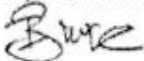
Dear Sir,

**RE: THE ENVIRONMENTAL PROJECT BRIEF - SECOND DRAFT SUBMISSION
FOR PEMBA LEAF TOBACCO ON LOT No. MAMBW/4014875**

I refer to the above subject and your letter dated 19th June, 2023, I have considered your comments and revised the Environmental Project Brief accordingly. I therefore, submit the second draft of my Environmental Project Brief for the establishment of a Tourism Facility in Lower Lupande in Chief Kakumbi's Chiefdom in Mfuwe–Mambwe District of Eastern Province–Zambia for your review and further guidance.

I look forward to hear from you as soon as possible.

Yours Faithfully,



Ismail Zamakda
DIRECTOR

**GENERIC ENVIRONMENTAL PROJECT BRIEF REPORT
FOR THE
CONSTRUCTION AND OPERATION
OF A TOURISM FACILITY (LODGE & CAMPSITE)
ON LOT No. MAMB/4014875
IN CHIEF KAKUMBI'S CHIEFDOM
OF MFUWE – MAMBWE DISTRICT – EASTERN PROVINCE -
ZAMBIA
FOR
PEMBA LEAF TOBACCO
TO BE SUBMITTED ON
DATED 15TH AUGUST, 2023**



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ABBREVIATIONS AND ACRONYMS

ADMADE	ADMINISTRATIVE DESIGN FOR GAME MANAGEMENT
AIDS	ACQUIRED IMMUNE DEFICIENCY SYNDROME
CBD	CONVENTION ON BIOLOGICAL DIVERSITY
CBNRM	COMMUNITY BASED NATURAL RESOURCE MANAGEMENT
CITES	CONVENTION IN INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FLORA AND FAUNA
CRB	COMMUNITY RESOURCE BOARD
DNPW	DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
EIA	ENVIRONMENTAL IMPACT ASSESSMENT
EMA	ENVIRONMENTAL MANAGEMENT ACT
EMMP	ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN
EPB	ENVIRONMENTAL PROJECT BRIEF
EPPA	EASTERN PROVINCE PLANNING AUTHORITY
GMA	GAME MANAGEMENT AREA
GRZ	GOVERNMENT OF THE REPUBLIC OF ZAMBIA
HIV/AIDS	HUMAN IMMUNO DEFICIENCY SYNDROME
IDP	INTEGRATED DEVELOPMENT PLAN
IUCN	INTERNATIONAL UNION FOR CONSERVATION OF NATURE
LIRDP	LUANGWA INTEGRATED RESOURCE PROGRAMME
MDC	MAMBWE DISTRICT COUNCIL
NEAP	NATIONAL ENVIRONMENTAL ACTION PLAN
NGO	NON-GOVERNMENTAL ORGANIZATION
SCAFE	SOIL CONSERVATION AND AGROFORESTRY EXTENSION SOUTH
SLAMU	LUANGWA AREA MANAGEMENT UNIT
STD	SEXUALLY TRANSMITTED DISEASE
UNFCCC	UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE
V-WASHE	VILLAGE WATER SANITATION HEALTH EDUCATION
ZFAP	ZAMBIA FORESTRY ACTION PLAN
ZEMA	ZAMBIA ENVIRONMENTAL MANAGEMENT AGENCY

EXECUTIVE SUMMARY

a) Brief Description of the Proposed Project

This document is an Environmental Project Brief (EPB) report for the proposed Lodge and Camp site **HEREIN** referred to as a '**TOURISM FACILITY**' to be located in Lower Lupande Game Management Area (GMA) South of Uyowa School with a proposed boundary on the North being Mpalazi stream going South East in Chief Kakumbi's Chieftdom of Mfuwe in Mambwe District of Eastern Province Zambia on Lot No. Mamb/4014875.

The project will promote and focus on ecotourism activities to benefit the local people in the Chief Kakumbi's Chieftdom. Promotion of ecotourism activities in the Lower Lupande and will open Kakumbi's Chieftdom to private investment and public socio-economic infrastructure development.

Kakumbi's Chieftdom is a beautiful wilderness and wildlife area that has rich natural resources base suitable for tourism activities such as game drives, photographic and walking safaris, and recreation activities such as camping and picnics.

The project proponent will create employment opportunities for the local people and pay taxes and levies to the Local Authority, Mambwe District Council (MDC). The local Authority charges Rates, Personal Levy and issues business licenses to raise funds for its budget used to finance socio-economic programs and projects in the district and has statutory power to make Bylaws to regulate and levy the tourism industry in Mambwe District.

The project proponent will collaborate with the Department of National Parks and Wildlife (DNPW), The Community Resource Board (CRB) and Mambwe District Council (MDC) to motivate and encourage the local community to participate in developing ecotourism activities in their Chieftdom so that the community can derive long term direct or indirect benefit from their natural resources. The local people will be assisted by the project proponent to protect the valuable Wildlife and Natural Resources in their Chieftdom from short-sighted destructive activities.

Tourism is one of the key lead sectors identified by the Government of the Republic of Zambia to trigger investment and economic growth in natural resource rich areas like Mambwe district. Therefore, the proposed project is expected to generate positive returns that will contribute to conservation of biological resources, poverty alleviation and socio- economic development in Mambwe District.

The report is designed to examine the impacts of the proposed the proposed Tourism facility with a focus on ecological units and systems within the project area including the physical, biological, socio-economic, socio-cultural and archaeological environmental impacts and to provide mitigation measures for the identified impacts.

b) Technology

The technology that will be used to implement the proposed development during construction and operation will be both human and machine labour. Machinery to be used will include; Earthmoving equipment such as excavators, loaders and graders; Construction equipment such as dumpers, concrete mixers, paving, spraying and plastering machines and tippers; Material/equipment handling machinery such as cranes and forklifts and also vehicles, laptops, desktops and printing devices.

c) Lifespan of the project

The construction phase will take about 1 year to 2 years and the estimated lifespan of this project initiative will be a minimum of 98 years following the Lifespan of the Certificate of title issued by Ministry of Lands for a period of 99 years to Pemba Leaf Tobacco with effect from January, 2022. The project implementation date is based upon receipt of the Decision letter from ZEMA.

d) Project objectives

The main project objectives are:

- ❖ To tap into the business opportunities of the Hospitality and Tourism industry in South Luangwa Game Management Areas.

- ❖ Provide employment for the skilled, semi-skilled and casual workers during the preparation and subsequent operation stages at the Tourism Facility through direct and indirect job opportunities for the local communities;
- ❖ Join and enhance other tourism circuits within the South Luangwa Game Management Area whilst maintaining an attractive destination;
- ❖ Contribute revenue to the Government and the Local Authority through payment of corporate taxes, rates and personal levy; and
- ❖ Contribute Foreign exchange earnings, since tourists bring into the country the much-needed Foreign exchange.
- ❖ Collaborate with the Community Resource Board (CRB) to promote wildlife and Forest conservation.
- ❖ To fulfill the condition given by the Department of National Parks and Wildlife (DNPW) in their letter of consent to the project.

e) Location

The Tourism Facility will be located in Lower Lupande Game Management Area (GMA) South of Uyowa School with a proposed boundary on the North being Mpalazi stream going South East in Chief Kakumbi's Chieftdom of Mfuwe in Mambwe District of Eastern Province Zambia and is on Lot No. MAMB/4014875. The coordinates for the site using Arc 1950 UTM33

	Eastings	Northings	Distances (Metres)
A.	369447.79	8549414.76	A – B = 250m
B.	369697.64	8549423.47	B – C = 240m
C.	369782.78	8549199.08	C – D = 250m
D.	369533.43	8549190.56	D – A = 240m

f) INVESTMENT COST

The developer intends to invest a minimum of USD 350,000, which is the estimated total cost of the project.

g) Alternatives Considered

There are currently no project alternative sites that have been considered should ZEMA consider the site and investment in question to be unsuitable. However, there some alternatives considered in terms of Electricity Supply, Water Supply for drinking and also Sanitation.

h) Relevant Legislation

The EPB is prepared in line with the Zambia Environmental Management Act No. 12 of 2011 of the Laws of Zambia and its subsidiary legislation, the Environmental Impact Assessment (EIA) Regulations SI No. 28 of 1997. Section 3 of the EIA Regulations requires that all developments be developed after a Project Brief has been prepared and the Zambia Environmental Management Agency issues a Decision Letter.

In the development of this Environmental Project Brief, the following legal and policy framework was considered;

- ❖ The Environmental Management Act No. 12 of 2011.
- ❖ Environmental Impact Assessment (EIA); Section 29 of the EMA Act No. 12 of 2011:
- ❖ Waste Management Regulations; Section 63 of the EMA No. 12 of 2011
- ❖ Water Pollution Control; Section 46 of the EMA No. 12 of 2011:
- ❖ Prohibition of discharges into environment; Section 32 of the EMA No. 12 of 2011:
- ❖ Cessation of activity relating to hazardous waste; Section 59 of the EMA No. 12 of 2011
- ❖ Urban and Regional Planning Act No. 3 of 2015
- ❖ The Local Government Act No. 2 of 2019
- ❖ Water Resources Management Act, No. 21 of 2011
- ❖ The Forest Act No. 4 of 2015
- ❖ Zambia National Parks and Wildlife Act Cap 201
- ❖ Zambia Wildlife Act No. 14 of 2015
- ❖ The National Heritage Conservation Commission Act CAP 173 of 1989
- ❖ Lands Act Cap 184 of 1995
- ❖ The Public Health Act CAP 295 of 1930
- ❖ Employment Act. Cap 268

- ❖ Ramsar convention
- ❖ Paris Agreement to the United Nations Framework Convention on Climate
- ❖ Convention on Biological Diversity (CBD): -
- ❖ Convention on International Trade in Endangered Species of wild Fauna and Flora
- ❖ The Lusaka Agreement on Cooperative Enforcement Operations.
- ❖ United Nations Convention to Combat Desertification
- ❖ World Heritage Convention
- ❖ Basel Conventions on the Control Trans boundary Movements of Hazardous Waste and their Disposal: -
- ❖ Convention on Migratory species and Africa- Eurasian Water Bird Agreement: -
- ❖ The United Nations Framework Convention on Climate Change (UNFCCC)

i) Major Impacts

The study addresses issues surrounding the following aspects of the environment: - Land and Soil; Air quality; Surface and underground water; Occupational health and safety; Public health and safety; Local Ecosystem, vegetation and habitat, Noise; and Employment and its multiplier effects.

The major impacts will be based on the following identified environmental aspects and these are: -

- 1 Vegetation Clearing / Loss of Vegetation due to Land clearing;
- 2 Soil Disturbance / Compaction;
- 3 Soil Erosion;
- 4 Surface and Ground Water Pollution;
- 5 Dust Pollution;
- 6 Air Emissions / Air Pollution;
- 7 Noise Pollution / Ambient Noise;
- 8 Solid Waste Pollution;
- 9 Liquid Effluents / Wastewater / Soot Generation as Wastewater;
- 10 Products and By-Products;
- 11 Health Risk of Workers;

- 12 Safety and Risk of Workers;
- 13 Population Influx and Secondary Developments;
- 14 HIV / AIDS and STDs; and
- 15 Industrial Hazard Management;

j) Environmental Management Commitments

The Environmental Management Plan shall include the mitigation measures, proposed monitoring system and an environmental audit plan that shall be conducted within 36 months of project implementation sets forth a framework to ensure that all the major issues outlined are addressed in order to minimize adverse impacts during all phases of project implementation. ZEMA will carry out environmental audit inspections at regular intervals to identify non-conformances for which corrective action will be taken. With regards to Safety and Emergency Preparedness, the management will prepare an emergency preparedness plan, procure first aid equipment, adhere to the hospitality industry regulations and conduct emergency foot-drills for its workers.

k) Main Project Components

The main project components for the Tourism Facility will include the following:

- I. Preparation phase
 - a) Desk Study/Literature review
 - b) Opening up of access and land clearance
- II. Construction phase: Accommodation construction (Chalets, Offices, Kitchen and Restaurant, Camping site and support structures; sanitation, waste management pits and first aid).
- III. Decommission Phase which will include issuing of closure notices, shutting down of all construction activities, Removal of removable components of the building such as glass, finishing's, tiles, aluminium frames, etc. Demolition of all temporal structures and buildings, Segregation, collection and disposal of demolition debris from the site to a designated dump site and last Decommissioning Report.
- IV. Operation Phase – daily administration, accommodations and hospitality services.

1.0 INTRODUCTION

1.1 Overview

The Government's long-term vision for the Tourism Sector is to ensure that Zambia becomes one of the best five major tourist destinations of choice in Africa with unique features, which contributes to sustainable economic growth and poverty reduction. Tourism has remained as one of the sectors in Zambia that plays a pivotal role in stimulation of national economic growth. Growth in Tourism sector can result in employment creation; rural and infrastructure development; increased foreign exchange earnings; and community and entrepreneurial development.

1.2 Rationale of the Proposed Project

Government, in recognizing the integral part tourism plays in the sustainable development of the country, accepts responsibility to rank tourism as the second priority sector next to agriculture. This can only be achieved by bringing in more players in the industry because the government is becoming smaller to be everywhere and provide the required hospitality services.

It is in line of this government priority that Pemba Leaf Tobacco has taken advantage of the prevailing environment and intends to put up a Tourism Facility in the Lower Lupande in Chief Kakumbi's Chiefdom of Mfuwe in Mambwe District of Eastern Province. This EPB was prepared in accordance with the Environmental Management Act, No. 12 of 2011 of the Laws of Zambia and its subsidiary legislation, the Environmental Impact Assessment (EIA) Regulations SI No. 28 of 1997.

1.3 Specific Objectives of the Environmental Project Brief

- ❖ Provide employment for the skilled, semi-skilled and casual workers during the preparation and subsequent operation stages at the Tourism Facility through direct and indirect job opportunities for the local communities;
- ❖ To provide and maintain an attractive destination for luxury and affordable and Executive accommodation and camping facility.

- ❖ To provide and maintain the best photographing safari.
- ❖ To provide and maintain the best and safest game and safari drives.
- ❖ To provide the best local and International dishes from our well-equipped and stocked Kitchen with a well-ventilated spacious Restaurant.
- ❖ Contribute revenue to the Government and the Local Authority through payment of corporate taxes, rates and personal levy; and
- ❖ Contribute Foreign exchange earnings, since tourists bring into the country the much needed Foreign exchange.
- ❖ Collaborate with the Community Resource Board (CRB) to promote wildlife and Forest conservation.
- ❖ To ensure that the requirement under Section 3 of the EIA Regulations which states that all developments ought to be developed after a Project Brief has been prepared and the Zambia Environmental Management Agency issues a Decision Letter.
- ❖ To ensure that the condition set out by the Department of National Parks and Wildlife (DNPW) in the Consent Letter for the project is met.

1.4 Company Information

The Tourism Facility will be wholly owned by Pemba Leaf Tobacco which is a seasoned and experience business entrepreneurship based in Chipata where it supports over 3000 Tobacco farmers and now wants to diversify into the Hospitality Industry. The Tourism Facility will be for the sole purpose of providing First class accommodation and tourism facilities within the Tourism and hospitality sector.

The Tourism site will be built exclusively from environmentally friendly local materials and will incorporate a local labor force to supply the same. This will ensure the Tourism Facility blends in with the surrounding immediate area but add value and beauty to Game Management Area as recommended by the Department of National Parks and Wildlife (DNPW) so that the area remains natural.

Firstly, the Tourism Facility will need to extend the access road to the site, construct Twelve (12) Chalets, Stores Room, Camping Site, Office Accommodation, two Blocks of Staff

Accommodation, a Manager's house, an Ablution Block, Kitchen/ Restaurant and storm water drainage and sewer disposal facilities.

The Tourism Facility's civil works will include construction of water supply reticulation system from an existing borehole on the project site to all the building structures on the project premises, installation of a water storage tank and a submersible pump adequate to meet all water needs during construction and operation phases of the project; and electrical fittings and fixtures. Similarly, there are two common types of sewer disposal systems commonly used in Mambwe district namely: - Septic tanks and Pit Latrines. The project will use VIP Pit Latrines during the construction phase and Septic tanks during operation phase.

Table 1: Developers Details

Name of Developer	PEMBA LEAF TOBACCO
Postal Box No.	P.O. Box 511017
Cell	+260950556850
Tell/Fax Number	To be advised
Contact Person	ISMAIL YOUSUF ZAMAKDA
Designation	DIRECTOR
Email Address	Pembaleaf@yahoo.com
Sector	TOURISM/HOSPITALITY
Estimated Cost	U\$350,000
Residential Address	PLOT No. 5699 KAWALALA RD – CHIPATA
Pacra Certificate	Certificate No. 320170014502
Zambia Revenue Authority TPIN	TPIN No. 1000217333

The project will fully be owned by Pemba Leaf Tobacco and will fully being funded by the same.

Table 2: Company Directors/Shareholders

DIRECTOR/SHAREHOLDER	NATIONALITY	% SHAREHOLDING
ISMAIL YOUSUF ZAMAKDA	Zambian with Green NRC No. 430505/52/1	100%

1.5 Track Record/Previous Record Experience

Pemba Leaf Tobacco is a vibrant Business with vast experience in Business. The management experience spans over 30 years starting with an investment in Tobacco farmer support programs and Tobacco Exports, the business that has been successfully built and operates in Chipata and Its Director Mr. Ismail Yousuf Zamakda has over 15 years' experience in hospitality business having been a Business Associate for Lupande Lodge in Mfuwe a company he worked with the Managing Director/Owner of Lupande Lodge from construction to operation.

1.6 Brief Description of the Location

The Tourism Facility will be located in Lower Lupande Game Management Area (GMA) South of Uyowa School with a proposed boundary on the North being Mpalazi stream going South East in Chief Kakumbi's Chiefdom of Mfuwe in Mambwe District of Eastern Province Zambia and is on Lot No. MAMB/4014875.

1.7 Total Project Cost/Investment

Pemba Leaf Tobacco intends to invest a minimum of US\$350,000.00 (Three and Fifty Thousand United States Dollars) which is estimated to be the full total cost of the project.

1.8 Proposed Implementation Date

The project implementation date is based upon receipt of the Decision letter from ZEMA, which is a condition, by the Department of National Parks and Wildlife (DNPW) for any activities to take place in a Game Management Area (GMA).

2.0 LEGAL AND POLICY FRAMEWORK

2.1 Policy, legal and institutional framework relevant to the project

This section presents social and environmental laws and institutions that shall apply to the proposed tourism project. This proposed tourism EPB was prepared in accordance with the legal framework of the Environmental Management enshrined in the Environmental Management Act, No. 12 of 2011 of the Laws of Zambia and its subsidiary legislation, the Environmental Impact Assessment (EIA) Regulations SI No. 28 of 1997. Section 3 (1) of the EIA Regulations states that, "A developer shall not implement a project for which a project brief or environmental impact statement is required under these Regulations, unless the project brief or the environmental impact statement has been concluded in accordance with these regulations. The legislation institutional framework requirements associated with the proposed developmental works include among others the following and as outlined below.

2.1.1 The Environmental Management Act No. 12 of 2011

Provision: The Act provides for integrated environmental management and the protection and conservation of the environment and the sustainable management and use of natural resources; provide for the preparation of the State of the Environment Report, environmental management strategies and other plans for environmental management and sustainable development; provide for the conduct of strategic environmental assessments of proposed policies, plans and programmes likely to have an impact on environmental management; provide for the prevention and control of pollution and environmental degradation; provide for public participation in environmental decision- making and access to environmental information; establish the Environment Fund; provide for environmental audit and monitoring; facilitate the implementation of international environmental agreements and conventions to which Zambia is a party; repeal and replace the Environmental Protection and Pollution Control Act, 1990; and provide for matters connected with, or incidental to, the foregoing.

Relevance: The Tourism Facility being a development in a Game Management area falls under the project category requiring the preparation of an Environmental Project Brief. The

Environmental Project Brief approval decision letter is necessary for implementing this project as guided also by the Department of National Parks and Wildlife.

Compliance: Preparation of Environmental Project Brief is done in accordance with the above legal requirements. The developer will avoid water pollution and air pollution during construction phase of the Tourism Facility. The developer shall also avoid unnecessary cutting of trees in order to protect and conserve the environment. Environmental monitoring to continue throughout the project phases as outlined in the Environmental Management Plan.

Enforcing Authority: Zambia Environmental Management Agency and Department of National Parks and Wildlife and the Community Resource Board.

The following are the actual Sections of the EMA, 2011 which are relevant to the project:

2.1.1.1 Environmental Impact Assessment (EIA); Section 29 of the EMA Act No. 12 of 2011:

This Section provides that A person shall not undertake any project that may have an effect on the environment without the written approval of the Agency, and except in accordance with any conditions imposed in that approval.

Relevance: The Environmental Project Brief for the suggested Tourism Facility has been prepared with regard to the legal framework on Environmental Management contained in the Environmental Management Act, Cap 204 of the Laws of Zambia and its subsidiary legislation, the Environmental Impact Assessment Section No. 29 of 2011 part (1) read together with the Statutory Instrument No. 28 of the EIA Regulations of the EPPCA of 1990 which states that, “a developer shall not undertake a project for which a project brief or environmental impact statement is required, unless the project brief or the environmental impact statement has been concluded in accordance with the foregoing section/regulations and the Zambia Environmental Management Agency has issued a decision letter.” This Act also outlines offences relating to failure to prepare and submit an EIA report for projects that require such reports. The suggested project is outlined in the Environmental Impact Assessment Regulations, 2016,

Third Schedule (Regulations (5) under the heading Projects which require Project Briefs Class V (iv).

The tourism project activities will be subjected to mandatory EIA as per requirements of the Environmental Management Act No 12 (2011) read together with the Environmental Impact Assessment (EIA) Regulations, Statutory Instrument No. 28 of 1997.

Compliance: The developer, Pemba Leaf Tobacco will obtain all necessary approvals and permits as contained under the Act. The new development will be carried out in accordance with the EIA procedures laid out in the Environmental Impact Assessment Regulations enforced by ZEMA.

2.1.1.2 Waste Management Regulations; Section 63 of the EMA No. 12 of 2011:

This section provides the regulations of waste management, treatment and disposal. It also classify and define categories of waste, including hazardous, and clinical, waste, and deem certain substances to fall within or outside such categories and also restrict the locations at which waste disposal and waste management may be carried out; it also require specified categories of persons involved in the generation, management and disposal of waste to gather data and to submit reports, studies and plans, and prescribe the form and content of the reports, studies and plans.

Relevance: The construction and operation activities of the proposed project will likely generate waste and its transportation and disposal may require licensing.

Compliance: Handling and Management of solid wastes should be done in accordance with the requirements of this section.

2.1.1.3 Water Pollution Control; Section 46 of the EMA No. 12 of 2011:

It provides that a person shall not discharge or apply any poisonous, toxic, eco-toxic, obnoxious or obstructing matter, radiation or other pollutant, or permit any person to dump or discharge such matter or pollutant into the aquatic environment in contravention of water pollution control standards established by the Agency in liaison with the relevant appropriate authority.

Relevance: The construction and operation activities of the Tourism Facility has the chances to lead to leakages, oil spills or wash pollutants from vehicles and generators which may end up into the natural water bodies.

Compliance: Management of the site shall take into account the need to prevent pollution of the aquatic environment.

2.1.1.4 Prohibition of discharges into environment; Section 32 of the EMA No. 12 of 2011

It provides that a person shall not, without a license, discharge, cause or permit the discharge of, a contaminant or pollutant into the environment if that discharge causes, or is likely to cause, an adverse effect. It also provides that a person who operates a motor vehicle, boat, train, aircraft or other similar conveyance shall not operate the conveyance in a manner that is likely to cause the discharge of a contaminant or pollutant in contravention of the prescribed emission standards; or import any machinery, equipment, device or similar thing likely to cause the emission of a contaminant or pollutant into the environment in contravention of prescribed emission standards.

Relevance: The Gas and fuel storage facility at the proposed tourist facility will be fed with fuel and equipped with fire extinguishers and other firefighting equipment which may not be environmentally friendly.

Compliance: The Tourism Facility management will ensure that only certified CFCs free fuel/ low Sulphur fuel is brought to the site and all fire extinguishers stored on site meant to deal with potential fire outbreaks will be those that contain substances that are environmentally friendly.

2.1.1.5 Cessation of activity relating to hazardous waste; Section 59 of the EMA No. 12 of 2011:

It provides for the immediately prevention of any hazardous waste generation, handling, transportation, storage and disposal activity which presents an imminent and substantial danger to human health, well-being or the environment.

Relevance: The gas fridges, stoves and fire extinguishers if not handled properly are likely to generate wastes which are considered as hazardous therefore, the handling of such facilities is subjected to these regulations.

Compliance: Storage, accumulation, collection, transportation, pre-treatment and disposal of hydrocarbon contaminated materials will be done in compliance with this section.

2.1.2 Urban and Regional Planning Act No. 3 of 2015

Provision: The Act provide for development, planning and administration principles, standards and requirements for urban and regional planning processes and systems; provide for a framework for administering and managing urban and regional planning for the Republic; provide for a planning framework, guidelines, systems and processes for urban and regional planning for the Republic; establish a democratic, accountable, transparent, participatory and inclusive process for urban and regional planning that allows for involvement of communities, private sector, interest groups and other stakeholders in the planning, implementation and operation of human settlement development; ensure functional efficiency and socioeconomic integration by providing for integration of activities, uses and facilities; establish procedures for integrated urban and regional planning in a devolved system of governance so as to ensure multi-sector cooperation, coordination and involvement of different levels of ministries, provincial administration, local authorities, traditional leaders and other stakeholders in urban and regional planning; ensure sustainable urban and rural development by promoting environmental, social and economic sustainability in development initiatives and controls at all levels of urban and regional planning; ensure uniformity of law and policy with respect to urban and regional planning; repeal the Town and Country Planning Act, 1962, and the Housing (Statutory and Improvement Areas) Act, 1975; and provide for matters connected with, or incidental to, the foregoing.

Relevance: Prescribes the planning, use and zoning of land by constituted authorities, and its subsequent acquisition for development by developers.

Compliance: The Tourism Facility will ensure that all development and operational approvals from relevant authorities are obtained accordingly.

Enforcing Authority: Ministry of Local Government and Housing (Local Councils)

2.1.3 The Local Government Act No. 2 of 2019

Provision: This Act provides for an integrated local government system; give effect to the decentralization of functions, responsibilities and services at all levels of local government; ensure democratic participation in, and control of, decision making by the people at the local level; revise the functions of local authorities; provide for the review of tariffs, charges and fees within the area of a local authority; provide for the proceedings of the council and committees; provide for the role of traditional leadership in democratic governance; repeal and replace the Local Government Act, 1991; and provide for matters connected with, or incidental to, the foregoing.

Relevance: Prescribes functions of Local Authorities and the Local Government System, on elements of pollution control and the protection of the environment.

Compliance: Adhere to local authority regulation concerning pollution control and protection of the environment.

Enforcing Authority: Ministry of Local Government and Housing (Local Councils)

2.1.5 Water Resources Management Act No. 21 of 2011

Provision: The Act provides for the management, development, conservation, protection and preservation of the water resource and its ecosystems; provide for the equitable, reasonable and sustainable utilization of the water resource; ensure the right to draw or take water for domestic and noncommercial purposes, and that the poor and vulnerable members of the society have an adequate and sustainable source of water free from any charges; create an enabling environment for adaptation to climate change; provide for the constitution, functions and composition of catchment councils, sub-catchment councils and water users associations; provide for international and regional cooperation in, and equitable and sustainable utilization of, shared water resources; provide for the domestication and implementation of the basic principles and rules of international law relating to the environment and shared water resources as specified in the treaties, conventions and agreements to which Zambia is a State Party; repeal and replace the Water Act, 1949; and provide for matters connected with, or incidental to, the foregoing.

Relevance: Safeguards water courses and ground water from pollution, hence the developer will ensure all measures are implemented to prevent any pollution of the groundwater.

Compliance: Developer will protect all the water resources in the area because they are important even for the animals that depend on the same water for drinking. The development will be built 30 metres away from the water bodies to ensure that the water bodies are preserved.

Enforcing Authority: Ministry of Mines Energy and Water Development and Water Resources Management Authority.

2.1.6 The Forest Act No. 4 of 2015

Provision: The Act provide for the conservation and use of forests and trees for the sustainable management of forests ecosystems and biological diversity; establish the Forest Development Fund; provide for the implementation of the United Nations Framework Convention on Climate Change, Convention on International Trade in Endangered Species of Wild Flora and Fauna, the Convention on Wetlands of International Importance, especially as Water Fowl Habitat, the Convention on Biological Diversity, the Convention to Combat Desertification in those Countries experiencing Serious Drought and/or Desertification, particularly in Africa and any other relevant international agreement to which Zambia is a party; repeal and replace the Forests Act, 1999; and provide for matters connected with, or incidental to, the foregoing.

Relevance: Some areas will be cleared from vegetation and some trees will be cut. Monitoring methods and mitigation measures for possible environmental impacts are described in the projects EMP.

Compliance: The developer will work with all the stakeholders in ensuring that all development activities are done according to requirements and the conservation and use of forests and trees for the sustainable management of forests ecosystems and biological diversity effectively managed.

Enforcing Authority: Forestry Department, the Community Resource Board and the Department of National Parks and Wildlife.

2.1.7 The National Heritage Conservation Commission Act CAP 173 of 1989

Provision: The Act provide for the repeal and replacement of the Natural and Historical Monuments and Relics Act; to establish the National Heritage Conservation Commission; to define the functions and powers of the Commission; to provide for the conservation of ancient, cultural and natural heritage, relics and other objects of aesthetic, historical, prehistorical, archaeological or scientific interest; to provide for the regulation of archaeological excavations and export of relics; and to provide for matters connected with or incidental to the foregoing.

Relevance: This act is relevant since bush clearing, machine installation and construction of the lodge may alter and/or damage heritage sites within the project area if any.

Compliance: This Act will guide the developer on the reporting, preservation and protection of heritage sites that may be found within the project area.

Enforcing Authority: The National Heritage Conservation Commission

2.1.8 Lands Act Cap 184 of 1995

Provision: The Act provide for the continuation of Leaseholds and leasehold tenure; to provide for the continued vesting of land in the President and alienation of land by the President; to provide for the statutory recognition and continuation of customary tenure; to provide for the conversion of customary tenure into leasehold tenure; to establish a Land Development Fund and a Lands Tribunal; to repeal the Land (Conversion of Titles) Act; to repeal the Zambia (State Lands and Reserves) Orders, 1928 to 1964, the Zambia (Trust Land) Orders, 1947 to 1964, the Zambia (Gwembe District) Orders, 1959 to 1964, and the Western Province (Land and Miscellaneous Provisions) Act, 1970; and to provide for matters connected with or incidental to the foregoing.

Relevance: The Act is relevant because all land in Zambia is vested in the state.

Compliance: Tourism Facility will utilize the land in accordance with the intended purpose and provisions of this Act. The developer has so far complied with this Act during the acquisition of the land and Title deed for the same land and it will strive to comply with any provisions under this act.

2.1.9 ZAMBIA NATIONAL PARKS AND WILDLIFE ACT CAP 201

Provision: The Act provide for the establishment, control and management of National Parks and for the conservation and protection of wildlife and objects of aesthetic, prehistoric, historical and scientific interest in National Parks; to provide for the establishment of game management areas; to provide for the licensing of hunting and the control of the possession, transfer, sale, import and export of wild animals and trophies; to provide for matters connected with or incidental to the foregoing.

Relevance: The proposed development is located in the Game Management Area where they are wildlife and possible objects of aesthetic, prehistoric, historic and scientific interest related to the National Parks which is less than 5 km from the site.

Compliance: The Developer shall ensure the conservational and protection of wildlife and objects of aesthetic, prehistoric, historic and scientific interest relating to the National Park and cooperate with the stakeholders such as the Department of National Parks and Wildlife, the Community Resource Boards and the Hunting Safari for the area. The developer has already made progress by obtaining the consent from all the stakeholders following his commitment to protect and conserve wildlife.

2.1.10 ZAMBIA WILDLIFE ACT No. 14 of 2015

Provision: An Act to provide for the winding up of the affairs of the Zambia Wildlife Authority; establish the Department of National Parks and Wildlife in the Ministry responsible for tourism; provide for the transfer of the functions of the Authority to the Ministry responsible for tourism, Department of National Parks and Wildlife and Director of National Parks and Wildlife; establish the Wildlife Management Licensing Committee; provide for the establishment, control and management of National Parks, bird and wildlife sanctuaries and for the conservation and enhancement of wildlife eco-systems, biological diversity and objects of aesthetic, pre-historic, historical, geological, archeological and scientific interest in National Parks; provide for the promotion of opportunities for the equitable and sustainable use of the special qualities of public wildlife estates; provide for the establishment, control and management of Community Partnership Parks for the conservation and restoration of ecological structures for non-

consumptive forms of recreation and environmental education; provide for the sustainable use of wildlife and the effective management of the wildlife habitat in Game Management Areas; enhance the benefits of Game Management Areas to local communities and wildlife; involve local communities in the management of Game Management Areas; provide for the development and implementation of management plans; provide for the regulation of game ranching; provide for the licensing of hunting and control of the processing, sale, import and export of wild animals and trophies; provide for the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Wetlands of International Importance especially as Waterfowl Habitat, the Convention on Biological Diversity, the Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora and other international instruments to which Zambia is party; repeal the Zambia Wildlife Act, 1998; and provide for matters connected with, or incidental to, the foregoing.

Relevance: The project falls direct under the Department of National Parks and Wildlife being located in the Game Management Area with a number of wild Fauna and Flora, therefore, being regulated by the Act.

Compliance: The developer shall ensure the protection and conservation of bird and wildlife sanctuaries and the conservation and enhancement of wildlife eco-systems, biological diversity and objects of aesthetic, pre-historic, historical, geological, archeological and scientific interest in the project area. The developer will also promote opportunities for the equitable and sustainable use of the special qualities of public wildlife estates and corroborate with stakeholders for the conservation and restoration of ecological structures for non-consumptive forms of recreation and environmental education; provide for the sustainable use of wildlife and the effective management of the wildlife habitat in the area and enhance the benefits of Game Management Areas to local communities and wildlife.

2.1.11 The Public Health Act CAP 295 of 1930

The Act provide for the prevention and suppression of diseases and generally to regulate all matters connected with public health in Zambia.

Relevance: The activities to be undertaken will entail public interaction through workers and other visitors to the project area. This will require adequate public health facilities and conditions.

Compliance: The project shall comply with the provisions of the Act in order to safeguard human life. The project shall also ensure that measures are put in place to prevent diseases and pollution which may be dangerous to human health and any water supply point. The developer will also ensure all relevant health permits are obtained following an inspection by the Local Authority.

2.1.12 Employment Act. Cap 268

This Act provides conditions under which employees should work in Zambia. The Act covers both temporary and permanent employees. Generally, this Act stipulates employee protection and social security requirements. Major provisions include:

- a) Minimum contractual age
- b) Establishment of employment contract
- c) Settlement of disputes arising from such contracts of employment
- d) The appointment of labour officers and other staff for the administration of the Act
- e) Certain conditions of employment such as ordinary leave, sick leave, maternity, redundancy and welfare of employees.

Relevance: The project will create employment in form of short and long term contracts throughout its life cycle. i.e. preparation and construction, operation and decommissioning phase.

Compliance: The developer will comply with this act by employing the required age, establishing contracts, conditions of service and settling disputes in accordance with this act.

2.2 International Agreements and Conventions

Zambia is signatory to a number of international conventions. Conventions of significance to the proposed project are briefly described below.

2.2.1 Ramsar convention

Provision; The Convention provides for the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world. The Convention uses a broad definition of wetlands. It includes all lakes and rivers, underground aquifers, swamps and marshes, wet grasslands, peatlands, oases, estuaries, deltas and tidal flats, mangroves and other coastal areas, coral reefs, and all human-made sites such as fish ponds, rice paddies, reservoirs and salt pans

Relevance to the proposed project: -The extent of the proposed tourism area shall cover dambos, streams and rivers such as the Mpalazi streams that meander around the project area. These are wetlands areas with resources that shall require protection in accordance with this Convention. This explains how the Ramsar Convention agreement relates to the project.

Compliance thereof: The Tourism facility will ensure that the water bodies in the project area are safeguarded as much as possible because they provide drinking water for animals such as Buffaloes, Elephants, Kudus, Bush, Impalas and many others.

2.2.2 Paris Agreement to the United Nations Framework Convention on Climate Change

The aim is to further reduce greenhouse gases by enhancing the national programs of developed countries aimed at this goal and by establishing percentages reduction targets for the developed countries. Its overarching goal is to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels.”

Relevance to the proposed project:-Deforestation and use of tourism machinery explains how the project may relate with the Convention. Knowledge of the convention is important in order to ensure that the carbon emission footprint is minimized.

Compliance: The Developer will ensure that machinery used for tourism activity will be in good working condition to reduce any greenhouse gases.

2.2.3 Convention on Biological Diversity (CBD)

The Convention on Biological Diversity covers biodiversity at all levels: ecosystems, species and genetic resources. It also covers biotechnology, including through the Cartagena Protocol on Biosafety. In fact, it covers all possible domains that are directly or indirectly related to biodiversity and its role in development, ranging from science, politics and education to agriculture, business, culture and much more. The major aim of the Convention on Biological Diversity (CBD) is to effect international co- operation in the convention of biological diversity and to promote sustainable use of living natural resources worldwide. A number of plans in this convention fall under the Department of Agriculture, Fisheries and ZEMA.

Relevance Convention on proposed project: -The project shall be conducted in Lower Lupande Gama Management Area with diverse vegetation and natural resources. Protection of these resources is imperative and this shall be done through compliance with the Convention Agreement.

Compliance thereof: is that the developer will embark on the planting of trees to ensure all variety of trees that are necessary for animal habitation are planted.

2.2.4 Convention on International Trade in Endangered Species of Wild Fauna and Flora

Provision: The agreement provides a legal framework to regulate the international trade of species, ensuring their sustainability and promoting cooperation among CITES members, also known as CITES Parties.

Relevance: The proposed project is daily faced with a number of endangered species of Wild Fauna and Flora in the area being a Game Management Area close to the South Luangwa National Parks.

Compliance: The developer will ensure that all the wild Fauna and Flora are conserved and protect and provide any necessary measures to ensure there is conservation and protection.

2.2.5 The Lusaka Agreement on Cooperative Enforcement Operations

Provision: The objective of this Agreement is to reduce and ultimately eliminate illegal trade in wild fauna and flora and to establish a permanent Task Force for this purpose.

Relevance: The Project is located in a Game Management Area with a lot of wild Fauna and Flora and also there are villages about 2 Km from the area who are a risk to these natural resources.

Compliance: The Developer shall ensure that the wild Fauna and Flora are protected from the villagers and any potential risk.

2.2.6 United Nations Convention to Combat Desertification – UNCCD

Provision: The Convention is based on the principles of participation, partnership and decentralization and is a multilateral commitment to mitigate the impact of land degradation, and protect our land so we can provide food, water, shelter and economic opportunity to all people. The United Nations Convention to Combat Desertification (UNCCD) was established in 1994 to protect and restore our land and ensure a safer, just, and more sustainable future. The UNCCD is the only legally binding framework set up to address desertification and the effects of drought.

Relevance: The project will involve some minimal land changes during construction.

Compliance: The developer shall ensure that all mitigation measures are in place during the construction. Decommissioning and operation phase to ensure a safer, just and more sustainable future.

2.2.7 World Heritage Convention

Provision: The Convention provides for the conservation and preservation of nature and cultural properties. The convention defines which sites which can be considered for inscription on the

World Heritage list, sets out the duties of each country's governments to identify potential sites and to protect and preserve them.

Relevance: This Convention is relevant since bush clearing, machine installation and construction of the lodge may alter and/or damage heritage sites within the project area if any.

Compliance: This developer ensures the reporting, preservation and protection of heritage sites that may be found within the project area.

2.2.8 Basel Conventions on the Control Trans boundary Movements of Hazardous Waste and their Disposal

Relevance: The objective is to control import and export of hazardous wastes. It also aims at ensuring that any trans-boundary movement and disposal of hazardous wastes, when allowed, is strictly controlled and take place in an environmentally sound and responsible manner.

Relevance to the proposed project: -Hazardous wastes shall be generated and disposal off. Maximum control measures shall be put in place to ensure that their transportation and disposal is done in accordance with provisions of this Convention.

Compliance thereof is that hazardous waste will be disposed of in accordance with appropriate disposal regulation of the Basel Convention.

2.2.9 The United Nations Framework Convention on Climate Change (UNFCCC)

It was signed by Zambia in 1992. The main objective is to achieve stabilization of greenhouse concentration in the atmosphere. Zambia recognizes that the largest source of one the main greenhouse gases, carbon dioxide, is from burning wood fuel and the use of coal and oil.

Relevance to the proposed project: -Evidence of climate change is now common knowledge. Tourism activities may contribute to climate change through unnecessary cutting of trees especially when making tourism roads hence the relationship.

Compliance thereof is that no trees will be cut in project areas.

A number of institutions will have a regulatory and monitoring mandate directly or indirectly under their respective pieces of legislation. However, in this respect, the following will be the key institutions whose requirements will need to be complied with: -

- 1) Zambia Environmental Management Agency
- 2) Mambwe District Council
- 3) Ministry of Lands
- 4) Ministry of Labour and Social Security, Factories Inspectorate
- 5) Ministry of Tourism and Art
- 6) Department of National Parks and Wildlife

3.0 DESCRIPTION OF THE PROJECT

3.1 Detailed Description of the Project.

The Tourism Facility will be a Lodge and Camp site with the sole purpose of providing First class accommodation and tourism facilities within the Tourism and hospitality sector. The Project will include the construction and operation of a Tourism Facility that will provide accommodation, Camping Facilities, recreation, Photographic Safari, Safari Drive and hospitality that will comply with all Environmental regulations and Zambian standards for construction and operation of such as well as provide social services and facilities.

The development will have a single storey building which will accommodate 12 self-contained Chalets, camping site, reception, offices, kitchen, laundry, bar, Manager's House and 2 block Staff house, store rooms and Ablution Block. The development will also extend the access road to the site and help renovate the existing road. The developer will also construct storm water drainages, sewer disposal facilities and water supply reticulations from a borehole that will be sunk on site to all the building structures on site and installation of a water storage tank and a submersible pump adequate to meet all water needs during construction and operation phases of the project; and electrical fittings and fixtures. Similarly, there are two common types of sewer disposal systems commonly used in Mambwe district namely: - Septic tanks and Pit Latrines. The project will use VIP Pit Latrines during the construction phase and Septic tanks during operation phase

The facility will be designed, built and operated by experienced teams comprising both local talent and international expertise to ensure a long-term successful hospitality facility. Employment will be created for up to 30 workers during the preparation and construction phase of the project which will include casuals, skilled and semi-skilled labour and sub- contractors.

The buildings will be built exclusively from environmentally friendly local materials and will incorporate a local labor force to supply the same. This will ensure the Tourism Facility blends in with the surrounding immediate area but add value and beauty to Game Management Area as recommended by the Department of National Parks and Wildlife (DNPW) so that the area remains natural.

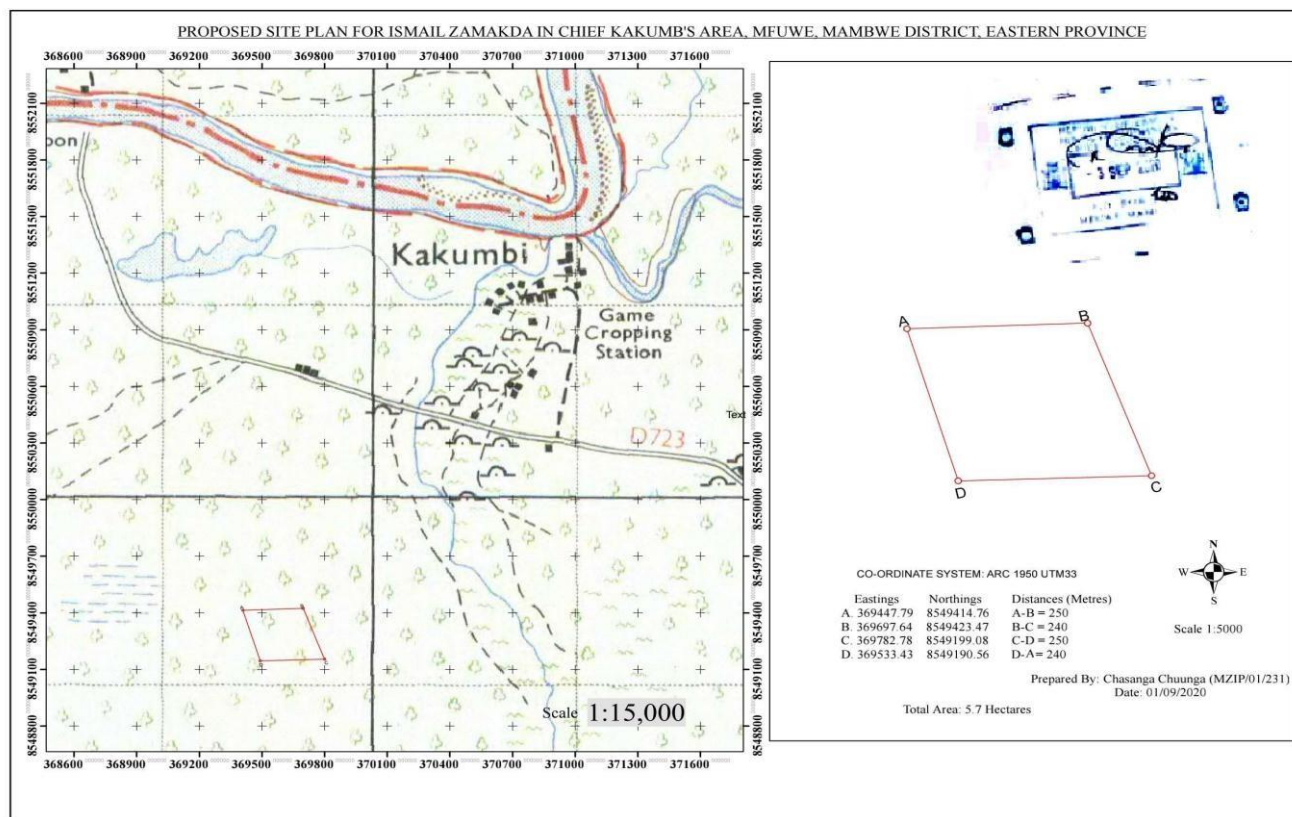
3.2 DESCRIPTION OF THE PROJECT LOCATION

The proposed development will be constructed in Lower Lupande Game Management Area (GMA) South of Uyowa School with a proposed boundary on the North being Mpalazi stream going South East in Chief Kakumbi's Chieftdom of Mfuwe in Mambwe District of Eastern Province. The Government has leased land to the developer for a period of 99 years issued with Certificate of Title number 126866 sitting on Lot No. Mambw/4014875 and allowed the proposed activities to go ahead. Below are the actual location coordinates for the proposed development. The designated site is in extent of 5.7 Ha of land (Fig. 1.)

Table 3: Coordinates for the Proposed Tourism Facility

STN	EASTINGS	NORTHINGS	DISTANCES (METRES)
A	369447.79	8549414.76	A – B = 250m
B	369697.64	8549423.47	B – C = 240m
C	369782.78	8549199.08	C – D = 250m
D	369533.43	8549190.56	D – A = 240m

Fig. 1 Location Map of the proposed site



3.2.1 Accessibility

The site is accessible by a system of gravel road from Uyowa School road and also Off South Luangwa National Park Regional Office Rd. however, the road will be extended by less than a 1km to the site on either side and it will be accessed by any type of vehicles.

3.2.1 Surrounding Developments

There are only two residential houses on the Northern side of the project location with approximate distance of about 800 metres from the site.

3.3 Nature of the project

The objective of the project is to construct and operate a Tourism Facility that will provide accommodation, Camping Facilities, recreation, Photographic Safari, Safari Drive and hospitality that will comply with all Environmental regulations and Zambian standards for construction and operation of such as well as provide social services and facilities. The development will have a single storey building which will accommodate 12 Chalets, reception, offices, kitchen, laundry, bar and toilets.

The facility will be designed, built and operated by experienced teams comprising both local talent and international expertise to ensure a long-term successful hospitality facility. Employment will be provided for up to 30 workers during the preparation and construction phase of the project which will include casuals, skilled and semi-skilled labour and sub- contractors. As far as possible, priority will be given by the contractor to the employment of labour from local communities around the project area, although a number of the Contractors permanent skilled staff may be brought in from other areas. Construction staff will be commuting on a daily basis except for the security personnel.

3.3.1 Raw Materials

The raw materials that are expected to be used in construction of the project and their sources are summarized in Table 4 below:

Table 4: Raw materials to be used in construction phase

	Raw Material	Source	Mode of Delivery
1	River and building sand	Local suppliers	Road truck
2	Aggregates and laterite	Local approved suppliers	Road truck
3	Cement	Local Suppliers	Road truck
4	Burnt Bricks and Concrete Blocks	Local approved suppliers	Road truck
5	Diesel (for operation of the generator and machinery)	Local approved suppliers	Road truck
6	Water	Site borehole	Electric Pump
7	General building materials (e.g. Gum Poles, timber for shuttering, window and door frames, polythene sheeting, sewer pipes, paint etc.)	Local approved suppliers	Road truck
9	Finished products and equipment (e.g. Roofing Grass, roofing sheets and cladding, structural steel components, sanitary ware, glass, brass ware and finishing, piping, switches, tiles etc.	Local approved suppliers and imported ensuring compliance with Zambian standards and regulations.	Road truck

The other main raw materials required for operating the Tourism facility will be;

- ❖ Water; for domestic use and to a limited extent for irrigation of the landscaped areas, Water will be supplied by a borehole.
- ❖ Electricity; for lighting, operation of equipment/pumps, electricity will be provided by ZESCO from the nearby existing power supply. The facility will also have a standby generator in-case of power outages.

3.3.2 Process and Technology

The Tourism Facility will have ramps and some landscaped areas. The units will be brick masonry work buildings with pre-coated sheet roofing and some grass thatched. The units will be constructed and installed on a concrete footing foundation. The technology that will be used to implement the proposed development during construction and operation will be both human and machine labour.

Machinery to be used will include:

- ❖ Earthmoving equipment- excavator, loader and grader,
- ❖ Construction equipment – a dumper and tipper
- ❖ Material/equipment handling machinery – cranes and forklifts
- ❖ Construction equipment - tunneling & handling equipment, concrete mixers, road making machines, pavers and spraying & plastering machine.
- ❖ Vehicles, Laptops and desktop computers

3.3.2.1 SERVICES

- ❖ **Water supply:** - The water supply for the proposed project will be from a borehole. Water will be pumped into an above ground water tank. The amount of water that will be required at the project site is 10000L/day.
- ❖ **Sanitation:** - During construction the proposed project will make use of some VIP Pit latrine. During operation the project will make use of VIP Pit latrines and also Flushable toilet since Septic Tanks will have been constructed.
- ❖ **Electricity supply:** The hydro power supply is about 1km from the site area; the project will be connected to Zesco main grid and will also have a stand-by electrical generator and gas facilities. Gas will be used for cooking, solar power will be installed for 12V lighting and low wattage inverter usage, while heavy equipment like the borehole submersible pump will use Zesco electricity and Gas is readily available in Chipata and Lusaka and is supplied in gas cylinders.

- ❖ **Fire-fighting systems:** The design of fire-fighting services such as Fire Hose Reels and Portable Fire Extinguishers will be based on "the Local Administration (Fire Services) Regulations 1991" and ZS 361 – Water Supply Systems – Demand Figures for Design – Guidelines". Both these documents give accurate and detailed requirements regarding the location and duty of Fire Hose Reels, Portable Fire Extinguishers and Fire Hydrants for all types of buildings. A suitable capacity of water will be stored on site in order to cater for any fire-fighting requirement on site in accordance with the above mentioned regulations and guidelines.
- ❖ **Safety:** The buildings will have a centralized safety shutoff which will be accessible.

3.3.3 Products and by-products

3.3.3.1 Products of the Project

The main product of the project is a Tourism Facility which will have a lodge and Camping Site which will be offering hospitality functions, accommodation, Photographic Safari, Game Drive, camping and services including employment creation and also having a kitchen, bar and a landscaped parking area.

3.3.3.2 By-products during Construction

The various waste products expected to be generated during the project lifecycle and their disposal or management methods are as follows:

- ❖ **Vegetative waste:** The amount of vegetative waste resulting from site preparation is expected to be minimal on the land because the developer will ensure that the construction do not disturb the natural environmental surrounding.
- ❖ **Topsoil:** will be used on the site for landscaping and in order not to disturb the natural environment;
- ❖ **General building rubble:** is expected to be generated which will include rejected blocks and concrete, gravel, timber off cuts, etc. Building rubble will be used as solid core for slabs or backfill for existing pits that occur on the site.

- ❖ **Solid waste:** will include material such as scrap timber, various cut offs, refuse, and packaging material (e.g. Cement bags), worker's garbage, domestic waste etc. Collection and disposal will be done in accordance with the local authority and Zambia Environmental Management Agency Regulations.
- ❖ **Dust:** will be generated from the site due to the nature of various construction activities during the construction phase. The work site and areas will be watered daily to suppress dust.
- ❖ **Sewage:** Adequate temporary sanitary facilities will be provided for construction workers.
- ❖ **Storm water drainage** will be constructed to ensure that storm water is directed to various water bodies around the site.

3.3.3.3 By Products during Operation

Effluents and by-products/ solid waste generated during operation and their management (in summary):

- ❖ All hazardous waste will be separated at source as per ZEMA/ Zambian regulations and collected by designated and registered waste disposal company to be incinerated at approved incineration facility.
- ❖ Solid (non- hazardous) waste will be collected on site in bins and disposed of by an approved solid waste collector;
- ❖ Waste will be segregated at source disposed of in bins and these will be emptied by waste master (a waste collection company licensed to handle and dispose of waste).
- ❖ Sewage and grey water from the facility will be channeled into the septic tanks and VIP latrines. All the systems are Agreement certified.
- ❖ Storm water drains into the soil, during construction, a purpose drain will be established to prevent stagnation of water.
- ❖ Effluent such as waste water from the kitchen will go through grease traps that will trap all oils and then channeled to the onsite sewer system.

3.3.4 PRODUCTION CAPACITY

The Project will have a lodge with a bed capacity of 24 and the Camp site will have another extra bed capacity of 16 which means that the total capacity for both the Lodge and Camp site will accommodate a maximum total of 40 people per night.

3.3.5 Schedule and lifetime of the project

The project is scheduled to start as soon as the Decision Letter is issued by Zambia Environmental Management Agency (ZEMA) possibly by 1st Quarter of 2024 and will be completed over a period of 36 months. The project is expected to have a lifetime of over 100 years unless the developer decides to shut down or is forced to close the facility.

3.4 PROJECT MAIN ACTIVITIES

The proposed Major engineering and construction works will include:

- ❖ Excavation of foundation trenches
- ❖ Drainage works
- ❖ Sub structure works
- ❖ Concrete and block building works
- ❖ Electrical and equipment installation.
- ❖ Finishing works

3.4.1 Activities during Preparation

During this phase, the works will include the following:

- ❖ Acquiring of approvals and commitments from ZEMA, WARMA (borehole), Planning Authorities, Waste Collectors, etc.
- ❖ Organizing of construction equipment and qualified manpower to work on the project.
- ❖ Hoarding off site.
- ❖ Putting measures to promote public safety and to limit disturbance to members of the public and also to the animals.

- ❖ Arranging for salvage or disposal of the preparation/construction waste,
- ❖ Clearing of land,
- ❖ Stripping of topsoil and vegetative material for access roads and building foundations.
- ❖ The foundation which will be constructed with a view to minimize the need for rock breaking. However, in the event that blasting is carried out, this will be controlled to minimize noise and scattering of debris.
- ❖ Basic earthworks to establish required finished road and foundation levels and falls.
- ❖ Commissioning of on-site well.
- ❖ Provision of temporary electrical power supply.

3.4.2 Activities during Construction

The main activities envisaged during construction will include:

Road, Parking Area, Ramps and Drainage Construction

- ❖ The topsoil is usually stripped
- ❖ Stumps and roots are removed and holes filled as required
- ❖ If rock or other unsuitable material is discovered it is removed, moisture content is managed and replaced with standard fill compacted to meet the design requirements (generally 90-95% relative compaction).
- ❖ Compacting after top soil is removed
- ❖ Stabilization of the base with the piling, spreading and compaction of gravel and aggregate;
- ❖ Spreading and compaction of aggregates and stone materials on the road and parking areas for gravel surface and preparation, pouring and compaction of concrete for concrete surfaced areas;
- ❖ Shaping and lining of drains.
- ❖ Shaping of ramps.

Excavation and Foundations

- ❖ Excavation of trenches for foundation strips for buildings drainage, sewer trenching, water tower construction, etc.
- ❖ Compaction of underside of foundation trench.
- ❖ Mixing, pouring and compaction of concrete.

Equipment to be used at this stage include Excavators, rollers and concrete mixers

Sub-Structural Works, Floor Slabs and Services

- ❖ Brick work
- ❖ Mixing, pouring and compaction of concrete
- ❖ Backfilling and compaction of material according to specifications.
- ❖ Construction of water mains network, water borne sewerage system.

Equipment to be used at this stage include: Excavators, rollers, jamming tool and concrete mixers.

Super-structural works

- ❖ Construction of various buildings including: fixing of any structural steel components, laying of bricks, fixing of roofing sheets / cladding/grass thatching, etc.;
- ❖ Installation of internal water and electrical reticulation system and lighting.
- ❖ Finishing works: plastering, painting of walls, fixing of blinds, planting of trees, grass and watering, etc.

Equipment to be used at this stage includes welding and drilling equipment, cranes etc.

Materials Mobilization and Handling

The sources and mode of transport to the site of the various materials are outlined in the table 5 above.

- ❖ Due to projects close proximity to approved suppliers, there will be no need for storage of any petroleum products (diesel) on site. Diesel for the operation of machinery will be delivered to site as required on a regular/daily basis by licensed and registered fuel suppliers and sometimes by way of a fuel bowser.
- ❖ Materials such as blocks, sand, laterite and aggregate, which are not required for immediate use, will be stockpiled in a designated area on site.

Equipment to be used at this stage will include loaders, fuel bowser, bulldozer and cranes.

3.4.3 Activities During Decommissioning Phase

The main activities during this phase include;

- ❖ Issuing of notice of closure;
- ❖ Closing down of all activities at the temporal and construction offices.
- ❖ Clearing of all the rooms
- ❖ Removal of removable components of the building such as glass, finishing's, tiles, aluminum frames, etc.
- ❖ Demolition of the concrete and temporal structures of the building.
- ❖ Segregation, collection and disposal of demolition debris from the site to a designated dump site.
- ❖ Writing a decommissioning report and submit a copy to ZEMA

Equipment to be used at this stage includes drilling equipment, Loader and Tipper.

3.4.4 Activities during Operation

Activities envisaged during operation will be:

- ❖ Day to day office activities pertaining to the administrative function of the building;
- ❖ Operation of kitchen.
- ❖ Daily cleaning/management of the building,
- ❖ Waste management
- ❖ Management of utility services

4.0 PROJECT ALTERNATIVE

4.1 PROJECT SITE

There are currently no project alternative sites that have been considered should ZEMA consider the site and investment in question to be unsuitable.

4.2 ELECTRICITY SUPPLY

The Project will be connected to the Zesco Main Power grid which is 1km from the site, however, the developer will have some alternatives in place just in case of Zesco faults and also to cut on the cost of Electricity. The project will have a stand-by electrical generator which will run whenever there is power outage by Zesco. They will be also gas facilities specifically for the Kitchen even when there is Zesco to save on Electricity cost. Solar power will be installed as alternatives for 12V lighting and low wattage inverter usage, while heavy equipment like the borehole submersible pump will use Zesco electricity.

4.3 WATER SUPPLY

The Project Area is very far from the nearest Eastern Water and Sewerage Company water connection point and therefore, the source of water for drinking and sanitation will be from the borehole, however, the only alternatives for drinking water shall be 20ltrs mineral water bottles from registered Mineral water suppliers such as Aqua Water, Yes Mineral water, Aquasavana and many others.

4.4 SANITATION

The Project will set up flushable toilets which will be connected to the septic tanks on the site, however, as alternative, the project will also have VIP Pit latrines Toilets in the event water problems where we cannot use the flushable toilets.

5.0 DESCRIPTION OF THE BASELINE ENVIRONMENT

5.1 Ecological Resources

a) Fauna

(i) Terrestrial Species

During the survey and interview of the local people and the Game Guide who accompanied us on the survey, the following animals were identified on site and those that the local community identified that they always pass through the site location in some seasons and at some specific times. The animals are shown in the table below, they could be more but for this EPB, we have concentrated on the notable ones.

Table 5. Terrestrial Fauna Species

		NAME	LOCAL NAMES	SCIENCTIC/BOTANIC NAMES
1.		Elephant	Nzobvu	<i>Elephantidae</i>
2.		Bush buck	Chikwiba	<i>Tragelaphus sylvaticus</i>
3.		Impala	Phala	<i>Aepyceros melampus</i>
4.		Kudu	Phulupulu	<i>Tragelaphus strepsiceros</i>
5.		Puku	Nseula	<i>Kobus vardonii</i>
6.		Water buck	Chuzu	<i>Kobus ellipsiprymnus</i>
7.		Zebra	Chibweta	<i>Equus quagga</i>
8.		Hyena	Chimbwi	<i>Hyaenidae</i>
9.		Giraffe	Lulumba	<i>Giraffa</i>
10.		Buffalo	Mbowo	<i>Bubalus bubalis</i>
11.		Lion	Nkalamu	<i>Panthera leo</i>
12.		Cookson Wildebeest	Numbu	<i>Connochaetes taurinus cooksoni</i>
13.		Monkey	Kolwe	<i>Cercopithecidae</i>





(ii) Aquatic Species

The stream that passes through the site is usually will water only during the rainy season, therefore, it is very rare to find any aquatic species around the site unless accidentally, a Hippo (*Hippopotamus amphibious*) and can be found lost on the site.

(iii) Identification of Rare or Endangered Species.

The International Union for Conservation of Nature (IUCN) is a globally recognised organisation that assesses the conservation status of species and maintains the Red List of Threatened Species. The Red List categorises species into different levels of endangerment, including:

- ❖ **Critically Endangered (CE):** Species facing an extremely high risk of extinction in the wild.
- ❖ **Endangered (EN):** Species facing a very high risk of extinction in the wild.
- ❖ **Vulnerable (VU):** Species facing a high risk of extinction in the wild.
- ❖ **Near Threatened (NT):** Species that may be considered threatened in the near future.
- ❖ **Least Concern (LC):** Species that are widespread and abundant, with a low risk of extinction.

- ❖ **Extinct in the Wild (EW):** Species that exist only in captivity or as a cultivated population, with no known individuals surviving in the wild.
- ❖ **Extinct (EX):** Species that no longer exist.

Therefore, for this EPB, I am going to categories threats to species using the IUCN red list data as shown in the Table below:

Table 6. Fauna Terrestrial Species according to IUCN Red List Data

	NAME	LOCAL NAMES	SCIENCTIC/BOTANIC NAMES	IUCN RED LIST CATEGORY
1.	Elephant	Nzobvu	<i>Elephantidae- Loxodonta africana</i>	Endangered (EN)
2.	Bush buck	Chikwiba	<i>Tragelaphus sylvaticus</i>	Least Concern (LC)
3.	Impala	Phala	<i>Aepyceros melampus</i>	Least Concern (LC)
4.	Kudu	Phulupulu	<i>Tragelaphus strepsiceros</i>	Least Concern (LC)
5.	Puku	Nseula	<i>Kobus vardonii</i>	Near Threatened (NT)
6.	Water buck	Chuzu	<i>Kobus ellipsiprymnus</i>	Least Concern (LC)
7.	Zebra	Chibweta	<i>Equus quagga</i>	Near Threatened (NT)
8.	Hyena	Chimbwi	<i>Hyaenidae</i>	Least Concern (LC)
9.	Giraffe	Lulumba	<i>Giraffa camelopardalis thornicrofti</i>	Vulnerable (VU)
10.	Buffalo	Mbowo	<i>Bubalus bubalis</i>	Endangered (EN)
11.	Lion	Nkalamu	<i>Panthera leo</i>	Vulnerable (VU)
12.	Cookson Wildebeest	Numbu	<i>Connochaetes taurinus cooksoni</i>	Least Concern (LC)
13.	Monkey	Kolwe	<i>Cercopithecidae</i>	Least Concern (LC)

Therefore, according to the IUCN Red List Data and from the animals seen on the project area, only the Elephants and Buffaloes are considered endangered and only the Giraffe and the Lion are considered vulnerable while the Puku and the Zebra are considered Near Threatened, the rest of the animals are considered Least concern.

a) Flora

(i) Terrestrial Species

In the Lower Lupande GMA, the vegetation around the project area is characterized by some forest surrounded by a Munga and Mopani Woodland; and large grassland on the waterlogged or flooding clays and depressions in some areas only during the rainy season.

These forest types and grassland in the project area are in a range area for different species of animals. From an ecological point of view, the forest in the project area could be divided into many sub-types based on predominance of certain species.



Table 7. Terrestrial Flora Species

NAME	LOCAL NAMES	SCIENTIFIC NAME/BINOMIAL
Baobab Tree	<i>Milambe</i>	<i>Adansonia Grandidieri</i>
Mopani Tree	<i>Lupanye</i>	<i>Colophospermum Mopane</i>
Acacia Tree	<i>Munga</i>	<i>Acacias</i>
Mahogany Trees	<i>Msikizi</i>	<i>Swietenia Macrophylla</i>
Sausage Trees	<i>Muvungula</i>	<i>Kigelia Africana</i>
Knob thorns.	<i>Nyamamphonombwe</i>	<i>Acacia Nigrescens</i>
Black African Ebony Trees	<i>Nchenja</i>	<i>Diospyros Ebenum,</i>
Ivory Palm	<i>Kakoma</i>	<i>Phytelephas Aequatorialis</i>
Marula Tree	<i>Masewe</i>	<i>Sclerocarya Birrea</i>
Tamarind Tree	<i>Wembe</i>	<i>Tamarindus Indica)</i>

(ii) Aquatic Species

The stream that passes through the site is usually with water only during the rainy season; therefore, it is very rare to find any aquatic flora species around the site.

(iii) Identification of Rare or Endangered Species.

Just like the Fauna, Flora Species are also classified by the IUCN Red List into nine groups, specified through criteria such as rate of decline, population size, area of geographic distribution, and degree of population and distribution fragmentation. Therefore, the identified flora in the project are will be classified accordingly as follows:

- ❖ Extinct (EX) – beyond reasonable doubt that the species is no longer extant.
- ❖ Extinct in the wild (EW) – survives only in captivity, cultivation and/or outside native range, as presumed after exhaustive surveys.
- ❖ Critically endangered (CR) – in a particularly and extremely critical state.
- ❖ Endangered (EN) – very high risk of extinction in the wild, meets any of criteria A to E for Endangered.
- ❖ Vulnerable (VU) – meets one of the 5 Red List criteria and thus considered to be at high risk of unnatural (human-caused) extinction without further human intervention.
- ❖ Near threatened (NT) – close to being endangered in the near future.
- ❖ Least concern (LC) – unlikely to become endangered or extinct in the near future.
- ❖ Data deficient (DD)
- ❖ Not evaluated (NE)

Therefore, for this EPB, I am going to categorize the threats to Flora species using the IUCN red list data as shown in the Table below:

Table 8. Flora Terrestrial Species according to IUCN Red List Data

NAME	LOCAL NAMES	SCIENTIFIC NAME/BINOMIAL	IUCN RED LIST CATEGORY
Baobab tree	Milambe	<i>Adansonia grandidieri</i>	Endangered (EN)
Mopani Tree	Lupanye	<i>Colophospermum mopane</i>	Least Concern (LN)

Acacia Tree	Munga	<i>Acacias</i>	Least Concern (LN)
Mahogany Trees	Msikizi	<i>Swietenia macrophylla</i>	Vulnerable (VU)
Sausage Trees	Muvungula	<i>Kigelia Africana</i>	Least Concern (LN)
Knob thorns.	Nyamamphonombwe	<i>Acacia nigrescens</i>	Near Threatened (NT)
African Ebony trees	Nchenja	<i>Diospyros ebenum,</i>	Endangered (EN)
Ivory Palm	Kakoma	<i>Phytelephas aequatorialis</i>	Near Threatened (NT)
Marula Tree	Masewe	<i>Sclerocarya birrea</i>	Least Concern (LC)
Tamarind Tree	Wembe	<i>Tamarindus indica)</i>	Least Concern (LC)

Therefore, from the Trees identified on the project area, only the Baobab and the African Ebony are considered Endangered while the Mahogany is considered vulnerable and the Ivory Palm and Ivory Palm and the Knob Thorns are considered near threatened and the rest are of least concern.

b) Birds

The birdlife in project area which is near the South Luangwa National Park is phenomenal with more than 400 bird species recorded so far. Among them are the wild varieties of ducks, the Egyptian goose and the spur winged goose, the helmeted Guinea Fowl, the variety of Quails, variety of spur fowls, the greater Flamingo, the Little Grebe, the Rameron Pigeon and several variety of Doves, the yellow throated and double banded sand grouse, the Denham and black bellied Bustard, different type of Turaco and go away birds, different types of Coucal and Cucko birds, variety of night jar birds, variety of spintail and swift birds, the great white and pink backed pelican, different varieties of the Hawk, Vultures, Eagles“, Owls, Mouse Birds, Hornbill birds, different types of wood perkers, Falcons, Parrots, sunbirds, Buffalo weaver etc.



Table 9. Birds according to IUCN Red List Data

Common Name	Local names	Scientific name	IUCN Red List Status
Wild ducks,	Bakha	<i>Anas platyrhynchos</i>	Least Concern (LC)
Egyptian goose	Khambakhamba	<i>Alopochen aegyptiaca</i>	Least Concern (LC)
Wild Guinea Fowl,	Nkhanga	<i>Numida meleagris</i>	Least Concern (LC)
Quails,	Kwale	<i>Coturnix coturnix</i>	Least Concern (LC)
Flamingo	mbeluka	<i>Phoenicopterus roseus</i>	Least Concern (LC)
African Olive Pigeon	Nkhunda	<i>Columba arquatrix</i>	Least Concern (LC)
Doves	Nkhunda	<i>Streptopelia turtur</i>	Vulnerable (LC)
Sand Grouse		<i>Pteroclididae</i>	Least Concern (LC)
Black Bellied Bustard	Kamwe	<i>Lissotis melanogaster</i>	Least Concern (LC)
Turaco	Mkurukuru	<i>Tauraco erythrolophus</i>	Least Concern (LC)
go away birds,	Nkhue	<i>Corythaixoides concolor</i>	Least Concern (LC)
Coucal	Khuta	<i>Centropus sinensis</i>	Least Concern (LC)
Cuckoo birds,		<i>Neomorphus radiolus</i>	Least Concern (LC)
night jar birds,	Lumba	<i>Caprimulgus ruficollis</i>	Near Threatened (NT)
swift birds,	Mimbya	<i>Apus apus</i>	Least Concern (LC)
Pelican,	Mbeluka	<i>Pelecanus Onocrotalus</i>	Least Concern (LC)
Hawk,	Khwangwala	<i>Accipiter trivirgatus</i>	Least Concern (LC)
Vultures,	Akuba	<i>Necrosyrtes monachus</i>	Critically Endangered (CE)
Eagles',	Mpingwa	<i>Aquila chrysaetos</i>	Least Concern (LC)
Owls,	Machichi	<i>Athene cunicularia</i>	Least Concern (LC)
Hornbill birds	Mungomba	<i>Buceros bicornis</i>	Vulnerable (VU)
wood Perkers,	Mkonkomolo	<i>Melanerpes erythrocephalus</i>	Least Concern (LC)
Falcons,	Kabawi	<i>Falconidae . rupicolus</i>	Least Concern (LC)
Parrots,	Muchiche	<i>psittacines meyeri</i>	Least Concern (LC)
sunbirds,	Nyasonje	<i>Anthreptes rhodolaemus</i>	Near Threatened (NT)
Buffalo weaver	Mkaikai	<i>Bubalornis niger</i>	Least Concern (LC)

The existence of birds in the Lower Lupande Game Management Area and the Project Area is based on the Interview of the Local People and Trained Department of National Parks and Wildlife narration of which birds are seen in the area regardless of when they last came across such a bird. I could not dispute the existence of Shoebill Bird which they call Mungomba in their local language and their description matched the bird.

5.2 Geology and Hydrogeology

The physical and chemical properties of soil in the district range from clay to sandy soil, and acidic to strong alkaline. The areas receive relatively high rainfall and have slightly acidic soils. However, soil acidity changes as one lowers down the valley, becoming alkaline at the valley bottom with isolated exceptions such as dambo sites.

Mopane clays and dambo soils occupy extensive areas of almost all level land in the valley characterized by alluvial soils that are quite fertile but prone to erosion. Mopane clays and dambo soils are almost black although pockets of light to dark Grey soil areas could be seen scattered here and there in the Area. Similarly, Mopane soils (alkaline or sodic soils) have high levels of sodium, which results in the destruction of soil structure, impediment of aeration and drainage and compaction of the subsoil because of Elephant and trampling. This consequently renders the soils to have a very high potential of being eroded and easily gets washed away.

The Project area is mainly a woodland with Mpalazi stream act as a drain for the Mbuli lagoon when it overflows especially during the rainy season and take the water into the Chizombo Lagoon into the Luangwa River.

The main traditional land-use by the local people in the Kakumbi's Chieftdom is traditional dwelling (Villages); communal forests which are the source of food, raw materials for shelter, fuel wood, medicine, crafts and cultural identity; subsistence agriculture and fishing; and traditional hunting. Only a very small land area in the Kakumbi's Chieftdom and Mambwe district is used as agricultural land who practice subsistence agriculture - including cultivated land and villages. Subsistence farming or peasant farming is the main land use practiced by the local communities in the Kakumbi's Chieftdom because the whole Chieftdom is a Game Management Area and being close to South Luangwa National Parks, animals are everywhere making farming very difficult.

The hydrology of the site is characterized by underground stream and the nearby Mbuli Lagoon that supply water into the Mpalazi Stream that cuts across the project area. There is need to make use of ground water by sinking boreholes which can be used as a source of water for the

project, to be located at strategic points. The project will apart from observing the Visual quality of Water used for human consumption, regularly test water to ascertain its quality, by ensuring that specific chemical analyses or bacterial tests are periodically carried out.

Managing water quality involves dealing with water flow of surface and ground water systems. Proper sitting of buildings on the premises in terms of soil suitability; and distance from water resources are management responsibilities important for water quality maintenance.

5.3 Drainage

The project catchment area is drained by the Lupande, Msandile, Mwangazi and Kauluzi tributaries of the Luangwa River. These streams/rivers and the lagoons get flooded during the Rainy season and become meandering waterways into the Buli lagoon which drains into Mpalazi stream that passes through the project site and floods the area completely making it inaccessible by road starting from December to April. The Mpalazi stream just acts as a drain for the floodwater to the Chizombo Lagoon that take it back into the Luangwa River. It is very difficult to access the site especially during the rainy season because of the water and the type of soil that once it rains, the soil becomes very slippery for any kind of vehicle.

In the rain season when the proposed project becomes operational, tourists will still access the Campsite and the project area since an all season road will be constructed. However, the Mpalazi stream dry up after the rain season.

5.4 Climate

Zambia is divided into three main agro-ecological regions ((Regions I, II and III) based on soils, climatic factors, rainfall patterns and common agricultural activities. The Semi-Arid Region I includes areas of southern, eastern and western Zambia: Zambia's valleys including the Luangwa Valley are at 300-800m altitude mostly lie in Region 1. Mean annual rainfall in Region I ranges from 600 to 800 mm.

The Project area is located in Chief Kakumbi's Chiefdom of Mfuwe in Mambwe district of Eastern Zambia in the Luangwa valley which falls in region I of the agro ecological regions. The Area

has a sub-humid climate and unimodal rainfall pattern controlled by the movements of the Inter-Tropical Convergence Zone and has a tropical continental type of climate with three distinct seasons namely, the hot rainy season from late November to April; a cool-dry season, from May-July; and a hot -dry season, from August to early November. The area generally experiences a hot climate with mean daily maximum temperatures in the range of 32°C – 37°C during the Hot season. The minimum and maximum temperatures are 9°C – 28°C (June – July) and 32°C - 37°C (October) respectively. The mean annual rainfall is in the range of 750mm – 800 mm.

Table 10. Showing the Climatic Parameters and their Levels at the Project Site

Climate Parameters	Levels
Maximum annual temperature	32 °C - 37 °C
Minimum annual temperature	9 °C - 20°C
Maximum annual rainfall	800 mm
Minimum annual rainfall	300 mm

Source: Yachiyo Engineering Co. Ltd, 1995

5.5 Landscape and Topography

The project area is the Region 1 of the agro ecological zone in the Luangwa valley with attitude range of 300m to 800m; however, the project sit is sitting at an altitude of 541m to be specific.

The terrain in and around the project site is mostly flat with no major steep slopes. The project site is generally flat landscape or gently sloping, well drained and is thus not waterlogged even at the peak of the wet season and is habitable even during the rainy season.



5.6 Land use and Soils

5.6.1 Land use

There are conflicts in Mambwe District concerning roles and responsibilities over traditional Land uses, the procedures for alienating traditional Land in a Game Management Area (GMA) to Zambian businessmen and foreign investors; traditional use of Biological resources and user rights of landholders; and the facilitation of socio-economic development in the local communities.

The main traditional land-use by the local people in the Kakumbi's Chieftdom is traditional dueling (Villages); communal forests which are the source of food, raw materials for shelter, fuel wood, medicine, crafts and cultural identity; subsistence agriculture and fishing; and traditional hunting.

Department of National Parks and Wildlife has promoted law enforcement through Village Scouts to sustain maximum yield of high quality trophies for Safari hunting concessions. The Department also favored wildlife to welfare of local people and imposed restrictions/prohibitions on development initiatives/activities of the local community such as agriculture, forestry, commercial infrastructure and development of urban tourism facilities.

Zambian businessmen allocated traditional land in the area clustered as Tourism Development Zone in the Draft General Management Plan for Lupande GMA 2010 were discouraged and frustrated or hindered and blocked by the Department of National Parks and Wildlife (DNPW). However, in a Letter dated 28th November 2016 from the Director General - Department of National Parks and Wildlife hereto, the project proponent was given consent to establish a Tourism Facility on condition that both the Chief and Kwalata Hunting Safaris give consent.

On 19th November, 2019, Kwalata Hunting Safaris gave consent to establish to build a lodge in Lower Lupande Game Management Area which 305m away from Uyowa School with Mpalazi stream on the North and on 14th September, 2020, His Royal Highness Chief Kakumbi gave consent and Land measuring 240m by 250m to Mr. Pemba Leaf Tobacco to establish a Tourism Facility in his Chieftdom.

The Department of National Parks and Wildlife has also given provisional guidelines concerning some procedure required to be followed by Zambian businessmen in the acquisition of traditional land, which the local Chiefs in the Lupande GMA reject, and Zambian businessmen and other interested members of the public seriously criticize. Though the Zambia Wildlife Act, 1998 promoted local and foreign investment in tourism, and gave the Department of National Parks and Wildlife power to issue Leases to Zambian businessmen or foreign investors alike to have user rights in a National Park, the Department did not have legal mandate to allocate land to anyone in a Game Management Area (traditional land).

Senior Chief Nsefu and His Subordinate Chiefs in Mambwe district are responsible to alienate traditional land to Zambian Citizens to promote and facilitate local investment in productive activities that may lead to socioeconomic well-being of their subjects. Alienation of land on leasehold to Zambians is very important because the Capital market in Zambia demand collateral in the form of Title Deeds before any developer can access development funds.

The Forest Act also has been criticized for predominant sanctions and command approaches which have hindered incentives and community participation. Only a very small land area in the Chieftdom and Mambwe district is used as agricultural land. Agricultural land is occupied by people practicing subsistence agriculture - including cultivated land and villages. The area has predominantly small-scale farmers growing Luangwa rice and maize. Farmers use hand hoes for cultivation. Goats and chickens are commonly kept by farm households, and some farmers have a few cattle.

5.6.2 Soils

The Project area fall under Region I on the Agro Ecological Region that contains a variety of soil types, ranging from slightly acidic loamy and clayey soils with loam topsoil, to acidic sandy soils. Characteristics of these soils, which have significant constraints for crop production, include erosion, limited soil depth in hilly and escarpment areas, poor physical properties that make it difficult to till especially on cracking clay soils, crusting, and low water holding capacities in sandy soils.

5.7 Ground and Surface Water

A study was conducted to generate the first available baseline data examining water quality in Tourist lodges situated around South Luangwa National Park and some of these lodges such as Wildlife Camp, Kakumbi Village, Marula lodge falls under Lower Lupande and very close to the project area. Most of the water quality samples taken in the study showed positive trends making the area safe for visiting Tourist. However, it is recommended that a regular monitoring system examining the level of any potential microbiological pollution in the boreholes, pipelines, and point of use be put in place and any required maintenance should be carried out immediately.

The project proponent will apart from observing the Visual quality of Water used for human consumption, regularly test water to ascertain its quality, by ensuring that specific chemical analyses or bacterial tests are periodically carried out. Managing water quality involves dealing with water flow of surface and ground water systems. Proper sitting of buildings on the premises in terms of soil suitability; and distance from water resources are management responsibilities important for water quality maintenance.

Soil acidity and strong alkaline makes it difficult to find clean sweet surface water but by drilling boreholes. Therefore, it necessary to install water purifying systems to provide quality water for domestic use; or alternatively use bottled mineral water for drinking.

The project will liaise with the Department of Water Affairs to determine the actual water yield of the existing borehole and will use a submersible pump to ensure sustainable water supply to the Campsite. Water storage capacity should at least be 10,000 liters. An underground polypipe water reticulation system will be used to supply water to all buildings on the Campsite premises in order to avoid contaminating water by mental corrosion. However, galvanized piping will still be used inside the buildings.

5.8 Air Quality and Noise

The air quality in the project area is generally very good and free from pollution but fumes generated by the flow of vehicles to and from the project site during the construction and

operational phases of the project might cause minimal pollution however, the flow of vehicles will be kept at a small scale.

Similarly, construction activities will be planned according to a schedule that is compatible with climatic conditions because strong winds and dry conditions make dust generation likely. The construction contractor will visually monitor dust levels on the site during construction.

The impact of dust during construction is expected to be minor and localized because the pristine vegetation in the project area checks heavy winds. However, dust suppression may be instituted; using water sprinklers and this will be done in the event that high levels of dust are observed. During operational phase very minimal dust will be generated from movement of safari vehicles on the main feeder Road and access road.

Noise from the construction site even if there would, occur during daylight hours only. Short-term effects such as the generation of minor noise along the Feeder Road may be caused by construction vehicles transporting building materials, while in the operational phase, minimal noise will be generated by safari vehicles. Noise disturbances may also be caused by the equipment workers use during construction, and the equipment tourists use in recreation activities; noise produced by portable radios, thermal power generator sets can be extremely disturbing to animals.

5.9 Social, Economic and Cultural Issues

5.9.1 Socio Economic Background

Tourism is an important Industry in Eastern province and is centered on the South Luangwa National Park area of 9,000 km² situated in Mpika District/Mchinga province and the Lupande GMA, an area of (4,840 km²) situated in Mambwe District.

The proclamation of the South Luangwa National Park as a game reserve in 1938 led to the removal of villages for Senior Chief Nsefu, Chief Kakumbi and Chief Malama then situated within the Reserve onto the peripheries of the South Luangwa National Park in Mambwe district.

The Kakumbi Chieftdom has attracted subsistence farmers and business people from around the District due to its densely populated Cropping Area in Kakumbi Ward. The large increase in population and communal living has created a sharp demand for social economic services, facilities, and infrastructure.

The local community is very poor and has inadequate social and economic infrastructure. Subsistence farming or roaming the forest for food gathering and other livelihood coping strategies in the Kakumbi area is very risky business because of the heavy presence of vermin like Elephants, Hippo, Buffalo, Wild pigs, Monkeys and birds, in the surrounding Local forest

Subsistence agriculture and fishing activities are the only local economic activities sustaining livelihoods and supporting the informal trade in the Mfuwe area. Generally, most food and non-food supplies are traded and obtained from the local Market at Cropping Area in Kakumbi Ward.

5.9.2 Potential Disputes and Conflicts of Interest

The main potential conflict is usually with the Department of National Parks and Wildlife, the Chief in whose Chieftdom the land is located, the local community and the Hunting Safari for the area who in the case is Kwalata Safari who have license to hunt in the area and the Community Resource Board representing the Community. All the above potential conflict interest groups have all consented to the establishment of the Tourism facility as per attached consent letters.

5.9.3 Cultural setting

There are no known sites on the project site apart from being about 4km away from South Luangwa National Park and the Luangwa River.

5.9.4 Political Environment

Zambia has enjoyed over four decades of political peace, which has enabled her to become one of the first countries in Sub-Sahara Africa to retain peaceful multi-party democracy that has attracted worldwide acclaim.

The site is politically located in Malambo Parliamentary Constituency in Kakumbi ward. The project surrounding area is under the traditional leadership being a traditional land though the site itself has been converted into state land with Certificate of Title following a consent to obtain title issued by the Department of National Parks and wildlife on 16th October, 2020 and the Mambwe District Council gave the consent to convert the land into state land and recommend for issuance of Title Deed on 20th November, 2020.

5.10 Built Environment

People in Lower Lupande GMA live together in settlements made of many villages as a strategy to protect themselves from attacks by Elephants and Lions. The project site does not have any settlements; Safari hunting and Photographic Safari are the only activities that attract some visitors to this locality.

Development of urban facilities by Zambians in the Tourism Development Zone in the Lupande GMA was restricted by the Department of National Parks and Wildlife. The purpose of the Tourism Development Zone is to provide for consumptive and none consumptive tourism and related infrastructure development by foreign Investors only. This approach by Department contradicted the Government policy of promoting participation of Zambians in the Tourism sector to trigger investment and economic growth.

The area clustered as Tourism Development Zone includes the Land area in Nsefu Chiefdom between Tenatena turnoff/Milyoti Gate Road and the Luangwa River; the Cropping area in Kakumbi Chiefdom, and land along the major commercial spine stretching approximately 5 km wide along the east bank of the Luangwa River up to Malama Chiefdom.

5.10.1 Settlements

The Project area is located in the Lower Lupande GMA, which is traditional land for the local people of Chief Kakumbi's Chieftdom; conflicts over traditional land use rights may arise. There is a village settlement about 2km from the project site on the North and East side of the project site. There is also a market about 2km North of the project site. The establishment of the project in the area will act as boundary to restrict further movement of villagers into the restricted Game and Management Area.

The settlements are made of traditional housing structures and are part of the densely populated cropping Area. The area is being the last point on the way to the entrance to the South Luangwa National Park, most of the shops, main market, filling station; Health Centre is the centre of activities. The project area is about 3km to the trading area.

6.0 SOCIO - ECONOMIC IMPACTS, ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES IDENTIFICATION

The objectives of the identification of environmental and social economic impacts and proposed mitigation measures of the proposed Tourism Facility are to: -

- a) Identify all potential social-economic, positive and negative impacts that may arise as a result of implementing the project and their impacts on the biophysical environment, their magnitude and significant;
- b) Prescribe the mitigation measures to all the identified potential negative impacts;
- c) Outline a sustainable Environmental Management Plan (EMP) for implementing the proposed EMP for the Tourism Facility;
- d) Outline a monitoring, evaluation and reporting / feedback mechanism for effective management of the proposed EPB for Tourism Facility;
- e) Ensure good quality surface and ground water by regular monitoring and auditing;
- f) Ensure an efficient and effective solid waste management system for the Small Tourism Enterprise;
- g) Control and reduce the amount of dust arising from bare portions of the Tourism Facility premises during windy periods;
- h) Ensure an efficient and effective management system of sewer and water effluents;
- i) Reduce noise to appropriate acceptable levels at the premises;
- j) Prevent health risks of workers at the Tourism Facility;
- k) Create awareness and sensitize employees on the dangers of HIV and AIDS;
- l) Ensure safety of employees and avoid risks of fire out breaks
- m) Ensure that the environment of the Tourism Facility and its surroundings are maintained;
- n) Ensure the sustainable management of the site post closure by current and future stakeholders; and
- o) Monitor the progress of the Tourism Facility Operational Management Plan by Review and Internal / External Auditing

6.1 Socio-Economic Impacts and Proposed Mitigation Measures

The Socio - Economic Impacts of the proposed Tourism Facility during all the three phases of project implementation will be managed according to their impact on: -

- 1) Economy and Society
- 2) Employment
- 3) Health and
- 4) Education

6.2 Environmental Impacts and Proposed Mitigation measures

The Environmental Impacts of the proposed Tourism Facility that shall be under consideration during all the three phases of project implementation will be based on the following and Table 15 shows the environmental impacts, potential positive impacts, potential negative impacts and proposed mitigation measures: -

- 1) Vegetation Clearing / Loss of Vegetation due to Construction;
- 2) Disturbance to Animal Life;
- 3) Soil Disturbance / Compaction;
- 4) Soil Erosion;
- 5) Surface and Ground Water Pollution;
- 6) Dust Pollution;
- 7) Air Emissions / Air Pollution
- 8) Solid Waste Pollution;
- 9) Liquid Effluents / Wastewater / Soot Generation as Wastewater;
- 10) Products and By-Products;
- 11) Health Risk of Workers;
- 12) Safety and Risk of Workers;
- 13) Population Influx and Secondary Developments;
- 14) HIV / AIDS and STDs
- 15) Industrial Hazard Management; and

16) Aesthetic

Table 11. Social - Economic Impacts, Potential Positive and Negative Impacts and Proposed Mitigation Measures

No.	Social Economic Impact On	Potential Positive Impact	Potential Negative Impact	Proposed Mitigation Measure
1.	Economy and Society	<ul style="list-style-type: none"> a) There will be an increase in the revenue collected by the local authority through the various levies that will be charged on raw materials that shall be procured locally; b) There will be an increase in the protection of wildlife in the area due to the ever presence of people at the Tourism Facility; c) The project will also have multiplier effects on the general well-being of the local communities in the area, the district and the nation at large due to the undertaking of the project; and d) The Government and the Local Authority will generate revenue through payment of corporate taxes, park entry fees and personal levy. 	<ul style="list-style-type: none"> a) There will be potential influx of people from other towns to project site. b) There will be potential mushrooming of unplanned settlements at the around the project area; c) Potential risk of HIV, AIDS and STD infections amongst staff, resort visitors and surrounding communities; 	<ul style="list-style-type: none"> a) Not allowing employees to shift with wives but providing special programs for alternating leave days. This will discourage illegal settlements. b) Putting in place of HIV/ AIDS awareness, prevention and treatment programs to sensitize the employees on the dangers, prevention, treatment and care during all the three phases; c) Putting up of posters in English and local languages with all the necessary information on HIV / AIDS; d) Cooperatives and open working relationships should be established early with the local communities and maintained throughout the life of the project; e) Project workers should be encouraged to participate in community affairs;

2.	Employment	<p>a) There will be provision of at least 10 direct and over 15 Indirect employment opportunities created for both the skilled, semi-skilled and casual women and men workers during the site preparation, construction and operational phases of the project through direct and indirect job opportunities;</p> <p>b) An increase in the employment figures will result in the increase in the taxes paid and therefore a direct increase in the country's revenue;</p> <p>c) The project will contribute to poverty reduction levels of the people who shall be employed and supply of goods and service to the project.</p>	<p>a) There will be potential influx of people from within Mfuwe – Mambwe and Chipata to Project Site seeking for job opportunities;</p> <p>b) There will be potential increase in poaching by some job seekers who may not be employed; and</p> <p>c) There will be potential of illegal harvesting of resources by some job seekers who may not be employed.</p>	<p>a) Provide plans to take care of the expected influx of people from other townships to Project Area seeking employment;</p> <p>Put in place proper security measures.</p>
3.	Health	<p>a) The development will result in an increase in GDP and this will in turn have an improvement on health of nationals; and</p> <p>b) An increase in employment levels and economic performance of the country will mean that there will be more money available to be spent on the improvement of the health sector as the awareness in the people will be created resulting in them demanding for better services in the areas.</p>	<p>a) Healthy looking people may be HIV, AIDS and STDs carriers who may be on ARVs hence increasing the risk of HIV, AIDS and STDs.</p> <p>b) During construction, there will be at risk of injury and various ailments.</p>	<p>c) Conduct health education and HIV / AIDS / STDs awareness and sensitization for the local communities / employees in order to enhance mitigation measures against the HIV / AIDS / STD diseases.</p> <p>d) Distribute brochures, newsletters, posters and leaflets on HIV/AIDS/STDs about the dangers of HIV/AIDS and STDs; and</p> <p>e) Provide free condoms to anybody who may need them during the three phases of project implementation.</p> <p>f) Train and provide first Aid services on site and ensure there is adequate transport to the nearby health facility.</p>

4.	Education	<ul style="list-style-type: none"> a) An expanding economy and workforce will result in the educational levels and systems being improved; b) The project may offer support to the schools within and around project sites and may offer scholarships to local pupils and students. c) The improvements in the economic sectors will result in an increase in research-based activities, which in turn will lead to improved lives. 	<ul style="list-style-type: none"> a) High Illiteracy levels can lead to high crime rates. b) High human – animal's conflicts, c) Poor development 	<ul style="list-style-type: none"> a) Cooperative and open working relationships should be established early with the local communities and maintained throughout the life of the project; b) Project workers should be encouraged to participate in community affairs; c) Brief all employees to ensure awareness of and sensitivity to the local cultures, traditions and lifestyles; and d) Ensure that traditional leaders are aware of the project activities and are assisted in identifying impacts that may be of particular concern to them, and have a voice in appropriate mitigation measures.
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Table 12. Environmental Impacts, Potential Positive and Negative Impacts and Proposed Mitigation Measures

No.	Environmental Impact	Potential Positive Impact	Potential Negative Impact	Proposed Mitigation Measures
1.	Vegetation Clearing / Loss of Vegetation due to Construction	<ul style="list-style-type: none"> a) Cleared areas can provide feeding and nesting sites for birds and mammals; b) Increased habitat diversity at the contact between the plant premises and the existing vegetation; c) Some Facility infrastructure and structures will serve as nesting sites and perches for many birds, especially raptors; d) Safeguarding the surrounding environment of the proposed site; and 	<ul style="list-style-type: none"> a) Removing of vegetation cover to pave the way for the construction of structures and other facilities causing some vegetation damage; b) Modification of vegetation and introduction of alien invasive and non-native plant species. c) Habitat and organism loss / degradation / fragmentation or disturbance; d) Soil erosion, runoff and sedimentation enhancement; e) Disturbance of cultural resources and plant communities; and 	<ul style="list-style-type: none"> a) Planting of some indigenous tree species appropriate to the area's ecosystem; b) Control and prevention of introduction of alien invasive plants. c) All the site preparation, construction and tourism operation works will be done during the normal working hours of the day to avoid disturbance to the locality of the project site; d) Introduce appropriate management practices that do not disturb or degrade vegetation cover from vehicular traffic movement, construction activities and dust emissions on the project site, etc.; e) Need to undertake appropriate resource surveys of the site and its surrounding area in order to document an inventory of: - cultural and historical resource; flora and fauna of the Area; existing developments and projects in the district; and identification of significant topographical features; f) Provide mitigation measures on identified resource conflicts by avoidance; timing of operations; Recovering and achieving cultural and historic resources; and compensating for losses by protecting or enhancing comparable resources in the area; g) Minimize unnecessary disturbance of vegetation by keeping vegetation clearing to minimum levels; h) Prompt rehabilitation of disturbed areas and revegetation with native species; i) Preserve or create similar natural vegetation or habitats.

2.	Soil Disturbance / Compaction	<p>a) There will be no disturbance to the soil but rather soils will be sustainably managed; and</p> <p>b) The geological formation of the site will be exploited on a sustainable basis</p>	<p>a) Soil compaction may be experienced due to movement of vehicles and equipment;</p> <p>b) Degradation of soil from vehicular traffic on site; construction activities on site; dust emissions from activities on site, the cement and aggregates during construction; and waste from the site.</p>	<p>a) Clearing of the site will be strictly limited to the actual area of development and access to the site in order to minimize undue distraction of the surrounding areas of the site;</p> <p>b) Extreme care will be observed in the movement of materials and vehicles around the site in order to minimize the impacts of materials and vehicles to the surrounding areas of the proposed development;</p> <p>c) Soils will be stabilized mechanically to reduce the soil erodibility;</p> <p>d) Soil extracted from excavation works during the digging of foundations and trenches, will be used on site;</p> <p>e) Confining vehicular movements to specific areas and limiting the area of construction activities within the site;</p> <p>f) Minimizing disturbance to the soil and reducing on the importation of foreign soil; and</p> <p>g) Keep soil disturbance to minimum required operational standards of acceptable safety measures</p>
3.	Soil Erosion	<p>a) There are no anticipated positive impacts of the activities that will be carried out during site preparation, construction and operational phases of project implementation associated to soil erosion.</p>	<p>a) Degradation of surface waters by soil erosion from disturbed areas; and</p> <p>b) Erosion, runoff and sedimentation from construction of infrastructure, structures and opening of access roads and other facilities.</p>	<p>a) Control of storm water runoff and prompt revegetation on disturbed areas;</p> <p>b) Avoid disturbance of streams, drainages, ponds, water bodies, floodplains and wetlands;</p> <p>c) Install sediment traps or screens to control runoff and sedimentation;</p> <p>d) Where disturbance cannot be avoided, require use of sediment control structures / practices;</p> <p>e) Water quality standards should include suspend solids; and</p> <p>f) Stabilize soils mechanically or chemically to reduce erosion potential.</p>

4.	Surface and Ground Water Pollution	<ul style="list-style-type: none"> a) Avoid and minimize unsatisfactory surface water quality during the construction and operational phase of the project; b) Avoid and minimize unsatisfactory ground water quality during the construction and operational phase of the project; 	<ul style="list-style-type: none"> a) Reduction and alteration of the hydrological patterns and in local water supply; b) Contamination of groundwater c) Potential pollutants from detergents in the kitchen effluent and chemicals used during construction; removal of topsoil in the areas of building activity; use of local surface water or groundwater; d) Change in surface and ground water quality; e) Change in surface water flow and discharge; 	<ul style="list-style-type: none"> a) Require treatment of sanitary/domestic and storm water runoff to meet water quality standards before discharge; b) Prompt cleanup of any spills (oils, lubricants and cleaning solvents); c) Water quality standards should be established for all waste water discharges; d) Ensure that all steps are taken to prevent contamination of both surface and ground water; e) Ensuring an effective drainage system in place; f) Ensuring that vehicles and equipment are in good working conditions in order to avoid any raw material / oil spills; g) Provide drains to capture any oil spills if they should occur and then provide for a trap to contain the spill; h) Have in place an effective monitoring system on site during and after construction; i) Ensuring that the borehole is at least 60 meters apart; j) Ensuring effective management of foul and solid waste on site; k) Maintenance of a good drainage and vegetation on site; l) Proper management of solid waste; soil and foul effluent; m) Use of approved chemicals during construction and proper management of their application; n) Maintenance of a good drainage system to prevent ponding; o) Control of runoff and prompt revegetation on disturbed areas; p) Rainwater percolation and runoff from solid materials, fuel and waste piles can be controlled by covering and / or containment to prevent percolation and runoff to ground and surface waters;
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5.	Dust Pollution	<p>a) Avoid and minimize unsatisfactory air quality during the preparation, construction and operational phases of the project.</p>	<p>a) Dust from site preparation and construction works phase and from vehicle movements around the site;</p> <p>b) Dust from the cement and aggregate during construction;</p> <p>c) Dust from vehicular traffic during the operational phase;</p> <p>d) There is a potential of minimum dust emissions during the clearing and landscaping</p> <p>e) and digging of the foundation trenches;</p>	<p>a) Watering the site at regular intervals during the site preparation and construction phases of project implementation;</p> <p>b) Enforcing speed limits to access roads in order to minimize dust pollution;</p> <p>c) Watering down the premises and areas of construction activities;</p> <p>d) Ensuring the use of sound vehicles in order to avoid pollution from them;</p> <p>e) Provide dust collector equipment and monitor dust fallout;</p> <p>f) Provide dust collector equipment and monitor dust fallout;</p> <p>g) Maintain dust levels $\leq 10\text{mg/m}^3$;</p>
6.	Air Emissions / Air Pollution	<p>a) Avoid and minimize unsatisfactory air quality during the preparation, construction and clearing operational phases of the project; and</p> <p>b) Operate within the framework of the 7NDP (2017-2023) in revitalization of the Tourism sector in Zambia.</p>	<p>c) Degradation of air quality and visibility from airborne particulates of routine clearing operational.</p> <p>d) Air quality degradation from processing emissions;</p> <p>e) Exhaust fumes from the vehicles; and</p> <p>f) Air pollution effects to human health, agriculture and native wildlife and vegetation.</p>	<p>a) Ensure proper practices to minimize airborne particulates, watering of access roads, prompt revegetation or application of sealants and dust suppressants to disturbed areas (including waste and topsoil piles in order to prevent air pollution;</p> <p>b) Require appropriate pollution control devices installed and operative on all diesel generators and pumps;</p> <p>c) Minimize venting during land clearing operations;</p> <p>d) Locate site away from sensitive air quality receptors and use cleaner fuels;</p> <p>e) Install air pollution control equipment and use well maintained equipment, machinery and vehicles; and</p> <p>f) Analysis of raw materials during feasibility stage of project planning can determine existing levels of pollutants to properly design control measures.</p>

7.	Noise Pollution / Ambient Noise	a) Prevent or minimize noise nuisance.	<ul style="list-style-type: none"> a) Disturbance of human and wildlife by noise from equipment operations; b) Noise nuisance from vehicles, other machineries and facilities. 	<ul style="list-style-type: none"> a) Utilize earth mound vegetation screening; b) Reduce noise impact by enclosing and insulating noise emitting processes or equipment in buildings or by use of other noise abatement procedures; c) Carrying out all the construction works during the normal working hours of the day; d) Diffuse the noise of the generator by mounting the generator in an enclosed structure; e) Avoid loud noise in critical wildlife areas, especially during mating or nesting seasons; f) Require proper mufflers on diesel equipment and use lower rated equipment. g) Require proper mufflers on diesel equipment and use lower rated equipment; h) Control the timing of noise and vibration to least disruptive periods; i) Install noise barriers and maintain noise levels below 90 dB, or provide ear protection; and j) Table 6 and 7 on sound pressure, intensity and level will be used as guide for determine the normal noise levels.
8.	Solid Waste Pollution	a) Ensure quality solid management.	<ul style="list-style-type: none"> a) Disposal of solid waste; b) Solid waste from Vehicular traffic on site; Construction activities on site; c) Regional solid waste problem exacerbated by inadequate on site storage or lack of ultimate disposal facilities; and d) Soil and foul waste from facilities and ablution block. 	<ul style="list-style-type: none"> a) Institute solid waste management; b) Having designated points for the disposal of waste; c) Separation of biodegradable from non-biodegradable waste. Waste will be separated into the four categories in order to ensure that recycling is carried out hence reducing the environmental load by minimizing actual waste being Biodegradable; Plastics; Glass and bottles; and Cans and metal. d) Minimizing solid waste through effective and efficient operations on site during and after the construction phase of project implementation; e) Waste will be kept to minimum levels by efficient and effective operations on site; f) A system will be put in place to ensure that there is proper storage of the waste so that even in the event of potential delay in collection, the waste is properly contained; g) Vehicles carrying waste should be covered as they transport the waste to designated dumping sites;

9.	Liquid Effluents / Wastewater Generation as Wastewater	a) Avoid and minimize unsatisfactory surface water quality during the construction phase of the project.	a) There are potential blockages of the drainage pipes; b) There is potential pollution of the surrounding area; c) Water pollution from discharge of liquid effluents and runoff from waste piles;	a) Ensuring proper construction of the elements for the collection of the waste; b) Carrying out regular checking of all sewer and effluent facilities; c) Carrying out regular maintenance of the sewer and effluent facilities; d) Maintain storage and disposal areas to prevent accidental release; and e) Require identification and segregation of toxic rock materials.
10.	Health Risk of Workers	a) Minimize unsatisfactory Quality of health.	a) Occupational health effects on workers due to fugitive dust, materials handling, noise, or other process; b) Occurrence of accidents due to level of skill or labour; and c) Accidents during construction activities.	a) Implement a safety and health program designed to identify, evaluate, monitor and control health hazards and provide safety training; b) Put in place a health scheme for the employees; c) Ensure that employees are regularly trained and drilled to fire fighting and safety techniques; d) Employees are sensitized on prevalent diseases like malaria, cholera and diarrhea; e) Ensure proper storage and management of waste, surface and ground water on site; f) Provide adequate ablution facilities for all employees and change rooms facilities; and g) Provide hygienically prepared meals for all employees.
11.	Population Influx and Secondary Developments	a) Availability of Cheap labour sources during the construction phase.	a) Induced secondary development during construction in the surrounding area;	a) Provide comprehensive plans for handling induced development; b) Construct and provide appropriate facilities to reduce demand; and c) Provide technical assistance in land use planning and control to local government

12.	HIV / AIDS / STDs and Malaria	<p>a) Prevent the spread of HIV/AIDS and STDs and Malaria to the employees.</p>	<p>a) Spread of HIV/AIDS and STDs among the Contractors and employees; and</p> <p>b) Cases of malaria infection among the employees.</p>	<p>a) Arranging for programs to sensitize the employees on the dangers and risks of HIV / AIDS;</p> <p>b) Ensuring that condoms are placed in the ablution blocks for both male and female employees;</p> <p>c) Arrangements will also be made to have drama groups make educational performances once a month in order to create awareness among employees on the dangers of HIV / AIDS / STDs;</p> <p>d) Ensuring that all the contractors and employees are provided with treated mosquito nets;</p> <p>e) Ensuring that all the areas where water would collect or collects are rehabilitated in order to avoid mosquitoes breeding from them.</p>
13.	Industrial Hazard Management	<p>a) A well industrial hazard free management will avoid accidents occurring at the site, which shall also save unnecessary costs.</p>	<p>a) Fires, explosions, vapor, dust, emission of toxic liquids, radiation and various combination of these effects</p> <p>b) Flammable Materials: - Fire Hazard</p> <p>c) Oxidizing Agents: - Fire Hazard</p> <p>d) Water Sensitive Materials: - Evolve heat, flammable gases or explosive gases in contact with water, steam or water solution.</p> <p>e) Accidental radiation / biological hazard release.</p> <p>f) Toxic Materials:- Causes or serious injury to people or environment.</p>	<p>a) Provision of escape routes and emergency assembly points for employees and safety and emergency training for employees;</p> <p>b) Implementation of emergency procedure on and off site;</p> <p>c) Planning and training for evacuation and provision of safety buffer zones around the site boundary.</p> <p>d) Locate storage area well away from areas of fire hazard (E.g. where torch cutting of metals is to be performed;</p> <p>e) Keep apart from powerful oxidizing agent materials that are susceptible to spontaneous heating (materials that react with air or moisture to evolve heat);</p> <p>f) Provide fire-fighting equipment and use of bare filament heaters;</p> <p>g) Keep fuel away and store in dry and cool places / areas;</p> <p>h) Storage building must be waterproof, located on high ground and separated from other storage;</p> <p>i) Store hazardous gas as a refrigerated liquid rather than under pressure;</p>

14.	Aesthetic and Other Impacts	<p>a) The Tourism Facility will be modern and will use environmentally friendly machinery, equipment and materials which will bring an improvement to the landscape and therefore impact the aesthetic value positively; and</p> <p>b) The finished products, buildings and landscape will be blending with the environment.</p>	<p>a) The natural habitat will be slightly transformed into the proposed Tourism facility hence changing the aesthetic nature of the area;</p> <p>b) Visual intrusions from Chalets and cooking facilities;</p> <p>c) Conflicts with native cultures, traditions and life styles;</p> <p>d) Impaired cultural or aesthetic resources because of visual impacts;</p>	<p>a) Consult with local land users during the process of sitting access roads</p> <p>b) Allow other land uses to continue on the site where compatible with the Tourism Facility;</p> <p>c) Observe road load limits;</p> <p>d) Design roads for adequate capacity and visibility;</p> <p>e) Ensure that roads are properly signed, vehicles are well-maintained, and drivers are trained and safety conscious;</p> <p>f) Provide transport to commuting workers and car-pooling;</p> <p>g) Paint structures to blend with the background (vegetation and sky), avoid contrasting colors and construct visual buffer;</p> <p>h) Select appropriate structural design, materials and finishes;</p> <p>i) Use lower voltage, DC system or underground cable to reduce or eliminate visual impacts of lines and structures;</p> <p>j) Require pre development, socioeconomic study of potentially affected communities to identify possible impacts on services, infrastructure, dislocations and conflicts;</p> <p>k) Address impacts by community assistant grants, loans, prepayment of taxes, phasing mineral development and constructing needed community facilities;</p> <p>l) Brief all employees to ensure awareness of and sensitivity to the local cultures, traditions and lifestyles;</p> <p>m) Ensure that traditional leaders are aware of the project activities and are assisted in identifying impacts that may be of particular concern to them, and have a voice in appropriate mitigation measures;</p> <p>n) Mitigation may include isolating the work force from the native community;</p> <p>o) Minimize clearing and blend the development with the vegetation where possible;</p> <p>p) Not publicizing cultural resource sites in remote or unprotected locations; and</p> <p>q) Restrict unnecessary access and patrol sites.</p>
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Ambient Noise: -Noise abatement measures should be achieved either through the levels given below or a maximum increase in background levels of 3 decibels (measured on the A scale) dB(A) as provided for by Table 6 and 7 below. Measurements are to be taken at noise receptors located outside the project property boundary.

Table 13. Maximum Allowable Log Equivalent (hourly measurements) in dB(A)

No.	Receptor	Day (07.00 – 22.00)	Night (22.00 – 07.00)
1.	Residential, Institutional & Educational	55	45
2.	Industrial and Commercial	70	70

Table 14. Showing the Sound Pressure, Intensity and Level

	Sound Pressure (μPa)	Sound power (10^{-12} watt) or Intensity Level (10^{-12} watt/ m^2)	Sound Level (dB)	Example
1.	200,000,000	100,000,000,000,000	140	Threshold of Pain
2.		10,000,000,000,000	130	Riveting on Steel Plate
3.	20,000,000	1,000,000,000,000	120	Pneumatic Drill
4.		100,000,000,000	110	Loud Car Horn at 1 m
5.	2,000,000	10,000,000,000	100	Alarm Clock at 1 m
6.		1,000,000,000	90	Inside Underground Train
7.	200,000	100,000,000	80	Inside Bus
8.		10,000,000	70	Street Corner Traffic
9.	20,000	1,000,000	60	Conversational Speech
10.		100,000	50	Business Office
11.		10,000	40	Living Room
12.		1,000	30	Bedroom at Night
13.		100	20	Broadcasting Studio
14.		10	10	Normal Breathing
15.		1	0	Threshold of Hearing

Source: *Methods of Environmental Impact Assessment, 2nd Edition*

6.2.1 Analysis of the Identified Environmental Impacts

The analysis is based on the twenty-one (20) identified environmental impacts with respect to the significance of the impacts by combining the frequency of occurrence of the source of the impact, the duration of the impact, the severity of the impact, the spatial extent of the impact and the sensitivity of the element being impacted upon. The identified environmental aspects are-

- 1) Economy and Society;
- 2) Employment;
- 3) Health;
- 4) Education;
- 5) Vegetation clearing / Loss of Vegetation due to Land clearing;
- 6) Disturbance to Animal Life;
- 7) Soil Disturbance / Compaction;
- 8) Soil Erosion;
- 9) Surface and Ground Water Pollution;
- 10) Dust Pollution;
- 11) Air Emissions / Air Pollution;
- 12) Noise Pollution / Ambient Noise;
- 13) Solid Waste Pollution;
- 14) Liquid Effluents / Wastewater / Soot Generation as Wastewater;
- 15) Products and By-Products;
- 16) Health Risk of Workers;
- 17) Safety and Risk of Workers;
- 18) Population Influx and Secondary Developments;
- 19) HIV / AIDS and STDs;
- 20) Industrial Hazard Management; and
- 21) Aesthetic.

6.3 METHODOLOGY

6.3.1 Study Methodology

Primary data was collected from the site by conducting a site inspection and recording the necessary site characteristics. Basic interviews were also conducted to find out major economic activities, land uses and facilities around the area.

Bio-physical environmental characteristics were assessed by observations due to the nature of the project and its location as well as due to the relationship of the project especially ecological site features. Random samples of tree species were analyzed to identify tree species in the area. Interviews were also conducted to find out animals that are observed by the local people.

6.3.2 Methodology of Impact Evaluation

Negative environmental impacts were analyzed using environmental risk assessment and classification methods to facilitate prioritizing the impacts. These impacts were analyzed in terms of severity, geographical extent, frequency, duration and likelihood as explained in the tables below. Positive impacts were also identified and listed.

Table 15: Definition of impact analysis factors

Impact Factor	Meaning
Severity	Refers to the strength with which an impact will have on an Environment
Likelihood	The probability of the impact taking Place
Extent	The Scope in Space or geographical cover of the impact
Frequency	The number of times or how often the impact shall occur
Duration	The extent in terms of time.

Table 16; - Impact significance analysis scale

Scale	Severity	Likelihood	Extent	Frequency	Duration
	Negligible	Impossible	Activity specific	Annual	6 months
1	Minor	Highly Unlikely	Project site	Bi-Annual	1 Year
2	Marginal	Unlikely	District	Monthly	3 Years

3	Significant	Possible	Province	Weekly	6 Years
4	catastrophic	Definite	National	Daily	>6 Years

Table 17: - Impact significance analysis matrix table.

(SEVERITY) × (Extent) × (Duration)															
(LIKELIHOOD) × (FREQUENCY)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45
	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105
	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
	9	18	27	36	45	54	63	72	81	90	99	108	117	126	135
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150

Table 18: - Impact significance rating

Significance	Matrix Value	Mitigation Measures	Positive Impact Enhancement Measure
Very Low	1-30	Propose mitigation measure	Enhance
Low	31-60	Propose mitigation measure	Enhance
Medium	61-90	Propose mitigation measure	Maintain
High	91-120	Propose mitigation measure and pay more attention	Maintain
Very High	121-150	High risk area, propose mitigation measures and have high monitoring frequency	Maintain

A Scale of 1-5 was used to score each of the environmental impacts in terms of severity, extent, duration, likelihood and frequency. The figures were then added and multiplied using the formula below and as illustrated in the table below.

Impacts strength = [severity (M) × Duration (D) × Extent (E)] + {Frequency (F) × Likelihood (L)}

Severity sensitivity**Table 19: - Example of how the matrix above was used**

Air Pollution due to dust generation from open areas, access roads and exhaust fumes	
Severity (M)	Minor (2)
Duration (D)	3 Years (3)
Extent (E)	Project Site (2)
Frequency (F)	Daily (5)
Likelihood (L)	Possible (4)
Total Score (M×D×E) + (F×L)	32
Proposed Mitigation Measure	
1. Dust masks shall be provided to workers 2. Safety talks shall be conducted weekly regarding use of dusk masks 3. Workers shall be subjected to periodic medical check-ups.	
Air Pollution after applying mitigation measures	
Severity (M)	Negligible (1)
Duration (D)	3 Years (3)
Extent (E)	Project Site (2)
Frequency (F)	Daily (5)
Likelihood (L)	Unlikely (3)
Total Score (M×D×E) + (F×L)	21

7.0 ENVIRONMENTAL SOCIAL MANAGEMENT PLAN

7.1 Mitigation Measures of the Negative Impacts.

7.1.2 Physical Environment

The project is likely to several physical environmental impacts ranging from air and noise pollution, ground and surface water contamination, soil, ecosystem, waste generation and health care waste. Therefore, below are the detailed explanations of the mitigation measures.

7.1.2.1 Air and Noise Pollution

Construction Phase

During this phase, every effort will be made to minimize noise and air pollution. To mitigate the impact of dust and small particulate emission such as cement particles, wood particles etc. the site will be regularly watered down. The use of worn out and faulty construction equipment/machinery will not be tolerated to mitigate emissions and noise. Good housekeeping will also be promoted on site to prevent unpleasant smells from accumulated waste and unintentional mixing of material.

Late night working is not envisaged, to minimize any disturbance to any nearby residents and wildlife. The work hours will be from 08:00 hours -17:00hrs. The site will also be restricted to the public to ensure the accident risk to third parties is minimized.

Operation Phase

Solid waste will be separated and disposed of in waste bins and garbage plastics, which will be regularly collected and disposed accordingly. If any leakage or problems arise, with the sewage management system, this will be reported to the management and the problem will be addressed immediately. The impact on air quality because of vehicle emissions is negligible due to the nature of the development.

To mitigate the impact on the air quality as a result of using the generator, the developer will use a generator which is designed to have limited emissions. The developer will also ensure that the generator is serviced regularly.

7.1.2.2 Impacts on Ground Water

Construction Phase

The solid waste generated on this site will be temporarily disposed in drums that will be placed at various locations of the proposed sites. The bins will be emptied on a regular basis into a waste collection truck to be transported to an approved disposal site. The hazardous waste/ material soiled with hazardous chemicals/products will be temporarily disposed of in a drum that will be clearly marked as hazardous waste and will be covered at all times. This hazardous waste bin will then be collected by an approved hazardous waste collection agency and disposed of at ZEMA approved disposal sites.

To prevent oil contamination of ground water, all machinery that uses or requires oil will be checked for spillages and properly maintained before usage on this site. In addition, all routine maintenance of construction machinery and vehicles will be carried out off-site at workshops. Poorly maintained machinery will not be allowed to operate on site.

Operation Phase

Proper housekeeping practices will ensure potential contamination of water run-off is avoided:

- ❖ Septic tanks are used by all the tourist facilities, some urban commercial structures and a few houses in the district to manage soil water and waste water; while the larger part of the local community uses Pit Latrines.
- ❖ A vacuum tanker service owned by Eastern Water and Sewerage Company (EWSC) is available for hire and maintains septic tanks in Mambwe district and other Districts in EP. Septic tanks on the project site will periodically be maintained by the EWSC.
- ❖ There will be no notable industrial waste generated from the project site as described and regulated under the Water Pollution Control (Effluent and Waste Water) Regulations, 1993 Statutory Instrument No. 72 of 1993. The project proponent will also comply in full with the Hazardous Waste Management Regulations, SI No. 125 of 2001.
- ❖ Sewer lines will be checked routinely and necessary maintenance will be carried out to avoid leakages.

- ❖ All solid waste will be put in bins and dumpsters on site and will be collected on a regular basis by a Solid Waste Collection Company approved by the City Council Waste Management Unit and disposed of according to ZEMA approved disposal methods.
- ❖ On site storm water management will be drained via lined drains which discharge into the local drainage system. Storm water drains will be cleaned on a regular basis.

7.1.2.3 Impacts on Soil

Construction Phase

In cases where small quantities of fuel are brought to site, these will be present on site in a mobile fuel bowser and at the end of a workday transported to appropriate fuel storage facilities. Trained personnel will supervise works on the site to ensure proper handling of material such as fuels and paints, which are likely to cause soil contamination. To mitigate soil contamination from oil spills, all machinery will be regularly maintained so that there are no fuel leaks.

To mitigate the impacts on soil because of solid waste, all solid waste will be disposed of in bins (drums) that will be provided on site. The bins will be emptied on a regular basis into a waste collection truck and then transported to an approved disposal site.

The hazardous waste/material soiled with hazardous chemicals/products will be temporarily disposed of in a drum that will be clearly marked as hazardous waste and will be covered at all times. This will be collected by a ZEMA licensed hazardous waste collection company. The amount of hazardous waste expected to be generated is very small, not likely to fill a 200L drum for the entire construction period.

7.1.2.3 Impacts on Ecosystem

Construction phase

The developer will ensure that the vegetation cut from site is not burned but that it is given to interested parties who may use it as compost or as wood. This will lessen the amount of carbon released to the atmosphere.

Operation Phase

The developer will ensure that as part of landscaping the site design incorporates vegetation. The green areas will be set up after the building is up.

7.1.2.4 Waste Generation

Construction Phase

The solid waste generated on this site will be temporarily disposed in drums that will be placed at various locations of the proposed sites. The bins will be emptied on a regular basis into a waste collection truck and then transported to an approved disposal site. The hazardous waste/ material soiled with hazardous chemicals/products will be temporarily disposed of in a drum that will be clearly marked as hazardous waste and will be covered at all times. This hazardous waste bin will then be collected by an approved hazardous waste collection agency and disposed of at ZEMA approved disposal sites.

Sewage will be managed by use of VIP Pit latrines. Good housekeeping practices will be strictly adhered to.

Operation Phase

Good housekeeping practices will be strictly adhered to. Sewage management will be by use of modern flushable toilets connected to Septic Tanks and VIP Pit latrines. Bins will be introduced on site which will be used to collect waste and these will be collected by a licensed garbage collector at regular intervals. The waste will be separated at source and categorized into two categories that is health care waste and general waste. Health care waste will be disposed in bins lined with yellow plastics and the general waste will be disposed of in bins lined with black plastics. The general waste will then be collected from site by a licensed waste collection company. The management of the health care waste will be as follows:

7.1.2.5 Health Care Waste Management

The following practices will be employed to reduce the negative impact of health care waste on humans and the environment;

7.1.2.5.1 Purchasing practices

Good purchasing practices will be employed to ensure the desired amount of stock is held in store to avoid wastage. Every effort will be made to purchase durable equipment and furnishings. The following are some management practices to reduce waste.

- ❖ Practice First in First out (FIFO) to prevent generation of pharmaceutical waste.
- ❖ Avoid products with excess packaging and request supplies to avoid excess packaging.
- ❖ Develop micro testing procedures to reduce chemical usage
- ❖ Ensure biomedical waste is properly segregated from general waste to reduce disposal costs and increase materials for recycling.

7.1.2.5.2 Material Re-usage

Only materials that do not pose a threat of infection, or environmental contamination will be reused. Reusable equipment such as waste bins and transport trays will be thoroughly disinfected before re-use.

7.1.2.5.3 Segregation

Management will ensure that waste is segregated at source. Segregation of the waste will ensure that the correct disposal routes are taken, personnel safety is maintained, environmental harm is maximized and recycling consumes the least resources. The following measures will be put in place to ensure sound management of waste at source.

7.1.2.5.4 Colour Coding and Labelling

Colour coding of HCW receptacle will be an efficient way of achieving segregation of waste and for sorting out recyclable items. Colour coding will reduce the risk of cross contamination and occupational health hazards and enhance identification of types of Health Care Waste.

Different Colors for general and potentially infectious waste will be used. Black will be used for non-hazardous (general waste) waste while yellow will be used for infectious waste and chemical waste respectively.

All stored or packaged Health Care Waste will be labelled in order to ensure responsibility for what staff members put into the bins and to gather data on the amount of waste produced in each department. The labels will contain the following information:

- a) Waste type
- b) Source of Waste
- c) Data and waste generation
- d) Amount of waste generated

7.1.2.5.7 Packaging of Health Care Waste

Health Care Waste will be packaged in resistant sealed receptacles to prevent spilling during handling and transportation. Pedal bins and 20L high-density plastic containers will be used. The following provisions will ensure sound packaging of HCW:

- ❖ The HCW receptacles to be used will be robust enough and of sufficient strength to prevent damage during handling or use.
- ❖ Reusable receptacles will need to be smooth and rounded on the inside to allow effective cleaning. A suitable disinfectant such as JIK in the ratio of 1:6 will be used.
- ❖ Receptacles for sharp will be non-corrosive, puncture resistant (metal of high density plastic), rigid, with fitted covers, and impermeable to return any residual liquid from syringes. Management will ensure that these receptacles are not more than three quarters full before disposal.
- ❖ HCW receptacles shall be readily available close to the point of generation, located away from patient area to avoid cross infections.
- ❖ Bio-hazard marks and other warning signs will be posted on receptacles.

7.1.2.5.8 Collection, Transportation and Disposal of Health Care Waste

Collection and transportation of HCW from the proposed facility will be done by a private company licensed by ZEMA to transport hazardous waste. However, it will be the responsibility of management to ensure that waste is handled in an environmentally sound manner. To this end, the following measures will be put in place:

- ❖ A schedule for the collection of waste bags and containers shall be agreed upon with the waste transporter.
- ❖ Collected waste bags and containers will immediately be replaced with new ones of the same type.
- ❖ The waste transporter will be required to keep the vehicle in good working condition by ensuring that the vehicle is disinfected and cleaned regularly with an appropriate disinfectant at an appropriate site where waste water will be properly disposed of.

7.1.2.5.9 Chemical Disinfection

This is a treatment method routinely used to kill microorganisms on equipment and on floors and walls. Chemicals are added to waste to kill or inactivate the pathogens it contains; this treatment results in disinfection rather than sterilization. Chemical disinfectants such as sodium hydro chlorite of appropriate concentration will be used.

7.1.2 Socio-economic Environment

7.1.2.1 Occupational Health and Safety Risk.

Construction Phase

The Contractor will be obliged to comply with and conduct all construction activities in accordance with applicable Zambian Construction Health and Safety Standards (e.g. as stipulated under the Factories Act, the Labour act and the Workman's Compensation Act). The following safety measures and procedures will be taken:

- ❖ Personal Protective Equipment (PPE), including dust masks, safety goggles and hearing protection, shall be issued and used as required by the various categories of the workforce and according to the risk assessments carried out before any scope of works.
- ❖ Barrier tape, reflective coats and warning signs will be erected in appropriate places on the construction site (e.g. around trenches, holes) to prevent injury to construction workers and other personnel on site.
- ❖ All workers on site will have been trained and specialized in the tasks that they are to undertake on site that is, the drivers will have licenses, welders will have their welding certificates, general workers will have their registration cards and skilled workers will have their certificates.

- ❖ The site will always have a competent supervisor ensuring that works are done according to the work procedures and on time.
- ❖ Strict adherence to safety measures and procedures will minimize (or eliminate) risks of accidents or hazardous developments occurring.

Operation Phase

Management will ensure that all procedures and practices involved in the operation of the Tourism facility will comply with the most stringent of:

- ❖ Tourism Facility Health Safety Policy
- ❖ All applicable Zambian safety standards and regulations.
- ❖ Regulations of the Zambia Medicines Regulatory Authority

The company will ensure that all equipment is in suitable condition and is able to operate without risks to health and safety, and that effective monitoring and maintenance is undertaken of the same. All employees will be trained and inducted in the company's safety rules and regulations, of which some of the main areas covered include:

- ❖ Use of personal protective equipment (PPE) including overalls, boots/gloves and masks as required,
- ❖ Accident and First Aid procedures,
- ❖ Fire procedures and assembly points,
- ❖ Good housekeeping,
- ❖ Other major safety points. Operators will be fully trained in the handling, storage and application of chemicals in accordance with ZEMA and ZAMRA regulations,
- ❖ Only chemicals pesticides that are approved for the purpose shall be used,
- ❖ Chemicals (Medicines and others) will be stored in considerable quantities on site in designated, secure and well ventilated stores.
- ❖ All works will be done by personnel trained in the works occupied with. For example, the cleaners will clean and not be allowed to treat patients.

The facility will be equipped with appropriate fire detection and suppression equipment.

7.1.2.1.1 HIV AIDS Risks

Construction Phase

HIV/AIDS awareness talks will be covered in the daily toolbox talks before work is done. Construction workers will be commuting to the site so there is less risk of interaction between workers. Contracts of work priority will be given to the local people who apply.

Operation Phase

The Tourism Facility management team will ensure that workers are not allowed to have any interactions with clients or fellow workers that may lead to HIV/AIDS and that sharp instruments like needles and blades are handled with care to eliminate the spread of HIV through use of sharps. The project will also ensure that the workers are aware of how to handle patients/fellow workers with bleeding wounds to eliminate the spread of HIV/AIDS through such.

7.1.2.1.2 Public Health and Safety

Construction Phase

The solid waste generated on this site will be temporarily disposed in drums that will be placed at various locations of the proposed sites. The bins will be emptied on a regular basis into a waste collection truck managed by the local council and then transported to an approved disposal site. Hazardous waste/ material soiled with hazardous chemicals as hazardous waste and will be covered at all times. This hazardous waste bin will then be collected by an approved hazardous waste collection agency and disposed of at ZEMA approved disposal sites.

Sewage waste will be managed by use of VIP Pit latrines toilets. The site exposed work areas will be watered down to minimize the risk of respiratory illnesses and other impacts of dust to the members of the public.

To mitigate the negative impacts as a result of machinery usage, construction machinery will be regularly checked and maintained and no works will be carried out at night. Work will be from 08:00 Hours to 17:00 hours.

Operation Phase

To ensure health and safety on site; bins will be introduced on site which will be used to collect waste and these will be collected by a licensed garbage collector at regular intervals. Good house-keeping practices will be strictly adhered to. Warning signs of any unsafe zones will be placed such as boards that warn of wet floors, electrical areas etc.

7.1.2.1.3 Other Indirect, Secondary Impacts and Traffic

Construction Phase

Heavy flow of vehicles that can generate high levels of noise during the construction phase of the project are more unlikely because the project is small scale and will not be able to generate heavy flow of traffic. However, the project proponent will establish a strict policy regarding driving on the access road leading to the project site and visits to the camp site will be spread throughout the year in order to reduce congestion at the Camp during the peak tourist seasons.

Operation Phase

Heavy flow of vehicles that can generate high levels of noise during the operation phase of the project are more unlikely because the project is small scale and will not be able to generate heavy flow of traffic. However, the project proponent will establish a strict policy regarding driving on the access road leading to the project site and visits to the camp site will be spread throughout the year in order to reduce congestion at the Camp during the peak tourist seasons.

Obliteration of vegetation cover due to peak season congestion is unlikely because when fully booked only limited number of cars will be allowed on the premises. The Camp will accommodate maximum 16 people at one instance, so even on the busiest moments there will be no congestion. Foot tracks will be created on the Camp premises but the number will be kept at a minimum; everyone staying at the Campsite will be directed to use foot tracks.

Traffic and safety warning signs will be established where ever needed on access road approaching the site and on the site. The site will have one (01) access/egress point for private vehicles and another access/egress point for ambulances.

7.2 Enhancement Measures of Positive Impacts

7.2.1 Social Economic Impact on the Economy

The Tourism facility during the construction and operations phase will have a number of positive impacts in the project area and its surrounding. Some of the social economy impacts on the economy are as follows;

- ❖ There will be an increase in the revenue collected by the local authority through the various levies that will be charged on raw materials that shall be procured locally;
- ❖ There will be an increase in the protection of wildlife in the area due to the ever presence of people at the Tourism Facility;
- ❖ The project will also have multiplier effects on the general well-being of the local communities in the area, the district and the nation at large due to the undertaking of the project; and
- ❖ The Government through the Local Authority will generate revenue through payment of corporate taxes, park entry fees and personal levy. There will be an increase in the revenue collected by the local authority through the various levies that will be charged on raw materials that shall be procured locally;

The Project developer will ensure that the following enhancement measures are in place to boost the social economic impact on the economy;

- ❖ The project will be tax compliant and remit all the revenue due to all relevant authorities.
- ❖ The project will join the local community scout and the Department of National Parks and Wildlife to protect and conserve wildlife.

7.2.2 Social Economic Impact on Employment

The project will also have a positive impact on employment especially for the local community both during the construction and operations phases. There will be provision of at least 10 direct and over 15 Indirect employment opportunities created for both the skilled, semi-skilled and casual women and men workers during the site preparation, construction and

operational phases of the project through direct and indirect job opportunities. The project will also contribute to poverty reduction levels of the people who shall be employed and supply of goods and service to the project.

The Project developer will ensure that the following enhancement measures are in place to boost the positive impact on employment;

- ❖ The developer will ensure that an expansion programme is also in place which will result in the increase in the number employment opportunities as well as upgrade of some employment positions.
- ❖ The developer, will ensure that all the goods and services are sourced from local suppliers so that poverty levels are reduced.

7.2.3 Social Economic Impact on Health

The development will also have a positive impact on Health because of the multiplier effect. For example, an increase in GDP due to the increase production in the Tourism sector this will in turn have an improvement on the health of nationals; and an increase in employment levels and economic performance of the country will mean that there will be more money available to be spent on the improvement of the health sector as the awareness in the people will be created resulting in them demanding for better services in the areas.

The developer will ensure it remains compliant by paying all the taxes and levies due to the government and also help the local health centre with some material and other supports to promote health in the local community.

7.2.4 Social Economic Impact on Education

The development will also have some positive impact on education because an expanding economy and workforce will result in the educational levels and systems being improved; However, the project may offer support to the schools within and around project sites in terms of infrastructure and school materials and may offer scholarships to local pupils and students. The improvements in the economic sectors will result in an increase in research-based activities, which in turn will lead to improved lives.

The development through its corporate social responsibility will target the education sector as an enhancement measure to offer scholarships, provide for the underprivileged school requisites and also maintain its policy of tax and levy compliance to the government and its agent in order boost government revenue collection.

7.2.5 Environmental Positive Impact on Vegetation

The project development will also have some positive impact on the environment because it will act as a barrier against villagers who have been cutting trees on site area thereby protecting the vegetation that provide feeding and nesting sites for birds and animals. They will be Increased habitat diversity at the contact between the plant premises and the existing vegetation and also Some Facility infrastructure and structures will serve as nesting sites and perches for many birds, especially raptors;

The development shall ensure that it will works with the Community Resource Board and the Forrest Department to Conserve and protect the vegetation. The development will also ensure that during construction and operations, tree planting remain a continuance project in order to maintain the vegetation of the area.

7.3 ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN (EMMP)

An Environmental Management and Monitoring Plan is laid out in Table 12 below. Overall responsibility for Environmental Management at all project phases will be that of the developer. Compliance with relevant Health, Safety and Environmental standards during construction will be the prime responsibility of the Contractor. During operation, the developer will be fully responsible for the implementation of Environmental Management and Monitoring activities and ensuring full compliance with Health, Safety and Environmental standards.

Table 20: ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN (EMMP)

Aspects	Impacts	Objective	Mitigation Measures	Responsible person	Indicator	Means of Verification	Frequency of applying mitigation measures	Time frame	Cost ZMK /phase
Preparation/ Construction Phase									
Clearing of building area, basic earthworks, backfilling and compacting of the site, construction of various buildings, and Delivery of raw material	Air pollution	To minimize dust nuisance	All work areas and access road will be regularly watered down by water bowser	Project Engineer	Minimal dust generation	Observation	Daily	7 months	7,000
		To minimize exhaust pollution and nuisance	The use of ill maintained construction plant and equipment will not be permitted	Project Engineer	Zero-minimal Exhaust emissions. Record of machine maintenance.	Machine maintenance records Machine operators certificates	Weekly	7 months	20,000
		To avoid fire risk and smoke nuisance	All works are to be carried out in accordance with laid down work procedures.	Project Engineer	Zero fire occurrences Record of Toolbox talks and work methods	Site audit report	At the beginning of each new job specification	7 months	5,000

Clearing of building area, basic earthworks, backfilling and compacting of the site, construction of various buildings, and Delivery of raw	Noise pollution	To minimize noise disturbance to neighbours	The use of ill maintained construction plant and equipment will not be permitted	Project Engineer	Noise levels within threshold limit. Record of machine maintenance	Machine maintenance records Machine operators certificates	Weekly	7 months	20,000
Clearing of building area, basic earthworks and backfilling and compaction of the site	Waste nuisance	To avoid waste nuisance	All waste generated on the site will be segregated and disposed of appropriately	Project Engineer	Good Housekeeping. All solid waste to be in bins and not on the floor	Site observation	Weekly	7 months	5,000
		To provide sanitary facilities and prevent contamination of ground water from sewage waste and construction waste	Sanitation facilities will be provided to construction workers. Construction waste will be disposed of in bins that will be provided on site. The bins will then be emptied regularly by a local council approved waste collector.	Project Engineer	Presence of temporary sanitation Facility No contamination of ground water.	Inspection of sanitation facility Cleaning material procurement records Interview with the workers Ground water sample results	Weekly	7 months	20,000

Clearing of building area, basic earthworks, backfilling and compacting of the site, construction of various buildings, and Delivery of raw material	Occupational health and safety risk	To ensure Health and Safety on the construction site	All construction activities will be conducted in accordance with applicable Zambian Construction Health and Safety Standards.	Project Engineer	Zero number of accidents recorded. All workers inducted in health and safety topics	Site health and safety report	Weekly	7 months	10,000
Clearing of building area, basic earthworks, backfilling and compacting of the site, construction of various buildings, and Delivery of raw material	Public and safety risk	To prevent accident or injury to members of the public	The site will have restricted access	Project Engineer	Signs to show access point to site and Security personnel at the site access points	Site health and safety report	Weekly	7 months	10,000
		To prevent accident or injury to members of the public	Barrier tape and warning signs will be erected around excavations and other appropriate places such as holes and existing services areas.	Project Engineer	Zero accidents recorded in a month involving members of the public	Site health and safety report	Weekly	7 months	12,000

Operational Phase									
Aspects	Impacts	Objective	Mitigation Measures	Responsible person	Indicator	Means of Verification	Frequency of applying mitigation measures	Time frame	Cost ZMK /phase
Provision of services offered by Center Lodge	Loss of air quality	To ensure a clean and germ free and comfortable environment	The surfaces of the clinic and offices will be cleaned and disinfected regularly. The critically ill/emergency patients will be cleaned as soon as possible. Preventing the sight of blood and stool on a person.	Management	Clean environment. Zero cases of illness/infections due to being at the proposed development	Visual monitoring	Daily	Fifty years	10,000
Sewage generation	Water pollution	To prevent contamination of ground from point or diffuse sources	All sewage waste will be managed by use of toilets connected to Septic Tanks and VIP Pit latrine. If any faults in the water and sewer reticulation system that might lead to	Management	Zero contamination of ground water.	Sewer system checks and ground water results.	Quarterly	Fifty years	60,000

Waste generation	Public health risk	To minimize potential risks to public health	Waste will be segregated at source and disposed of in colour coded bins that will be introduced on site and these will be collected by a licensed general waste collector and health care waste collector respectively at regular intervals. Good house-keeping practices will be strictly adhered to. Disinfection of the clinic and offices will be done on a regular basis.	Management	Zero cases of illnesses due to project activities. Workers and members of the public utilizing bins to dispose of waste. The site kept clean	Safety report and site safety audit	Weekly	Fifty years	5,000
Day to day activities pertaining to the function of the development	Occupational/ public health and safety	To prevent the accidents and injuries/infections to workers and members of the public	The company will ensure that all equipment is in suitable condition and is able to operate without risks to health and safety, and that effective monitoring and maintenance is undertaken of the same. All employees will be trained and induced in the company's safety rules and regulations.	Management	Zero accidents/injuries/infections recorded on site	Safety report and site safety audit	Monthly	Fifty years	3000/ quarter

Use of electricals for lighting, cooking, operation of machinery.	Fire occurrence	To minimize potential risks due to fire	The fire-fighting system (extinguishers) to be tested regularly and first aid kits/fire extinguishers will be available in each building.	Management	Zero fire occurrences. Fire extinguishers available at strategic locations on site.	Safety report Fire horse reels available with adequate water supply.	Quarterly	Fifty years	3000/quarter
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8.0 DEMOLITION AND CLOSURE PHASE

8.1 Introduction

This decommissioning plan is prepared in accordance with the National Council of Construction. Decommissioning will be undertaken at the closing down of the proposed Tourism Facility. The decommissioning activities will be undertaken by the developer of the proposed project.

In line with the National Council of Construction act and ZEMA guidelines, the works will be undertaken as per the plan outlined below.

8.2 Legislative Requirements

The National Council of Construction (NCC) is responsible for the administration, inspection and enforcement of legislation regarding decommissioning activities. The decommissioning and demolition of buildings has to be undertaken according to the stipulations of the NCC act. Also, according to The Zambia Environmental Management Agency, the developer is mandated to ensure compliance to environmental protection laws and guidelines. To this effect, this plan is attached to an Environmental Project Brief to be submitted to ZEMA as part of this process.

8.3 Licensed Technical Personnel

The knock down and demolition of buildings will be done under the supervision of an Engineering Institute of Zambia registered civil engineer.

8.4 Application for Permit

Prior to undertaking the activities, the relevant permits i.e. Environmental Project Brief, will be obtained by the company.

8.5 Demolition Safety Precautions

Demolition of the proposed offices will be done with the utmost caution. In case any site contamination is identified, it will be cleaned up by licensed environmental cleaning service

providers. Furthermore, the contractor once on site will submit a safety plan to ensure procedures are followed to prevent injury to personnel and the environment.

8.6 LIST OF ACTIVITIES UNDER THE DECOMMISSIONING AND CLOSURE PHASE

The main activities during this phase include;

- ❖ Issuing of notice of closure;
- ❖ Closing down of all activities at the temporal and construction offices.
- ❖ Clearing and cleaning of all the rooms
- ❖ Removal of removable components of the building such as glass, finishing's, tiles, aluminum frames, etc.
- ❖ Demolition of the concrete and temporal structures of the building.
- ❖ Segregation, collection and disposal of demolition debris from the site to a designated dump site.
- ❖ Writing a decommissioning report and submit a copy to ZEMA

Equipment to be used at this stage includes drilling equipment, Loader and Tipper.

8.7 Decommissioning and Closure Procedures

The table on the next page shows the demolition program and estimated costs. The decommissioning and closure phase budget is K150, 000

Table 21: Decommissioning Program

ISSUE	ACTION	IMPLEMENTING ORGANISATION	RESPONSIBLE ORGANISATION	DURATION	COST
Issuing of notice of closure	This will be done by the developer	Pemba Leaf Tobacco	Pemba Leaf Tobacco	Three Months	K1000
Close-down of all activities at the offices.	Clearing of all rooms	Pemba Leaf Tobacco	Pemba Leaf Tobacco	Three months	K12,500

Removal of removable components of the building such as glass, finishing's, tiles, aluminum frames, etc.	Skilled contractors under the supervision of a civil engineer will be hired to do this job	Pemba Leaf Tobacco	Pemba Leaf Tobacco	One month	K40,000
Demolition of the concrete structures of the building.	Knocking down of walls and stripping of floors	Pemba Leaf Tobacco	Pemba Leaf Tobacco	One Month	K35,000
Segregation, collection and disposal of demolition debris from the site to a designated dump site	Collection of waste will be by and approved council waste collector	Pemba Leaf Tobacco	Pemba Leaf Tobacco	One Month	K38,000
Decommissioning program/Report	Writing a decommissioning report and submit a copy to ZEMA	Pemba Leaf Tobacco	Pemba Leaf Tobacco	One Month	Statutory fee as stipulated by ZEMA

8.8 CONCLUSION

It is expected that almost all the identified negative environmental impacts of the Tourism Facility will be mitigated during all the three phases of project implementation and this is substantiated by the following reasons: -

- a) The environmental impact of the construction and operation of the Tourism Facility will not have any detrimental impacts given the location area of the proposed site and existing environment;

- b) The project will have positive impacts on the environment. Amongst the associated benefits includes reduction of poaching in the area due to continued presence, an increase in the economy through an increase in the revenue and hence the Gross Domestic Product (GDP), employment levels, the aesthetics of the building and improved efficiency;
- c) The project will have positive impacts on the environment as the activities will have no adverse effect on the ground water, vegetation, fauna and soil. In addition, all possible steps have been planned for and will be implemented in order to ensure that any potential ground water and soil contamination are curbed through the various stringent measures in the design and the type of materials to be used; and
- d) The project is expected to positively impact the economy through the creation of employment and the generation of revenue both during construction and operational phase of project implementation.

Therefore, the environmental impacts during the site preparation, construction and operational phases of project implementation will be negligible because the proposed mitigation measures will have to be implemented to ensure that all the sensitive aspects of the environment are avoided or minimized.

In conclusion, most of the environmental impacts during the operational phase of the project will be positive and the following are among the notable ones: -

- a) Contribute to the revitalization of the tourism sector at the lowest total economic, financial, social and environmental cost consistent with national development goals of sustained growth, employment generation and poverty reduction as articulated in the 7NDP and Zambia Vision 2030;
- b) Contribute to national Growth Domestic Product (GDP) by enhancing tourism development in the country;
- c) Provide a total of about 10 employment opportunities for the skilled, semiskilled and casual workers during the site preparation through direct and indirect job opportunities for the country;

- d) Contribute revenue to the Government and the Local Authority through payment of corporate taxes, rates and personal levy;

Furthermore, we are of the opinion that the development will satisfy and meet the requirements of the laws and regulations governing the construction and operations of the projects. The proposed project is well designed and will not lead into negative environmental problems. It is therefore our hope that the Zambia Environmental Agency (ZEMA) considers and approves the proposed project located in Lower Lupande in Chief Kakumbi's Chiefdom in Mfuwe Mambwe District of Eastern Province of the Republic of Zambia.

9.0 DECLARATION OF AUTHENTICITY

I Ismail Zamakda do hereby affirms that the information presented in this report is correct to the best of my knowledge.

This report has been prepared to recognize the importance of Biodiversity, conservation and sustainable use of natural resources so that the value of environmental considerations during the design, development and implementation process of Tourism Facility project are not underestimated, so that adverse environmental impacts can be eliminated or mitigated. Environmental benefits should be enhanced, prior to the implementation of the project.

I hope that this brief will meet the intended purpose and form a basis on which ZEMA will make a favorable decision to allow the developer to implement the project.

Sign: 

Director

DATE: 10/07/2023

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APPENDIX I: - TITTLE DEED

DR 10d




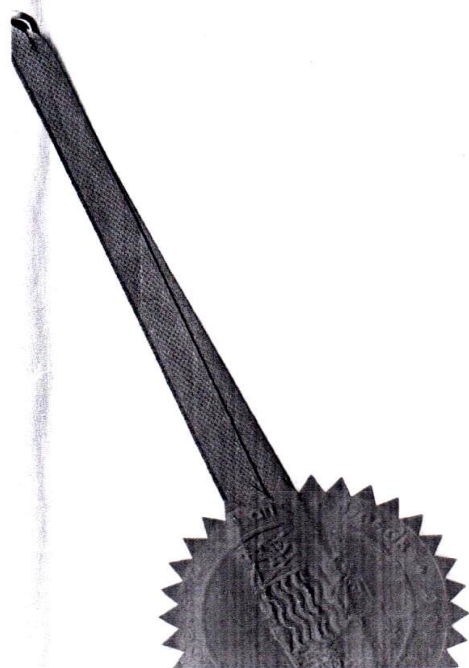
REPUBLIC OF ZAMBIA


No.:

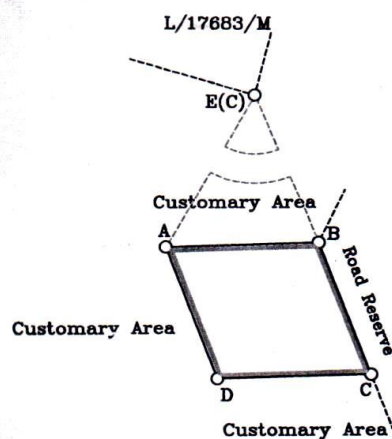
CERTIFICATE OF TITLE

No.: 126866

 Lot No.:..... **MAMBW/4014875**



SIDES METRES		ANGLES OF DIRECTION	CO-ORDINATES SYSTEM UTM 33 E METRES N			DIAGRAM NUMBER
						SD 1760/2022
AD	250.00	88.00.13	A	369447.79	8549414.76	APPROVED:  GOVERNMENT SURVEYOR DATE: 10/02/2022
BC	240.00	159.13.10	B	369697.64	8549423.47	
CD	249.50	268.02.40	C	369782.79	8549199.08	
DE	240.00	339.05.40	D	369533.43	8549190.56	
CONNECTING DATA						
EA	713.07	178.46.22	E	369432.52	8550127.67	
ED	752.45	159.22.10				



SCALE 1:10,000

BEACON DESCRIPTION..... All are iron pegs in concrete

THE FIGURE..... A - B - C - D - A

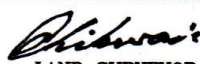
REPRESENTS..... 5.6719 Hectares

OF LAND BEING..... L/Mambw/4014875

SITUATED IN THE..... Eastern..... PROVINCE..... REPUBLIC OF ZAMBIA

SURVEYED IN..... January 2022

BY ME


 LAND SURVEYOR

PARENT DIAGRAM No.:

SURVEY RECORDS No.: 640/2022

S G FILE No.: SD/104/13/3

PLAN No.: 640/2022

MAP REFERENCE: 1331 B3

[illegible][illegible]

COT: 126866
Myno: 2/mambwe/4014875/2
Myno: 12/05/2022

LF/1
Stocked by Lands
10m M593 12/84 S&T



Lease No. LG - 39402

Province. EASTERN

STAND No. L/MAMBWE/4014875

THIS LEASE MADE the 12th day of May
two thousand and twenty-two BETWEEN HIS
EXCELLENCY THE PRESIDENT OF ZAMBIA (hereinafter called 'the President') of one
part and ZAMAKDA ISMAIL of Mambwe in Zambia

(Hereinafter called 'the Lessee' which expression where the context so admits includes.....
Himself, his heirs and assigns.....) of the other part

WITNESSETH as follows

1. In consideration of the sum of K.....3,833.40.....now paid by the Lessee to the President receipt whereof the President doth hereby acknowledge and of the rent hereinafter reserved and the covenants and condition herein after contained the President hereby demises unto the Lessee ALL THAT piece of land

In extent.....5.6719 hectares.....

More or less being.....L/MAMBW/4014875.....No.....

situated in.....Eastern.....

province of ZAMBIA which piece of land is more particularly delineated and described on.....

.....Diagram.....No.....SD 1760 of 2022.....

attached to.....these present.....

(hereinafter called 'the said land')TO HOLD unto the Lessee for terms of.....

.....99..... years from the first day ofJanuary.....

two thousand andtwenty two..... (herein called 'the said terms')

YIELDING AND PAYING therefor during the said term the rent as hereinafter provided.

EXCEPTING AND RESERVING out of the demise hereby made all minerals, mineral oils and precious stones whatsoever upon or under the said land.

2. The Lessee forhimself,his heirs and assigns.....

.....

hereby covenant with the President as follows:

- (1) To pay all such rates taxes assessment an imposition whatsoever as may hereafter become payable in respect of the said land according to the law
- (2) To permit during the said term the President or any person or persons authorised by the President to enter on the said land at any reasonable time during the day for the purpose of inspection or to lay or have access to water mains drains sewer pipes telegraph or telephone wires and electric manis of all description whether the same or any of them be overhead or underground provided that just and fair compensation shall be paid by the President to the Lessee for any loss or damage occasioned thereby.
- (3) To pay on or before the execution of these presents the sum of K.....108.10..... being rent for the period from the date of commencement or the said to the.....first..... day of.....January.....two thousand and.....two.....and thereafter a yearly rent of K.....108.10.....on the.....thirty first.....day ofDecember.....in each successive year in arrear free of all deductions.

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President

1) within a period of twenty-four months from the date of the certificate of title to erect on the said land good and substantial buildings to the approval of the planning Authority and to the value as assessed by the local authority of not less than K250,000.00.....and to complete the foundations thereof within twelve months from the date of the certificate of title.

2) At all times during the said term well and sufficiently to repair, cleanse, uphold, maintain and keep any messuage or buildings which may be erected on the said land and all additions thereto and the wall fences, sewers drains and amendments and to execute at the lessee's own cost all such sanitary and other works as may from time to time be lawfully required by the local authority.

3) Except with the prior written consent of the President not to assign sublet mortgage charge or any manner whatsoever encumber or part with possession of the said land or any part thereof or interest therein or concerning the same or attempt so to assign sublet mortgage charge encumber or part with possession of the said land.

terms')

4) Except with the prior written consent of the President not to use the said land or the buildings thereon or to be erected thereon or any part thereof for any purpose other than for AGRICULTURAL Purposes in accordance with the approved development plan or any amendment thereof and for which an application for planning permission has been submitted to and approved by the Provincial Authority.

President hereby covenants with the Lessee that the Lessee paying the rent of K108.10 reserved and observing and performing the several covenants and condition herein on the Lessee's contained shall peaceably hold and enjoy the said land during the said term without any interruption e President or any person lawfully claiming under the President.

the

VIDED ALWAYS and it is hereby mutually agreed as follows:

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1) If and whenever the rent hereby reserved or any party thereof shall be in arrear and unpaid for twenty-eight days after the same shall have become due (whether legally demanded or not) or if the Lessee shall at any time make default in the observance of any of the covenants and conditions herein contained on the Lessee's part to be performed or observed it shall be lawful for the President to re-entre upon the said land and hold the same as of his former estate as if this Lease had not been made but without prejudice to any right of action or remedy of the Lessor in respect of any prior breach non-performance non-observance of any of the lessee's covenants or conditions herein-contained.

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2) The annual rent stated in sub-clause shall at the option of the President be subject to revision during the subsistence of the Lease or any extension thereof at such periods as the President might in his absolute discretion decide.

IN WITNESS WHEREOF..... LYNN SYANZIBA HABANJI

Commissioner of Lands of the Government of Zambia for and on behalf of the
President has hereunto set his hand and seal and..... ZAMAKDA ISMAIL has hereunto
set his hand and seal

on the day and year first before written.

SIGNED SEALED and DELIVERED

by the said..... LYNN SYANZIBA HABANJI

For and on behalf of the President of Zambia
in the presence of:

Witness..... CHAZYA SILWIMBA

Address: P.O. Box 30069, LUSAKA

Occupation: Civil Servant

SIGNED SEALED and DELIVERED

by the said..... ZAMAKDA ISMAIL

in the presence of:

Witness..... ZGAMBO ROBERT

Address..... P.O. BOX 510543 CHITPAIA

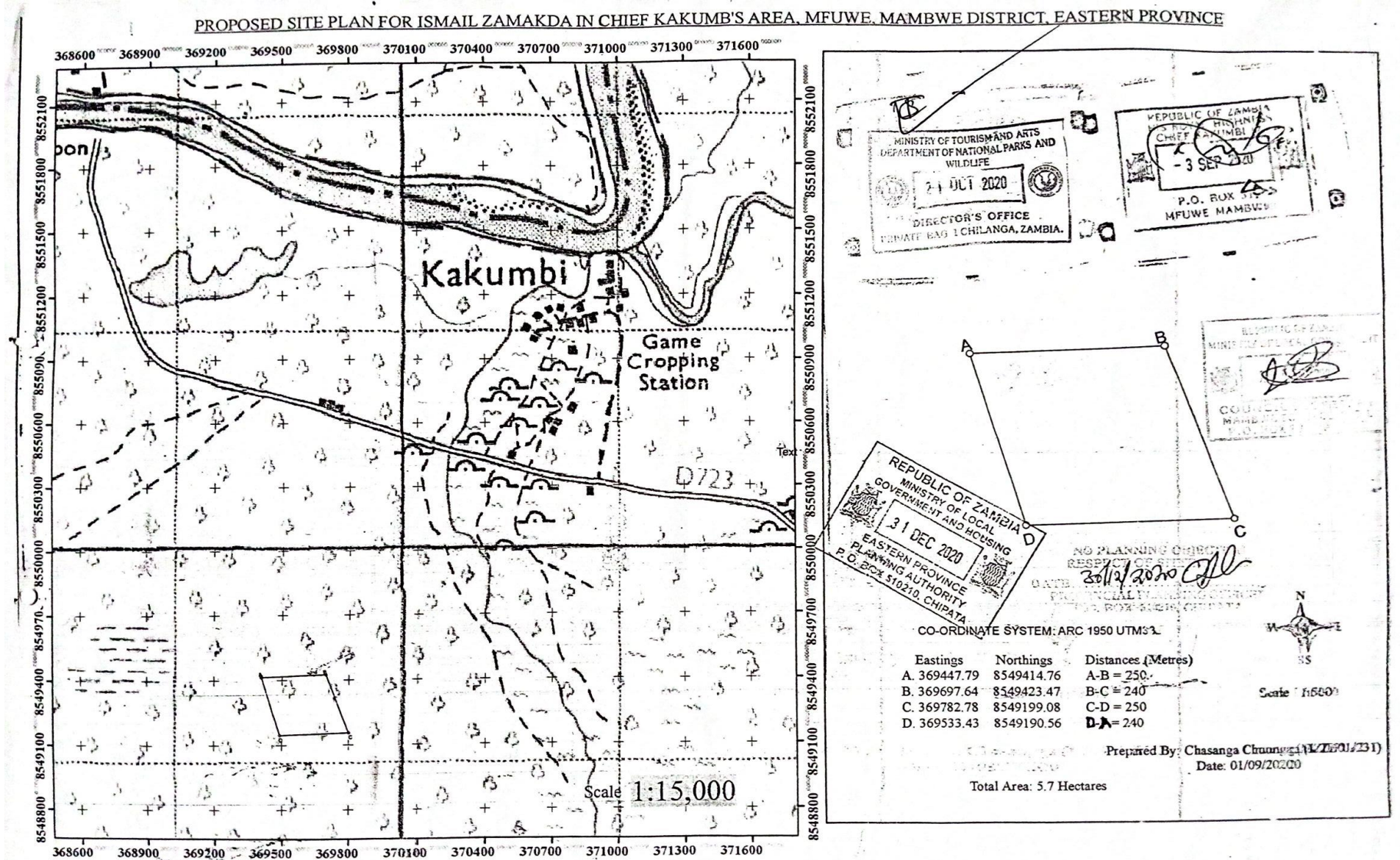
Occupation..... VALUATION ASSISTANT

Qiba



fuho

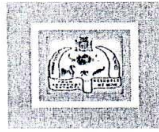
APPENDIX II: - APPROVED SITE PLAN



APPENDIX III: - SATELIGHT IMAGE OF THE PROJECT AREA



APPENDIX IV: - MAMBWE TOWN COUNCIL APPROVALS WITH MINUTES



MAMBWE TOWN COUNCIL

Civic Centre
P.O. Box 23, Mfuwe
Mambwe, Zambia
Tel: (0216) 246165
Email: mambwecouncil@yahoo.com

*All communications should be addressed to the
Council Secretary and not to Individuals*

Land Rich in Natural Resources

20th November, 2020.
The Commissioner of Lands
Ministry of Lands and Natural Resources
Mulungushi House
P.O. Box 30069
LUSAKA

Dear Sir/Madam

**RE: RECOMMENDATION FOR OFFER OF COMMERCIAL LAND (MEASURING 5.7
HECTARES) IN KAKUMBI CHIEFDOM– MAMBWE DISTRICT - MR. ISHMAIL
ZAMKDA**

Reference is hereby made to the above subject.

I wish to recommend for offer of a Commercial Plot situated in Kakumbi Chiefdom of Mambwe District in favour of **Mr Ishmail Zamakda NRC#430505/52/1**.

Further, Council at its meeting held on **10th November, 2020** under Minute No. **MDC/C/255/11/20** as read together with Committee Minute number **SPEANRDC/699/10/20** approved the application for conversion of **Commercial Land** measuring **5.7 hectares** for development of a tourism facility.

Attached hereto are extracts of Council Minutes and copies of the Site Plan for your scrutiny.

Your favourable consideration will be highly appreciated.

Yours Faithfully
MAMBWE TOWN COUNCIL


Henry Siwakwi
COUNCIL SECRETARY

Cc. Provincial Local Government Officer
P.O Box 510277
CHIPATA.

Cc. Provincial Lands Officer
P.O Box 510488
CHIPATA.

Cc: District Planning Officer
MAMBWE TOWN COUNCIL

Cc. File

**EXTRACTS OF MINUTES OF THE THIRD (3RD) ORDINARY COUNCIL MEETING
HELD IN THE COUNCIL CHAMBER, CIVIC CENTRE MAMBWE ON TUESDAY
10TH NOVEMBER, 2020 AT 10:20 HOURS.**

PRESENT: COUNCILLORS:

Phiri Maison	-	Council Chairman-in the Chair
Zulu Steven	-	Vice Council Chairperson
Hon. Linda W. Saili	-	H.R.H Chieftainess Msoro
Phiri Lyford	-	Member
Mwale Kamalizya	-	Member
Phiri Greyson	-	Member
Mwanza Derick	-	Member
Kamanga Edson	-	Member
Mbewe Webson	-	Member
Chulu Jonas	-	Member
Mulauzi Assan	-	Member
Phiri Joseph	-	Member
Sakala Stephen	-	Member
Nyirenda Blackson	-	Member

IN - ATTENDANCE

Mr. Henry Siwakwi	-	Council Secretary
Mr. Kennedy Phiri	-	District Planning Officer
Mr. Frank Mazani	-	Acting Deputy Council Secretary
Mr. Musyani Mugala	-	Council Treasurer
Mr. Kennedy Kaputo	-	District Agriculture Coordinating Officer
Mr. Moses Manasseh	-	District Social Welfare Officer
Ms. Florence Manda Kantini	-	District Education Standards Officer
Mr. Edson Kambole	-	Deputy Council Treasurer
Mr. Curtis C. Shamano	-	Planner – Health
Mr. Edwin M. Mwewa	-	Chiefs and Traditional Affairs Officer
Mr. Mike Mulenga	-	Livestock and Fisheries Officer
Ms. Nangana Nalukena	-	Office of the President
Mr. M'tumbi Hara	-	Assistant Social Welfare Officer
Mr. Lazalous Lungu	-	Assistant Community Development Officer
Mr. Kapindu K. Nyirenda	-	Procurement Officer
Ms. Taonga Phiri	-	District Aids Coordinator Advisory
Ms. Janet Mulilo	-	Social Economic Planner
Mr. Emmanuel Ngosa	-	Acting Rural Water Coordinator
Mr. Gershon Simutowe	-	Acting Health Inspector
Mr. Patson Musonda	-	Assistant Internal Auditor
Ms. Catherine Satulo	-	Planning Assistant
Mr. Fortune Musonda	-	Assistant Committee Clerk (Minuting)
Ms. Elizabeth Mwila	-	Committee Clerk (Minuting)

BY INVITATION

Mr. Geoffrey Mumba	-	District Administrative Officer
Mr. Noah Mbewe	-	Professional Assistant
Ms. Thelma Kunda	-	District Information Officer- ZANIS
Mr. Mannix Sakala	-	Judicially

NATIONAL ANTHEM/PRAYER

Prior to the commencement of the meeting, the National Anthem was sung followed by the word of God and a prayer by Councillor Greyson Phiri.

MDC/C/227/05/20: NOTICE OF MEETING

The notice of meeting duly circulated was read in accordance with the Local Government Act number 2 of 2019 as read together with Standing Orders.

MDC/C/228/05/20: APOLOGIES FOR ABSENCE

Apologies for absence from attending the meeting were received from His Royal Highness Chief Malama and Chief Kakumbi.

Thereafter, it was

RESOLVED

That the above apologies for absence from attending the meeting be accepted.

MDC/C/229/05/20: ADOPTION OF THE AGENDA

Having read the agenda of the meeting and on a proposal by Councillor Derick Mwanza duly seconded by Councillor Jonas Chulu, it was;

RESOLVED

That the agenda be adopted and approved as presented.

ADOPTION OF MINUTES OF STANDING COMMITTEES

MDC/C/237/05/20: SPECIAL PLANNING, ENGINEERING, AGRICULTURE, NATURAL RESOURCES AND INFRASTRUCTURE DEVELOPMENT COMMITTEE MEETING HELD ON WEDNESDAY 9TH OCTOBER, 2020

On a proposal by Councillor Jonas Chulu duly seconded by Councillor Patrick Mwale, it was; -

RESOLVED

That the minutes of Special Planning, Engineering, Agriculture, Natural Resources and Infrastructure Development Committee meetings held on **Wednesday 9th October, 2020** be adopted as part of the proceedings of the Council.

Certified as a true and correct records of extracts of minutes of the Third Ordinary Council meeting held in the Council Chamber, Civic Centre, Mambwe on Tuesday 10th November, 2020 at 10:20 hours.

SIGNED THIS.....DAY OF.....2020



Henry Siwakwi
COUNCIL SECRETARY

EXTRACTS OF MINUTES OF SPECIAL, ENGINEERING, AGRICULTURE AND NATURAL RESOURCES AND INFRASTRUCTURE DEVELOPMENT COMMITTEE MEETING HELD IN THE COUNCIL CHAMBER, CIVIC CENTRE MAMBWE ON WEDNESDAY 9TH OCTOBER, 2020 AT 10: 30 HOURS.

PRESENT: COUNCILLORS

Joseph P. Phiri	-	Chairperson
Jonas Chulu	-	Vice Chairperson
Patrick Mwale	-	Member
Steven Zulu	-	Ex-officio (Deputy Council Chairperson)
Phiri Maison	-	Ex-officio (Council Chairperson)

IN- ATTENDANCE

Mr. Henry Siwakwi	-	Council Secretary
Ms. Lenganji Nalomba	-	Council Treasurer
Mr. Kennedy Phiri	-	District Planning Officer
Mr. Niza Ndawa	-	Director of Works
Mr. Frank Mazani	-	Acting Deputy Council Secretary
Mr. Richard Mankomba	-	Deputy Director of Works
Ms. Janet Mulilo	-	Social Economic Planner
Mr. Felix Satela	-	Valuation Officer
Ms. Mbaloste Mwanza	-	District Accountant
Mr. Gershom Simutowe	-	Acting Health Inspector
Mr. Patson Musonda	-	Assistant Internal Auditor
Ms. Penelope Nyirenda	-	Buildings Inspector
Mr. Fortune Musonda	-	Assistant Committee Clerk (Minuting)
Ms. Elizabeth Mwila	-	Committee Clerk (Minuting)

REPORT OF THE DISTRICT PLANNING OFFICER

SPEANRIDC/699/10/20: APPLICATION FOR CONVERSION OF LAND FROM CUSTOMARY TO LEASEHOLD TENURE – MR ISHMAIL ZAMAKDA

The District Planning Officer reported for consideration by the Committee on the receipt of an application for conversion of land from customary land to leasehold tenure in Kakumbi Chiefdom, Mambwe District. Below were the details of the application:

- Name of Applicant: Ishmail Zamakda
- NRC No.: 430505/52/1
- The land applied for conversion was located in Kakumbi Chiefdom in Mambwe District.

- Extent of land applied for: **5.7 Hectares**
- There were no settlers on the land in question.
- The applicant had already obtained letter of consent from His Royal Highness Chief Kakumbi
- The applicant had a consent letter from Kakumbi CRB.
- The applicant had not yet obtained the letter of consent for obtaining Title from Department of National Parks and Wildlife (DNPW).
- The applicant had been occupying the said land for 5 years

In view of the above, the District Planning Officer recommended that:

- d. The applicant obtains consent letter for obtaining Title from the Department of National Parks and Wildlife
- e. The applicant obtains letter of consent for establishing a tourism facility from the Department of National Parks and Wildlife
- f. That once these conditions were met, the applicant be recommended to the Commissioner of Lands for issuance of Title Deed.

The District Planning Officer reported for consideration by the Committee to consider the application for conversion of land,

The applicant had been invited for interviews and he appeared before the Committee accordingly.

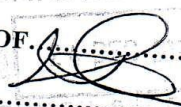
On a proposal by Councillor Patrick Mwale duly seconded by Councillor Jonas Chulu, it was;

RECOMMENDED;

That the report on the application for conversion of land (5.7 hectares) from customary to leasehold tenure in Kakumbi Chieftdom within Mambwe District by Mr. Ishmail Zamakda be approved.

Certified as a true and correct records of extracts of minutes of Special Planning, Engineering, Agriculture, Natural Resources and Infrastructure Development Committee meeting held in the Council Chamber, Civic Centre, Mambwe on Wednesday 9th October, 2020 at 10:30 hours

SIGNED THIS DAY OF 2020


Henry Siwakwi
COUNCIL SECRETARY

FORM III
(Regulation 3)

APPROVAL OF THE LOCAL AUTHORITY FOR THE CONVERSION OF
CUSTOMARY TENURE INTO LEASEHOLD TENURE

1. I, HENRY SIWALI in my capacity as Council
Secretary of MAMBWE District Council confirm and state that
(property number) the land to be
converted from customary tenure to leasehold tenure by the applicant
ISHMAIL ZAMAKIDA (Name of applicant) falls within the
boundaries of MAMBWE District Council.

AND THAT the said (property number) falls
within the Jurisdiction of Chief VAKUMBI. The
approval/refusal of the Chief for the land to be converted from customary tenure to leasehold
tenure is herewith attached.

2. The applicant ISHMAIL ZAMAKIDA (name) has
occupied and has had the right to the use and occupation of the said land for a continuous
period of 6 years.
3. I am not aware of any other rights personal or communal to the use and occupation of the land
or any part of the land.
4. As a result of the information available to me, I hereby give/refuse my approval for the said land
to be converted into leasehold tenure.

Signed:

Date: 22/12/2020

APPENDIX V: - DEPARTMENT OF NATIONAL PARKS AND WILDLIFE CONSENT TO ESTABLISH A TOURISM FACILITY.

28th November, 2016

Mr. Ismail Zamakda
P.O. Box 511017
CHIPATA.

Cell No. +260 950556850

Dear Sir,

**RE: APPLICATION FOR THE ESTABLISHMENT OF A TOURISM FACILITY
ON AN ALTERNATIVE SITE**

Reference is made to the above subject.

The Department of National Parks and Wildlife (DNPW) is in receipt of your correspondence dated 12th November, 2019 pertaining to an alternative site found for the establishment of a tourism facility in the Lower Lupande Game Management Area.

As you are already aware, the area in question falls in the chiefdom of His Royal Highness Chief Kakumbi(VII). Therefore, you are required to obtain consent from the traditional leader for the development on the proposed alternative site. Furthermore, Kwalata Hunting Safaris currently holds a Hunting Concession Agreement in the area with DNPW, which provides that the Hunting Outfitter should provide written consent allowing for any proposed development prior to the granting of a no-objection authority and next steps from the Department.

In principal, DNPW has no objection to your proposed development. You are therefore, requested to provide written consents from the both the Chief and Kwalata Hunting Safaris to assist in the processing of your application by DNPW.

DNPW sincerely appreciates your interest in and contribution to the tourism industry in the country.



Paul Zyambo
DIRECTOR
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
for/PERMANENT SECRETARY

Cc: Permanent Secretary – Ministry of Tourism and Arts
Senior Warden – South Luangwa Area Management Unit (SLAMU, DNPW)
Principal Planner- DNPW, Chilanga

APPENDIX VI. DEPARTMENT OF NATIONAL PARKS AND WILDLIFE CONSENT TO OBTAIN LEASEHOLD TITLE DEED



MINISTRY OF TOURISM & ARTS

Department of National Parks and Wildlife

Private Bag 1, Kafue Road, Chilanga, Zambia
Telephone: +260-211-279080 / 278366 / 278555 / 278365
Telefax: +260-211-278524 / 278244 / 278471
Email: info@zawa.org.zm



All correspondence should be addressed to the Director

NPW/12/6/1

16th October, 2020.

Mr. Ismail Zamakda,
Pemba Leaf Zambia Ltd,
P. O. Box 511017,
Plot No. 66 Obote Road,
CHIPATA.

Dear Sir,

RE: APPLICATION FOR CONSENT TO OBTAIN LEASEHOLD TITLE FOR LAND
IN LOWER LUPANDE GMA.

The above matter refers.

The Department of National Parks and Wildlife (DNPW) is in receipt of your letter of 2nd October, 2020 in which you have requested for Consent to Convert 5.7 hectares Customary Land in Leasehold.

We also make reference to our letter of 28th November, 2016 in which we granted you a provisional No Objection to your application provided that you obtain Consent from the Chief of the area, His Royal Highness Chief Kakumbi as well as support letters from the Kakumbi Community Resources Board (CRB) and the Safari Operator for Lower Lupande Hunting Block, Kwalata Safaris.

DNPW is therefore satisfied that you have fulfilled the required procedure as stipulated to you in our earlier communication.

Your application is therefore granted and the office of the Commissioner of Lands shall be advised of this development in order to enable you proceed with other requirements of the Planning process in accordance with the Land Act of 1995 and the Urban and Regional Planning Act No 3 of 2015.

Yours faithfully,

Dr. Chuma Simukonda
ACTING DIRECTOR.

Southern Region Office
P.O. Box 60086
Livingstone
Tel: +260-213-321396

Eastern Region Office
P.O. Box 18
Mfuwe
Tel: 062 45021 / 062 45042

Northern Region Office
P.O. Box 710393
Mansa
Tel: +260-212-8221735

Western Region Office
P.O. Box 830124
Mumbwa
Tel: 01 800056

Copy: The Permanent Secretary Ministry of Tourism and Arts
The Commissioner of Lands – Lands Department
The Council Secretary – Mambwe Town Council
HRH Chief Kakumbi, Kakumbi Chiefdom, Mambwe District
Assistant Director Conservation and Management - DNPW
Principal Planner - DNPW



MINISTRY OF TOURISM & ARTS

Department of National Parks and Wildlife

Private Bag 1, Kafue Road, Chilanga, Zambia
Telephone: +260-211-279080 / 278366 / 278555 / 278365
Telefax: +260-211-273524 / 278244 / 278471
Email: info@zawa.org.zm



All correspondence should be addressed to the Director

NPW/12/6/1

16th October, 2020.

The Commissioner of Lands,
Lands Department,
P. O. Box 50069,
LUSAKA.

Dear Sir,

RE: CONSENT FOR MR. ISMAIL ZAMAKDA TO CONVERT CUSTOMARY LAND
TO LEASEHOLD IN LUPANDE GAME MANAGEMENT AREA, MAMBWE
DISTRICT.

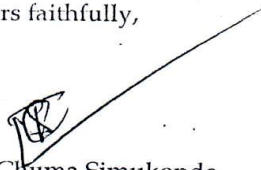
The above matter refers.

The Department of National Parks and Wildlife (DNPW) wishes inform your office that
Mr. Ismail Zamakda has been granted Consent to Convert Customary Land measuring
about 5.7 hectares to Leasehold.

The land is located in Lupande Game Management Area No. 21, in Mambwe District of
the Eastern Province.

Please find attached duly endorsed Site Plans and Consent Letters for your reference.

Yours faithfully,


Dr. Chuma Simukonda
ACTING DIRECTOR.

Copy: The Permanent Secretary Ministry of Tourism and Arts
The Council Secretary – Mambwe District Council
HRH Chief Kakumbi, Kakumbi Chieftdom, Mambwe District

Southern Region Office
P.O. Box 60086
Livingstone
Tel: +260-213-321396

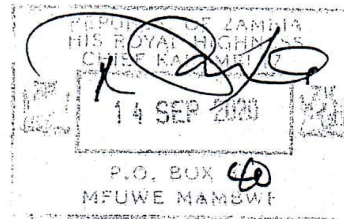
Eastern Region Office
P.O. Box 18
Mfuwe
Tel: 062 45021 / 062 45042

Northern Region Office
P.O. Box 710393
Mansa
Tel: +260-212-8221735

Western Region Office
P.O. Box 830124
Mumbwa
Tel: 01 800056

Assistant Director Conservation and Management - DNPW
Assistant Director Commercial Services - DNPW
Principal Planner - DNPW
Senior Wildlife Warden – DNPW, Eastern Region, Mfuwe

APPENDIX VII. CHIEF KAKUMBI'S CONSENT FOR LAND ACQUISITION



TO WHOM IT MAY CONCERN.

Dear Sir,

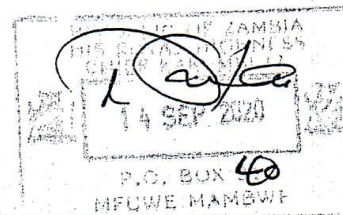
RE: CONSENT LETTER FOR MR ISMAEL ZAMALDA OF PLOT NO 66 OBOTI-RE. CHIRATA.

This is to certify that I JOHN KANDA KAPERE Chief of KANDA TRIBE MAMBWE have allowed the above mentioned person to put up a Tourism facility in my Chiefdom after consultation with other stakeholders who also gave consent to have the area identified as a plot 240 x 250 mts of land.

Kindly assist him develop the area. I hope that my request would receive a favorable response.

Yours faithfully
H-R H CHIR DEAKAMBA

A handwritten signature in dark ink, appearing to read 'H-R H Chir Deakamba'.



FORM II
(Regulation 2)

APPROVAL OF THE CHIEF OF AN APPLICATION FOR CONVERSION OF
CUSTOMARY TENURE INTO LEASEHOLD TENURE

- I, JOHN KUNDA KAPEPE - CHIEF KAKUMBA
(Village) confirms and certifies that
1. I have caused the right to the use and occupation of ISMAIL ZAMARWA
(Property number) by
(the applicant to be investigated and the investigation has revealed that the applicant or
his family has for the last years been in occupation of the land described
in the plan I have appended my signature.
 2. I am not aware of any other right (s), personal or communal, to the use and occupation
of the land or any other part of the party of the land, except that these rights have always
been enjoyed by the community and shall not affect the right of the applicant to the use
and occupation of the land.
 3. I have caused the consultation to be made with members of the community.
 4. As a result the consultation and the information made available to me, I hereby give
~~refuse~~ my approval for the said land to be converted into Leasehold Tenure.

Signed.....

Date.....

14/09/2020



APPENDIX VIII. KAKUMBI COMMUNITY RESOURCE BOARD CONSENT

KAKUMBI COMMUNITY RESOURCE BOARD

P.O. Box 118,
MFUWE.

26th November 2019

MR ISMAIL ZAMAKDA
P.O. Box 511017,
CHIPATA.



Dear Sir,

RE: CONSENT LETTER OF ESTABLISHING A PHOTOGRAPHING SAFARI IN
LOWER LUPANDE G.M.A.

Referring to the above mentioned matter,

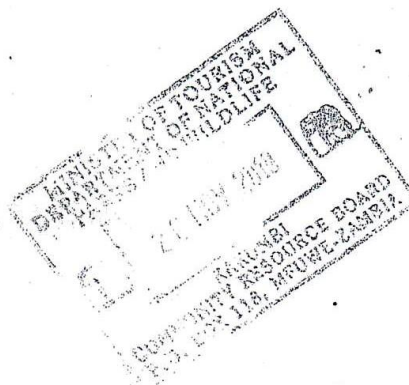
I write to inform you that Kakumbi Community Resources Board has allowed and supports you to establish a photographing safari in Lower Lupande Game Management Area. The Board is delighted with the investment you would like to bring in the chiefdom and we are very much excited to work with you in promoting tourism industry.

The board wishes you well as you take up all necessary steps and process to establish a photographing safari in our chiefdom.

Yours faithfully,

Raphael Banda

CRB CHAIRPERSON



APPENDIX IX. KWALATA HUNTING SAFARI'S CONSENT



Plot No. 2419
Freedom way Southend
IDC Building,
P.O.Box 35225, Lusaka, Zambia
Tel/fax: +260 211 236533
Mobile: +260 961 666676
+260 978 773561
E-mail: zaed137@hotmail.com
E-mail: kwalatapeter@yahoo.com

19 November, 2019

The Director,
Department of National Parks,
Private Bag 1,
CHILANGA.

Dear Sir,

RE: CONSENT TO BUILD A LODGE IN LOWER LUPANDE GAME MANAGEMENT AREA

We hereby give consent to Mr. Ismail Zamkda to build a Lodge in Lower Lupande Game Management Area. The Lodge will be constructed at an Area with the co-ordinates as below:-
MGRS: 36LUL69639, LAT:-13,12115 LON:-31,79736 DMS31,79736 DMS: -13°7'16.158"S/31°47'50.749"E
The Land boundary on the North is Mpalazi Stream going South East covering an Area of 100m by 500m.
The site 385m away from Uyoba School. 18m from the last beacon of land belonging to Melisa.



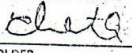
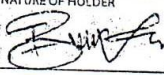
This consent does not infringe on our exclusive hunting rights outside the 5hectares and the remaining Lower Lupande Game Management Area.

Yours Sincerely,

PETER CHIPMAN
DIRECTOR

Lusaka Office
P.O.Box 35225 Lusaka, Zambia

APPENDIX X: - NATIONAL REGISTRATION CARD (NRC)

	REGISTRATION NUMBER 430505/52/1	
	REPUBLIC OF ZAMBIA 	
SIGNATURE OF REGISTRATION OFFICER 		RIGHT THUMB PRINT
SIGNATURE OF HOLDER 		

REPUBLIC OF ZAMBIA NATIONAL REGISTRATION CARD		CARD No. Z13477739
FULL NAME ZAMAKDA ISMAIL		
DATE OF BIRTH 01-10-75	PLACE OF BIRTH T CHIPATA	SEX M
FATHER'S/MOTHER'S PLACE OF BIRTH T MANGRON		
VILLAGE MAGRON	DISTRICT INDIA	
CHIEF MAGRON	REGISTRATION DATE 19-10-92	
SPECIAL MARKS NIL	DATE OF RENUNCIATION	
IF THIS CARD IS FOUND, PLEASE RETURN TO NEAREST REGISTRATION OFFICE OR POLICE STATION		

APPENDIX XI: PACRA REGISTRATION CERTIFICATE AND PACRA PRINT OUT

Form V
Business Registration No. **320170014502**
Serial No. **1059579**



SCAN TO VIEW
OUR REGISTRATION DETAILS



Republic Of Zambia

THE REGISTRATION OF BUSINESS NAMES ACT

(Act No. 16 of 2011 of the Laws of Zambia)

CERTIFICATE OF REGISTRATION

I HEREBY CERTIFY that: **PEMBA LEAF TOBACCO** this **7th** day of **November 2017** have (has) been duly registered pursuant to and in accordance with the provisions of the Registration of Business Names Act, and the Regulation made there under, and have (has) been entered under the Number **320170014502** in the Index of Registration.

Given under my hand at Lusaka, Zambia, this **7th** day of **November 2017**



N.J. Moola
Assistant Registrar of Business Names

For further details relating to this business visit
<http://www.pacra.org.zm>



Patents and Companies Registration Agency

Computer Printout - Business Name

Business Name PEMBA LEAF TOBACCO
Date of Incorporation 07 day of November 2017
Registered Office 918, UMODZI HIGHWAY, CHIPATA, CHIPATA, EASTERN PROVINCE, ZAMBIA
Postal Address 511017, CHIPATA, CHIPATA, EASTERN PROVINCE, ZAMBIA
Town / City CHIPATA
Country ZAMBIA
Certificate Signed By N.J. Moola
Phone +260979147935
Email pembaleaf@yahoo.com
Struck off/Ceased on

Registration Number 320170014502
Date of FY End 31/12/2022

Nature of Business
Sector
0150. Mixed farming
4719. Other retail sale in non-specialized stores

Annual return	Date Delivered
Year	
2021	16/02/2022
2020	31/05/2021
2019	02/01/2020
2018	01/11/2019



* - Information in this report can change any time.

Printed By: PACRA Printed On: 29/11/2022

Individuals

Present Forenames and surnames	Nationality	Identity Type	Identity Number
ISMAL YOUSUF ZAMAKDA	ZAMBIA	National ID	430505/52/1

Business Entities

Individual Beneficial Owners

Artificial Beneficial Owners

Mortgages

Insolvency History



* - Information in this report can change any time.
Printed By: PACRA Printed On: 29/11/2022

APPENDIX XII: ZRA TAX CLEARANCE CERTIFICATE

2/9/23, 9:54 AM

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General Tax Clearance Certificate

TPIN: 1000217333

Jurisdiction: ISMT0 Eastern Province

Business Name: PEMBA LEAF TOBACCO

Taxpayer Name: ISMAIL ZAMAKDA

Physical Address: 510256 UMODZI Down shops Chipata



Province: EASTERN PROVINCE

Date: 09/02/2023

Email: HUMPHREY.ECDMOTH@GMAIL.COM

Certificate Number: 2372039530

Contact Number: 0977785289

Dear Sir/Madam

RE: TAX CLEARANCE CERTIFICATE FOR ISMAIL ZAMAKDA - SECTION 81B (CAP 323)

This is to certify that ISMAIL ZAMAKDA trading as PEMBA LEAF TOBACCO, TPIN 1000217333 is duly registered for tax purposes.

In addition, this tax clearance certificate has been issued to ISMAIL ZAMAKDA trading as PEMBA LEAF TOBACCO pursuant to section 81 B of the Income Tax Act (CAP 323).

This certificate is valid up to 31/12/2023.

Accordingly, in terms of section 81 B of the Income Tax Act, for the duration of this certificate, the above named is free to conduct business in line with the trading license held.

Please note that any established act of non-compliance with the provisions of the Income Tax Act shall invalidate this Certificate.

Yours Faithfully,

JOSEPH NONDE

Commissioner - Direct Taxes

Zambia Revenue Authority

NOTE: This notice has been issued for and on behalf of the Commissioner General

Zambia Revenue Authority Domestic Taxes Division
Enquiries Email: advice@zra.org.zm Website: www.zra.org.zm
ZRA National Call Center: 4111
Revenue House - P.O.BOX 35710, Lusaka

about:blank

1/1

APPENDIX XIII: ANY OTHER RELEVANT SUPPORTING DOCUMENTS OR INFORMATION

ISMAIL ZAMAKDA P.O.
BOX 511017
CHIPATA

15TH NOVEMBER, 2019

THE DIRECTOR
KWALATA HUNTING SAFARI
P.O BOX
MFUWE Dear

Sir,

RE: APPLICATION FOR CONSENT FOR THE ESTABLISHMENT OF A TOURISM FACILITY ON A SITE LOCATED SOUTH EAST OF UYOWA SCHOOL

I refer to the above subject; following consultations and site visits by your Team, Kakumbi CRB and Planning Department Officers from the Department of National Parks and Wildlife Mfuwe, I hereby apply for your consent to establish a Tourism Facility (i.e a lodge and Campsite) on the site located from the coordinates MGRS: 36LUL69639, LAT: -13,12115 LON: 31,79736 DMS: -13°7'16.158"S/31°47'50.749"E.

The Land boundary on the North is Mpalazi stream going south east covering an area of 100m by 500m. The site is 385m away from Uyowa School, 18m from the last beacon of the land belonging to Melisa.

The main objective of this establishment is to contribute to the national economy through promotion of both local and foreign tourism, add value to the hospitality industry and also create employment for the local community as well as promotion and conservation of both the animals and the environment.

In and during the construction of this tourism facility, strictly consideration and care will be taken to ensure protection of animal passage, environment and all conservation according the Laws and regulation governing the Area.

I will also ensure that the facility cooperate and coordinate with the Department of National Park and Wildlife, the Kakumbi CRB, the Hunting safari and any organisation operating the area from the period of construction to the time of its operations.

I have attached the screenshots as verified by Sydney for all the 4 corners cover 100m by 500m.

Your positive consideration in our favour will greatly be appreciated. Yours

Faithfully,


ISMAIL Zamakda
0950 556850

ISMAIL ZAMAKDA
P.O BOX 511017
CHIPATA

12TH NOVEMBER, 2019

THE DIRECTOR GENERAL
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
P.O BOX
CHILANGA

Dear Sir,

**RE: APPLICATION FOR THE ESTABLISHMENT OF A TOURISM FACILITY ON
AN ALTERNATIVE SITE**

I refer to the above subject; following the objection to the earlier site by Kwalata which was identified and approved by the Chief, The CRB and the Department of National Parks and Wildlife. I therefore with permission from the Chief and advise from Kwalata Hunting Safari, we have identified an alternative site moving approximately 1km to the North of the earlier site and 2km away from Uyowa School.

Kwalata Hunting Safari has been consulted over the site and has since visited the area and has advised that he has no objection on the area and will issue the consent has soon as the Department grants consent.

The main objective of this establishment is to contribute to the national economy through promotion of both local and foreign tourism, add value to the hospitality industry and also create employment for the local community as well as adding value to the promotion and conservation of both the animals and the environment.

In and during the construction of this tourism facility, strictly consideration and care will be taken to ensure protection of animal passage, environment and all conservation according the Laws and regulation governing the Area.

Your positive consideration in our favour will greatly be appreciated.

Yours Faithfully,


ISMAIL Zamakda
0950 556850

ISMAIL ZAMAKDA
P.O BOX 511017
CHIPATA

15TH NOVEMBER, 2019

HIS ROYAL HIGHNESS CHIEF KAKUMBI
CHIEF KAKUMBI'S OWN PALACE
P.O BOX 41
MFUWE

Dear Sir,

**RE: APPLICATION FOR CONSENT FOR THE ESTABLISHMENT OF A TOURISM FACILITY
ON A SITE LOCATED SOUTH EAST OF UYOWA SCHOOL IN YOUR CHIEFDOM**

I refer to the above subject; following your permission in 2014 to allow me to identify a site for the establishment of a Tourism facility in your Chieftom, proposals were made and consultations were made with various stakeholder especially the Hunting Safari and the Department of National Parks and Wildlife, the initial preferred site which even the department of National Parks and wildlife had consented but was objected by the Hunting safari. I later engaged the Hunting Safari following your advise and the CRB to help in identifying some land without conflicts which finally has been found Hence my application for consent for the new site was just shifted northwards from the first site.

Kwalata Hunting safari and the Planning Department were taken to the site to check if it was suitable and available with no conflicts which both have said they have no objection and consent letters has been granted.

The proposed site is located south of Uyowa School with a proposed boundary on the North being Mpalazi stream going south east next to Melisa. We look forward to your guidance on the actual boundaries of the site your royal Highness because it is your constitutional right.

Your Royal Highness, this establishment will contribute to the national economy through promotion of both local and foreign tourism, add value to the hospitality industry and also create employment for the local community as well as promotion and conservation of both the animals and the environment.

In and during the construction of this tourism facility, strictly consideration and care will be taken to ensure protection of animal passage, environment and all conservation according the Laws and regulation governing the Area.

I will also ensure that the facility cooperate and coordinate with your Office, the Department of National Park and Wildlife, the Kakumbi CRB, the Hunting safari and any organisation operating in the area from the period of construction to the time of its operations.

Your positive consideration in our favour will greatly be appreciated.

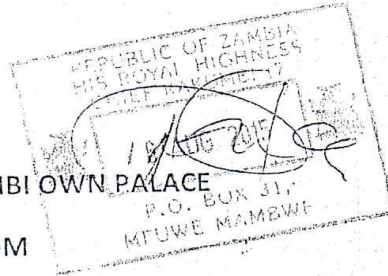
Yours Faithfully,


ISMAIL Zamakda
0950 556850

HIS ROYAL HIGHNESS CHIEF KAKUMBI OWN PALACE

KAKUMBI CHIEFDOM

MAMBWE



6TH AUGUST 2015

The senior warden
Zambia wildlife authority
Eastern Region

Dear Sir / Madam

RE : AUTHORISATION FOR SITE IDENTIFICATION – ISMAIL ZAMAKDA

Refer to the above subject matter.

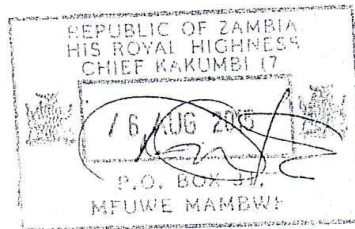
I Chief Kakumbi (vii) of the kunda speaking people do hereby confirm to your office my authorisation on site identification by Ismail Zamakda on which he intend to establish a tourist facility in my chiefdom.

I therefore, write to your kind office requesting on the suitability of the facility on the identified site through your assessment.

I would appreciate if my request meets your favourable response.

Yours Faithfully,

His Royal highness Chief Kakumbi (vii)



C C: Ismail Zamakda

MR. ISMAIL ZAMAKDA
PEMBA LEAF ZAMBIA LTD
P.O BOX 511017
PLOT NO. 66 OBOTE RD
CHIPATA

2ND OCTOBER, 2020

THE DIRECTOR
DEPARTMENT OF NATIONAL PARKS AND WILDLIFE
PRIVATE BAG 1, KAFUE RD
CHILANGA

Dear Sir,

RE: APPLICATION FOR CONSENT TO OBTAIN LEASE HOLD TITLE FOR LAND IN LOWER LUPANDE GMA.

I refer to the above subject, I hereby write to apply for consent to obtain leasehold title for the land in lower Lupande GMA 2km South away from Uyoba Primary School covering an area of 5.7 hectares as shown on the site map attached.

All the stakeholders such as the Chief, the hunting Safari, the Department of National Parks and Wildlife and also the Community whom we have signed an MOU to build a wall fence, 4 office block and provide tap water by connecting the water pump to a tank which we shall provide at their Community Resource Board offices. All the consents from the stakeholders have been attached.

I have met all the requirements as guided by the Wildlife Act and Land Act, I hereby apply for the consent to obtain leasehold title on the following grounds;

1. The land will strictly be used in conformity with wildlife conservation and management as guided by the Wildlife Act of 2015 and The Lands Act.
2. I have obtained consent from His Royal Highness Chief Kakumbi, The Community Resource Board on behalf of the community and also for the Hunting Safari who are Kwalata Safaris and their letters are attached.
3. I am a citizen of Zambia born and grew up in Mambwe and Chipata Districts of Eastern Province where the site is located with a full understanding of our customs and values and that I cannot disadvantage the local community whom I grew up together and some of them even went to the same schools.
4. Sir, the amount of Investment I intend to put up requires security of tenure by way of title which is recognized by financial Institutions as well.
5. Further, the Zambia Wildlife Act No. 14 of 2015 provides under sections 28 (4) that a person may obtain leasehold title within a Game Management Area in accordance with the provisions of the general management plan for the Game Management Area.

I thank you in advance for the favourable consideration of my application;

Yours Faithfully,



ISMAIL ZAMAKDA
DIRECTOR
NRC No. 430505/52/1

ANNEXURE 'C'

GOVERNMENT OF THE REPUBLIC OF ZAMBIA
LANDS DEPARTMENT

Application for a Farm or Small Holding in the.....MAMBWE
.....DISTRICT..... Council Area to be completed in duplicate and
both copies submitted to the Council SecretaryMAMBWE..... District Council.

1. First Choice Farm/Lot No.:.....Town : MAMBWE
2. Other Choice Farm/Lot No.:.....
3. If more than one Stand is required because of the scale of the proposed development give details here :.....
4. If the Area applied for is not numbered provide four (4) copies of the approved Layout Plan.

A.

APPLICATION BY INDIVIDUAL

1. Name in block letters ISMAIL ZAMAKDA
2. Address : PLT 66 DBOTE ROAD TOWN CENTER CHIPATA
3. Age : 44 yrs
4. Nationality: ZAMBIAN
5. National Registration Card Number: A30505/52/11
6. Date and Place of Issue : 19-10-92 CHIPATA
7. Residence in Zambia (non Zambian) from: RESIDENCE IN ZAMBIA SINCE BIRTH
8. Passport No. (non – Zambian):.....
9. Date and Place of Issue :.....
10. The name of Mortgage :.....
11. If you do not intend to borrow, state your source of income with which to finance development (provide evidence)
12. Occupation : BUSINESSMAN (DIRECTOR)
13. Full description of type of development proposed on the Stand applied for
TOURIST FACILITY ESTABLISHMENT
14. Will the proposed building be owner occupied? YES BUSINESS ENTITY
15. Estimated cost of proposed development . K.....
16. Particulars of land owned by or leased to applicant.

Property	Stand No	User Clause	District	Term of Lease

(To be completed in triplicate and two copied to be submitted to the Council)

C. STATUTORY DECLARATION

I ISMAIL ZAMAKDA.....do solemnly and sincerely declare that the particulars given in this application Form(s) are true correct and that I have not withhold any information which might affect my application and I make solemnly declaration conscientiously believing the same to be true and by virtue of the provision of the Statutory Declaration Act 1985.


.....
SIGNATURE

D. FOR USE BY THE MAMBWE DISTRICT COUNCIL .

1. The application under X / B is recommended for the following reasons.
2. The application under A / B is not recommended for the following reasons.

THE APPLICANT HAS THE CAPACITY
TO DEVELOP

CERTIFICATE

I hereby certify that the application was approved by the Full Council under item
No. PWD /on the


.....
COUNCIL SECRETARY

The COUNCIL SECRETARY should sign the Certificate personally

Official Date Stamp

FORM I
(Regulation 2)

APPLICATION FORM FOR CONVERSION OF CUSTOMARY TENURE INTO
LEASEHOLD TENURE

Particulars of Applicant

1. Name ISMAIL ZAMAKOA
2. Postal and Physical Address PLOT NO 66 OBOIE ROAD
CH PATA
3. Location of Land LOWER LUPANDE CHIEF KAKUMBI - MAMBWE DISTRICT
4. Size of the Land and Plan NO 240 X 250 Mts

5. Declaration of Rights:

- (a) I or my family have the right to the use and occupation of the land shown on the Plan for the continuous period of Years;
- (b) I am entitled to or my family is entitled to (delete as appropriate), the benefit to the I land and I am not aware of any other person's right to be use or, occupation of the land or part of the land except:
.....
.....

And granting leasehold to me will not affect these rights.

Signed [Signature] Date 16-9-2020

Note:

- (i) If in occupation for less than five years, describe how the use and occupation of the land begun, by starting the name of the Chief or Headman who gave you permission to occupy and use the land;
- (ii) Prove that the use and occupation of land is exclusive, by describing the use that the land has been to; please attach six layout plans of the land n issue to this Form.