ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT STUDY REPORT FOR THE PROPOSED MIXED USED DEVELOPMENT ON PLOT L.R ELDORET MUNICIPALITY BLOCK 7/162 LOCATED AT THE JUNCTION OF RONALD NGALA STREET AND NANDI ROAD IN ELDORET MUNICIPALITY, UASIN GISHU COUNTY.

SITE GPS COORDINATES: Latitude: 0.5146º N and **Longitude:** 35.2771º E

PREPARED BY:
Lead Expert:
Cornelius K. Kinyili
Registration number: 1150
Associate Expert:
Dominic K. Kiptore
Registration number: 7169

PROJECT PROPONENT
Tarita Trocadero Limited
P.O. Box 2949 - 30100
Eldoret

MAY 2022

CERTIFICATION

ENVIRONMENTAL EXPERTS

We, **Cornelius Kinyili (Lead expert 1150) and Dominic Kiptore (Associate expert 7169)** submit the following Environmental and Social Impact Assessment Study Report for the Proposed Mixed Use Development on Plot L.R. No. Eldoret Municipality Block 7/162 located at the Junction of Ronald Ngala Street and Nandi Road in Eldoret Municipality Uasin Gishu County. This environmental impact assessment has been professionally done and documented in accordance with the Environmental Management and Coordination Act (EMCA), 1999 and the Environmental Impact Assessment and Audit Regulations 2003.

We the undersigned, certify that the particulars given in this report are correct and righteous to the best of our knowledge.

CORNELIUS KINYILI (NEMA REG. NO 1150)

SIGN……..……Date……...

DOMINIC K. KIPTORE (NEMA REG. NO. 7169)

SIGN……..……Date……...

PROPONENT

I, **…….....,** on behalf of TARITA TROCADERO LIMITED, P.O. BOX 2949 - 30100 ELDORET submit this Environmental and Social Impact Assessment Study Report for the **Proposed Mixed Use Development in Eldoret Municipality, Uasin Gishu County** on Plot L.R. Eldoret Municipality Block 7/162 located at the Junction of Ronald Ngala Street and Nandi Road. To my knowledge, all the information contained in this report is accurate and a truthful representation of all findings as relating to the proposed project.

SIGN……..……Date……...

ACKNOWLEDGEMENT

We Cornelius Kinyili and Dominic Kiptore take this opportunity to thank the management of **Tarita Trocadero Limited** for giving us an opportunity to conduct this Environmental and Social Impact Assessment (EIA) Study Report for the proposed Mixed Use Development located in at the Junction of Ronald Ngala Street and Nandi Road within Eldoret Municipality in Chepkoilel location within Moiben Sub County, Uasin Gishu County.

We would also like acknowledge the proposed project manager from Villapoint Limited led by Mr. Cornelius Songok for the support they gave us when we were collecting data from the site especially during baseline data collection and public participation around the proposed site. We also recognize the contribution of Tarita Trocadero Limited led by Mr. Kiprono Songok and Mr. Sawe for the support they gave us as a team by availing and preparing venue for public participation meeting within Tarita Center which is within the proposed project site.

Sincere thanks to our proponent through the project manager Villapoint Limited for availing the necessary documentation and facilitating the site visits to enable the experts to collect the data and write an EIA report for submission to NEMA.

Lastly we recognize the area chief Mr. Daniel Kebenei and area ward administrator Mr. Kerich for mobilizing the locals to attend the public participation meetings and also for participating in the meetings with the locals. They were so cooperative giving us all the information we required.

This was done in an endeavor to comply with the Legal requirement as stipulated in Constitution of Kenya 2010, Environmental Management and Co-ordination Act 1999 (Revised 2018) and Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2003.

Table 1: LIST OF ENVIRONMENTAL AND SOCIAL CONSULTANTS

NAME	ROLE	QUALIFICATIONS
Cornelius Kyalo Kinyili	Lead ESIA expert	BSc. Geology, certificate in EIA/EA
Dominic Kiprotich Kiptore	Associate ESIA expert	BSc Botany, MSc. Environmental science (ongoing)
Grace N. Wang'ombe	Social expert	Masters of Science in Research Methods Bachelor of Arts in Anthropology

Table 2: LIST OF PROJECT TECHNICAL AND CONTRIBUTING CONSULTANTS

NAME	ROLE	QUALIFICATIONS
Cornelius Songok	Overall project manager	Bachelor of Science (Construction Management)
Arch. Njoroge Joel Ng'ang'a	Architectural designs	Bachelor of Architecture
Eng. Francis Mungai Ndung'u	Structural designs	Bachelor of Science (civil engineering)
Eng. Louis Huria Kabiru	Electrical and mechanical designs	Bachelor of Science (electrical engineering)
Qs. Thumbi Fervent Kimani	Bill of Quantities	Bachelor of science (quantity surveyor)

LIST OF ACRONYMS

CAP	Chapter (of the Laws of Kenya)
CBD	Convention on Biological Diversity
CCTV	closed circuit television
CEC	County Environment Committee
CGU	County Government of Uasin Gishu
CPP	Consultative and Public Participation
EA	Environmental Audit
EIA	Environmental Impact Assessment
ELDOWAS	Eldoret Water and Sanitation Company Limited
EMCA	Environmental Management and Coordination Amendment Act
EMP	Environmental Management Plan
EMMP	Environmental Monitoring and Management Plan
ESIA	Environmental and Social Impact Assessment
GIIP	Good International Industry Practise
HSEMP	Health Safety and Environmental Management Plan
KEBS	Kenya Bureau of Standards
LPG	Liquefied Pressurized Gas
NCA	National Construction Authority
NEC	National Environment Council
NEMA	National Environment Management Authority
NEAP	National Environment Action Plan
OSH	Occupation Health and Safety
OSHA	Occupational Safety and Health Act
PCC	Public Complaint Committee
PMS	premium motor spirit
UNCCD	United Nations Convention on Combating Desertification
UNFCCC	United Nations Framework Convention on Climate Change

TABLE OF CONTENTS

TABLE OF PLATES

TABLE OF TABLE

EXECUTIVE SUMMARY

Background

Environmental Impact Assessment (EIA) is a tool in the Kenyan constitution, environmental policies and environmental legislation to ensure that all development activities that have a bearing on the environment have a beneficial and sustainable interaction with the environment. This Environmental Impact Assessment was commissioned by the proponent to comply with the stipulated Legal requirement in the; Constitution of Kenya 2010, Environmental Management and Co-ordination Act 1999 (Revised 2018), the preceding Environmental Management and Coordination Act 1999 and the subsequent Legal supplement Environmental (Impact Assessment and Audit) (Amendment) Regulations 2018. Environmental (Impact Assessment and Audit) Regulations 2003 and Legal Notice number 31 and 32 of 2019 which categorise the proposed project as a high risk project. The main purpose of the Environmental Impact Assessment study, was to identify possible ecological, social-cultural and socio-economic impacts that may arise from the construction, operations and decommissioning of this project then come up with mitigation measures and an Environmental Management Plan (EMP) for implementation by the proponent. The proposed project has impacts that are similar to most construction in urban development projects and are manageable through the proposed EMP that was developed in this report.

Tarita Trocadero Limited, the proponent has proposed to build a mixed use development project within Eldoret Municipality. The project shall consist of 88 metres tower that will be located on a 0.2852 hectares plot at the junction of Ronald Ngala Street and Nandi Road. The site currently houses Gulf Energy Filling station and some shops that will be decommissioned to create room for the proposed project.

This study report presents the outcome of an Environmental Social Impact Assessment (ESIA) for the proposed construction of mixed use development on Plot L.R. No. Eldoret Municipality Block 7/162. The proposed development will comprise of one block with basement one and basement two having parking slots. Mezzanine, ground floor and 1st to 22nd floors will have mixed use development within the project plot. All the floors except the 21st and 22nd will have a lobby with lifts and stairs for accessing the upper or lower floors.

- Shops – 62
- Restaurant - 13
- Alfreso - 6
- Food Trucks - 3
- Gym and Spa - 1
- Juice bar - 1
- Sauna - 2
- Meeting rooms/conference - 15
- Lodging rooms - 153 (smart rooms – 134 and Smart Suites – 19)
- Bar and club - 1
- Laundry rooms - 4
- Champion market stalls - 12
- Chill out and bar restaurant - 1

The building will also have 67 parking lots located in the basement floors.
The project plot is located in Chepkoilel location in Moiben Sub County.

The Scope

The scope of the study included literature review, through desktop studies on national level, county, sub county, ward and scoping down to the project plot and immediate neigbourhood. Collecting baseline and environmental information, identifying projects phase's, processes, understanding designs and developing an Environmental Management Plan (EMP). These were combined together with two public participation meetings, questionnaires were given to nearby Institutions and government offices (both National and County) and open ended questionnaires were given to surrounding neighbours to get their views regarding the proposed project (**see annexed questionnaires**).

The assessment main objectives to these activities were

- To identify and analyse the impacts of the proposed project on the natural environmental
- To evaluate impacts of the proposed project on socio-cultural environment
- To evaluate impacts on infrastructure and social amenities (water supplies, road networks, sewerage and KPLC electricity)
- To assess and predict any effects on ecosystems
- To identify and predict impacts on and changes in development policy with respect to the project area
- To formulate an Environmental and Social Management Plan

This project is connected to national grid KPLC power line and there is an existing transformer along Nandi Road next to the site. The plot is connected to Elodret Water and Sanitation that serves Eldoret town and its environs with clean water. It is also connected to the main sewerage system serving Eldoret town.

The project will involve five phases namely: pre-construction/design, decommissioning of existing structures, construction, operation and decommissioning.

Positive impacts:

- Creation of market for supply of construction materials
- Creation of employment opportunities for locals
- Provide market of transport business
- Increased business opportunities for investors,
- Development of Eldoret municipality by making optimum economic use of land,
- Provision of retail, office and accommodation/lodging space,
- Source of revenue to National and County governments,
- Improving the growth of the Country's economy,

Negative impacts:

- Destruction and interference of the little existing vegetation cover,
- Soil erosion and degeneration during construction period,
- Increased runoff from new impervious areas,
- Increased Solid Waste generation,
- Noise and vibration caused by heavy trucks, and construction equipment and machinery,
- Dust generation and exhaust fumes emissions,
- Oil and grease Spills,

- Increased water demand,
- Increased Energy use,
- Demand for construction materials extracted from natural resource base,
- Workers accidents and hazards during construction.
- Traffic congestion and accidents
- Public accidents from falling objects
- Loss of income for businesses currently on the plot
- Compromised privacy to the neighbours

Mitigation measures:

Mitigation measures have been suggested in the Environmental Management plan in order to suppress/minimize the identified negative impacts or concerns related with the proposed project among these are:

1. Noise-suppression techniques will be employed to minimize the impact of temporary construction noise at the project site by:
   - Installing portable barriers to shield compressors and other stationary equipment where necessary.
   - Use equipment and machines designed with noise control elements.
   - Co-ordinate with relevant agencies regarding construction activities near the residential and commercial areas.
   - Install sound barriers for pile driving activity.
   - Limit pickup trucks and other small equipment to an idling time when necessary, observe a common-sense approach to vehicle use, and encourage workers to shut off vehicle engines whenever possible.
   - Ensure regular servicing of equipment and machines to avoid noise that may result due to un-serviced parts.
2. Control of exhaust emissions, using the following measures during construction:
   - Reduce vehicle idling time
   - Alternatively fuelled construction equipment shall be used where plausible.
   - Machinery and equipment shall be properly set and maintained.
   - Use of clean fuels like unleaded and de-sulphurized fuels.
   - Raise awareness of workers on emission reduction methods

3. Dust reduction techniques during project implementation by adopting the following measures:
   - Cover all trucks hauling soil, sand and other loose materials.
   - Watering construction areas when necessary.
   - Pave, sprinkle water when necessary, or apply non-toxic soil stabilizers on all unpaved access roads and parking areas within construction sites.
   - Sweep daily (with water sweepers) all paved access roads and parking areas at construction site.
   - Re-vegetating of exposed and dust prone surfaces
4. The proponent will prepare a hazardous substance control and emergency response plan that will include preparations for quick and safe clean-up of accidental harmful substances spills.
5. Several measures shall be put in place to mitigate the impacts that are likely to lead to hydrology and water quality degradation like ensuring no waste from the site gets into the nearby drainage system that drains to River Sossiani.

6. The proponent shall also provide covers for refuse containers and appropriate Personal Protective Equipment (PPE).
7. Adequate collection and storage of solid waste on site and safe transportation to the disposal sites and disposal methods at designated area shall be provided.

Site visit to undertake the environmental assessment and collect baseline information was made on 1st to 5th July 2021, this led to collection of data and compiling TOR that was later taken to NEMA and sought the approval of TOR for this project. After the approval of the TOR by NEMA we went to the site again from 23rd-25th November 2021 and 2nd and 3rd December to undertake public participation.

This ESIA Project Report, therefore, presents findings and fulfills the requirements of the; Constitution of Kenya 2010, Environmental Management and Co-ordination Act 1999 (Revised 2018) and Environmental (Impact Assessment and Audit) (Amendment) Regulations 2003.

Key Findings and Conclusions:

The EIA Project established that the proposed project will have significant economic impacts on the project area. However, there are negative environmental and socio-economic impacts that might arise as a result of the proposed development during the entire project cycle. The negative impacts can be mitigated cost-effectively by the proponent without reversing the economic gains. The EIA report provides an EMP that will guide the proponent in matters relating to implementation of the mitigation measures of negative impacts associated with the project.

The project proponent should therefore comply with the conditions issued by the relevant county and national government authorities including; National Environment Management Authority (NEMA), National Construction Authority (NCA), Kenya Urban Roads Authority (KURA) and the County Government of Uasin Gishu (CGU).

The proponent must also take into consideration the views and concerns expressed by stakeholders from local community then incorporate them in the project design, implementation and operation.

Conclusion and Recommendations:

It is quite evident that the proposed development by Tarita Trocadero Limited will bring development and positive effects in Eldoret Municipality. The project will increase the number and quality of hotel accommodation and offices in Eldoret Town.

The positive impacts including: creation of employment opportunities, improving the growth of the local economy; promoting of the formal and informal sector; optimal use of land; incorporation of collective waste management and increase in government revenue at both national and county government among others will in turn benefit Uasin Gishu county and Kenya as a Nation. However, negative impacts will also be experienced hence the need to mitigate them in order to reduce their adverse effects to the environment.

Considering the benefits that the proposed project will bring to the; proponent, local community, county and national government and the nation as a whole, the development of this proposed project is considered very important and beneficial. It is therefore proposed that the project be allowed to continue with the strict observance of the ESMP. The proponent should comply with the relevant; principal laws, county laws and regulations; and take into consideration measures suggested by the stakeholders.

An environmental audit (EA) should be conducted after one year to assess the efficacy of the EMP that has been developed in this EIA report and to identify areas of improvement.

CHAPTER ONE:

1.0 INTRODUCTION

1.1 Background and Rationale for an Environmental Impact Assessment

Tarita Trocadero Limited is a company that was incorporated in the year 2019 by the directors and shareholders of Tarita Siokwei Limited. The company is 100% Kenyan owned with interest in the commercial property development. The company has proposed to develop a mixed use development building on L.R. NO. Eldoret Municipality Block 7/162 comprising an area of **0.2852** Hectares. The actual site is at the Junction of Nandi Road and Ronald Ngala Street. The holding company Tarita Siokwei Limited is the owner of the plot with a certificate of lease.

An ESIA for proposed mixed use developments project was thus conducted to comply with the Legal requirement stipulated in the; Constitution of Kenya 2010, Environmental Management and Co-ordination Act 1999 (Revised 2018) and Environmental (Impact Assessment and Audit) Regulations 2003.

1.2 Scope

The Kenya Government law and policy on all new projects, programmes or activities requires that an environmental impact assessment is carried out at the planning stages of the proposed undertaking to ensure that significant impacts on the environment are taken into consideration during the design, construction, operation and decommissioning of the facility. The scope of this EIA therefore, covered:

- The baseline environmental conditions of the area,
- Description of the proposed project,
- Provisions of the relevant environmental laws,
- Identification and discuss of any adverse impacts to the environment anticipated,
- Appropriate mitigation measures,
- Provision of an environmental management plan outline

1.3 Terms of Reference (TOR)

The TOR for this assessment is based on the Environmental (Impact Assessment and Audit) Regulations, 2003. According to the Regulations the Study Report should where possible, contain description of the following:-

- Description of the proposed project and all anticipated activities
- Review of legislative regulatory and policy framework influencing the project.
- Description of the potentially affected environment.
- Waste management issues
- Seek views of interested parties and stakeholders
- Occupational health and safety concerns throughout the project cycle.
- Identification of probable impacts of the proposed development on the environment and the host ecosystem in particular
- Propose sufficient mitigation measures for anticipated impacts
- Preparation of a detailed Environmental Monitoring and Management Plan

1.4 Objective

Its objective is to identify potential and significant environmental impacts associated with the project. The scope of EIA study is to identify impacts likely to be caused to the environment, public health, occupation health and socio-economic wellbeing. An EIA is a process that has several benefits that include; Potentially screening out environmentally-unsound projects, proposes modified designs to

reduce negative environmental impacts, identifies feasible site and technology alternatives, predicts significant adverse impacts, identifies mitigation measures to reduce, offset, or eliminate major impacts, engages and informs potentially affected communities and individuals, and influences decision-making and the development of terms and conditions.

1.5 Methodology

The EIA was carried out in light of the environmental management; statutory and regulatory requirements in Kenya as outlined in the Environmental (Impact Assessment and Audit) Amendment) Regulations, 2018.

The general steps followed during the assessment were as follows:

1.5.1 Environmental Screening

This step was applied to determine whether an EIA was required and was done in reference to requirements of the Environment Management and Coordination Act 1999 (Revised 2018) and specifically the second schedule together with the Environmental (Impact Assessment and Audit) Regulations 2003 and Legal Notice number 31 and 32 of 2019 which categorise the proposed project as a high risk project. Issues that were considered included the physical location, sensitive issues and nature of anticipated impacts.

1.5.2 Preparation of Terms of Reference and submission to NEMA for approval

The environmental experts prepared the Terms of Reference for the ESIA and submitted it to NEMA for review and approval. The Terms of Reference included the list of consultants who were directly or indirectly involved in the preparation of the Study Report.

1.5.3 Environmental Scoping

The scoping process helped narrow down onto the most critical issues requiring attention during the assessment. Environmental issues were categorized into physical, natural/ecological and social, economic and cultural aspects.

1.5.4 Desktop study

This included documentary review on the nature of the proposed activities, project documents, designs policy and legislative framework as well as the environmental setting of the area among others. During desktop study the experts went through several documents including; the Constitution of Kenya, several Acts of Parliament, Kenyan national policies, international treaties and conventions Kenya is a member, 2019 National Census results and Uasin Gishu County Integrated Development Plan 2018-2022.

1.5.5 Site Assessment and Public Participation

Field visits were meant for physical inspections of the site characteristics and the environmental status of the surrounding areas to determine the anticipated impacts.

During the visit the expert observed and took notes, took photographs at the site and satellite images of the site.

Consultative and Public participation through:

- Administering interview schedules to national agencies and county government departments within Eldoret town and institutions near the proposed site especially those along Nandi Road and Ronald Ngala Street.
- Undertaking two public participation meetings with residents of Chepkoilel location where the proposed site is located mobilised by the area chief in conjunction with area ward administrator representing the county government of Uasin Gishu. The meeting were undertaken one week apart on 24th November 2021 and 2nd December 2021.
- Administering of questionnaires to local residents working or living around the proposed site. The visit was held on 23th and 24th November 2021.

- Putting of notices at the site on the proposed project and at the area chief office notice board

1.5.7 Reporting

This report was prepared in accordance with the EIA terms of reference and in line with the guidelines specified in the Environmental (Impact Assessment and Audit) Regulations, 2003 for preparation of ESIA reports.

CHAPTER TWO:
2.0 DESCRIPTION OF THE PROJECT AND ALTERNATIVES

2.1 Site and location

The proposed project site is located at the Junction of Nandi Road and Ronald Ngala Street on land L.R. Number Eldoret Municipality Block 7/162 comprising an area of **0.2852** Hectares. The proposed site is currently hosting several businesses including;

- Gulf Energy and its sales office,
- vehicle service bay
- two Kimwa restaurants,
- three chemist shops,
- two Safaricom dealer/agent shops,
- a jewellery stall,
- a Jua kali stall,
- an agro-vet shop,
- a medical clinic,
- taxi stage, motorcycle (boda boda) stage,
- a temporary public service vehicles stage and a pay user toilet

The plot on which the development will take place is on GPS coordinates Latitude **0.5146º North** and Longitude **35.2770º East.**

Plate 1: proposed site as viewed from Amani Hotel and Guest house the opposite building along Ronald Ngala street

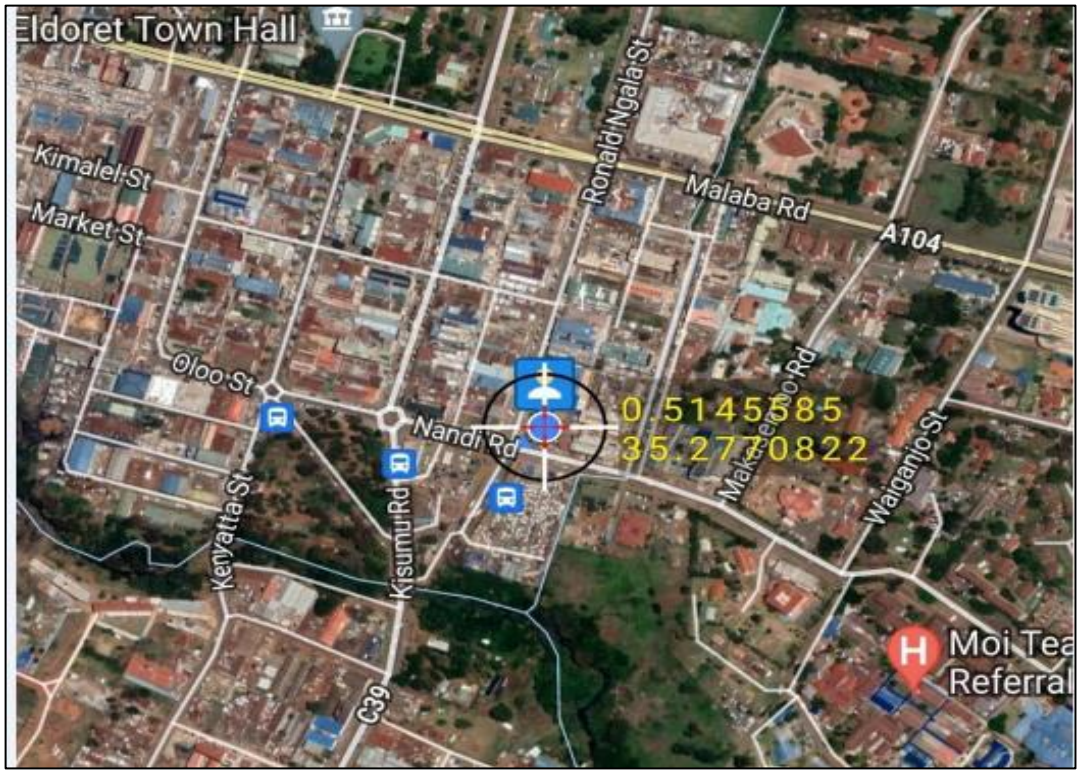


Plate 2: satellite image showing the location of the site in relation to the surrounding parts of Eldoret municipality

Plate 3: satellite image showing the land the proposed site is located as a white arrow

Plate 4: proposed site and neighbouring buildings including; Kitmatt Centre housing Naivas, Neema Centre, Tarita Centre with blue windows and building housing Khetia Supermarket beyond Tarita centre

Plate 5: buildings opposite proposed site along Ronald Ngala Street

2.2 Project design

2.2.1 Summary of the building design

The proposed development will comprise of one block with basement one and basement two having 67 number parking slots. The building will have; four lifts at the lobby and one at the fire escape; all the lifts starts at basement

two all the way to the upper floors, two stairwells one at the lobby near the lifts and one at the fire escape route. Mezzanine, ground floor and 1st to 22nd floors will have mixed use development within the project plot. All the floors except the 21st and 22nd will have a lobby with lifts and stairs for accessing the upper or lower floors. The proposed development will have a total of 274 rooms which includes

- Shops - 62
- Restaurant - 13
- Alfreso - 6
- Food Trucks - 3
- Gym and Spa - 1
- Juice bar - 1
- Sauna - 2
- Meeting rooms/conference - 15
- Lodging rooms - 153 (smart rooms – 134 and Smart Suites – 19)
- Bar and club - 1
- Laundry rooms - 4
- Champion market stalls - 12
- Chill out and bar restaurant - 1

The building will also have 67 parking lots located in the two basement floors.

According Legal Notice number 31 of 2019 which categorizes projects into; low, medium and high risk. The proposed project falls under a high risk project because:

- It will have an hotel with 153 lodging rooms with more than 150 beds
- It has an area of 19,521 m^2 which is above 10,000 m^2 for medium risk projects
- The proposed tower will not be keeping with the surrounding because most buildings in the area are below 10 floors but the proposed project will have a height of 88 meters.

2.2.2 Mixed use development design description

A brief description of each floor from the basement floors to the upper most floors is given below:

i.) Basement 2

This is the lowest floor of the building will have an area of 1400 $m^2$and will have 35 parking lots each with a drive way space around the parking lots. The drive way heads to the ramp that leads to the basement 1. The floor will also have a lobby for accessing the stairs and lifts to the upper floors. The floor will also have a fire escape with the stairs beside the ramp.

ii.) Basement 1

This is the second lowest floor of the building will have an area of 1400 $m^2$and will have 32 parking lots each with a drive way around the parking lots. The drive way heads to a ramp that leads to the basement 2 or the ground floor. The floor will also have a fire escape with the stairs beside the ramp

iii.) Ground floor

The ground floor will have an area of 1406 m^2. The floor will have; two restaurants with capacity of 30 persons and 54 persons, kitchen/minimart, six shops of different surface area, two sales stands, two alfresco, hallway to the centre of the floor and walk way at the entrance. The floor will also have a car lift beside the four lifts located beside the lobby area.

The floor will also have; a borehole fire escape with a lift, transformer room, generator room and LPG tank on one side of the floor. The floor will have a ramp to the basement floors.

iv.) Mezzanine floor

It will have an area of 1225 m^2. The floor will have; five shops, two restaurants with capacity of 40 and 50 persons, air conditioning system near the toilets, two alfresco, a hallway for accessing the inner shops around the atrium and a void. There will be bridge in the floor between shop 1 and 2.

The floor will also have toilets as follows; four for women, one for persons with disability and two for men and a urinal. The toilets will have handwashing sinks for; women, men and the persons living with disability.

v.) 1st, 2nd and 3rd floors

Each floor will have an area of 1300 m^2. Each of the three floors will have; eight shops of different surface area, two restaurants with capacities of 20 and 30 persons, air conditioning system near the toilets and two alfresco.

The floor will also have toilets as follows; four for women, one for persons with disability and two for men and a urinal. The toilets will have handwashing sinks for; women, men and the persons living with disability.

vi.) 4th floor

The floor will have an area of 1300 m^2. The floor will have; eleven shops, ten exhibition stands between the shops and hallway and air conditioning system between shop 11 and the toilets.

The floor will also have toilets as follows; four for women, one for persons with disability and two for men and a urinal. The toilets will have handwashing sinks for; women, men and the persons living with disability.

vii.) 5th floor

The floor will have an area of 1300 m^2. The floor will have; two banking halls opposite on another from the lobby with area of 195 m^2 for hall one and 155 m^2 for hall two and a fun scapes with an area of 664 m^2.

The floor will also have toilets as follows; four for women, one for persons with disability and two for men and a urinal. The toilets will have handwashing sinks for; women, men and the persons living with disability.

viii.) 6th floor

The floor will have an area of 1500 m^2. The floor will have two movie theatres with areas of 163 m^2 and 166 m^2. A ticket booth will be located between the two theatres. The floor will have two food stuff trucks around the alfresco with an area of 194 m^2. The floor will also have a sitting area with an area of 188 m^2 and a second alfresco between the sitting area and the movie theatre with an area of 163 m^2. There will be two food joints with areas of 58 m^2 and 54 m^2. A car lift will be located beside the car lift. Fire escape way will be located between the toilets and the ticket booth area leading to a lift and stairs.

The floor will have eight toilets that will be located between movie theatre with an area of 166 m^2 and ticket booth. The toilets will be distributed as follows; three for gentlemen, four for ladies and one for the people living with disability.

ix.) 7th floor

The floor will have an area of 850 m^2. The floor will have a sport bar with an area of 348 m^2, bowling with an area of 165 m^2 and a spill over juice bar with an area of 60 m^2. The floor will also have a store on the right hand of the walkway to the fire escape. The entrance walkway from the lobby will be a suspended walkway.

The floor will have six toilets distributed as follows; two for gentlemen, three for ladies and one for the physically disabled.

x.) 8th floor

The floor has an area of 970 m^2. The floor will house the hotel reception and main hotel hub with; a restaurant with capacity of 87 persons and area of 201 m^2, chill out and bar with capacity of 60 persons and an area of 139 m^2, work/snack zone with capacity of 50 persons and an area of 118 m^2 and coming, retail and going with capacity of 38 persons and area of 88 m^2. Inside the main restaurant will be; a kitchen with servery, kitchen store and chute. The store will be located between the kitchen and the toilets and along the walk way to the fire escape.

The floor will have six toilets distributed as follows; two for gentlemen, three for ladies and one for the physically disabled.

xi.) 9th floor

The floor will have an area of 970 m^2 and host conference/meeting halls. The floor will house four meeting rooms with capacity of; 210 persons and area of 313 m^2, 80 persons and area of 117 m^2, 75 persons and area of 108 m^2 and 40 persons and 58 m^2. The floor will also have; a kitchen with store and chute inside and island and servery outside, spill out area and store near the toilets.

The floor will have six toilets distributed as follows; two for gentlemen, three for ladies and one for the physically disabled.

xii.) 10th floor

The floor will have an area of 970 m^2 and will house eleven small meeting rooms with areas ranging from 30 m^2, 42 m^2, 44m^2, 47m^2 and 64 m^2. The floor will have a spill out and hallway in the middle to separate the rooms and provide access. The floor will also have; two decks, a store and a chute.

The floor will have six toilets distributed as follows; two for gentlemen, three for ladies and one for the physically disabled.

xiii.) 11th , 12th, 13th and 14th floors

The four floors will each have 24 lodging rooms making 96 rooms in total. Each floor will have 22 smart rooms each with a self-contained room with a bed, chair/table and a toilet/bathroom and 2 smart apartments each with a; sitting room, bedroom, walk in closet and a toilet/bathroom. Each of the four floors will also have a linen store.

The four floors will each have a hallway at the middle to provide access to the lodging rooms and a fire escape with stairs and lift.

xiv.) 15th, 16th and 17th floors

The three floors will each have 17 lodging rooms making 51 rooms. Each floor will have 15 smart-partments and 2 smart suites. Each smart-partment will have a sitting area and bed area in the same room and bathroom/toilet room while each smart suite will have two rooms with a sitting area and a dining table with four chairs and a bedroom and a toilet/bathroom.

The three floors will each have a hallway at the middle to provide access to the lodging rooms and a fire escape with stairs and lift.

xv.)18th floor

The floor will have 13 smart suites. Each smart suite will have; a bed area, a sitting area with a dining area having a table and four chairs and a bathroom/toilet. Each smart suite will have an area of 44 m^2.

The floor will have a hallway at the middle to provide access to the smart suites and a fire escape with stairs and lift.

xvi.) 19th floor

The floor will have: a gym with an area of 214 m^2, lap pool with an area of 50 m^2, a service area of 214 m^2, spa with an area of m^2, gentlemen and ladies changing rooms each with two sauna rooms inside and four toilets.

The floor will have a hallway at the middle to provide access to the smart suites and a fire escape with stairs and lift.

xvii.) 20th floor

The floor will have; an indoor/covered restaurant with a kitchen and store within it, open restaurant and a water feature at the far end of the open restaurant. There will be a store along the walkway to the fire escape.

The floor will have six toilets distributed as follows; two for gentlemen, three for ladies and one for the physically disabled.

xviii.) 21st floor

The floor will house a bar and club with an area of 229 m^2. The bar and club will also have club counter where drinks will be served from and store where drinks will be kept and a machine room where sound systems will be kept.

The floor will have six toilets distributed as follows; two for gentlemen, three for ladies and one for the physically disabled.

xix.) 22nd floor

This will be the roof top floor and will provide an area for services and drying of laundry. The services that will be located in the floor includes; the building lift and water tanks storage.

PLATE 6: top view of the proposed development

The building roof will be used for services provision that includes; water storage for all the floors, air conditioning and lifting machinery which will be attached to the roof. It will have top view restaurant terrace with pool.

The design concept and criteria for the project were developed in accordance with the general guidelines and standards used in the design of storey buildings in Kenya and are in line with international standards for best practice. The design of the project has been executed with due consideration of the existing topography of the proposed site. In general, the design of the project will optimize use of the best available technology to prevent or minimize potentially significant environmental impacts and to incorporate efficient operational controls, to ensure high level business and environmental performances. **(For more details check architectural and structural plans attached in appendices).**

The walls of the building will be mainly made of quarry stones, concrete mixes reinforced by steel bars to hold weight of the building as per the structural designs. The exterior areas will have glass held by aluminium frames; this will enable to reduce the weight of the building. Some quarry stone mortared with cement and sand will be used in some section, the interior part of the walls will be cemented and painted

Windows and door will be made of steel alloy, aluminium and glass. Electrical works will be done by; UPVC conduits as per the design and installing wires, sockets, switches, bulbs, security lights and connecting the site to 3 phase electricity from the nearby power line. Plumbing will be done using UPVC and GI pipes as well as drainage system in the building to be connected to the services provided by the County.

The architectural and structural designs will be approved by the County of Uasin Gishu officers from; revenue department, Planning Department, Survey office, Works/engineers office and Public Health Department. The approvals will also be submitted to National Construction Authority before construction starts. Other details regarding plans design of the proposed building are on the architectural and structural plans.

2.2.2 Public sewer system

The proposed project will be connected to the existing public sewer passing along the proposed site; in fact the existing structures (to be decommissioned) like the toilets, restaurants and the hand washing sinks within the site are drained into the public sewer. The public sewer is owned and operated by Elodret Water and Sanitation Company Limited.

PLATE 7: public sewer line passing on the left side of the polluted drainage system

PLATE 8: a public sewer line passing across River Sossiani 400 meters from proposed site

2.3 Construction Materials

The construction and operation phases of this project will utilize a lot of inputs and raw materials. The proponent is expected to procure building materials from licensed dealers which must meet required standards by KEBS.

Construction raw materials will include; glass, aluminium frames, cement, paints, steel metals, nails, roofing materials, PVC pipes for water reticulation, steel window, steel casements, and strap glasses will be sourced from hardwares within Eldoret town.

Building stones and gravel will be sourced from quarries within Baringo and Nakuru Counties; sand will be sourced from dealers within Eldoret Town.

Heavy machinery e.g. excavator, concrete mixer, poker vibrator, dumper, roller and back hoe will be hired from local contractors or supplied by the project contractor.

Construction workers will also need manual tools like; spade, hammers, trowel and other hand tools.

2.4 Description of the project's construction activities

2.4.1 Site Clearance by decommissioning existing structures

Site clearance process entails removal of any obstruction on the way of the intended construction activity. The site has small section covered by grass and few trees, operational petrol station and several businesses. Site clearance involves decommissioning of existing structures at the proposed site which includes:

- Removal of the five underground storage tanks currently used to store petroleum products and their covers
- Removal of the price board, two canopies and supporting columns
- Removal of fuel dispensing pumps
- Removal of the concrete floors at the filling station
- Demolition of the one storey building housing the agro-vet, chemist shops, restaurants, filling station offices, toilets
- Removal of electrical and plumbing works
- Removal of vegetation and disposing it as either wood fuel or for temporary construction

PLATE 9: canopy and pumps to be removed

PLATE 10: a Jua Kali shade to be demolished

PLATE 11: one storey building to be demolished

PLATE 12: underground storage tanks covers to be removed

2.4.2 Excavation work

An excavator with a back hoe will be used to excavate the ground to create a pit which will be approximately eight meters for the basement floors and building foundation. The excavated soils will be transported and disposed by NEMA licensed waste handler especially around the underground storage tanks using licensed trucks to a dumpsite approved by NEMA.

2.4.3 Storage of materials

Building materials will be stored on site in temporary stores constructed for the specific purpose. Bulky materials such as rough stones, ballast, sand and steel will be carefully piled near the site. To avoid piling large quantities of materials on site, the proponent will order bulky materials such as sand, gravel and stones in quotas. Materials such as cement, steel, aluminium, paints and glasses among others will be stored in temporary storage structures which will be constructed within the project site for this purpose.

The proponent will also put up to perimeter fence at the proposed site to prevent entry of unauthorised persons and contain waste generated at the site before being disposed.

2.5 Project Alternatives

The proposed site already has existing fuel filling station with a service bay operated under Gulf Energy Company. The proposed site currently also has; two restaurants, agro-vet shop, three chemist shops, clinic with a laboratory, a jewellery shop and two mobile phones shop with Mpesa. The proponent plans to decommission the fuel filing station and the structures housing the various businesses to create room for proposed project.

2.5.1 The Proposed Development Alternative

For the proposed development alternative, the proponent will contract NEMA licensed experts to conduct an ESIA study for the proposed project. The ESIA study report will be submitted to NEMA for review, approval and licensing. In issuing a license, NEMA would approve the proponent's proposed development, provided all environmental measures are complied with during the demolition of existing structures, construction and operation phases. This alternative consists of the proponent final proposal with the inclusion of mitigation of environmental impacts as outlined in the EIA regulations to the maximum extent possible.

This alternative has the following benefits:

- ✓ Employment creation to a large number of people mostly local residents.
- ✓ Provision for a high-class hotel to meet the local and international demand and competitiveness
- ✓ Optimal land use which is a highly valuable but scarce resource within the central business district of Eldoret Town.
- ✓ Positive gains in local and national economy
- ✓ Improvement of associated infrastructural facilities like; water, sewage, electricity and road

2.5.2 Alternative Site/ Location

This would involve relocation of the proposed project to another site other than the proposed site. This action would have several implications on both the proponent and the recipient environment. The proponent owns the land at the site and changing of site would mean the proponent has to acquire an alternative land. The result would be an increase in time and financial resources required. Some of the implications may include:-

- Additional cost of purchasing alternative land
- Degradation of the new environment should the alternative site be acquired

The current location was chosen due to its suitability of constructing a mixed development made of commercial building with a high-end hotel and the reduction in land acquisition needs.

2.5.3 Alternative Design

Planning, designing and implementation of the development to fit and suit the site in question requires; time, sourcing of various consulting professionals involved and financial provision to facilitate their engagement. The team ranging from the; project manager, land surveyor, architect, engineers, environmentalist, quantity surveyors, social expert among others dedicate their time to ensure that the mutually agreed design is achieved within the specified time frame. Changing the design may mean a loss in; time, finances and resources which could have been diverted to develop other areas for socio-economic development and ecological sustainability.

2.5.4 Alternative Construction materials and Technology

The construction sector is one of the sectors that contribute to climate change through high levels of greenhouse gas especially carbon dioxide due to direct use of fossil energy used in construction-related activities such as; quarrying, mining and transportation. Production of building materials and consumption of electricity at the construction site contributes to carbon dioxide emissions.

The proposed development will be built using modern, locally and internationally accepted materials to achieve; environmental sustainability, occupation safety, public health, security and aesthetic needs.

The main target is to establish an environmentally friendly complex by employing technology which doesn't compromise on cost. It will include avoidance of ozone depleting substances, use of energy and water saving technologies, water recycling, rainwater harvesting and reuse of recyclable materials.

Ballast and sand shall be sourced from registered and approved quarry and sand mining firms whose activities have undergone acceptable environmental impact assessment/audit and received approval from NEMA and other government agencies. All the other construction material shall be sourced from suppliers with acceptable environmental performance standards. Cement, sand, steel, tiles, glass, aluminum frames among others shall meet the Kenya Bureau of Standards requirements and quality. There shall be minimal use of timber during construction and where need be, exotic tree species would be preferred to indigenous species in the construction.

2.5.5 Solid Waste Management Alternatives

Large quantities of waste will be generated during; demolition of existing structures, construction and operation of the proposed development. An integrated waste management system will be put in place by the proponent in conjunction with the contractor, consultants, project managers and NEMA licensed waste handlers.

During demolition and construction, the proponent will give priority to reduction of solid waste, followed by recycling, reuse, and proper disposal. This will call for putting in place segregation and separation at source. Non-recyclable waste should be disposed of at designated county sites.

2.5.6 Sewage waste and Wastewater Management Alternatives.

Connection to the public sewer line option is the most viable and sustainable option for the proposed development considering the magnitude of the proposed project and the availability of the sewer line system which is already available within the proposed site.

Other available alternatives include:

2.5.6.1. Sewage waste and wastewater treatment plant.

This involves the construction of a treatment plant that uses chemicals to treat the effluents to acceptable standards. It is costly to construct and maintain a treatment plant and also it requires a large piece of land to put it up. The sludge from the treatment plant can be composted and used for gardening. This is however not possible given the size of land available for the proposed project which can't accommodate a treatment plant.

2.5.6.2. Use of Septic Tanks.

This involves the construction of underground concrete-made tanks to store the sludge and effluent. The wastewater from the septic tanks is then channelled to soak pits. Considering the size of the proposed development this is not viable option.

2.5.7 No Project Alternative

The no project alternative option in relation to the proposed project implies that things remain as they are. This means the proponent would leave the parcel of land with the existing fuel filling station and structures within it which will have economic implications for the proponent as the land would not be utilized to its maximum potential in terms of profitability.

The no project option is most applicable in situations where the proposed area is in ecologically sensitive sites and risks the existence of endangered species which is not the case. The land in which the proposed development is to be put up is in the central business district of Eldoret Municipality and currently has a fuel filling station with other businesses, it also neigbours several commercial buildings along Ronald Ngala street and Nandi road. In general, the No Project Option is the least preferred from the socio-economic and partly ecological perspective due to the following factors:

- The economic status of Uasin Gishu County and the local residents within Eldoret Municipality would remain the same.
- Local skilled and unskilled labourers will remain underutilized.
- No employment opportunities will be created for local residents and other Kenyans who will work in the proposed development area.
- Discouragement for other investors willing to invest in Eldoret and Kenya in general.
- Improvement of support infrastructural facilities like; sewage, water, roads, electricity will not be undertaken.

From the above analysis, it becomes apparent that the No Project alternative is no alternative to the proponent, residents, Uasin Gishu County and nation of Kenya. This approach should not be adopted, as we need to encourage project developments so long as they are undertaken on a sustainable basis as per the Environmental and Social Management and Monitoring Plan (ESMMP) developed in the EIA/ESIA report.

2.5.8 Analysis of Alternatives

It can be concluded that if the proposed development is not implemented, some low environmental impacts could be avoided, though the development of the area and socio-economic condition will be impeded. Considering rational design decisions and appropriate mitigation measures that will be put in place, the proposed development construction and operation will result in important socio-economic benefits, rather than the no-action alternative, hence, the latter was ignored. Construction of the project is of notable importance for the improvement of the economic situation in the local area and country at large

2.6 Project Inputs, Outputs, By-products and Wastes.

2.6.1 Inputs at the construction stage

Land is the most important input for the proposed project. The proponent is the legal owner of the land to be used for proposed project.

Machines to be used during construction include; excavator, poker vibrator for compacting concrete, trucks for transporting materials, water boozers, water storage tanks, welding machine, crane, mechanical lifting machine.

Construction materials that shall be used include; sand, aggregates, natural stones; construction stones blocks.

Other inputs include; precast units for drains, PVC pipes for sewer and water reticulation, wire mesh, water tanks and steel gutters. Window casement and glasses, spades, pick axes, and hoes and a host of other tools will also be needed. Labour for construction offered by skilled and skilled workers.

2.6.2 Inputs at operation and maintenance phase

The input at operation and maintenance phase include: - food cooked in restaurant, beverages and alcoholic drinks, water, and energy (electricity and LPG), office equipment, books, and office stationeries, cleaning detergents, human resource/workers, clients and tenants.

2.7 Outputs, By-products and wastes

The by-products and wastes to be generated include: soils from excavation of foundations, noise and dust from construction activities and delivery of material to the site, left-over construction materials, fuel spill, human sewage waste, wastewater, general cleaning and exhaust fumes from vehicles bring building materials during construction phase.

2.7.1 Products, By-products and Waste generated during Project Construction

During the construction phase of the project, it is envisaged that the following products, by-products and waste will be generated:

- Dust emissions during excavation of the site as well as emissions arising out of various construction activities,
- Wood, polythene sheeting and nails arising from the formwork that will be used to contain various concreting activities, empty cement bags, wet gunny bags used for curing concrete services.
- Oil spills arising out of improperly serviced transportation trucks and construction machines.
- Human effluent like sewage waste emanating from construction workers on the site.
- Contaminated soil with leaked fuel during decommissioning of existing petroleum filling station

2.7.2 Products, By-Products and Waste generated during Operations.

Products during operation includes:

- Food cooked in restaurant.
- Beverages and alcoholic drinks in the restaurant and bar
- Services and goods provided by tenants who will be leasing shops and offices
- Parking space for vehicles in the basement parking

There are no by-products expected from the operation of the building.

Waste expected to be generated from the building includes:

- Food and drinks remains from restaurant
- Laundry waste from cleaning of clothes and beddings within the hotel
- Used paper from unpacking goods used in the building
- Glass from beverage and alcoholic drinks

- Sewage waste from human feacal matter and urine from; tenants, workers and clients visiting the building
- Wastewater from cleaning of the; building floor and walls, laundry that includes clothes and beddings, utensils cleaning

2.8 Project Implementation Sequencing

2.8.1 Pre-construction stage

This involved the following:

- Appraisal of baseline condition to determine supply and demand for required infrastructural services.
- Surveying of the land for appropriate siting
- Design of the proposed project plans by; architect, structural engineers, mechanical engineers and electrical engineers
- Preparation of bill of quantities by quantity surveyor
- Environmental and social impact assessment project report by environmental and social experts
- Seeking of the appropriate approvals from the relevant authorities at both national and county governments.
- Handing over the site to the contractor to commence construction work once approvals are done
- Procuring of construction machines and building materials
- Registration of the site as a construction site with directorate of occupational safety and health
- Fencing of the proposed site and putting up of warning signs
- Recruitment of skilled and unskilled workers who includes;
  - ✓ Site supervisor
  - ✓ Foremen
  - ✓ Machine operators
  - ✓ Security guards
  - ✓ Welders
  - ✓ Truck drivers
  - ✓ Masons
  - ✓ Plumbers among other workers

2.8.2 Construction stage –

This will involve the following:

2.8.2.1 Establishment of related works and all support infrastructures that are significant for the construction work:

This would involve the transportation of machinery and deployment of the workers to the construction site. The machinery would be used for ground breaking and for transportation of materials from the sources to the site. It is important to note that heavy machinery will be used at this stage. The major machineries that would be used include: excavators, mixers, welding machines, crane, lifting machines and transmission machines. The contractor would also mobilize human workforce to the site. Both casual (unskilled) and permanent (skilled) will be hired.

2.8.2.2 Site Clearance:

This will involve clearing of the site of any debris and foreign materials. This will involve decommissioning of existing structures that includes;

- Petroleum filling station which has; underground storage tanks, canopy, price board, dispensing pumps, piping from tanks to pumps, concrete floor, manhole covers for the tanks, electrical works with wires/cables, switches and sockets
- Building housing the; offices, shops, restaurants, medical clinic and restaurants with their kitchens and stores
- Clearing of vegetation used for landscaping that includes; trees, flowers and grass

2.8.2.3 Acquisition and transportation of building materials:-

The contractor shall source for materials for construction from the various available suppliers. Supply of materials would be a continuous activity throughout the project life since different materials will be needed at different phases of the construction. The materials that shall be used in the construction including; glass, aluminium frames, building

stones, sand, ballast, cement, timber, reinforced concrete frame, steel, bars, G.I pipes, PVC pipes, pavement blocks, insulated electrical cables and timber among others.

2.8.2.4 Excavation and land filling works

This is part of normal construction works where the site will be excavated to approximately eight meters deep to create room for foundation that will support the upper floors and room for the basement floors.

2.8.2.5 Construction of the building

The engineering designs and site layout plans that have been approved shall be implemented. The setting would comply with the specifications set out by the proponent to the contractor under the supervision of qualified engineers, architect and construction manager. In accordance with the designs and the layout plans, the construction of the proposed project and associated infrastructure will begin immediately NEMA approves the ESIA and NCA approves the plans that have been approved by the county government of Uasin Gishu. The contractor will then be supplied with all the approved documents including copy of the EIA report.

2.8.2.6 Transportation of the construction wastes from the site for landscaping

This waste will be disposed in sites approved the County Government of Uasin Gishu (CGU) through Eldoret Municipality administration and county department of environment. Waste contaminated with petroleum products from decommissioning of existing filling station will be handled by a licensed NEMA waste handler to protect the environment from contamination during transportation and disposal of the waste.

2.8.3 Solid and liquid waste management

Waste management infrastructure shall be set thus dustbin cubicles and shall be protected from rain and wind. These will be used both during construction and occupation stages.

2.8.4 Occupation stage

This stage shall involve running and managing the facility as per the laid down rules and procedures.

2.8.5 Decommissioning Phase

Decommissioning refers to the final disposal of the project and associated materials at the expiry of the project life span. This is dealt with in chapter ten of this project report.

2.9 Wastes

There will be liquid, solid and gaseous wastes from the project site. These will be from project activities during construction operation and decommissioning. There shall be effluents from civil works, workers and the storm water. It is envisaged that at the construction stage, effluent that shall be discharged will also be sprinkled on area of working to reduce dust generation by construction machinery. Other wastes from construction site will be mainly material residues of the construction material. These include pieces of concrete, heaps of sand and aggregates, bits and pieces of various pipe types, cans of paint, polythene sheets, paper packing materials, pieces of timber, pieces of iron (metals) among others scattered within the project site.

Wastes during operation will include used papers and effluent from toilet flushing. It is expected that the effluent shall be managed through connection to a conservancy tank. Wastes from decommissioning of the project will include salvaged equipment; water tanks, windows, doors and demolished stone blocks among others.

2.9.1 Air Emissions

Relative air emission is expected during construction when dust from construction activities and construction machinery will be emitted. It is recommended that watering be enforced to keep dust at minimal levels. The employees at the site shall also be provided with face masks to protect them from dust emissions.

2.9.2 Waste Management

The principle objective of waste management program is to minimize the pollution of the environment as well as to utilize the waste as a resource. This goal should be achieved in a way that is environmentally and financially sustainable.

2.9.3 Solid Waste Management

The technologies for the management of the solid wastes will incorporate the collection of the waste from the source, transportation of the waste to the place of processing, treatment and final disposal. The following waste management techniques shall be used in the different stages of the Project.

i) During construction

Wastes at this stage shall be managed as follows:

Express condition shall be put in the contract that before the contractor is issued with a completion certificate; he will clear the site of all debris and restore it to a state acceptable by the supervising architect and environmental consultant. Materials from excavation of the ground and foundation works shall be reused for earthworks and landscaping.

ii) During operation

The following methods will be used to manage wastes:

Used Paper- Used paper shall be thrown in designated dustbins labeled 'paper only'. The paper waste shall then be collected and kept in a central place pending disposal through a contractor.

Empty Cans and Plastic Containers - These will be collected and stored in a designated area pending disposal to interested parties for recycling.

iii) **Decommissioning**

During this stage, the following shall be observed: Wastes generated as a result of facility decommissioning activities will be characterized in compliance with standard waste management procedures. Disposal locations will be selected by the contractor and County government of Uasin Gishu based on the properties of the particular waste generated. All buildings, machinery, equipment, structures and partitions that will not be used for other purposes shall be removed and reused or rather sold/given to scrap material dealers.

2.9.4 Effluent treatment

There shall be effluents from the civil works, workers and storm water drainage. It is envisaged that during construction stage, effluents that shall be discharged shall be sprinkled on the working areas to reduce dust generation by the construction machinery. Wastewater from the toilets together with the solids will be collected into a conservancy tank, which shall be constructed for this purpose.

2.10 Project Budget and Duration

The proposed development will require large capital outlay to commission and thus the proponent has sourced sufficient funds. This is to ensure that the project completion is attained within the approved time. The proposed project is estimated to cost approximately **Kshs 2.7 Billion** Kenya shillings. The project will take approximately two years to complete and to start operations.

2.11 Similar buildings within Eldoret Town

Currently the tallest building in Eldoret town is called The Eldoret Daima Towers (MUPS Plaza) that has twenty four floors and stands at seventy meters high. The building is owned by Moi University Pension Scheme and is located along Uganda road.

KVDA plaza is the second tallest building in Eldoret town with thirteen floors. It is owned by Kerio Valley Development Authority one of the state corporations owned by the national government.

The proposed building will be will be the tallest in Eldoret with eighty eight meters high from the ground.

PLATE 13: The Eldoret Daima Towers owned by Moi University SACCO

PLATE 14: KVDA Plaza

CHAPTER THREE

3.0 BASELINE INFORMATION

3.1 Geographical Location

The area where the proposed mixed use development will be put up is located at the Junction of Nandi Road and Ronald Ngala Street. The site is located in Chepkoilel location, Moiben division within Moiben Sub County within Uasin Gishu County.

3.2 Demography

According to 2019 Kenya Population and Housing Census Volume II: Distribution of Population by Administrative Units Census results; the population of Uasin Gishu County was 1,163,186; 580,269 males and 582,889 females. This population is distributed among 304,943 households. The population density of Uasin Gishu County is 342 persons km^2 residing in an area of 339 kilometres squared. Moiben Sub County had a population of 181,338 persons; 90,309 males and 91,027 females. The sub county has 46,729 households living in an area of 770 km^2 giving the sub county a density of 236 persons per km^2.

Chepkoilel location had a population of 66,878 persons; 33,060 males and 33,817 females distributed in 22,389 households residing in an area of 21 km^2 giving the location a density of 3,192 persons per km^2 (KNBS, 2019).

3.3 Location and Size

Uasin Gishu County lies between longitudes 34 degrees 50‟ east and 35 degrees 37‟ West and latitudes 0 degrees 03‟ South and 0 degrees 55‟ North. The county shares common borders with Trans Nzoia County to the North, Elgeyo Marakwet County to the East, Baringo County to the South East, Kericho County to the South, Nandi County to the South West and Kakamega County to the North West. It covers a total area of 3,345.2 Sq. Km (Uasin Gishu CIDP 2013-2018).

3.4 Physiographic and Natural Conditions

Uasin Gishu County is a highland plateau with altitudes falling gently from 2,700 meters above sea level to about 1,500 meters above sea level. The topography is higher to the east and declines gently towards the western border. The County is physio-graphically divided into three zones: the upper highlands, upper midlands and lower highlands. These zones greatly influence land use patterns as they determine the climatic conditions. The geology is dominated by tertiary volcanic rock with no known commercially exploitable minerals.

The soils which comprise of red loam soils, red clay soils, brown clay soils and brown loam soils mainly support maize, sunflower, wheat, pyrethrum, potatoes and barley farming. They also support livestock rearing and forestry.

Uasin Gishu County lies within the Lake Victoria catchment zone and all its rivers drain into the lake. The major rivers include Sosiani, Kipkaren, Kerita, Nderugut, Daragwa, and Sambu (Uasin Gishu CIDP 2013-2018).

As per the results from the geotechnical survey that was carried out the proposed site has a rocky ground which may make it very expensive during excavation of the site to create room for the foundation and basement floor.

3.5 Climatic Conditions

Uasin Gishu experiences high and reliable rainfall which is evenly distributed throughout the year. The average rainfall ranges between 624.9 mm to 1,560.4mm with two distinct peaks occurring between March and September; and May and August. Dry spells occur between November and February. The temperatures range between 7 degrees Celsius and 29 degrees Celsius. Generally these conditions are favorable for livestock keeping, crop and fish farming (Uasin Gishu CIDP 2013-2018).

3.6 Administrative and Political Units

Uasin Gishu County is divided into six sub-counties: Turbo, Soy, Ainabkoi, Moiben, Kessess and Kapseret. The sub-counties are further subdivided into fifty one locations and ninety seven sub-locations (Uasin Gishu CIDP 2013-2018).

3.7 Health facilities

Eldoret municipality is home to the second largest referral hospital in Kenya Moi Teaching and Referral Hospital that serves the all of Rift Valley and Western Kenya together with the neighbouring countries like; Uganda, Rwanda, Burundi, Democratic Republic of Congo and South Sudan. Eldoret also has several private hospitals that includes; Mediheal, St. Lukes, Eldoret hospital, Reale among others. The municipality also has several private clinics offering speciality services like; gynaecology, oncology, urology, nephrology, cardiology, neurology, radiology, chemotherapy among other services.

3.8 Learning institutions

Uasin Gishu County is home to two public universities namely; University of Eldoret and Moi University with several campuses like; main campus in Kesses, Annex law school, medical school within Moi Teaching and Referral hospital. Several other universities have their campuses within Eldoret town and includes; JKUAT, Kisii, CUEA, Egerton, UoN, Mount Kenya University Eldoret Campus among others.

Uasin Gishu county also has several tertiary colleges that includes; Eldoret National Polytechnic, Rift Valley Technical Training Institute, African Institute of Research and Development Studies, Kenya Medical Training College among others.

Eldoret municipality is home to Moi Girls Eldoret which is one of the national schools in Kenya. Other secondary schools within the county includes; Hills school, Seminary, Chebisas Boys, Paul Boit among many others.

The county also has several public and private primary schools within Eldoret municipality and in rural areas.

The nearest school to the site is Pioneer primary and secondary school which is approximately one kilometre from the proposed site on the Southern direction along Kisumu road

3.9 Administrative offices

Eldoret municipality is the headquarters of Uasin Gishu County. Eldoret houses offices of; the governor and other county government offices, county commissioner and other national government offices.

Eldoret municipality also host a number of regional offices that includes; Kerio Valley Development Authority headquarters, Kenya National Highways Authority, Tourism Regulatory Authority, Kenya Rural Road Authority, Energy and Petroleum Regulatory Authority, National Construction Authority, Kenya Airports Authority managing the Eldoret International airport and two other airstrips, Kenya Forest Service North Rift Conservancy, Kenya Bureau of Standards, Kenya Revenue Authority, Office of Directorate of Public Prosecution, Water Resources Authority, Ethics and Anti-corruption Commission North Rift Region among others.

Eldoret also host some national nonprofit making organizations like; Heifer International, East Africa Dairy Development, Red Cross, International Organization for Migration

3.10 Infrastructural facilities

3.10.1 Transport infrastructure

Uasin Gishu has an extensive road network comprising of over 300 Kilometres of tarmac roads, 549 Kilometress of marrum and 377 Kilometres of earth roads. It also boasts 179 Kilometres of railway line with 8 railway stations. In addition, there is an inland container depot.

The Moi International Airport and two airstrips are also located in Uasin Gishu easily making it the region's service hub (Uasin Gishu CIDP 2013-2018).

The proposed site is at the Junction of Nandi Road and Ronald Ngala Street; the two roads are tarmacked and well maintained.

PLATE 15: Nandi road passing along proposed site

3.10.2 Communication

The County enjoys about 95% mobile phone coverage which is provided by all the major service providers in Kenya which includes; Safaricom, Airtel, Telkom and Equitel.

The area also have internet connectivity from companies like; Safaricom, Telkom, Airtel, Faiba among other small providers.

The county also has 16 post offices, 4 sub-postal offices and 9 licensed service couriers. It is connected to the fiber optic cable thus, giving it access to fast internet connectivity (Uasin Gishu CIDP 2013-2018).

3.10.3 Financial services

The county has a branch of the Central Bank of Kenya, 21 Commercial banks, 108 urban and 4 rural Saccos; and 5 major micro financing institutions (Uasin Gishu CIDP 2013-2018).

Within the neighbouring Tarita Centre are three banks namely; KCB, Middle East and Bank of India.

3.10.4 Energy

Firewood remains the main source of cooking fuel accounting for 84% of the households. Currently, 30 trading centers, 33 secondary schools and 12 health centers are not connected to electricity (Uasin Gishu CIDP 2013-2018).

Electricity is supplied by the Kenya Power Company.

Most residents around the proposed project use LPG, kerosene and electricity. There are few ones who use fuel wood for cooking and some use charcoal made using *Eucalyptus* roots and stump after harvesting the logs and wattle trees.

PLATE 16: electricity power line passing along Ronald Ngala Street

The site has three phase power line with a step down transformer in between the proposed site and Ronald Ngala Street that serves the current business at the site and neighboring businesses.

3.10.5 Water and sewage

Eldoret town water is managed by Elodret Water and Sanitation Company Limited (ELDOWAS) which is under the county government. The company sources water from Chebara dam in Elgeyo Marakwet and pipe it to the municipality. ELDOWAS also operates the sewage system of the municipality from piping from commercial and residential building to the treatment plant. Eldoret municipality also has a solid waste management system where waste is collected and disposed at assigned sites though some residents dispose waste on the drainage system clogging them.

The site is well served piped water and public sewer.

PLATE 17: water pipeline serving around the proposed site

3.11 Land and Land Use

Uasin Gishu County has an average land holding of 5 hectares in rural areas, and 0.25 of hectares within Eldoret Municipality. Land use practices vary considerably across the County. In 2012 there were 919 landless households distributed in various schemes, with Turbo settlement scheme accounting for 658 households; Jabali settlement Scheme 161 and Maili Tisa 100. Some of the landless are squatters living in gazetted forests; immigrants from other counties; and those who become landless by virtue of selling family land (Uasin Gishu CIDP 2013-2018).

Around the proposed project is mostly commercial with: hotels with lodgings including; Bandaptai, Amani Guset house, Trocadero Guest House, filling stations that includes Gulf Energy within the proposed site and Ola filling station along Nandi road on the Western direction, supermarkets. The area also has several agro-vet shops, hardware shops selling construction materials. The proposed site neighbours Khetia Supermarket and Naivas supermarket along Nandi road.

Opposite the site along Nandi road is a public service vehicles stage.

PLATE 18: building housing Naivas Supermarket adjacent to the proposed site along Nandi Road

PLATE 19: commercial buildings neighbouring the proposed site from; Tarita Centre on the left with blue glasses, Neema Complex on the middle to Kitmatt Centre with Naivas Supermarket sign on top

3.12 Agricultural Activities

Arable land covers 2,995 sq. km, 332.78 sq. km is non-arable (hilly and rocky), 23.4 sq. km is water mass and 196 sq. km is urban. The County is a highland plateau ranging from 1500m – 2700m above sea level and soils range from red brown loam to clay. Rainfall averages 900mm to 1200mm per annum with its peak in May and October, temperatures range from 8.40 c to 26.20 c (a mean of 180c). Vegetation range from open grassland with scattered acacia trees, to natural highland forests and bush land. It has 3 ecological zones (AEZ) (lower highland, upper highland and upper midland).

The average farm size in Uasin Gishu is 2-10 acres with a wide range of crop and livestock enterprises. The crop enterprises include food crops, cash/industrial crops and horticultural crops whereas the livestock enterprises include dairy, poultry, sheep, goats, pigs, bee keeping and fish farming (Uasin Gishu CIDP 2013-2018).

3.13 Vegetation

The County has a total of 29,802 hectares of gazetted forests out of which 13,184 hectares (or 44%) is under plantation while 16,618 (or 56%) are under indigenous forest cover. The gazetted forests are in Nabkoi, Timboroa Kipkurere, Lurenge, Singalo, and Kapsaret. There exists community forest associations involved in forestry as an income generating activity.

The growing of wood lots is scattered across the County and is emerging as a significant carbon sink and income generating activity. There exists a big market both in the County and outside for forest products such as poles, timber and wood fuel.

The overuse and destruction of forest cover points to the need to protect forests and water catchment areas. The continued reliance on trees for fuel; and the use of wetlands for farming has led to deforestation and encroachment on river banks. These practices have resulted in environmental degradation, siltation of water reservoirs, depletion of forest cover, soil erosion and degradation. Concerted efforts are required to reverse these trends.

The degradation of the environment also results from poor solid waste disposal, pollution from industries and the overuse of insecticides and fertilizers. Soil erosion which is an aspect of environmental degradation is reducing productivity of the land in some areas. Deforestation has on its part led to unpredictable weather conditions greatly affecting farming. Rainfall patterns have become increasingly unpredictable and health is also affected due to increased survival of vectors and microbes (Uasin Gishu CIDP 2013-2018).

PLATE 20: vegetation within proposed site around the underground tank area

The proposed site has some vegetation around the underground tanks area and along Ronald Ngala border with the site. The plants within the site are used for landscaping and include; palm trees, around two coniferous trees, grass and some perennial flowers.

There is a lot of vegetation along River Sossiani riparian reserve that was planted to conserve it located 400 meters from the proposed site on the Southern direction. The vegetation includes; bamboo, Australian pine, epiphytic plants, bottlebrush and flowers

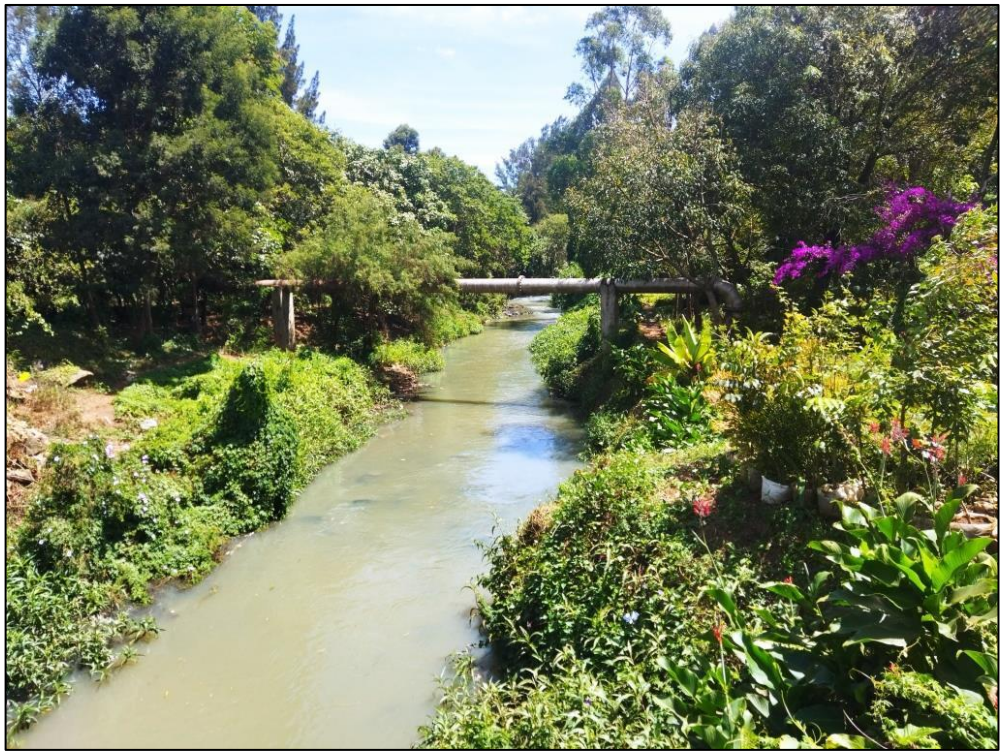


PLATE 21: riparian vegetation along River Sossiani which is located 400 metres from the proposed site

3.14 Local communities

Uasin Gishu is Cosmopolitan County mainly dominated by Nandi and Keiyo communities especially in rural areas. Other communities living in the county especially in Eldoret town which is county headquarters and the main urban town in the North Rift region includes; Kikuyu, Tugen, Marakwet, Luyhas, Luos, Kambas, Somalis, Gusii, Turkana, Somalis, Kenyan Indians, Kenyan Arabs. There are also many minor different tribes residents in Eldoret County.

CHAPTER FOUR

4.0 ENVIRONMENTAL POLICY, LEGISLATIVE FRAMEWORK, INSTITUTIONAL & REGULATORY FRAMEWORKS AND INTERNATIONAL CONVENTIONS AND TREATIES

There is a growing concern at a global level and in Kenya that many forms of development activities cause damage to the environment. Development activities have the potential to damage the natural resources upon which the economies are based. EIA is a useful tool for safeguarding the environment from the negative effects of developmental actions. It is now acknowledged that development projects must be socially acceptable, economically viable, and environmentally sound

4.1 Policies

4.1.1 National Environment Policy 2013

According to this policy the Kenyan government has identified environment and natural resources as valuable national assets that must be managed for sustainable development. They offer benefits for economic development, improved livelihoods and provision of environmental goods and services.

The policy also identifies several environmental degradation issues and challenges facing the country which includes; high rates of population growth, inappropriate technology, unsustainable consumption and production patterns, increased poverty and climate change. In the urban areas environmental degradation is mainly due to: lack of appropriate waste management and sanitation systems, industry and transport related pollution, adversely impact on air, water, soil quality and human health and well-being. Other challenges arise from emerging global environmental concerns like stratospheric ozone depletion and biodiversity loss. These challenges have led to changes in the relationship between mankind and ecosystems. If this situation is left unchecked it will lead to serious environmental degradation leading to increased poverty.

Against this background, the Policy proposes a broad range of measures and actions responding to key environmental issues and challenges. It seeks to provide the framework for an integrated approach to planning and sustainable management of natural resources in the country.

The main goal of this Policy is a better quality of life for present and future generations through sustainable management and use of the environment and natural resources.

The objectives of this Policy are to:

- Provide a framework for an integrated approach to planning and sustainable management of Kenya's environment and natural resources.
- Strengthen the legal and institutional framework for good governance, effective coordination and management of the environment and natural resources.
- Ensure sustainable management of the environment and natural resources, such as unique terrestrial and aquatic ecosystems, for national economic growth and improved livelihoods.
- Promote and support research and capacity development as well as use of innovative environmental management tools such as incentives, disincentives, total economic valuation, indicators of sustainable development, Strategic Environmental Assessments (SEAs), Environmental Impact Assessments (EIAs), Environmental Audits (EA) and Payment for Environmental Services (PES).
- Promote and enhance cooperation, collaboration, synergy, partnerships and participation in the protection, conservation, sustainable management of the environment and natural resources.
- Ensure inclusion of cross-cutting and emerging issues such as poverty reduction, gender, disability, HIV&AIDS and other diseases in the management of the environment and natural resources.
- Promote domestication, coordination and maximization of benefit from Strategic Multilateral Environmental Agreements (MEAs).

Implementation of this Policy is guided by the following principles: Environmental Right, Right to Development, Ecosystem Approach, Total Economic Value, Sustainable Resource Use, Equity, Public Participation, Subsidiarity, Precautionary Principle, Polluter Pays Principle, International Cooperation, Good Governance, Benefit sharing and Community Empowerment.

4.1.2 Kenya vision 2030

The Kenya Vision 2030 is the new country's development blueprint covering the period 2008 to 2030. It aims at making Kenya a newly leading industrializing "middle income country providing high quality life for all its citizens by the year 2030" The vision has been developed through an all-inclusive stakeholder consultative process, involving Kenyans from all parts of the country. The vision is based on three "pillars" namely; social, political and economic. Under the social pillar we have the environmental sector. The vision comes after the successful implementation of the Economic Recovery Strategy for Wealth Creation which has seen the country's economy back on the path to rapid growth since 2002. The long-term success of achieving Vision 2030 targets will largely be dependent on ensuring that environmental management is addressed in medium term plans as an enabler for sustained development rather than as an inhibitor to development. It is therefore critical that all constructions within the country take care of the environment and ensure environmental sustainability in order to help achieve this very important Millennium Development Goal amongst others.

4.1.3 National environmental action plan (NEAP)

According to NEAP 1994, the Government recognized the negative impacts on ecosystems emanating from development programmes that disregarded environmental sustainability. Established in 1990, the plan's effort was to integrate environmental considerations into the Country's Economic and Social Development. Under the NEAP process, EIA was introduced according to the Kenya National Environmental Action Plan (NEAP, 1994) and the negative impacts on ecosystems emanating from industrial, economic and social development programmes that disregarded environmental sustainability were recognized. Established in 1990, the plan's effort was to integrate environmental considerations into the country's economic and social development. The integration process was to be achieved through a multi-sectorial approach to develop a comprehensive framework to ensure that environmental management and the conservation of natural resources are an integral part of societal decision-making.

4.1.4 Sessional paper no. 6 of 1999 on environment and development

As envisioned in Sessional Paper No. 6 of 1999 on Environment and Development, Kenya should strive to move along the path of sustainable development to meet the needs of the current generation without compromising the ability of the resource base to meet those of future generations. The paper also makes it a right for every person in Kenya to have access to a clean and healthy environment. To this effect every person has an obligation to safeguard and enhance the environment (Kenya, 1999).

The overall goal is hence to integrate environmental concerns into the national planning and management processes and provide guidelines for environmentally sustainable development (Kenya, 1999). The policy paper emphasized environmental impact assessments must be undertaken by the developers as an integral part of a project preparation. It also proposed for periodic environmental auditing to investigate if a developer is fully mitigating the impacts identified in the assessment report. Among the key objectives of the policy paper on Environment and Development (Session Paper No. 6 of 1999) are to ensure that from the onset, all development policies, programs and projects take environmental considerations into account and ensure that an EIA report is prepared for any industrial venture or other development before implementation among others.

4.1.5 Physical Planning Policy

The physical planning policy governs the development projects and approval of all building plans as provided for in the Physical Planning Act (Cap 286). The project will be subjected to the requirements of this policy.

4.1.6 The Kenya National Climate Change Response Strategy

The goal of this strategy is to put in place measures required to address challenges posed by climate change through thorough environmental impact assessments and monitoring of various development projects. As per the Climate Change Projections, in Kenya we are likely to experience hotter drier sunny seasons, warmer wetter rainy seasons, rise in sea levels and an increase in extreme weather like floods and prolonged drought. These environmental changes will impact on lives and the buildings must be adapted to cope with such changes. A range of new ways to design, construct, upgrade and occupy buildings so that they are more energy efficient as well as resilient to climate threats.

In the construction sector, inclusion areas should include energy efficient innovations and technologies, and utilization low-carbon appliances and machines; the use of eco-friendly energy such as wind, solar, biogas, small hydro.

4.1.7 Public Health Policy

The existing public health policy calls upon the proponent to ensure that buildings and developments are adequately provided with facilities that are fit for human habitation. The proposed development has been designed by professional engineers and architects and as such will have all amenities/facilities that are essential for safeguarding public health for all people.

4.2 Legislative framework

4.2.1 Constitution of Kenya 2010

The Kenyan constitution was enacted in 2010 after a national referendum. It is the supreme law of the country and all laws are based on it.

Chapter Four-The Bill of Rights Article 42 provides for the right to a clean and healthy environment, this includes the right; to have the environment protected for the benefit of present and future generation through legislative and other measures, particularly those contemplated in Article 69 and to have obligations relating to the environment fulfilled under Article 70.

Chapter Five of the constitution Article 69 (1f and 1g) give an obligation to the state to; establish systems of environmental impact assessment (EIA), environmental audit (EA) and monitoring of the environment and eliminate processes and activities that are likely to endanger the environment. Article 69 (2) gives responsibility to every person to cooperate with the state organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources.

The proponent has initiated the ESIA report preparation with sole purpose of complying with requirement NEMA will give during issuance of ESIA license.

4.2.2 Environmental Management and Co-ordination Act, 1999 (Revision 2018)

Environmental Management and Co-ordination Act, 1999, Rev 2018 is an act of parliament that provides for the establishment of an appropriate legal and institutional framework for the management of the environment and related matters.

Part II on General Principles, Section 3 under Entitlement to a clean and healthy environment part (1) every person in Kenya is entitled to a clean and healthy environment in accordance with the Constitution and relevant laws and has the duty to safeguard and enhance the environment. Part (2) the entitlement to a clean and healthy environment under subsection (1) includes the access by any person in Kenya to the various public elements or segments of the environment for recreational, educational, health, spiritual and cultural purposes. (2A) every person shall cooperate with state organs to protect and conserve the environment and to ensure the ecological sustainable development and use of natural resources.

Part VI on Integrated Environmental Impact Assessment, Section 58 (1) of the Act provide for project proponents to apply for an Environmental Impact Assessment License before financing, commencing, proceeding with, carrying

out, executing or conducting or causing to be financed, commenced, proceeded with, carried out, executed or conducted by another person any undertaking specified in the Second Schedule to this Act, submit a project report to NEMA, in the prescribed form, giving the prescribed information and which shall be accompanied by the prescribed fee. Section 58 (2) the proponent of any project specified in the Second Schedule shall undertake a full environmental impact assessment study and submit an environmental impact assessment study report to NEMA prior to being issued with any license by NEMA. Section 58 (3) the environmental impact assessment study report prepared under this subsection shall be submitted to NEMA in the prescribed form, giving the prescribed information and shall be accompanied by the prescribed fee. Section 58 (5) Environmental impact assessment studies and reports required under this Act shall be conducted or prepared respectively by individual experts or a firm of experts authorized in that behalf by the Authority. NEMA shall maintain a register of all individual experts or firms of all experts duly authorized by it to conduct or prepare environmental impact assessment studies and reports respectively. The register shall be a public document and may be inspected at reasonable hours by any person on the payment of a prescribed fee.

Section 63 of the act provide for issuing Environmental Impact License. NEMA may, after being satisfied as to the adequacy of an environmental impact assessment study, evaluation or review report, issue an environmental impact assessment license on such terms and conditions as may be appropriate and necessary to facilitate sustainable development and sound environmental management.

Section 72(1) on water pollution prohibit any person, from discharging or applies any poison, toxic, noxious or obstructing matter, radioactive waste or other pollutants or permits any person to dump or discharge such matter into the aquatic environment in contravention of water pollution control standards established under this Part shall be guilty of an offence that attracts both imprisonment or fine.

4.2.3 Environmental (Impact Assessment and Audit) Regulations, 2003

Part IV of the Regulations on the Environmental Impact Assessment Study Report provides on how to prepare a full study report. Section 18 sub section 1 states that "A proponent shall submit to the Authority, an environmental contents of impact assessment study report incorporating but not limited to the environmental following information:

- the proposed location of the project;
- a concise description of the national environmental legislative and regulatory framework, baseline information,
- any other relevant information related to the project; the objectives of the project;
- the technology, procedures and processes to be used, in the implementation of the project;
- the materials to be used in the construction and implementation of the project;
- the products, by-products and waste generated project;
- a description of the potentially affected environment;
- the environmental effects of the project including the social and cultural effects and the direct, indirect, cumulative, irreversible, short term and long-term effects anticipated;
- alternative technologies and processes available and reasons for preferring the chosen technology and processes
- analysis of alternatives including project site, design and technologies and reasons for preferring the proposed site, design and technologies.
- an environmental management plan proposing the measures for eliminating, minimizing or mitigating adverse impacts on the environment; including the cost, time frame and responsibility to implement the measures
- provision of an action plan for the prevention and management of foreseeable accidents and hazardous activities in the cause of carrying out activities or major industrial and other development projects;
- the measures to prevent health hazards and to ensure security in the working environment for the employees and for the management of emergencies;
- an identification of gaps in knowledge and uncertainties which were encountered in compiling the information;

- an economic and social analysis of the project;
- an indication of whether the environment of any other state is likely to be affected and the available alternatives and mitigating measures;
- such other matters as the Authority may require.

Section 19 states that "proponent shall submit ten copies and an electronic copy of an environmental impact assessment study report to the Authority in Form 1B set out in the First Schedule to these Regulations accompanied by the prescribed fees (currently suspended).

Section 20 sub section states that "The Authority shall within fourteen days of the receipt of the environmental impact assessment study report, submit a copy of the report to any relevant lead agencies for their comments.

Section 21 sub section l provides an opportunity for NEMA within fourteen days of receiving the environmental impact assessment study report to invite the public to make oral or written comments on the report. Sub section 2 states that NEMA it the proponent expense publish for two successive weeks in the Gazette and in a newspaper with nationwide circulation particularly in the area of the proposed project, a public notice once a week for the public to submit oral or written comments on study report. Also make an announcement of the notice in both official and local languages at least once a week for two consecutive weeks in a radio with nationwide coverage.

Section 23 states that NEMA will give a decision on the EIA study report within three months of receiving the report in writing to the proponent.

Section 24 states that where NEMA approves the EIA study report it shall issue a license.

Section 31 sub section 1b states that new projects must undertake an environmental audit (EA) after completion of EIA study report. Sub section 4b requires a proponent to undertake an environmental audit twelve months after commencement of operation or not more than twenty four after completion of a project whichever is earlier

The proponent is undertaking an EIA study report and will comply with all the terms NEMA will attach to the license.

4.2.4 The environmental management and co-ordination (Noise and Excessive Vibrations Pollution Control) Regulations 2009

The Noise and Excessive Vibrations regulations, regulation section 3 (1) stipulates that except as otherwise provided in these Regulations, no person shall make or cause to be made any loud, unreasonable, unnecessary or unusual noise which annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and the environment.

In determining whether noise is loud, unreasonable, unnecessary or unusual, the following factors may be considered-

- Time of the day;
- Proximity to residential area;
- Whether the noise is recurrent, intermittent or constant;
- The level and intensity of the noise;
- Whether the noise has been enhanced in level or range by any type of electronic or mechanical means; and,
- Whether the noise can be controlled without much effort or expense to the person making the noise.
- Any person who contravenes the provisions of this Regulation commits an offence.

The proponent will ensure minimum noise and vibration comes out of the construction, carry out construction from 8 am-5 pm during the day. The proponent will also ensure machines and activities at the site doesn't cause too much noise or vibration by using the best alternatives.

4.2.5 The environmental management and co-ordination (Waste Management) Regulations, 2006

Part II of the Waste Management Regulations 4 (1) states that no person shall dispose of any waste on a public highway, street, road, recreational area or in any public place except in a designated receptacle. Regulation 4 (2)

further states that a waste generator shall collect, segregate and dispose such waste in the manner provided for under the regulations.

The proponent will ensure waste generated during construction and operation are segregated before disposed using the existing county government disposal means

4.2.6 The environmental management and co-ordination (Water quality) regulations, 2006.

These Regulations were published in the Kenya Gazette Supplement No. 68, Legislative Supplement No. 36, and Legal Notice No. 120 of 29th September, 2006. The Regulations provides for sustainable management of water resources including prevention of water pollution and protection of water sources: lakes, rivers, streams, springs, wells and other water sources.

It is an offence under section 4 (2), for any person to throw or cause to flow into or near a water resource any liquid, solid or gaseous substance or deposit any such substance in or near it, as to cause pollution. Part 11 further makes it an offence for any person to discharge or apply any poison, toxic, noxious or obstructing matter, radioactive waste or other pollutants or permit the dumping or discharge of such matter into the aquatic environment unless such discharge, poison, toxic, noxious or obstructing matter, radioactive waste or pollutant complies with the standards for effluent discharge into the environment.

The proponent will make sure any waste generated at the site during construction is disposed appropriately. During operation the proponent will make sure all wastewater and sewage waste are directed to the existing public sewer line

4.2.7 The Physical and Land Use Planning Act, 2019

An Act of Parliament to make provision for the planning, use, regulation and development of land and for connected purposes.

Section 57(1) states that person shall not carry out development within a county without a development permission granted by the respective county executive committee member. Sub section (2) a person who commences any development without obtaining development permission commits an offence and is liable on conviction to a fine not exceeding five hundred thousand shillings or to imprisonment for a term not exceeding two months or to both.

Section 58(1) a person shall obtain development permission from the respective county executive committee member by applying for development permission from that county executive committee member in the prescribed form and after paying the prescribed fees. Sub section (2) states that an applicant for development permission shall provide documents, plans and particulars as may be required by the respective county executive committee member to indicate the purposes of the proposed development.

Section 59 (1) A person applying for development permission shall ensure that any documents, plans and particulars that are provided to the respective county executive committee member while applying for development permission have been prepared by the relevant qualified, registered and licensed professionals. Sub section (2) states that a person who purports to prepare a document, plan or particulars required under this Act shall prove that person's credentials when asked to do so by a county executive committee member and shall be required to authenticate the copies of the documents, plans or particulars provided to the county executive committee member in that person's name.

Section 60 (I) Within seven days of receiving an application for development permission, the county executive committee member shall give a copy of the application to the relevant authorities or agencies to review and comment and the relevant authorities or agencies shall comment on all relevant matters including; land survey, roads and transport, agriculture and livestock, health, public works and utilities, environment and natural resources, urban development, national security in respect of land adjoining or within reasonable vicinity of safeguarding areas; and any other relevant authority. Sub section (2) states that within fourteen days of receiving the copy of the development

permission from a county executive committee member, the relevant authorities or agencies shall submit their comments to the respective county executive committee member.

Section 63(1) A county executive committee member may levy a development fee against an applicant for development permission. Sub section (2) states that each county government may, by notice in the *Gazette,* publish Regulations determining the circumstances under which a development fee shall be levied, the rates that shall be payable and the circumstances under which a development fee may be waived.

Section 64 (1) Where an applicant for development permission has been granted development permission but has not commenced the proposed project within three years of receiving the development permission that permission shall lapse. Sub section (2) states that despite sub-section (1), a county executive committee member, where an applicant makes an application, may extend development permission by a period of one year if the county executive committee member determines it is necessary or just to grant that extension.

The proponent will sub all the structural and architectural designs are approved by the county government of Uasin Gishu department including; physical planning, survey, public health, public works among other relevant departments

4.2.8 The County Government Act, 2012

The County Government were created by *The Constitution of Kenya 2010.* The County Government Act was enacted by parliament to operationalize Chapter 11 of the constitution on Devolved Government, the act also makes Fourth schedule of the constitution to operational by allowing the county government carry out its functions that includes; refuse removal, refuse dumps, solid waste disposal, control of air pollution, noise pollution and other nuisances, county planning and development, trade regulation, fire fighting services and fire fighting.

The proponent will comply with all the county government requirements including paying for relevant permits and licenses.

4.2.9 Public Health Act, CAP 242, (Revised 2012)

Part IX on Sanitation and Housing section 115 of this Act states that No person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.

Section 116 of the Act states that the local authorities (now counties) to maintain cleanliness and prevent nuisances. It shall be the duty of every local authority to take all lawful, necessary and reasonably practicable measures for maintaining its district at all times in clean and sanitary condition, and for preventing the occurrence therein of, or for remedying or causing to be remedied, any nuisance or condition liable to be injurious or dangerous to health, and to take proceedings at law against any person causing or responsible for the continuance of any such nuisance or condition.

Section 126A gives power to local authorities to come up with by-laws for buildings and sanitation. Section 126A(1) states that every municipal council and every urban and area council may, and shall if so required by the Minister for the time being responsible for local government with the agreement of the Minister, make by-laws for all or any of the following

Matters—

(a) as regards buildings—

(i) for controlling the construction of buildings, and the materials to be used in the construction of buildings;

(ii) for controlling the space about buildings, the lighting and ventilation of buildings and the dimensions of rooms intended for human habitation;

(iii) for controlling the height of buildings, and the height of chimneys (not being separate buildings) above the roof of the buildings of which they form part;

(iv) for prohibiting the erection or use of temporary or movable buildings, whether standing on wheels or otherwise, and for prohibiting or restricting the use of tents or similar buildings for business or dwelling purposes;
(v) for requiring and regulating adequate provision for the escape of the occupants of any building in the event of an outbreak of fire;
(vi) for preventing the occupation of a new or altered building until a certificate of the fitness thereof for occupation or habitation has been issued by such local authority;
(vii) to compel employers to provide housing for their employees;
(viii) to compel owners to repair or demolish unsafe dangerous or dilapidated buildings;
(b) as regards works and fittings—
(i) for regulating sanitary conveniences in connection with buildings, the drainage of buildings (including the means for conveying refuse water and water from roofs and from yards appurtenant to buildings), the cleansing, drainage and paving of courts, yards and open spaces used in connection with buildings and cesspools, and other means for the reception or disposal of foul matter in connection with buildings;
(ii) for regulating excavations of any kind in connection with buildings;
(iii) for regulating wells, tanks and cisterns for the supply of water for human consumption in connection with buildings;
(iv) for regulating stoves and other fittings in buildings (not being electric stoves or fittings), in so far as by-laws with respect to such matters are required for the purposes of health and the prevention of fire;
(v) for regulating private sewers and communications between drains and sewers and between sewers;
(vi) for regulating the erection and use of scaffolding and hoarding during the construction, demolition, repair, alteration or extension of any building;
(vii) for prohibiting, securing the removal of and regulating projections and obstructions in front of buildings, and projections over streets,
The proponent will comply with all public health department requirements including approving plans with them, ensuring waste are disposed as per the public health requirements and paying for relevant documents

4.2.10 Occupational Safety and Health Act, 2007 (Revised 2012)

This Act of Parliament to provide for the safety, health and welfare of workers and all persons lawfully present at workplaces, to provide for the establishment of the National Council for Occupational Safety and Health and for connected purposes.
Section 6(1) of the Act under the General Duties states that every occupier shall ensure the; safety, health and welfare at work of all persons working in his workplace.
Section 13 of the Act under the duties of employee states that:
(1) Every employee shall, while at the workplace—
(a) Ensure his own safety and health and that of other persons who may be affected by his acts or omissions at the workplace;
(c) At all times wear or use any protective equipment or clothing provided by the employer for the purpose of preventing risks to his safety and health;
(d) Comply with the safety and health procedures, requirements and instructions given by a person having authority over him for his own or any other person's safety;
(f) report to his supervisor any accident or injury that arises in the course of or in connection with his work.
Section 47(1) of the Act on Health-General Provisions on Cleanliness provides that every workplace shall be kept in a clean state, and free from effluvia arising from any drain, sanitary convenience or nuisance. Section 49(1) on Ventilation provides that an occupier shall ensure that effective and suitable provision is made for securing and maintaining, by the circulation of fresh air in each workroom, the adequate ventilation of the room. Section 52(1)

Sufficient and suitable sanitary conveniences for the persons employed in the workplace shall be provided, maintained and kept clean, and effective provision shall be made for lighting the conveniences; and, where persons of both sexes are or are intended to be employed (except in the case of workplaces where the only persons employed are members of the same family dwelling there), such conveniences shall afford proper separate accommodation for persons of each sex.

Section 91 (1) of the Act under Supply of drinking water states that every occupier shall provide and maintain an adequate supply of wholesome drinking water at suitable points conveniently accessible to all persons employed.

Section 101(1) under Protective clothing and appliances states that Every employer shall provide and maintain for the use of employees in any workplace where employees are employed in any process involving exposure to wet or to any injurious or offensive substance, adequate, effective and suitable protective clothing and appliances, including, where necessary, suitable gloves, footwear, goggles and head coverings.

The contractor will make sure they register the construction site, provide protective gear and are protected as they work at the site

4.2.11 Energy Act 2019

Section 148 sub section (1) states that "A person who wishes to carry out electrical installation work must be licensed as an electrical contractor by the Energy and Petroleum Regulatory Authority". Sub section (2) states that "To be licensed as an electrical contractor, a person must be a certified electrical worker or have in his employment a certified electrical worker.

Section 151 sub section 1 states that "It shall be the duty of any person planning, building, operating or maintaining a transmission or distribution system to ensure that such works are carried out only by electrical contractors and electrical workers duly authorized by the Authority. Sub section (2) states that "It shall be the duty of the owner or occupier of any premises to ensure, in accordance with regulations issued under this Act, that the electrical installation in the subject premises is carried out only by a duly authorized electrical contractor and appropriate certificates detailing particulars of the installation submitted to the licensee, before initial connection to a supply of electricity and tested and inspected periodically, any defects being remedied, and appropriate certificates detailing particulars of the installation issued and displayed at the point of supply.

Section 154 sub section 1 The amount of electrical energy supplied to the consumer or the number of hours during which the supply is given, or the maximum demand taken by the consumer, or any other quantity or time connected with the supply shall be ascertained by meters of a type approved by the Kenya Bureau of Standards, or determined in a manner agreed upon by the retailer and the consumer. Sub section 2 states the retailer shall supply and fix meters upon the premises of the consumer and connect the supply system therewith: Provided that the licensee may agree to the value of the supply to any consumer being ascertained by a private meter belonging to the consumer.

Section 155 sub section states that "The meters shall be sealed by the licensee with an approved seal bearing the licensee's distinguishing brand or mark impressed thereon". Sub section 2 states "The licensee may, in order to protect any meter or meters or any other apparatus belonging to him, install suitable cut-outs or such other apparatus on a consumer's premises on the supply side of any such meter or other apparatus, and seal such cut-outs or other apparatus with an approved seal bearing the licensee's distinguishing brand or mark impressed thereon." Sub section 3 states "Where any seal or other apparatus affixed under subsections (1) or (2) is broken or tampered with without the authority of the licensee, the consumer upon whose premises the seal or other apparatus was placed commits an offence and shall, on conviction, be liable to a fine not exceeding fifty thousand shillings or to imprisonment for a term not exceeding two years or to both: Provided that, where it can be proved that the offence was committed by some person other than the consumer, that person shall be liable as if the said person were the consumer upon whose premises the breach occurred.

The proponent has already engaged a licensed engineer to design the electrical work for the building who will also supervise the actual work during construction. The proponent will ensure the building is provided with a meter and sub meters for the tenants who will occupy the building once they start occupying it.

4.2.12 Engineers Act 2011

An Act of Parliament to provide for the training, registration and licensing of engineers, the regulation and development of the practice of engineers and for connected purposes.

Section 16 of the Act states that "a person shall be eligible for registration under this Act as a professional or consulting engineer if - (a) for a professional engineer, that person; is registered as a graduate engineer and has obtained practical experience as prescribed under this Act, has passed professional assessment examination conducted by the Board and is a corporate member of the Institution of Engineers of Kenya. For consulting engineer, that person has practiced in a specialized engineering field as a professional engineer for a period determined by the Board and has achieved a standard of competence to enable him to practice as a consulting engineer in that particular specialization.

Section 32 sub section 1 states that "A person shall not engage in the practice of engineering unless that person has been issued with a license and has complied with the requirements of this Act. Sub section 2 states "a person applying for a license shall be required to submit in the prescribed manner a certificate of continuing professional development issued by the Board, a statutory declaration confirming that no professional complaint has been made against him and pay the prescribed fee."

The proponent has engaged licensed structural, mechanical and electrical engineers to do the design of the building in requirements of this Act who will also carry out supervision during construction

4.2.13 Work Injury Benefits Act, 2007

This provides for compensation to employees for work related injuries and diseases contracted in the course of employment. The proponent must comply with the provisions of this legislation with regard to the above Act at the proposed premises.

The contractor will provide insurance to the workers during construction while the operator of various businesses will also provide insurance to workers too.

4.2.14 Water Act 2016

An Act of Parliament to provide for the regulation, management and development of water resources, water and sewerage services; and for other connected purposes

Section 9 of the Act states that every person has the right to access water resources, whose administration is the function of the national government as stipulated in the Fourth Schedule to the Constitution.

Section 63 of the Act states that every person in Kenya has the right to clean and safe water in adequate quantities and to reasonable standards of sanitation as stipulated in Article 43 of the Constitution.

Section 78(1) of the Act states that water services provider shall be responsible for- (a) the provision of water services within the area specified in the license;

The proponent already is connected to the piped water and public sewer by the provider (Eldoret Water and Sanitation Company).

4.2.15 Registered Land Act

An Act of Parliament to make further and better provision for the registration of title to land and for the regulation of dealings in land so registered, and for purposes connected there with.

Section 23(1) of the Act states that every proprietor of land shall maintain in good order the fences, hedges, stones, pillars, walls and other features which demarcate his boundaries, whether established pursuant to the requirements of any other written law or pursuant to an order of the Registrar or of the proprietor's own accord.

Section 24(1) of the Act states that any person who defaces, removes, injures or otherwise impairs any boundary feature or any part of it unless authorized to do so by the Registrar shall be guilty of an offence and liable to imprisonment for a term not exceeding two months or to a fine not exceeding two thousand shillings or to both.
The proponent already has a certificate of lease for the piece of land she plans to develop and has maintained the boundary

4.2.16 Climate Change Act 2016

An Act of Parliament to provide for a regulatory framework for enhanced response to climate change; to provide for mechanism and measures to achieve low carbon climate development, and for connected purposes.
Section 13 sub section 1 of this Act states "the Cabinet Secretary shall, in accordance with Article 10 of the Constitution and section 3 of this Act, and through public consultation, formulate a National Climate Change Action Plan. Sub section 3 The National Climate Change Action Plan shall prescribe measures and mechanisms:

- to guide the county toward the achievement of low carbon climate resilient sustainable development;
- to set out actions for mainstreaming climate change responses into sector functions;
- for adaptation to climate change;
- for mitigation against climate change;
- to specifically identify all actions required as enablers to climate change response;
- to mainstream climate change disaster risk reduction actions in development programmes;
- to set out a structure for public awareness and engagement in climate change response and disaster reduction;
- to identify strategic areas of national infrastructure requiring climate proofing;
- to review and determine mechanisms for climate change knowledge management and access to information;
- to enhance energy conservation, efficiency and use of renewable energy in industrial, commercial, transport, domestic and other uses;
- to strengthen approaches to climate change research and development training and technology transfer;
- to review and recommend duties of public and private bodies on climate change;
- to review levels and trends of greenhouse gas emissions; and
- to identify outputs, overall budget estimates and timeframes to realize expected results.

Section 16 sub section 1 give power to the Council may to impose climate change obligations on private entities, including entities constituted under the Public Benefits Organizations Act, 2013. Sub section 2 give powers to the Council to make regulations governing the nature and procedure for reporting on performance by private entities, including the authority to monitor and evaluate compliance.
Section 17 gives powers to National Environmental Management Authority on behalf of the Council to; monitor, investigate and report on whether public and private entities are in compliance with the assigned climate change duties; ascertain that private entities are in conformity with instructions prescribed under section 16 of this Act; and regulate, enforce and monitor compliance on levels of greenhouse gas emissions as set by the Council under this Act.
The proponent will comply with all the requirement NEMA will give in relation to climate change by ensuring the level of greenhouse emission is within compliance level during construction and operation phases.

4.2.17 Explosives Act 1989 (Revised 2017)

An Act of Parliament to consolidate and amend the law relating to the manufacture, storage, sale, transport, importation, exportation and use of explosives.
Section 18 (1) Any person causing an explosion whereby life or property is endangered shall be guilty of an offence and liable to the following penalties, according as the explosion was negligently or wilfully caused, that is to say;

- if the explosion is negligently caused and property is endangered, he shall be liable to a fine not exceeding five thousand shillings or, in default of payment, to imprisonment for a term not exceeding twelve months, or to both;

- if the explosion is negligently caused and life is endangered, he shall be liable to a fine not exceeding ten thousand shillings or, in default of payment, to imprisonment for a term not exceeding twelve months, or to both;
- if the act or omission causing the danger to life or property is wilful the maximum penalty hereinbefore mentioned in this section shall, if death does not result therefrom, be twelve years' imprisonment without the option of a fine;
- if the explosion is negligently caused and death results, he shall be liable to a fine not exceeding twenty thousand shillings or, in default of payment, to imprisonment for a term not exceeding two years or to both.

Since the proposed site neighbors several buildings on all direction the proponent will not use explosive during excavation of the ground especially in creating room for the underground foundation and basement floors.

4.2.18 Urban Areas and Cities Act 2011, (Revised 2015)

An Act of Parliament to give effect to Article 184 of the Constitution; to provide for the, classification, governance and management of urban areas and cities; to provide for the criteria of establishing urban areas, to provide for the principle of governance and participation of residents and for connected purposes.

Section 61 of the Act on Charges and rates under PART VIII – Transitional Provisions states that until such time as a new law relating to imposition of rates and charges is enacted, urban areas and cities may continue to impose rates and charges under the law for the time being in force in relation thereto with necessary modifications.

The proponent pays for land rate to the county government of Uasin Gishu

4.2.19 Standards Act

An Act of Parliament to promote the standardization of the specification of commodities, and to provide for the standardization of commodities and codes of practice; to establish a Kenya Bureau of Standards, to define its functions and provide for its management and control; and for matters incidental to, and connected with, the foregoing.

Section 4 of the Act gives functions of the Bureau that includes —

- to promote standardization in industry and commerce;
- to make arrangements or provide facilities for the testing and calibration of precision instruments, gauges and scientific apparatus, for the determination of their degree of accuracy by comparison with standards approved by the Minister on the recommendation of the Council, and for the issue of certificates in regard thereto;
- to make arrangements or provide facilities for the examination and testing of commodities and any material or substance from or with which and the manner in which they may be manufactured, produced, processed or treated;
- to control, in accordance with the provisions of this Act, the use of standardization marks and distinctive marks;
- to assist the Government or any local authority or other public body or any other person in the preparation and framing of any specification or codes of practice;

The proponent will use construction material approved by Kenya Bureau of Statistics

4.2.20 HIV and AIDS Prevention and Control Act 2006

An Act of Parliament to provide measures for the prevention, management and control of HIV and AIDS, to provide for the protection and promotion of public health and for the appropriate treatment, counseling, support and care of persons infected or at risk of HIV and AIDS infection, and for connected purposes.

Section 7 sub section 1 give responsibility to the Government to ensure the provision of basic information and instruction on HIV and AIDS prevention and control to employees of all Government Ministries, Departments, authorities and other agencies and employees of private and informal sectors. Sub section (2) state the information provided under this section shall cover issues such as confidentiality in the work-place and attitudes towards infected employees and workers.

Section 13 of the Act prohibits against compulsory testing and no person shall compel another to undergo an HIV test. Sub section 2 states that "Without prejudice to the generality of subsection (1), no person shall compel another to undergo an HIV test as a precondition to, or for the continued enjoyment of: employment, marriage, admission into any educational institution, entry into or travel out of the country or the provision of healthcare, insurance cover or any other service.

Section 17 sub section 1 provides that every testing center shall provide pre-test and post-test counselling to a person undergoing an HIV test and any other person likely to be affected by the results of such test.

Section 20 sub section 1 states "The Minister for the time being responsible for matters relating to health may, in regulations, prescribe privacy guidelines, including the use of an identifying code, relating to the recording, collecting, storing and security of information, records or forms used in respect of HIV tests and related medical assessments." Sub section (2) states "No person shall record, collect, transmit or store records, information or forms in respect of HIV tests or related medical assessments of another person otherwise than in accordance with the privacy guidelines prescribed under this section."

The proponent will work with county government department of health to provide HIV/AIDS education and testing after pre testing and post testing counseling. In case a worker tests positive his/her results will remain private and will not be used to discriminate against at the workplace.

4.2.21 Tourism Act 2011 (Revised 2018)

An Act of Parliament to provide for the development, management, marketing and regulation of sustainable tourism and tourism-related activities and services, and for connected purposes.

Section 98 sub section 1 of the Act states that "A person shall not undertake any of the tourism activities and services specified in the Ninth Schedule, unless that person has a license issued by the Tourism Regulatory Authority. Sub section 5 guides the Authority in considering the license application and have regard to the material considerations which include: the standard for the tourism area development plan as prescribed by the Minister under section 3(2)(b), (b) the protection of fragile environmental resources, ecosystems and habitats as provided for by the ministry for the time being responsible for matters relating to the environment, an environmental impact assessment license issued under Part VI of the Environmental Management and Co-ordination Act, 1999, any representations received from members of the public and a recommendation or approval from any other relevant authority as may be necessary.

Section **105.** (1) Gives power to the Minister to order a person engaged in tourism activities or services payment of a tourism levy. Sub section 2 states "The tourism levy order may make different provisions in relation to different tourism activities and services". Sub section 3 states "A tourism levy may contain provisions as to the evidence by which a person's liability to the tourism levy, or his discharge of that, may be established, and as to the time at which any amount payable by any person by any of tourism activity and service shall become due."

Once the proponent starts operating the hotel and restaurants will apply tourism license and pay tourism levy promptly as per the requirements of the Act

4.2.22 Penal Code CAP 63

Chapter XVII on "Nuisances and offences against health and convenience" contained in the penal code strictly prohibits the release of foul air into the environment which affects the health of the persons. It states "Any person who voluntarily vitiates the atmosphere in any place so as to make it noxious to the health of persons in general dwelling or carrying on business in the neighbourhood or passing along a public way is guilty of a misdemeanor"

The proponent will ensure the construction and operation activities will not cause nuisance to the health of workers and members of the public.

4.2.22 Occupiers Liability Act (Cap 34)

Section 3 states that, an occupier of premises owes the same duty to all his clients/visitors, except in so far as he is free to and does extend, restrict, modify or exclude his duty to any visitor or visitors by agreement or otherwise. Section 6 states "persons who enter premises for any purpose in the exercise of a right conferred by law are to be treated as permitted by the occupier to be there for that purpose, whether they in fact have his permission or not"

The proponent will treat all occupiers with the dignity they deserve as per the Act

4.2.23 Landlord and Tenant (Shops, Hotels and Catering Establishments) Act.

An Act of Parliament to make provision with respect to certain premises for the protection of tenants of such premises from eviction or from exploitation and for matters connected therewith and incidental thereto.

The proponent will ensure tenants' rights are taken care of and in case of eviction a notice is given in time

4.2.24 Building Code 2000

Section 194 of the Code requires that where sewer exists, the developer/occupants of the nearby premises shall apply to the Local Authority for a permit to connect to the public sewer line and all the wastewater must be discharged into sewers.

The proponent has made application for connection and made the necessary application to the ELDOWAS for the reconnection of the sewer to the proposed development during construction and before operation.

4.2.25 Rent Restriction Act 2012

An Act of Parliament to make provision for restricting the increase of rent, the right to possession and the exaction of premiums, and for fixing standard rents, in relation to dwelling-houses, and for other purposes incidental to or connected with the relationship of landlord and tenant of a dwelling house.

The proponent will increase rent after following all laid down requirements provided by the law

4.3 Institutional Framework

4.3.1 The National Environment Management Authority (NEMA)

This is the government authority charged with the general supervision and coordination of all environmental matters in the Kenya. NEMA is the principal instrument of the government in the implementation of all policies relating to the environment. The functions of NEMA are:

- to coordinate various environmental management activities undertaken by lead agencies;
- to promote the integration of environmental considerations into development actions with a view to ensuring proper management and rational utilization of environmental resources on a sustainable yield basis for the improvement of quality of life
- to advise the government on legislative and other measures for the management of the environment or the implementation of various international conventions, treaties and agreements in the field of environment;
- to identify development actions for which environmental audit and monitoring must be conducted under the Act;
- to assess and monitor activities to ensure that the environment is not degraded by such activities, that environmental management objectives are adhered to and adequate early warning on impending environmental emergencies is given;
- to cooperate with relevant lead agencies on environmental education and enhancement of public awareness on environmental protection;
- to prepare and issue an annual report on the state of the environment in Kenya

Under EMCA, NEMA may delegate any of its powers on the performance of any of its functions to Provincial and District Environment Committees; NEMA officers; its employees or agents.

4.3.2 Public Complaints Committee (PCC).

PCC is charged with the following functions:

- Investigating allegations/ complaints against any person or against the Authority (NEMA) in relation to the condition of the environment and its management,
- Prepare and submit to the Council periodic reports of its activities which shall form part of the annual report on the state of the environment, and
- To perform such other functions and excise such powers as may be assigned to it.

4.3.3 National Environmental Tribunal

This tribunal guides the handling of cases related to environmental offences in the Republic of Kenya. The Tribunal hears appeals against the decisions of the Authority. Any aggrieved persons may proceed to the Land and Environment court which is a branch of the High Court.

4.3.4 National Environmental Council (NEC)

EMCA act of 1999 Part iii Section 4 outlines the establishment of the National Environment Council (NEC). NEC is responsible for policy formulation and directions for purposes of EMCA; set national goals and objectives and determines policies and priorities for the protection of the environment and promote co-operation among public departments, local authorities, private sector, nongovernmental organizations and such other organizations engaged in environmental protection programmes. It also performs such other functions as are assigned under EMCA.

4.3.5 County Government of Uasin Gishu (CGU)

The County Government of Uasin Gishu is one of the 47 devolved units in Kenya. The devolved unit was created by the *Constitution of Kenya 2010* through Chapter 11 and County Governments Act, 2012. Article 174f of the constitution gives powers to the county government to promote social and economic development and the provision of proximate, easily accessible services throughout Kenya. The fourth schedule part 2 of the *Constitution of Kenya 2010* gives functions and powers to the county government which includes;

- county health services, including refuse removal, refuse dumps and solid disposal
- control of air pollution, noise pollution, other public nuisances and outdoor advertising
- county transport e.g. county roads, street lighting, traffic and parking
- trade development and regulation e.g. markets, trade licenses, fair trading practices, local tourism and cooperative societies
- county planning and development e.g. statistics, land survey and mapping, boundaries and fencing, housing
- implement specific national government policies on natural resources
- county public works and services e.g. storm water management systems in built-up areas and water and sanitation services
- fire fighting services and disaster management

4.3.6 The National Construction Authority (NCA)

This Authority was created by the National Construction Authority Act of 2011. The functions of the NCA as specified in section 5 (2) of the Act are to:

- promote and stimulate development, improvement and expansion of the construction industry;
- advise and make recommendations to the Minister for Public Works on matters affecting or connected with the construction industry;
- undertake or commission research into any matter relating to construction industry;
- prescribe the qualifications or other attributes required for registration as a contractor under this Act;
- assist in the exportation of construction services connected to the construction industry; provide consultancy and advisory services with respect to the construction industry;
- promote and ensure quality assurance in the construction industry;
- encourage the standardization and improvement of construction techniques and materials;
- initiate and maintain a construction information system;

- provide, promote, review and coordinate training programmes organized by public and private accredited training centres for skilled construction workers and construction site employers;
- accredit and register contractors and regulate their professional undertakings;
- develop and publish a code of conduct for the construction industry; and
- Do all other things that may be necessary for the better carrying out of its functions under the Act.

4.3.7 The Kenya Bureau of Standards (KEBS)

KEBS was establish with the enactment of Standards Act cap 496

The functions of the Bureau shall be—

- To promote standardization in industry and commerce;
- To make arrangements or provide facilities for the testing and calibration of precision instruments, gauges and scientific apparatus, for the determination of their degree of accuracy by comparison with standards approved by the minister on the recommendation of the council, and for the issue of certificates in regard thereto;
- to make arrangements or provide facilities for the examination and testing of commodities and any material or substance from or with which and the manner in which they may be manufactured, produced, processed or treated;
- To control, in accordance with the provisions of this act, the use of standardization marks and distinctive marks;
- To prepare, frame, modify or amend specifications and codes of practice;
- To encourage or undertake educational work in connection with standardization;
- To assist the government or any local authority or other public body or any other person in the preparation and framing of any specifications or codes of practice;
- To provide for co-operation with the government or the representatives of any industry or with any local authority or other public body or any other person, with a view to securing the adoption and practical application of standards;
- To provide for the testing at the request of the minister, and on behalf of the government, of locally manufactured and imported commodities with a view to determining whether such commodities comply with the provisions of this act or any other law dealing with standards of quality or description.

4.3.8 The Tourism Regulatory Authority

The authority is eestablished as per section 4 of Tourism Act 2011 (Revised 2018). The authority have the following functions as per section 7 of the Act:

- formulate guidelines and prescribe measures for sustainable establishments and operations to realize sustainable tourism development throughout the country;
- regulate tourism activities and services countrywide, in accordance with the national tourism strategy;
- register, license and grade all sustainable tourism and tourist-related activities and services including cottages and private residences engaged in guest house services;
- develop and implement, in consultation with relevant stakeholders, criteria for standardization and classification of tourism facilities and services;
- develop and regulate, in consultation with the ministry for the time being responsible for matters relating to education, tourism and hospitality curriculum, examination and certification;
- develop and implement a code of practice for the tourism sector; monitor and assess tourist activities and services to enhance continuous improvement and adherence to sound principles and practices of sustainable tourism;
- undertake, annually, an assessment and audit of tourism activities and services, measures and initiatives at the national level, and prepare and publish an annual national tourism sector status report, in consultation with the Minister and the relevant lead agencies; and
- perform any other functions that are ancillary to the object and purpose for which the Authority is established.

4.4. International Conventions and Treaties

Kenya has ratified or acceded to numerous international treaties and conventions. Those that have implications on the proposed project are:

4.4.1 Convention on Biological Diversity (CBD) 1993

The CBD adopts a broad approach to conservation. It requires Parties to the Convention to adopt national strategies, plans and programmes for, the conservation of biological diversity, and to integrate the conservation and sustainable use of biological diversity into relevant sectorial and cross-sectorial plans, programmes and policies. The project's project is expected to conserve biodiversity, especially the rare and endangered species in the project area and its environs in compliance with the Environmental Management and Co-ordination (Conservation of Biological Diversity) Regulations, 2006.

4.4.2 United Nations Convention to Combat Desertification 1994

UNCCD addresses the problem of the degradation of land by desertification and the impact of drought, particularly in arid, semi-arid and dry semi-humid areas. This convention is domesticated in EMCA 1999 via Section 46 where District Environment Committees are required to identify areas that require re-forestation or afforestation as well as to mobilize the locals to carry out these activities.

4.4.3 United Nations Framework Convention on Climate Change (UNFCCC) 1992

The framework sets an ultimate objective of stabilizing greenhouse gases concentration in the atmosphere; at a level that would prevent dangerous anthropogenic (human-induced) interference, with the climatic system. Development projects in Kenya such as the project's project are expected to take climate change considerations into account, to the extent possible, in their relevant social, economic and environmental policies and actions.

4.4.4 Safety Provisions (Building) Convention 1937

Article 16 of the Convention requires that all necessary personal safety equipment be kept available for the use of workers employed on the site and be maintained in a condition suitable for immediate use. It further requires workers to use the equipment thus provided and the employer to take sufficient steps to ensure proper use of the equipment by concerned workers.

Article 18 requires that adequate provision be made for immediate first-aid treatment of all injuries sustained during working. (ILO, 1937).

4.4.5 Occupational Safety and Health Convention, 1981

It is an International Labor Organization) convention which provides for the adoption of a functional national occupational safety and health policy, as well as action to be taken by governments and private sector to promote occupational safety and health and to improve conditions at the place of work. This policy shall be developed by taking into account national conditions and practice. It calls for the establishment and the periodic review of requirements and procedures for the recording and notification of occupational accidents and diseases especially at the workplace. (ILO, 1981)

4.4.6 Working Environment (Air Pollution, Noise and Vibration) Convention, 1977.

It is an ILO Convention concerning the protection of workers against Occupational hazards in the working environment due to air pollution, high level noise and vibration. The convention provides that, as far as possible, the working environment shall be kept free from any hazards due to air pollution, noise or vibration. To achieve this, technical measures shall be applied to firms or processes, and where this is not possible, alternative measures regarding the organization of work shall be taken instead. (ILO, 1977)

4.4.7 Kyoto Protocol.

The Kyoto Protocol is an amendment to the United Nations Framework Convention on Climate Change (UNFCCC), an international treaty intended to bring nations together to reduce global warming and its effects. Nations that ratify

the Kyoto Protocol agreed to reduce emissions of six greenhouse gases that contribute to global warming and climate change and its effects (United Nations, 1997)

4.4.8 Paris Agreement.

In December 2015, nations and organization who have ratified the United Nations Framework Convention on Climate Change (UNFCCC) adopted the Paris Agreement. The Agreement promotes the implementation of the Convention, including its targets, objective, aims to strengthen the global response to the threat of climate change, under the context of sustainable development and efforts to eradicate poverty, including by making sure the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would greatly reduce the effects and impacts of climate change. (United Nations, 2015)

4.5. Regulatory Agencies, departments and Jurisdiction Relevant to the project.

The proponent shall be required to obtain approvals, licenses and permits from various regulatory agencies and county government departments before commencement of the proposed project and during the operation of the various businesses inside the building as shown in the table below:

Table 3: Institutions and the role they play in the various phases

	Institution	Required approvals, licenses/permits	Project phase
1.	National Environment Management Authority (NEMA)	Environmental impact assessment license	Planning
		Effluent discharge license	Operation
2.	Uasin Gishu County Government through the following departments: ❖ Public health ❖ Physical planning ❖ Survey ❖ Revenue ❖ Fire ❖ Public works	Approval of plans, building inspections	Planning and Construction
		Issuing of; ❖ Trading ❖ Public health inspection certificate ❖ Fire inspection certificate ❖ Weight and scales inspection certificates	Operation
3.	ELDOWAS (Eldoret Water and Sanitation Company Limited)	Provision of water and sewerage services	Construction and Operation
4.	National Construction Authority (NCA)	Project Registration	Construction
5.	Directorate of Occupational Health and Safety Services (DOSHS)	❖ Registration of the construction site ❖ Approval of architectural and structural drawings ❖ Registration of the proposed project safety supervisor.	Construction and Operation
		❖ Registration of work place and issuance of certificate	Operation
6.	Tourism Regulatory Authority	Issuance of Tourism license for hotel and restaurant operation	Operation

CHAPTER FIVE:

5.0 CONSULTATION AND PUBLIC PARTICIPATION (CPP)

5.1 General overview

Consultation and public participation process is a policy requirement as stipulated by EMCA 1999 section 58 on EIA for the goal of achieving sustainable development. This section elaborates the process of consultation and public participation followed to identify key issues and the impacts of the proposed project.

5.2 Objective of the CPP process

The objective of the consultation and public participation was to:

1. Inform the stakeholders about the proposed project
2. Collect suggestions, comments and concerns of the affected and interested groups about the proposed project
3. Incorporate the collected information in the EIA report preparation

5.3 Methodology used during CPP process

The methods used in the entire process involved:

1. Field surveys, photography, GPS coordinates collection and observation
2. Key informant interviews and discussions
3. Use of questionnaires to reach out to the members of the public
4. Having public participation meetings mobilized by the area chief with local residents working and living near the proposed site

The objective of interviews and discussions was to capture the positive and negative impacts in all the phases of the proposed project and mitigation measures of the negative impacts. The CPP process also assisted the EIA team identify any other issues raised by stakeholders which may lead to conflict in case the implementers proceeds with the project as it is planned.

5.4 Local residents input through the questionnaires

The findings obtained from the administration of questionnaires to the members of the public working or living within Eldoret Town are presented below:

5.4.1 Potential beneficial impacts raised by the stakeholders

- Owner will have a legacy and have more wealth
- Rental space will bring more income to the owner
- Creation of employment of locals
- Reduction of poverty
- Attracts more investors leading to improvement of local economy
- Revenue source to both national and county government from business permits

5.4.2 Potential harmful/negative impacts raised by the stakeholders and possible mitigation measures

- Dust emission causing air pollution

Mitigation:

- ✓ Cover construction site using iron sheets to reduce dust
- ✓ Pour water during construction to settle dust

- Soil compaction will affect micro-organism

Mitigation:

- ✓ None

- Water contamination from destruction of underground pipes

Mitigation:

- ✓ Takes care of pipe work during construction

- ❖ Due to population pressure there will be influx in HIV/AIDS

Mitigation:

- ✓ None

- ❖ Pressure on the road infrastructure

Mitigation:

- ✓ Supply materials during weekends to reduce jams considering it is near a stage

- ❖ Removal of plants

Mitigation:

- ✓ Plant trees and other small plants after construction

- ❖ Increased insecurity due to builders

Mitigation:

- ✓ None

- ❖ The current occupants of the site will be displaced

Mitigation:

- ✓ Consider current tenants who will be displaced during construction are the first to be given rental space
- ✓ Ensure all laws by government are followed

- ❖ Workers might be hurt during construction

Mitigation:

- ✓ Provide workers with safety gears including personal protective equipment

- ❖ Vibration from building machines

Mitigation:

- ✓ Proper management

- ❖ Injuries from machines and falling building materials

Mitigation:

- ✓ Proper management

- ❖ Petrol station employees will lose their jobs

Mitigation:

- ✓ Give priority to petrol station workers during employment

- ❖ Emitted dust will cause breathing problems on those around the site

Mitigation:

- ✓ Proper management of dust

- ❖ Waste emissions could harm nearby water tributary

Mitigation:

- ✓ Proper waste disposal

- ❖ Interference with ecosystems due to global warming effects caused by emissions and radiations

Mitigation:

- ✓ None

- ❖ Increased chronic diseases due to pollution

Mitigation:

- ✓ Introduce guidelines and rules to curb pollution

- ❖ Increased displacement of low class investors and taxis

Mitigation:

- ✓ None

- ❖ Increased crime

Mitigation:

- ✓ Improve security to curb crime

5.5 Input from government agencies, county government officers and nearby institutions

Several relevant agencies were consulted by the EIA team during the CPP process using key informant guide. The team reached out to the following officers in the following institutions:

- ❖ Moiben Sub county commissioner, Eldoret Water and Sanitation company technical manager, deputy director of public health, KMTC Eldoret principal, Uasin Gishu police commander, NCA north Rift Coordinator, Tourism Regulatory Authority North Rift regional Manager, County Government Department of Environment, Kenya Power Company, Regional Blood Transfusion Unit head of Eldoret, County Occupation Health and safety Officer
- ❖ Family Health Options Kenya accountant, Cyden General Enterprises supervisor, African Inland Church CED worker for Eldoret East, Kenya National Chamber of Commerce and Industry, Middle East Bank and Ola Filling station.

5.5.1 Summary of the benefits or positive impacts

- ❖ Job creation to youths during construction
- ❖ Create more business space
- ❖ Increased revenue from several business
- ❖ Facelift of the town
- ❖ Maximization of available space
- ❖ Revenue source to government including ELDOWAS
- ❖ Increased bed capacity in Eldoret
- ❖ Will provide one stop shop since it is near matatu stages and will provide services within the building

5.5.2 Summary of the negative effects or harm

- ❖ During construction due to excavation there will be air, noise and vibration

Mitigation:

- ✓ The area should be corded off to reduce air and noise pollution
- ✓ Dust can be mitigated by watering the site

- ❖ Respiratory diseases due to air pollution

Mitigation:

- ✓ Watering the site to reduce dust

- ❖ Increased cases of HIV/AIDS due to employment of youths

Mitigation:

- ✓ HIV/AIDS awareness and provision of condoms at the site

- ❖ Cracks from vibration during crashing of rocks

Mitigation:

- ✓ Development of occupational health and safety charter

- ❖ Underground drainage work interference

Mitigation:

- ✓ None

- ❖ Risk of blockage and contamination of open storm water drainage leading to Sosiani river

Mitigation:

- ✓ Proper handling of waste

- ❖ Displacement of current businesses
- ❖ Noise and vibration from construction works

Mitigation:

- ✓ Erection of safety billboards
- ✓ Fencing the site

❖ Risk from flying objects (debris)

Mitigation:

- ✓ Provision of first aid
- ✓ Provision of PPEs for workers

❖ Increased wastewater discharge to the sewer system

Mitigation:

- ✓ Expansion of the sewerage system to accommodate additional loads

❖ Traffic snarls up

Mitigation:

- ✓ Transport material at night when traffic is low

❖ Water shortages

❖ Attract criminals who might steal from the site

Mitigation:

- ✓ Improve security

❖ Loss of clientele for nearby businesses

Mitigation:

- ✓ Minimize obstruction of other businesses

❖ Demolition of existing building structure will disturb the soil during excavation

Mitigation:

- ✓ Care during demolition not to endanger human beings and providing warning signs

❖ Construction may interfere with hospital clients near the site

Mitigation:

- ✓ Engage immediate neighbours especially hospitals

5.6 Consultation meeting with members of the public on 24th November 2021

A public meeting was held on 24th November 2021 at Tarita Centre which is within the proposed site. The meeting was a public meeting mobilized and convened by the area chief Mr. Daniel Kebenei who mobilized the locals including representative from;

❖ Area ward administrator
❖ Matatu operators
❖ Boda boda/motorcycle riders
❖ Women, youths and men representative
❖ Local traders
❖ Mechanics and welders
❖ Elders
❖ Religious leaders representing Christian and Muslim faith

5.6.1 Benefits/positive impacts arising from the public meeting

❖ Improve the town infrastructure to a city status
❖ Create wealth to the owner

- ❖ Locals will get jobs during construction and operation
- ❖ Increase businesses size by bringing in more clients who will visit the building
- ❖ Maximum space use by creating more space in the upper floors
- ❖ Boda boda (motorcycle) riders will get more business from the people who will be working or going into the building
- ❖ Revenue increase for the county government
- ❖ Provide more space to businesses
- ❖ Hotel will improve taxi business especially for airport picking and dropping of hotel clients
- ❖ Employment of locals' especially unskilled labourers where we expect at least 75% of unskilled workers to be sourced locally
- ❖ More investors means increased revenue for the county government
- ❖ Promote Eldoret town into city status
- ❖ Employment of locals will raise taxes for the national government
- ❖ Improve Eldoret town infrastructure
- ❖ Employment of skilled labourers

5.6.2 Issues/negative impacts arising from the public meeting

- ❖ Dust pollution during construction

Mitigation:

- ✓ Fence around the construction site
- ✓ Use of dust mesh in the upper floors

6 Generation of soil waste during excavation of the site

Mitigation:

- ✓ Remove excavated soils and dispose it at the right place
- ✓ Excavated soils can be used to re-carpet road as part of corporate social responsibility

- ❖ Destruction of vegetation during clearing of the site

Mitigation:

- ✓ Plant some vegetation beautifying the site after construction

- ❖ Flooding of the site during the excavation of the ground to create room for the basement floors

Mitigation:

- ✓ Water should be pumped out the existing drainage system

- ❖ Collapse of excavated pit to create room for basement floors

Mitigation:

- ✓ Leave at least one meter during excavation along the adjacent building to prevent collapse in case water floods the site
- ✓ Carry out excavation for 24 hours to ensure short time is spent during excavation of the ground
- ✓ Use many machines during excavation at a time to reduce time needed to excavate to ground

- ❖ Noise pollution from machines during construction

Mitigation:

- ✓ Use machines that are sound to reduce noise pollution

- ❖ Pollution of the nearby river by fuel spill at the site during construction

Mitigation:

- ✓ Ensure there is no oil spillage

- ❖ River ecosystem will be affected by directing wastewater from the building during construction and operation

Mitigation:

- ✓ Direct wastewater to the sewage system instead of the river
- ✓ Recycling water during construction e.g. using waste water for curing

❖ Increased traffic along Nandi Road and Ronald Ngala Street during construction as the trucks bring in construction materials and equipment and carry out generated waste

Mitigation:

- ✓ Construction should be carried out during both day and night to reduce time for used for construction and traffic jam duration
- ✓ Rerouting traffic to use other road coming in and out of the construction site like using Old Nairobi route when bringing in materials and using Nandi route out of the site

❖ Health hazards during construction like harm of workers or members of the public

Mitigation:

- ✓ Provide warning signs at the construction site

❖ Smoke/fumes from construction machines can affect workers and public health leading to respiratory diseases

Mitigation:

- ✓ Use of mechanically sound machines to reduce smoke/fumes generated

❖ Harmful exposure of workers

Mitigation:

- ✓ Provide health insurance to workers

❖ Terrorist may target the building because of the high end client the hotel will attract

Mitigation:

- ✓ Provide 24 hours surveillance to ensure security of the building
- ✓ Provide emergency doors or escape routes inside the building

❖ Displacement of the current businesses existing at the proposed site:

Mitigation:

- ✓ Give an advanced notice three months prior to displacement so that the current business owners can plan themselves

❖ Falling of objects on the workers and public members working around the site

Mitigation:

- ✓ Provide a tall security fence to protect members of the public

❖ Boda boda riders will be displaced

Mitigation:

- ✓ The county government and the developer should relocate them from their current stage to a new location

❖ Taxis operators at the entrance of the filling station will be displaced

Mitigation:

- ✓ Provide notice to them in advance then authorities should provide a place for them to relocate

❖ Meeting points for residents of Eldoret and visitors will seize to exist because the petrol station has been a meeting point

Mitigation:

- ✓ Locals can relocate to the nearby Nandi Park which is a public park

❖ Loss of the name Tarita which has been existence for many years

Mitigation:

- ✓ Rename the new building “Tarita”

❖ Insecurity within town from construction workers

Mitigation:

- ✓ Vetting of construction workers and ensure they have good conduct clearance from police
- ✓ Provide workers with work identification cards

✓ Social conflict during recruitment of construction workers

Mitigation:

- ✓ 75% of unskilled workers should be sourced locally from the community to create project acceptance
- ✓ Consider gender balance during workers recruitment

✓ Drug abuse and alcoholism among construction workers

Mitigation:

- ✓ The contractor should put in place rules to prevent drug abuse

❖ Sexual exploitation of female workers by their bosses

Mitigation:

- ✓ The contractor should provide mechanism of reporting sexual exploitation

❖ Drug trafficking from the hotel

Mitigation:

- ✓ The hotel owner/operator should ensure visitors are vetted and security searched before admission or checking in

❖ HIV/AIDS spread during construction as locals relate sexually with workers

Mitigation:

- ✓ Test workers and provide counselling services. Those found to be positive shouldn't be discriminated
- ✓ Provide condoms for construction workers to protect both them and local community

Increased traffic jams from transporting materials

Mitigation:

❖ Materials should be transported at night only and not during day time
❖ Proper planning of transportation trucks
❖ Use of alternative routes to the site and out
❖ Locally available materials should be sourced from local hardware shops
❖ Insecurity and accident at the construction site especially at night

Mitigation:

- ✓ Provide lighting at the site especially during night time

Plate 22: the lead expert Cornelius Kinyili addressing the participants

PLATE 23: social expert Grace Wang'ombe on the left moderating the meeting

PLATE 24: participants raising their hands as a sign of approving the proposed project

5.7 Consultation second meeting with members of the public on 2nd December 2021

A public second meeting was held on 2nd December 2021 within the proposed site. The meeting was a public meeting mobilized and convened by the area chief Mr. Daniel Kebenei who mobilized the locals including representative from;

- Area ward administrator representative
- Boda boda/motorcycle riders
- Women, youths and men representative
- Local traders
- Mechanics and welders
- Elders
- Religious leaders representing Christian and Muslim faith
- Matatu operators

5.7.1 Benefits/positive impacts arising from the public meeting

- Owner will get rent income than what he is earning now.
- Employment of locals during construction and operation
- Increased employment opportunities for locals
- Attract more investors to Eldoret town
- Improve the social status of the owner
- Attract more investors
- County government will get more revenue from permits and sewerage connection
- Youths will be employed to provide both skilled and unskilled labour
- Eldoret town will get city status with the building

- ❖ Provide rental space for locals
- ❖ Attract government investment like sewerage expansion
- ❖ Visitors coming to the building during operation will promote transport business like taxi
- ❖ Increase traffic flow around the area will promote local business
- ❖ Promote taxi business from the hotel to the airport
- ❖ Revenue source to the county government form business permits, water and sewerage bills
- ❖ Income to the county government through approvals of building plans
- ❖ Income tax to the KRA from businesses inside the building
- ❖ Income to Kenya Power through electricity bills

5.7.2 Issues/negative impacts arising from the public meeting

- ❖ Air pollution from dust

Mitigation:

- ✓ Install dust mesh to trap dust
- ✓ Sprinkle water to reduce dust
- ✓ Fence around the construction site to prevent blowing of dust
- ✓ Noise pollution from construction machines

Mitigation:

- ✓ Use machines producing less noise and those in sound state

- ❖ Soil and stone waste generation during excavation

Mitigation:

- ✓ Use excavated stones to repair small roads through corporate social responsibility
- ✓ Use the top soil excavated for landscaping within Eldoret town

- ❖ Vibration will affect nearby hospitals like Family Care with their patients

Mitigation:

- ✓ Use machines with less vibration
- ✓ Construct at night to reduce vibration impacts experienced during the day

- ❖ Sewage waste and other waste will be released from the building to the environment

Mitigation:

- ✓ Expand existing sewerage system
- ✓ Connect the building to public sewer

- ❖ Plants at the site will be removed

Mitigation:

- ✓ Replant plant and grass after construction through landscaping

- ❖ Birds and small animals like insects will loss a habitat

Mitigation:

- ✓ Replanting of plants will lead to restoration of birds and insects habitat

- ❖ Radiation brought about by welding during construction

Mitigation:

- ✓ Use of building materials that absorb radiation but not those that reflect

- ❖ Vibration especially if explosives are used

Mitigation:

- ❖ Don’t use explosives at all during excavation of the ground
- ❖ Construction materials will kill the insects

Mitigation:

- ✓ Dispose remaining materials in designated places

❖ Workers currently working at the site in shops and restaurants will be displaced

Mitigation:

- ✓ Displaced workers with skills should be given priority during recruitment of construction workers

❖ Loss of business leading to unemployment

Mitigation:

- ✓ Give a notice in advance

❖ Motorcycle riders, shoe shiners, transporters, matatu operators and taxis will loss employment

Mitigation:

- ✓ County government should provide alternative site to works
- ✓ Give notice to them in advance

❖ Workers may get hurt during construction

Mitigation:

- ✓ Provide protective gear to all workers
- ✓ Have an insurance cover for workers
- ✓ Ensure only healthy workers are employed

❖ dust may cause respiratory diseases to workers and members of the public

Mitigation:

- ✓ Provide protective gear especially masks
- ✓ Put mesh to protect the public members from dust being blown by wind

❖ Mental health issues among workers

Mitigation:

- ✓ Counselling of workers and ensuring there is an open session to talk with a counsellor

❖ Safety of workers at the construction site

Mitigation:

- ✓ Provide notices in Swahili language
- ✓ Fence around the site
- ✓ Have a standby ambulance equipped with first aid kit to respond in case of an accident
- ✓ Provide milk to construction workers working in dusty areas

❖ Alcoholism among the construction workers

Mitigation:

- ✓ Provide instructions to workers not to drink at the construction site
- ✓ Ensure there is an alco-blow at the entrance to ensure drunk workers don't enter the site to work

❖ Insecurity due to workers coming from other areas to work at the site

Mitigation:

- ✓ Provide security lights

❖ Spread of HIV/AIDS as workers and local women relate sexually

Mitigation:

- ✓ Provide warning signs at the site on HIV/AIDS
- ✓ Sensitize locals and workers through outreaches
- ✓ Ensure the site has an HIV/AIDS counsellor
- ✓ Provide friendly VCT for workers
- ✓ Don't discriminate workers who are already HIV positive

- ❖ Social conflicts as workers come from other areas leading to fights with locals and skilled workers hating local unskilled workers

Mitigation:

- ✓ Give priority to local skilled and skilled youths before people from other areas
- ✓ Local skilled youths should also apply for jobs when they are advertised

- ❖ Drug abuse among workers leading to harm during construction

Mitigation:

- ✓ Area chief should provide locals a channel of reporting drug dealers
- ✓ Security inspections and vetting of workers to make sure those using drugs are not employed

- ❖ The proposed building is very tall yet the site is sometimes waterlogged

Mitigation:

- ✓ Carry out a study to determine if the site is suitable for the project

- ❖ Increased traffic jams along Nandi road and Ronald Ngala Street.

Mitigation:

- ✓ Increase diversion space around the site
- ✓ Transport materials at night

PLATE 25: area Chief Mr Kebenei addressing the participants as he opened the meeting

PLATE 26: participants giving their inputs

PLATE 27: The lead expert Mr Cornelius Kinyili addressing the participants

PLATE 28: the participants raising their hands as a sign of approving the proposed project

CHAPTER SIX
6.0 POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

6.1 INTRODUCTION

This chapter identifies both positive and negative impacts associated with the project. These are identified according to the project phases: Planning/Design, Construction, Operational and the Decommissioning Phases.

6.1.1 Description of the existing and anticipated impacts

6.1.1.1 Existing Impacts

As at the time of the study, the following impacts existed within the project area;

- Noise from vehicles using Nandi Road and Ronald Ngala Street. There were also public service vehicles with a stage opposite the proposed site along Nandi road
- Vehicles traffic along the bordering roads and within the service filling station
- Human traffic from members of the public walking through the service station when undertaking their personal activities.
- There were people who visited businesses within the station to; have meals in the restaurants, buy human drugs from chemist shops, buy farm inputs from agro-vet shop, carrying out mobile phone service transactions

6.1.1.2 Anticipated Impacts

The impacts of the proposed project on the environmental elements are both positive and negative. The magnitude of each impact is described as major or minor. The time is termed as short - term or long term and the extent is categorized as specific or wide spread. The reversibility is categorized as reversible of irreversible. Most of the impacts have been addressed in the proactive design of the project and other mitigations can only be guaranteed through active and responsible management committed to the propositions of the environmental management plan.

❖ **Impact Analysis throughout the project cycle**

Pre-Construction phase

Component	Project activity	Negative impact	Mitigation measure
Feasibility study of the project	Consultants, proposal developments and write up	None	none
Technical design	Technical drawings and approval	None	none
EIA	Consultation, field visit and report write up Preparation of EIA for decommissioning the existing petrol station at site	None	none
Decommissioning of existing structures (petrol filling station and building within it)	Removal of existing structures that include; building housing offices, store, restaurant, filling station canopy. Removal of concrete floors within the station Removal of fuel dispensing pumps Excavation and removal of underground fuel storage tanks	-Generation of waste -oil spillage from removal of underground storage tanks -littering of the site from generated waste -noise pollution -dust pollution -increased traffic along neighbouring road	-proper disposal of generated waste -use serviceable vehicles to prevent oil spillage and to reduce noise levels -ensure contaminated soils are proper disposed by a licensed waste handler - noise pollution can be reduced by carrying out the exercise during day time only - traffic can be mitigated by removing the demolition waste at night and early in the

			morning
Preparation of Bills of Quantities and procurement	Procurement and transportation	-Oil spillage, materials pillage, -littering the site	-Use serviceable vehicles -ensure no spillage
	Construction of site office	-Oil spillage, -materials pillage, -littering the site, -public health	-Ensure no spillage occurs, Use serviceable vehicles Ensure use of serviceable machinery, Use serviceable vehicles,-Ensure no littering of the site,-ensure safe storage of materials, Provision of sanitation facility
	Excavation of foundations	Oil spillage, clearing vegetation, Noise, Dust, Soil destruction	-Ensure use of serviceable vehicles,-Excavate on areas where construction will take place, -Provision of PPEs
	Vehicle machinery emissions	Increase air pollution resulting in potential health hazard	-Ensure use of serviceable vehicles, -Provide dust masks

❖ **Construction phase**

Impact	**Impact analysis**		
	Magnitude	**Duration**	**Extent and Reversibility**

Employment	Major positive	Short term	Widespread and reversible
Market for goods and services	Major positive	Short term	Widespread and reversible
Revenue collection	Major positive		
Provision of shops, restaurant, accommodation and offices	-	-	-
Solid waste	Major negative	Short term	Specific and irreversible
Liquid waste	Major negative	Short term	Specific and irreversible
Traffic flow	Major negative	Short term	Widespread and irreversible
Oil pollution	Minor negative	Short term	Specific and irreversible
Soil erosion	Major negative	Short term	Widespread and irreversible
Storm water drainage	Major negative	Short term	Widespread and irreversible
Water demand	Major negative	Short term	Wide Spread and irreversible
Energy demand	Major negative	Short term	Widespread and irreversible
Noise pollution	Major negative	Short term	Specific and reversible
Air pollution	Major negative	Short term	Specific and reversible
Insecurity	Minor negative	Short term	Specific and reversible
Occupational health and safety	Minor negative	Short term	Specific and reversible
Increase is socio vices	Minor negative	Short term	Specific and reversible
Fire outbreak and safety	Minor negative	Short term	Specific and reversible

Impact on workers, community health and safety	Major negative	Short term	Specific and reversible
Satisfaction of Proponent desire	Major positive	Short term	Widespread and irreversible

❖ **Operation phase**

Impact	**Impact analysis**		
	Magnitude	**Duration**	**Extent and Reversibility**
Employment	Major positive	Long term	Widespread and irreversible
Market for goods and services	Major positive	Long term	Widespread and reversible
Revenue collection	Major positive	Long term	Widespread and reversible
Provision of shops, restaurant, accommodation and offices	Major positive	Long term	Specific and irreversible
Solid waste	Major negative	Long term	Specific and irreversible
Liquid waste	Major negative	Long term	Widespread and irreversible
Traffic flow	Major negative	Long term	Widespread and irreversible
Oil pollution	Minor negative	Long term	Specific and irreversible
Soil erosion	Major negative	Short term	Specific and reversible
Storm water drainage	Minor negative	Short term	Widespread and irreversible
Water demand	Major negative	Long term	Widespread and irreversible
Energy demand	Major negative	Long term	Widespread and irreversible
Noise pollution	Minor negative	Short term	Specific and reversible

Air pollution	Minor negative	Short term	Specific and reversible
Insecurity	Minor negative	Short term	Specific and reversible
Occupational health and safety	Minor negative	Long term	Specific and reversible
Increase is socio vices	Majour negative	Long term	Specific and reversible
Fire outbreak and safety	Major negative	Long term	Specific and reversible
Impact on workers, community health and safety	Minor negative	Long term	Specific and reversible
Satisfaction of Proponent desire	Major positive	Long term	Widespread and irreversible

❖ **Decommissioning phase**

Impact	**Impact analysis**		
	Magnitude	**Duration**	**Extent and Reversibility**
Employment	Major positive	Short term	Specific and reversible
Market for goods and services	none	None	none
Revenue collection	Major positive	Short term	Widespread and reversible
Provision of shops, restaurant, accommodation and offices	none	None	none
Solid waste	Major negative	Short term	Specific and irreversible
Liquid waste	Major negative	Short term	Widespread and irreversible
Traffic flow	Major negative	Short term	Widespread and reversible
Oil pollution	Minor negative	Short term	Specific and irreversible

Soil erosion	Major negative	Short term	Widespread and irreversible
Storm water drainage	Major negative	Short term	Widespread and irreversible
Water demand	Major negative	Short term	Widespread and irreversible
Energy demand	Major negative	Short term	Widespread and irreversible
Noise pollution	Major negative	Short term	Specific and reversible
Air pollution	Minor negative	Short term	Specific and reversible
Insecurity	Minor negative	Short term	Specific and reversible
Occupational health and safety	Minor negative	Long term	Specific and reversible
Increase is socio vices	Minor negative	Short term	Specific and reversible
Fire outbreak and safety	Major negative	Short term	Specific and reversible
Impact on workers, community health and safety	Major negative	Short term	Specific and reversible
Satisfaction of Proponent desire	Minor positive	Short term	Widespread and irreversible

6.2 PRE-CONSTRUCTION, PLANNING AND DESIGN PHASE

6.2.1 Positive impacts

6.2.1.1 Employment opportunities

With the planning and design phase of the proposed project, there will be employment opportunities, especially for professionals. Those involved in planning and design include; project managers, engineers, architects, quantity surveyors, valuers, physical planners, environmentalists and social expert among others. Those engaged will improve their living standards from the fees they will be paid for their services.

6.2.1.2 Creation of awareness

During the planning and design phase of the proposed project, the community was informed of the project and their views sought on the project. In this way, awareness will be created for both the community and the Proponent. The Proponent will also be in a position to draw local knowledge on the various environmental and social considerations and put into practice the useful advice from the community when planning and designing the Project.

6.2.2 Negative impacts

The consultants will mobilize a team to undertake the surveys and other studies required to complete the designs. Mobilization and the process of disclosure and consultations among the residents and other stakeholders shall, however, lead to heightened expectations and speculations. With the foregoing, it is envisaged that there will be minimal to no negative impacts during the planning and design stage.

Mitigation:

Impacts during this phase of the project are not significant. However, the consultants shall take necessary measures to document any concerns and address them on as they occur. In that regard, the Design Team shall incorporate an Environmental Expert in the team and take time to sensitize and inform the residents of the ongoing.

6.3 CONSTRUCTION PHASE

6.3.1 Positive impacts

6.3.1.1 Job Opportunities

Employment opportunities are a benefit both in economic and social sense. In the economic sense it means abundant unskilled and skilled labour will be used in economic production. In the social sense these young and energetic otherwise poor people will be engaged in productive employment other than remaining idle. Several workers including skilled and unskilled will be employed, they will include; designers, operators of; excavator, concrete mixer and poker vibrator, foreman, truck drivers and conductors to transport materials, store man, masons, welders, carpenters, electricians and plumbers are expected to work on the site for a period that the project will start to the end.

6.3.1.2 Growth in the National Economy

The project will require supply of large quantities of building materials most of which will be sourced from within Uasin Gishu County and neigbouring Nakuru and Baringo counties. This provides ready market for building material suppliers such as quarrying owners, building material brokers and hardware shops. This will bring gains in the local and national economy through consumption of locally available materials including: ballast, building stones, hard core, timber and cement. The cost of the materials will be payable directly to the producers. The consumption of these materials, fuel oil and others will attract taxes and cess which will be payable to both the county and national government.

6.3.1.3 Enhancement of Locals livelihood

Income generated from employment during construction and from the informal and formal business around the project area is expected to improve the economic status of the local area whose status is slum like currently. Increase in income would lead to increased saving and investment on the household level for example in housing, health, education and assets.

6.3.1.4 Provision of Market for Supply of Building Materials

The project will require supply of large quantities of building materials most of which will be sourced locally from the surrounding areas. This provides ready market for building material suppliers such as quarrying companies and hardware stores. The demand for the building materials will in turn spur other economic activities.

6.3.1.5 Informal Sector Benefits

During construction phase the informal sectors are likely to benefit temporarily from the operations. This will include; food vendors and kiosk owners who will be selling food to the workers on site and will finally promote the informal sector entrepreneurs around the project site.

6.3.1.6 Improved Security

With the coming up of the proposed project, cases of insecurity will reduce given that the project will come along with security details including; night time lighting, installation of CCTVs and employing of security guards which will be a benefit to the surrounding businesses.

6.3.1.7 Improved building technology/ knowledge transfer

With the commencement of the project local construction workers will gain new building technology that will be incorporated in the project's construction activities. This skill and technology gained will help them in executing other projects they will be involved within Eldoret Town and other neighbouring counties and the country.

6.3.1.8 Improved local trade

Construction activities will involve buying of materials from both the local and international market. Local investors especially manufacturers will benefit from selling the construction machinery, equipment and materials to the contractor resulting in boost to the local trade. Waste products from the decommissioning of existing structures including petroleum filling station and construction activities will also be handled by local NEMA registered waste handlers and benefit economically.

6.3.2 Negative Impacts

6.3.2.1 Noise pollution

The construction works will most likely be a noisy operation due to transportation vehicles. To be affected mostly are the site workers and neighbouring premises since noise beyond some level is itself a nuisance if not maintained within acceptable limit.

Mitigation Measures

- The contractor is recommended to utilize manual labour and hand tools where appropriate and switch off machinery when not in use.
- The contractor should also provide earmuffs to the workers.
- It is also recommended that working period be strictly from 08:00 and 17:00 hours to minimize impacting on the surrounding residents,
- Shield the areas under works to reduce noise propagation and any machinery should be serviced regularly to reduce noise resulting from friction.

6.3.2.2 Dust emissions

Particulate matter pollution is likely to occur during the foundation works, preparation of concrete and spreading of the topsoil. There is a possibility of dust particles affecting the site workers, neighbours and polluting the river.

Mitigation measures

- The contractor should install dust receptors/screens to reduce the impacts and to control the dust during the construction phase.
- Sprinkle water on dusty surfaces and during concrete preparation. Provide dust mesh also.

6.3.2.3 Increased Water Demand

Water is a major concern especially in construction sites. The proposed development may cause some strain to the existing water source since construction activities are known to be heavy water consumers. Occupation of the developments will bring about an increase in water consumption. The proponent will apply and drill their borehole. In case of water shortage, there will be reserves at the storage tanks which will be constructed to store water.

Mitigation

- Avoid wasting the water supplied to the site.
- The contractors should use water bowsers/tankers to bring in water for construction activities especially during periods of high water demand subject to authorization by existing water regulatory authority.
- Encourage water reuse/recycling during both construction and operational phases.
- Roof catchments should be provided with rainwater harvesting systems to enhance collection and storage of rain water. Such water can be used to water flower gardens and all kind of cleaning required on site.
- Install water meters for the offices to ensure accountability and responsibility.
- There will be water tanks to take care of water shortages.

6.3.2.4 Increase in waste

In construction projects, there are usually some wastes on the site. Removal and disposal of such refuse and other related wastes comes in handy. The waste should be disposed into the approved dumpsites.

Mitigation measure

- It is recommended that the contractor ensures that all the waste and unused building materials are removed safely from the site and disposed in approved disposal site.
- The contractor or proponent should work hand in hand with county department of environment to facilitate waste handling and disposal from the site.
- The waste materials should be properly segregated and separated to encourage recycling of some of them with the approval of the site engineer.

6.3.2.5 Occupational Health and Safety (OHS)

The proponent is dedicated to protecting the safety and health of its employees, contractors and the communities where it operates, as well as a conscientious regard for the environmental impact of its activities and products. During construction and operation occupation hazards and incidences may occur, and the immediate neighbours and workforce involved would be more subjected to these hazards.

Mitigation Measures

- All workers and visitors should be provided with appropriate protective gear while on site.
- Carrying out annual environmental and safety audit the premises.
- Safety kits and emergency facilities should be provided in case of any accidents and incidents common to such projects. These should be placed in strategic locations on site.
- Delivery and storage of materials at appropriate locations.
- Standards and legal requirements should be adhered to. These include: Building codes, Occupational Safety & Health Act, the Public Health Act.

- The project proponent and contractor should take appropriate insurance cover for the various project activities and personnel.
- The workforce should be further be trained on safety measures.

6.3.2.6 Oil leaks and spills

Oil leaks and spills may be generated from machines used at the site and it may have adverse effects at the site. This may cause contamination of ground water and surface water and can also cause harm to flora and fauna in the surface waters.

Mitigation Measures

- It is also recommended that the contractor uses only serviceable vehicles and equipment during transportation and construction.
- The contractor is instructed to use minimal greasing/lubricating on site.

6.3.2.7 Increased traffic

The traffic at site will increase due to vehicles transporting building equipment and materials. The situation will worsen because the road leading to the site is narrow.

Mitigation Measures

- If possible the contractor and the proponent can transport the materials and equipment during the evening or early in the morning.
- An appropriate Traffic Management plan should be developed for the same and plausible as a mitigation measure to ensure traffic congestion and possible accidents are kept to minimum.
- Limiting the number of trips made by the construction vehicles during peak hours and which will be ensured through proper planning on material acquisition.

6.3.2.8 Soil Degradation

This can occur during excavations for foundation laying. The excavated materials can be carried by water or water causing erosion.

Mitigation Measures

- Excavated materials should be removed promptly from the site to avoid erosion
- In case the excavated soils are contaminated with oil or other petroleum products they should be disposed by a NEMA licensed waste handler
- Avoid unnecessary movement of soil materials from the site
- Control construction activities especially during rainy and windy conditions
- Sprinkling of water to reduce dust
- Landscaping after completion of the project and introduce appropriate vegetation.

6.3.2.9 Flora/Fauna

There is a few plants at the proposed site currently will be cleared to pave way for the project construction. However, noise/dust pollution from construction activities might disturb fauna. Such small animal/bird life will have to find new nesting homes.

Mitigation Measures

- New vegetation will be introduced and managed on completion of the development to restore or improve the appearance of the site and also reduce soil erosion.
- Landscaping should be done within the site to improve site appearance after project completion.

6.3.2.10 Visual intrusion

During construction, visual intrusion is attributed to construction works including construction traffic. After construction of the project the situation will be permanent. In line with this, the project should be blend in a way to merge with the existing environment and approvals by the local council.

Mitigation Measures

- ❖ Visual impacts can be mitigated through controlling the operating hours of construction traffic, clearing debris after construction and landscaping the site.

6.3.2.11 Disturbance of the public

Disturbance to the public/neighbours would occur due to noise and dust during construction and traffic movement. After construction, noise levels compared to the current situation will be negligible.

Mitigation Measures

- ❖ Noise can be mitigated by constructing during day time between 8:00 am and 5:00 pm
- ❖ Dust can be reduced by sprinkling with water and carrying out excavation during rainy season

6.3.2.12 Construction waste

Construction waste will be minimal.

Mitigation Measures

- ❖ Proper disposal of waste generated is necessary; the waste should be disposed into approved dumpsites, by licensed waste handlers.

6.3.2.13 Project implementation disputes

Currently there are several businesses within the proposed site that includes:

- ✓ Gulf Energy Filling station
- ✓ Two restaurants
- ✓ Three chemist shops
- ✓ Two Safaricom dealer shops
- ✓ Medical clinic
- ✓ An agro-vet
- ✓ Jewelry stall
- ✓ Jua kali stall
- ✓ Motorcycle stage
- ✓ Taxi and public transport parking/stage
- ✓ Public vehicle temporary stage
- ✓ All the above businesses have employed workers whose livelihood will end abruptly and may spark conflicts

Mitigation:

- ❖ The proponent should issue earlier notices and offer support where possible by providing alternative place to the business owners.
- ❖ Jobless and qualified workers should be given priority during recruitment of construction workers
- ❖ After construction willing business owners should be given priority when leasing out the newly constructed building.

6.3.2.14 Increased storm water

Paving around the building and roofing will increase water collection and runoff as opposed to the infiltration. The increased storm water runoff will as a result lead to flooding of the nearby Nandi Road if proper channels will not be put in place. Being 400 meters from Sossiani River which located to the South west of the proposed site contaminated run-offs from the site will pose a great environmental challenge unto the already heavily polluted river.

Mitigation:

- ❖ Ensure contaminated water don't get to the nearby river
- ❖ Ensure the building has a proper storm drainage

- Collect water from the roof and use within the building for cleaning and in toilets instead of releasing it to the drainage system

6.3.2.15 Faecal waste generation

The construction workers will generate faecal waste during their day-to-day operations. The generated waste needs proper handling to prevent contamination with water and other environmental parameters hence which may otherwise cause waterborne diseases such as; cholera, diarrhoea , typhoid and dysentery.

Mitigation:

- The contractor must provide a toilet for workers within the facility or liaise with the proponent who owns the adjacent Tarita Centre to provide and designate a toilet for workers
- The contractor can also build a toilet for workers at the sides of the proposed site and ensure it is connected to existing public sewer passing nearby.

6.3.2.16 Water hydrology and water quality degradation

Changes in surface hydrology alter the flow of water through the landscape. Construction of impervious surfaces like the building will increase the volume and runoff rate resulting in increased pollutant loads, and flooding. Built areas will also influence groundwater hydrology like recharge rates and flow.

Ground excavation could lead to water quality degradation. Contaminated soil or water could be disturbed by excavation resulting in a transfer of the pollution to surface waters. Spills of hazardous materials in excavated areas during construction could introduce contaminants to ground water.

Mitigation:

- Ensure the wall and the floor of the excavated pit to create room for basement floors should be constructed using water proof material to prevent contamination
- All the waste from the building should be directed to the public sewer for treatment before releasing to the environment

6.3.2.17 HIV/AIDS and STDS infection

Construction activities usually involve people from different parts of Kenya with different backgrounds, whereby they interact on daily basis. If these workers are not properly educated on HIV/AIDS and other sexually transmitted diseases their health will be at risk.

Mitigation:

- Provisions of such contraceptives like condoms by a health institution to help protect health workers
- Frequent trainings on prevention methods will reduce the risks that the workers will be exposed to.

6.3.2.18 COVID-19

Construction activities usually involve people from different parts of Kenya with different backgrounds, whereby they interact on daily basis. These workers should be educated and a lot of awareness done to known that COVID-19 is real and they are at risk at site.

Mitigation:

- The contractor should have posters in strategic areas reminding all people the importance of maintaining socio distance, washing of hands and wearing of face masks.
- The contractor should provide water and soap for cleaning hands
- The contractors to provide hand sanitizers
- The contractor to provide masks and enforce wearing of masks throughout

- The contractor to liase with nearby heath facilities for testing of COVID-19 and also providing COVID-19 vaccination to employees and staff and treatment of any symptoms.

6.4 OPERATION PHASE

6.4.1 Positive Impacts

6.4.1.1 Optimal use of land

The proposed project will optimally make of the piece of land as compared to what the plot is used for currently. The building will provide a high class hotel and commercial space which will ensure scarce land will be for the benefits of the nation and its people who will get business space and services from the housed businesses.

6.4.1.2 Employment opportunities

Many people will be employed by the businesses housed in the building during operation of the various businesses at the facility from; hotel, bar, offices, shops and even maintenance of the building.

This will provide a source of income and hence improve their living standards.

6.4.1.3 Provision of business premises

The offices and shops that will be housed in the proposed building will provide business space for high end clients within Eldoret town and its environments and even other investors from other parts of Kenya and beyond.

6.4.1.4 Provide hotel accommodation

The building will have a modern hotel with capacity of more than 150 rooms. This will add to the bed capacity within Eldoret town and will attract conference tourism in the Western tourism circuit.

6.4.1.5 Source of income to the government

Once the proposed building is completed and opened for business it will provide revenue to both national and county government.

County government will get revenue from; business licenses, fire inspection certificate, water and sewerage connection and service fees, public health inspection certificate and cess from goods transported into the building.

The national government will too get income from; taxes paid by businesses inside the building to KRA, certificate of work place registration, tourism development levy among other revenues.

6.4.1.6 Improved security

With the installation of the CCTVs, night time lighting and recruitment of security attendants, the general security of the area will be greatly improved with the project implementation.

6.4.1.7 Creation of Landmarks

The proposed project will itself be an Iconic building in Eldoret town and once complete will be a landmark (possessing one of the tallest skyscraper in Eldoret town which will have the second building with more than twenty floors after The Eldoret Daima Towers owned by Moi University SACCO. This will add value to Eldoret town in terms of infrastructural development.

6.4.1.8 Reduced Traffic Congestion

The design of the whole project presents a ‘smart office’ approach with adequate parking spaces and widened drive ways. Over 67 parking spaces have been incorporated in the building design within the basement floors.

6.4.1.9 Increased property value

The proposed development together with its associated facilities will enhance the general look of the surrounding and this will have an impact on the neighbouring land and property value. The proposed development will generally enhance the property value of the neighbouring buildings.

6.4.2 Negative Impacts

6.4.2.1 Hydrology, drainage and water quality

Water may get contaminated by waste leaks. A lot of care need to be taken to ensure that clean water for domestic purposes is safe and not contaminated.

Mitigation

- Drainage channels should be provided to minimize any possible water logging. In this case, a segregated drainage system should be provided where the water that is contaminated with oils is not allowed to drain in to the open storm drains. Instead, it should be directed into the oil-water separator from where it should be treated before it is released to the rest of the drainage system.
- Ensure all the waste generated are directed to the public sewer nearby

6.4.2.2 Fire Risks

Restaurants and hotel have a greater fire risk than most establishments because of the highly combustible fuel they use especially LPG and electric faults. Firefighting preparedness therefore becomes a must for so as to ensure the risk of fire is minimized and in case of fire the response is swift to prevent any damages or loss of lives.

Mitigation

- Fire extinguisher cylinders shall be placed at the kitchens and in each floor of the building.
- Water hydrants should be installed in the building
- All the electrical connections shall be connected to one central emergency stop switch; in addition, they shall be designed by a registered engineer.

6.4.2.3 Increased Power Demand

There will be high power consumption especially during occupation phase because of many facilities within the building. The developments will connect to the existing power line and this might strain the resource. However the office occupants will be encouraged to conserve as much energy as possible and energy conserving appliances should be used. Energy conservation involves proper use of electrical appliances, lighting systems and other electrical gadgets used for different purposes.

Mitigation

- Use a design that is environmentally sound to avoid use of electricity for air conditioning
- Use energy conserving electric lamps for general lighting.
- Utilize natural light inside buildings to avoid using electricity for lighting during the day.
- All electrical appliances should be switched off when not in use.
- Put off all lights when not in use.

6.4.2.4 Waste generation

The project is expected to generate solid waste during its operation phase. The bulk of the solid waste generated during the operation of the project will consist of; used paper, cleaning detergents, food left overs and plastic bags. Some of these waste materials especially the plastic/polythene are not biodegradable hence may cause long-term injurious effects to the environment.

Mitigation measure

- Unrecyclable waste can be disposed regularly at the dumpsite approved by the county government to avoid odour smell

6.4.2.5 Increased water demand

The large number of tenants will increase the amount of water required especially in washrooms/ conveniences, and cleaning.

Mitigation measure

- Install water conserving taps that turn-off automatically when water is not in use.

- The proponent should also provide notices and information signs on means and needs to conserve water resource to awaken the civic consciousness with regard to water usage and management.
- There is also need to reuse water where possible and avoid excessive use of the water supplied on site.
- Harvest rainwater to supplement the piped water and providing water storage tanks.
- We propose the proponent should apply and drill their borehole for emergency water supply

6.4.2.6 Traffic Congestion

The building will to some extent have effect on traffic flow on the busy road around as vehicles will slow down as they approach the station. Acceleration and deceleration lanes should be constructed from the main road towards access to the basement parking to ease traffic congestion.

Mitigation

- Establish and clearly mark entry and exit points at the basement parking entrance

6.4.2.7 Impact on Water Resources

The proximity of development project to River Sossiani which is a surface water body or underground water are in most cases viewed as potential sources of environmental pollutants which could degrade environmental quality. Proper measures should put in place to ensure no kind of water contamination is experienced by this development to ensure minimized environmental pollution.

Mitigation

To minimize any anticipated negative impacts of the proposed building on water resources, we recommend the following:-

- Monitoring of wastewater quality on regular basis
- Harvest rainwater to reduce dependency on piped water provided by Elodret Water and Sanitation Company Limited
- Ensure that the building doesn't leak waste direct into the adjacent storm drainage channel

6.4.2.8 Energy consumption

During operation, the family units will use a lot of electrical energy mainly for domestic purposes including lighting, running of air conditioning equipment, running of refrigeration systems, pumping water into reservoirs. Since electricity generation involves utilization of natural resources, excessive electricity consumption will strain the resources and negatively impact on their sustainability.

Mitigation:

- Install energy saving lighting bulbs and tubes
- Switch of the light when not in use
- Install automatic light especially for security lighting that switches off during day time and on when darkness come
- Install solar for heating water

6.5 DECOMMISSIONING PHASE

6.5.1 Positive Impacts

6.5.1.1 Rehabilitation

Upon decommissioning of the project, rehabilitation of the project site will be carried out to restore the site to its original status. This will include replacement of topsoil and re-vegetation which will lead to improved visual quality of the area.

6.5.1.2 Employment opportunities

Several employment opportunities will be created for the demolition workers.

6.5.2 Negative Impacts

6.5.2.1 Solid waste

Demolition of the building will result in large quantities of solid waste e.g. materials used in construction including concrete, metal, glass, paints, adhesives, sealants and fasteners.

6.5.2.2 Dust

Large quantities of dust will be generated during demolition works. This will affect demolition staff as well as the neighbouring businesses.

6.5.2.3 Noise and Vibration

The demolition works will lead to deterioration of the environment within the project site and the surrounding areas.

6.5.2.4 Loss of businesses and income

The proponent will lose a premise when demolition will be done. The proponent will lose a source of income in form of rent while the government will loss income in form of taxes.

6.5.2.5 Loss of income source

The proponent will lose a source of income in form of rent while the government will loss income in form of taxes.

6.6 CONCLUSION

The construction of the proposed mixed use building will have very limited impacts on the environment. The proponent will follow all the legal procedures necessary for the execution of a project of this nature and adequate mitigating measures have been put in place to obviate any negative impacts. The implementation of the project should however be subject to the observance of all the legal and regulatory frameworks governing activity of this nature. The recommended Environmental Management Plan (EMP) should also be observed throughout the entire life of the project.

CHAPTER SEVEN

7.0. ENVIRONMENTAL MONITORING AND MANAGEMENT PLAN (EMMP)

7.1 Significance of EMP

EMP involves the protection, conservation and sustainable use of the various elements or components of the environment. The EMP for the proposed project provides all the details of project activities, impacts, mitigation measures, time schedules, costs, responsibilities and commitments proposed to minimize environmental impacts. The main activities include monitoring and evaluation and environmental audits during implementation and decommissioning phases of the project.

7.2 Environmental Monitoring and Audits

Environmental monitoring and audits are essential in projects life span as they are conducted to establish if project implementation has complied with set environmental management standards for Kenya as spelt out in Environmental Management and Coordination Act 1999 (Revised 2018) and Environmental (Impact Assessment and Audit) Regulations 2003. In this project, environmental monitoring and audit will be conducted to ensure that identified potential negative impacts are mitigated during the project's life span.

7.3 Decommissioning Phase

Decommissioning is an important phase in the project cycle and comes last to wind up the operational activities of a particular project. Decommissioning phase will involve; notification of intent to all relevant agencies and liaising with the project engineers, architects and environmentalists in a bid to ascertain guidelines on possible impacts and mitigation measures.

It refers to the final disposal of the project and associated materials at the expiry of the project lifespan. If such a stage is reached, the proponent needs to remove all materials resulting from the demolition/decommissioning from the site. The following should be undertaken to restore the environment.

- Remove all underground facilities from the site
- The site should be well landscaped by flattening the mounds of soil and
- Planting indigenous trees and flowers
- All the equipment should be removed from the site
- Fence and signpost unsafe areas until natural stabilization occurs
- Back-fill surface openings if practical

Table 4: The proposed EMMP for Construction Phase

Impact/ Objective	Mitigation Measure	Responsibility	Time Frame	Means of verification/ Monitoring indicators	Approximate Cost
Increased exploitation of Raw Materials	Ensure accurate budgeting and estimation of actual construction material requirements to ensure that the least amount of material necessary is ordered	Contractor	Every two weeks	Inventory records	Operational cost
	Maximize sourcing of construction materials from suppliers who use environmentally friendly processes in their operations.	Contractor	Monthly	Suppliers documents	None
	✓ Re-use excavated material like building blocks from demolition of existing structures for construction. ✓ Re-use of excavated soil for landscaping ✓ Utilize opportunities for donating recyclable/reusable or residual materials to community groups and institutions. ✓ Use of durable, long-lasting materials that will not need to be replaced regularly, thereby reducing the quantity of waste ✓ Ensure that damaged or wasted construction materials will be recovered and used in other projects ✓ Ensure that construction materials left over at the end of construction will be used in other projects rather than disposing off	Contractor	Throughout the construction period	None	Operational Cost

	Ensure that damage or loss of construction materials at the construction site are kept minimal	Contractor	Monthly	Valid site Inspection records	Operational cost
Noise Generation	✓ Use of attenuated equipment ✓ Ensure that all generators and heavy-duty equipment are insulated or placed in enclosures to minimize ambient noise levels. ✓ Statutory inspection and certification of all mobile machinery and equipment	Contractor	At the beginning of the project Every 6 months	Machinery & Equipment inspection certificates Servicing and maintenance records	2,000,000
	Restriction of construction activities to day time between 8:00 am-5:00 pm	Contractor	Throughout the construction phase	No complaints neighbours about loud noise	No cost
	✓ Provision of appropriate PPE- ear muffs and ear plugs ✓ Annual Medical examinations (audiometric tests) to be done on construction workers	Contractor	Throughout the construction phase	Workers medical examination reports PPE Registers	2,000,000 per year
	Sensitize drivers to avoid running of vehicle engines or hooting especially when passing through sensitive areas such as residential areas and schools	Contractor	Throughout the construction phase	No complaints from workers and neighbours about loud	None

				noise	
Air and Dust Pollution	✓ Appropriate hoarding of the construction site ✓ Installation of safety nets during construction. ✓ Sprinkle dust using water	Contractor	At the beginning of the project Throughout the construction phase	✓ No complaints from ✓ Neighbours Minimal dust on site	900,000
	Ensure proper planning of transportation of materials to ensure that vehicle fills are increased in order to reduce the number of trips done per vehicle or the number of vehicles on the road	Contractor	Throughout the construction phase	None	None
	Dust suppression by watering on graded access routes each day to reduce dust generation by construction vehicles	Contractor	Throughout the construction phase	No complaints from workers and community	Operational cost
	Erection of speed signs/bumps at the access road leading to project site to reduce speed and emissions of dust	Contractor	Throughout the construction phase	No complaints from workers and community	Operational cost
	Drivers to avoid unnecessary acceleration of vehicle engines at loading/offloading points and parking areas. Switch off vehicle engines at these points	Contractor	Throughout the construction	Training records	Operational cost

			phase		
	✓ Control earthworks and minimal clearance of vegetation ✓ The positioning of stockpiles to minimize the effect of wind ✓ Dust sheets over the surface of stockpiled materials	Contractor	Throughout the construction phase	Site inspection records No complaints from neighbors on dust	None
	✓ Control earthworks and minimal clearance of vegetation ✓ The positioning of stockpiles to minimize the effect of wind ✓ Dust sheets over the surface of stockpiled materials	Contractor	Throughout the construction phase	Site inspection records No complaints from neighbors on dust	None
	Burning of waste on site shall be prohibited	Contractor	Throughout the construction phase	None	None
Soil Erosion	✓ The Contractor will ensure proper demarcation of the project area to be affected by the construction works	Contractor	Before operations	None	4,000,000
Interference with the physical	✓ The design shall in no way propose to implement projects that will hinder drainage ✓ The tower construction shall adhere to all relevant permit conditions like NCA, KCAA, physical planning department, NEMA etc.	Contractor Proponent	During design and construction	Valid site Inspections records	Project Design cost

condition	✓ The proponent shall as much as possible complete the project in a way that natural aesthetics is retained at the site ✓ Restoration shall be undertaken to ensure that the original setting is retained.		phase		
	Put in place soil erosion control measures to reduce run-off Velocity and increase infiltration of storm water into the soil, e.g. silt traps.	Contractor	Monthly	Valid site inspection records	1,500,000
	Strict control of construction vehicles to ensure that they operate only within the area to be disturbed by access routes and other works	Contractor	Throughout the project cycle	Valid site inspection Records	500,000
Increased Traffic Congestion and Road Traffic Accidents	Supplier should time heavy traffic flows, wherever practicable, to avoid periods of heavy traffic flow along Nandi road and Ronald Ngala road in the morning and afternoon	Contractor	Throughout Construction Phase	None	None
	Only licensed and competent drivers and operators shall be engaged by the contractor. In addition, all drivers shall be trained and evaluated in defensive and off-road vehicle operation.	Contractor	Throughout the construction phase	Valid drivers' and operators' licenses Training records No complaints from the neighbouring businesses	600,000
	✓ Relevant authorities like police should be consulted to agree on specific routes for project	Proponent	Before routing	Traffic Management	5,000,000

	traffic to prevent road congestion, improve accessibility and avoid any sensitive areas or unsuitable parts of the road network. ✓ Clear signs, flagmen, and signals will be set up where necessary. Where temporary traffic signals are required, the details and locations of the signs shall be agreed to with the relevant authorities.	Contractor	traffic	Plan	
	✓ Diversions planned and communicated to the affected business owners and their staff as far in advance as practicable. ✓ Any road closures will be properly signposted and flag men positions to guide road users ✓ Speed limits will be established and enforced over all traffic routes.	Contractor	Before routing traffic	Traffic Management Plan	1,000,000
Disposal of Spoil	✓ Maximize the re-use of excavated materials in the works as far as feasible to ensure that no permanent spoil dumps are created ✓ Properly dispose of the spoil in the areas approved by the county government ✓ Care should be taken to avoid spoil location in a land that could otherwise be used for productive purposes.	Proponent Contractor	At the beginning of the project	None	1,000,000
Hazardous waste e.g. soil contaminate with petroleum product and waste	✓ Segregate hazardous from non-hazardous ones. ✓ Avoid mixing hazardous and non-hazardous waste to reduce the volume of hazardous waste ✓ Use waste containers that are compatible with hazardous waste types and in line with national regulations. The containers should be sealed and kept in good condition ✓ Label hazardous waste containers in accordance with national regulations ✓ Provide personal protective equipment (PPE)	Contractor	Throughout the construction phase	✓ Inspection records of waste storage facilities on site ✓ Availability of MSDS on site Visual inspection of the secondary containment	2,000,000

oil	suitable for handling each waste type, in line with waste characteristics ✓ Use legitimate NEMA authorized waste carriers to transport hazardous waste. ✓ Engage waste carriers through a formal contract/procurement process. ✓ Monitor and document waste until each load is safely disposed of ✓ Arrange to treat/dispose of hazardous waste at licensed facilities that are properly designed and operated in line with national regulations and good international industry practice. ✓ Report any spills to the regulator in line with regulations. ✓ Provide a dedicated hazardous waste storage area. Locate storage in a safe area with the limited change of exposure to hazards and accidents (e.g. away from main construction). Cover to prevent rain ingress which could lead to groundwater contamination) and wind (could lead to odour and dust). Seal area off and operate with limited access. Use safety signs to indicate hazard and restricted access. Design with sufficient capacity for anticipated types/volumes of waste. Separate containers to allow for inspection of leaks and spills. Restrict access to the hazardous waste storage area to those that have had training on the MSDS ✓ Use a secondary containment system for liquid volumes greater than 220 litres, in line with national regulations and good international industry practice			system ✓ Provision of PPE and regular inspection thereof review of waste carriers' legal authorization ✓ Review of waste facilities for licensing approval ✓ Incident report as applicable	

	✓ Provide sanitary conveniences for the construction workers for control of sewage waste. Effluent will be treated as hazardous waste. ✓ Provide information on characteristics of each hazardous waste type (using MSDS) and compatibility of wastes to workers /contractors handling waste				
Waste storage	✓ Use containers that are compatible with wastes ✓ Perishable wastes including food to be sealed containers (bags, bins) to reduce odour ✓ Allow space between containers to allow inspection for leaks and spills. Containers to be kept on pallets to prevent contamination in the event of a spill ✓ Store wastes away from direct sunlight, wind and rainfall	Contractor	Throughout the construction phase	✓ Visual inspection and records of waste storage facilities ✓ Training Attendance register and content	8,000,000
Waste transportation	✓ Use NEMA authorized waste carriers that operate in line with national regulations. Procure services of waste transporters through proper contracts ✓ Select appropriate waste transport containers and ensure these are properly labelled and secured ✓ Use covered vehicles to prevent litter/dust ✓ Label vehicles with correct signage in accordance with hazardous waste ✓ Ensure each waste shipment is accompanied by shipping paper manifest like covering unique consignment number, date of collection, nature and quantity of waste, information on containment, producer of waste, details of a waste carrier, destination, waste producer representative name	Contractor	Throughout Construction phase	Review of waste carriers' legal authorization Review of waste shipment documentation	Annually 900,000

Impact of waste management on environment health and safety	✓ Characterize waste types. ✓ Undertake an environmental, health and safety risk assessment for each waste stream ✓ Plan storage, handling, transport and treatment/disposal for each waste stream in line with good international industry practice ✓ Design project to minimize waste and hazardousness of waste materials on site e.g. substituting raw materials which are less hazardous or which end up with less waste volumes ✓ Procure goods to minimize waste by reducing packaging/select returnable packaging, procure lower hazard materials, select reusable materials ✓ Construct to minimize waste to minimize wastage/breakage, limit off-specification materials, limit orders in excess of needs, employ good housekeeping to avoid hazardous/non-hazardous waste mixing	Contractor	Throughout the construction phase	✓ Waste Inventory ✓ EHS assessment for waste streams ✓ Solid waste receptacles at the site	Operational cost
Increased Water Demand	✓ Install water-saving equipment in toilets such as low flow toilets ✓ Sensitizing construction staff to avoid irresponsible water use ✓ Rainwater harvesting and water storage facilities ✓ Regular maintenance of plumbing systems	Contractor	Throughout the construction phase	Recording of water consumption rainwater harvesting structures	100,000 per year
Increased Energy Demand	✓ Use of energy saving appliances/fittings ✓ Sensitization of staff to conserve electricity by switching off electrical equipment or appliances when they are not being used.	Contractor	Throughout the construction phase	✓ Use of energy saving appliances ✓ Documentation of energy consumption	50,000,000

Increased Energy Demand	✓ Energy consumption to be monitored, analysed and all records kept ✓ Regular comparison and monitoring of energy consumption with performance targets for the reduction of energy use ✓ Stand -by generators shall be installed and form part of the power supply at the site. These generators shall be soundproofed and kept in good running condition by regular servicing ✓ Ensure planning of transportation of materials to ensure that diesel and petrol are not consumed in excessive amounts	Contractor	Every 6 months 1,600,000	Track fuel use through inventory records	400,000
Increase in HIV/AIDS prevalence and other STIs	✓ Education and sensitization of workers and the local communities on STIs including the provision of condoms to the project team and the public ✓ HIV/AIDS awareness and prevention campaigns amongst workers for the duration of the contract e.g. erect and maintain HIV/AIDS information posters at prominent locations as specified by the site manager, provision of condom dispensers and voluntary testing ✓ Ensure that staff are made aware of the risks of contracting or spreading sexually transmitted diseases ✓ Workers to be sensitized on the local cultures and beliefs to ensure there is harmony in the project area.	Contractor	Throughout the construction phase	HIV/AIDS awareness board/ signs Condom dispensers on site	200,000
Occupational Health and	✓ The hiring of site EHS Manager ✓ Develop, document and display prominently an appropriate SHE policy for construction works	Contractor	At the beginning	✓ Number of workplace accidents	EHS Manager Salary-

Safety Risks	✓ To reduce the workers' accidents and hazards the Proponent will develop and commit the Contractors to Occupational Health and Safety rules and regulations as stipulated in the Occupational Safety and Health Act, 2007; ✓ Safety induction and training for all workers and personnel on site ✓ Provisions must be put in place for the formation of a Health and Safety Committee, in which the employer and the workers are represented ✓ Use of permit to work for all high-risk activities ✓ Ensure that machinery, equipment, personal protective equipment, appliances and hand tools used in construction to comply with the prescribed safety and health standards and be appropriately installed maintained and safeguarded ✓ Trenches over 1.5 m deep or wherever soil conditions dictate should be shored and secured against accidental entry by workers and the public ✓ Where construction activities interfere with the movement of traffic, the site should be signed and controlled by trained flagmen/flag women and lit by night ✓ Pinned signage all throughout the site onsite safety instructions and safe working procedures ✓ Hand, knee and foot railings should be installed on stairs, fixed ladders, platforms, permanent and interim floor openings, loading bays, ramps, etc. ✓ Provision of suitable personal protection equipment (PPE) (footwear, masks, protective clothing and goggles in appropriate areas), emergency eyewash and shower stations,		of the contract Throughout the construction phase	✓ Permit-to-work form for high-risk jobs ✓ Number of workers trained on safety 100 % use of appropriate PPE by ✓ Workers ✓ A clean, organized workplace	approx. 1,200,000 annually Operational costs

	ventilation systems, and sanitary facilities				
	Ensure that the premises/works are insured as per statutory requirements for third party and workman's compensation	Proponent Contractor	Annually	Insurance cover for construction workers	800,000
	Ensure that provisions for reporting incidents, accidents and dangerous occurrences during construction using prescribed forms obtainable from the county Directorate of Occupational Health and Safety Office (DOHSS) are in place	Proponent Contractor	Weekly	Number of accidents reports	Operational costs
Machinery Safety	✓ Only Licensed and competent operators involved in machinery operations ✓ All moving parts of machinery should be adequately guarded ✓ Shut down of machinery during maintenance ✓ Reports of safety examinations must be presented in prescribed forms, signed by the examiner and attached to the general register ✓ Arrangements must be in place to train and supervise inexperienced workers regarding construction machinery use and other procedures/operations	Contractor	At the beginning of the project Throughout the construction phase	Valid Operators' licenses Machinery records	1,300,000
Security	✓ Ensure that the site is always guarded by a reputable security firm ✓ Constant site patrol ✓ Collaboration with existing security machinery ✓ Partnership with neighbours and police in community policing	Contractor Proponent	24-hours a day throughout the project cycle	Zero cases of burglary or vandalism at the site	50,000 each month

Fire Hazards and accidents	✓ Develop Fire Safety Policy outlining evacuation procedures, provision for maintenance and servicing of appliances, training of workers, assignment of responsibilities, planning and organization of fire drills and identification of fire assembly points. ✓ Provision of fit for purpose fire fighting and fire detection facilities that are easily accessible ✓ Frequent Servicing of fire fighting equipment by a reputable service provider ✓ Appoint and train Fire Marshals ✓ Fire safety awareness training for all employees and annual fire drills ✓ Secure all gas cylinders ✓ Gas cylinders should never be stored in confined space	Contractor	Throughout the construction phase	✓ Fire safety policy ✓ Fire fighting equipment inspection certificates and reports ✓ Fire drill Report and evacuations register. ✓ Fire marshals training certificates ✓ Presence of clearly marked warning signs and evacuation procedures	EHS Manager salary annually Operational Cost (1,000,000)
Public health and safety	✓ Proper handling and disposal of solid waste ✓ Operation of noisy machinery at daytime only ✓ Control of visitors to the site ✓ Traffic control	Contractor	Throughout the project	✓ No complaints from the community ✓ Number of Road Traffic Accidents	Operational Costs
Emergencies	✓ Design suitable documented Emergency Preparedness and Response Plan for all project emergencies accidents; fire; spills; structural collapse etc. ✓ All employees and personnel on site to be oriented on all emergency response and evacuation procedures ✓ All emergency and evacuation procedures must be	Contractor	At the beginning of the project Throughout the construction	✓ Fire drills and evacuation reports ✓ Training register ✓ Emergency contacts & evacuation procedures	EHS Manager salary 1,200,000 annually

	tested at least bi-annually and at regular intervals e.g. fire drills ✓ Ensure that adequate provisions are in place to immediately stop any operations where there is an imminent and serious danger to health and safety and to evacuate workers ✓ Ensure that the most current emergency telephone numbers posters are prominently and strategically displayed within the construction site ✓ Provide measures to deal with emergencies and accidents including adequate first aid arrangements ✓ Engage a full-time resident nurse on site ✓ Sensitize the public on potential emergency situations ✓ Fit for purpose fire-fighting equipment such should be provided at strategic locations such as stores and construction areas. ✓ Regular inspection and servicing of the equipment must be undertaken by a reputable service provider and records of such inspections maintained ✓ Appointment of First Aiders. Minimum 1:60 employees, who shall undergo training by a recognized body. ✓ Training of all emergency response personnel		phase	prominently pinned on site ✓ First aid station and first aid facilities	

Table 5: Operation or Occupation Phase

Impact/ Objective	Mitigation Measure	Responsibility	Means of verification/	Approximate Cost

			Monitoring indicators	
Increased water consumption	✓ Install self-closing taps, automatic shutoff valves, spray nozzles, pressure reducing valves, and water conserving ✓ Install water-saving equipment in toilets such as low flow toilet ✓ Frequent maintenance of plumbing systems ✓ Rainwater harvesting	Proponent	During project fittings and throughout the operational phase	Project design cost and construction
Increased energy consumption	✓ Formulation and enforcement of energy saving policies, technologies and management strategies in the management scheme should be included ✓ Monitor energy use during the operation of the project and set targets for efficient energy use ✓ Regular comparison and monitoring of energy consumption with performance targets to identify where action should be taken to reduce consumption ✓ Promptly repair of distribution system leaks ✓ Appropriate power transformers and accessories shall be installed in conjunction with the power distribution company ✓ Stand -by generators shall be installed and form part of the power supply system. These generators shall be soundproofed and kept in good running condition by regular servicing	Proponent	Energy consumption Records Energy audit reports	Depends on units used
	Carry out Energy Audits as required by EPRA	Proponent	Every three years	250,000
Increased traffic congestion in the area	✓ The proponent shall construct a silo parking directly opposite the site in conjunction with the County Government of Uasin Gishu through private public partnership to provide parking lots for the clients and tenants ✓ Providing adequate acceleration and deceleration lanes ✓ Obtain authorization from KURA	Proponent	No complaints from the community	None

General waste	✓ Use of recyclable glass bottles as opposed to plastic. ✓ Dispose waste through county government waste handling trucks ✓ Ensure that contractors handling, treating and disposing of waste are reputable and legitimate enterprises, licensed by NEMA ✓ Undertake INTERNAL audits of waste segregation, tracking waste, characterization and disposal methods. ✓ Maintain completed waste transfer log the type of materials, physical state solid/liquid/gas, quantity, date dispatched, date received, any repacking, treatment/disposal details	Proponent	Annual Environmental and waste audits	200,000
Liquid Waste/ waste water/ Effluent	All waste water- both black and gray shall be channelled to public sewer that is connected to the proposed site	Project proponent	Annual environmental audits	Project design cost
Organic kitchen waste	✓ Food and perishable wastes to be sealed containers (bags, bins) to reduce odour ✓ County waste collection trucks can also be used to transport waste to county disposal sites ✓ The proponent shall acquire waste trucks which shall be registered with NEMA for waste transportation. ✓ Use covers on vehicles to prevent litter ✓ Label vehicles with correct signage in accordance with waste ✓ Ensure each waste shipment is accompanied by shipping paper or manifest ✓ Food waste audits to be undertaken by the hotel operator ✓ Annual Environmental audits as required by EIA/EA regulations	Proponent	✓ All permits necessary and licenses required for composting and recycling shall be obtained. ✓ Waste transportation licenses ✓ Annual Environment audits	Audit is as per agreement with the expert
Increased non-compostabl	✓ Grease traps to be used in drain pipes to separate the fat, oil and grease from the wastewater and the grease retained in the traps to be collected by a licensed waste oil collector at regular intervals. ✓ The grease traps shall be frequently serviced and maintained and	Proponent	✓ Waste registers ✓ Annual Environmental audits	None

e kitchen waste	written records of maintenance kept ✓ Engage waste carriers through a formal contract ✓ All waste transfer records shall be maintained ✓ Waste management training of all employees working in restaurants and hotel component ✓ Use of waste containers that are compatible with hazardous waste types and in line with national regulations and good practice. Containers to be sealed and kept in good condition ✓ Maintain all waste transfer log the type of materials, physical state solid/liquid/gas, quantity, date dispatched, date received, any repacking, treatment/disposal details		✓ Provision of grease traps maintenance records ✓ NEMA Permit documents for the licensed waste handlers	
Emergency preparedness	✓ Develop a comprehensive Emergency Response Plan for the tower ✓ A state-of-the-art automatic addressable fire detection system shall be provided with an annunciator panel located in the Control Room. ✓ Building coverage with smoke and heat detectors with appropriately located sounders and manual call points. The system shall interface with other fire fighting systems and door holders/closets for smoke control. ✓ A digitalized public address system with pre-recorded evacuation warning messages. The system will also be integrated with the building's communication systems including security, life safety, monitoring and control systems. ✓ Posting of all emergency contacts and evacuation procedures in all floors of the building ✓ The building system shall be able to initiate the shutdown of the air conditioning and mechanical ventilation in the event of a fire. ✓ All emergency and evacuation procedures must be tested at least annually and e.g. fire drills ✓ Installation of fit for purpose fire protection services- horse reels; extinguishers, sprinkler systems, wet risers and automatic Gaseous fire suppression system	Proponent	Fire inspection records Pinned evacuation procedures and emergency contacts on all floors of the building	Project design cost

	✓ Frequent servicing of all fire detection and fire fighting equipment by a reputable company			

Table 6: Decommissioning Phase

Environmental Impact	Mitigation measures	Responsibility	Time-frame	Cost (Kshs)
Solid waste management	✓ All removed materials that will not be used for other purposes must be removed and recycled/reused as far as possible ✓ Where possible recycle/reuse materials and other demolition waste ✓ Where not possible, the materials should be disposed by licensed waste handlers at licensed disposal site or arrangement made with County Government of Uasin Gishu ✓ Donate reusable demolition waste ✓ Ensure NO oil spillage occurs during equipment removal and ensure the use of serviceable machines and equipment	Contractor	Once	Depend of machinery and duration of time
Degeneration of the site after demolition	✓ Implement an appropriate programme to restore the site to a better status ✓ Consider the use of indigenous plant species in re-vegetation ✓ Trees should be planted at suitable locations so as interrupt slight planting), between the adjacent residential area and the development.	Contractor	Once	Depend on the type of restoration to be carried out at the site
Air and Dust Pollution	✓ Appropriate hoarding of the construction site ✓ Installation of safety nets during construction. ✓ Sprinkle dust using water	Contractor	Once	
	✓ Ensure proper planning of transportation of materials to ensure that vehicle fills are increased in order to reduce the number of trips done per vehicle or the number of vehicles on the road	Contractor	Once	None

Noise Generation	✓ Use of attenuated equipment ✓ Ensure that all generators and heavy-duty equipment are insulated or placed in enclosures to minimize ambient noise levels. Statutory inspection and certification of all mobile machinery and equipment	Contractor	Once	2,500,000
	✓ Restriction of construction activities to day time between 8:00 am-5:00 pm	Contractor	Once	No cost
	✓ Provision of appropriate PPE- ear muffs and ear plugs ✓ Annual Medical examinations (audiometric tests) to be done on construction workers ✓	Contractor	Once	1,000,000
	✓ Sensitize drivers to avoid running of vehicle engines or hooting especially when passing through sensitive areas such as residential areas and schools	Contractor	Once	No cost

CHAPTER EIGHT

8.0 HEALTH, SAFETY AND ENVIRONMENT MANAGEMENT PLAN (HSEMP)

8.1 Introduction

This HSE Management Plan outlines how the proposed project will manage its risks commensurate to the significance and magnitude of these risks. The purpose of this management plan is not only to ensure that the project complies with the relevant legislation and guidelines but also that it; prevents (where possible), reduces or minimizes its risks. Together with the actions proposed in the EMMP of this management plan will synergistically enable the project to set environmental performance objectives, goals and targets and achieve them. This HSE Management Plan (HSEMP) is guided by both national HSE/OSH legislation and Good international Industry Practice **(**GIIP), which should always be made available in the project, these include:

8.1.2 National Policies

- National Environment Policy 2013
- Vision 2030
- Sessional paper no. 6 of 1999 on environment and development

8.1.3 National Legislation

- Constitution of Kenya 2010
- Environmental Management and Co-ordination Act, 1999 (Revision 2018) and its subsidiary legislations
- The Physical and Land Use Planning Act, 2019
- Public Health Act, CAP 242, (Revised 2012)
- Occupational Safety and Health Act, 2007 (Revised 2012)
- Work Injury Benefits Act, 2007
- Standards Act
- Water Act 2016
- Energy Act
- HIV AIDS control Act

8.1.4 Good international Industry Practice (GIIP)

- The World Bank General EHS Guidelines, 2007
- The International Finance Cooperation Performance Standards of Environmental and Social Sustainability of 2012: Performance Standards 1, 2, 3, 4 & 6.
- The World Health Organization Guidelines on indoor and outdoor Air Pollution

8.2 Health & Safety EMP Scope

This HSEMP covers all aspects that the project proponent has an influence over and all activities in the project's area of influence. This area of influence includes:

- The project's main and ancillary activities in the project site;
- Any works financed as part of the project that will be carried outside the project's site;
- Any works carried out by third parties or employees of the project, and
- The areas where the project's direct impacts will be felt and will cause a HSE risk.

This area of influence delineates the proponent scope of liability as legally defined and the measures proposed will assign adequate management control over these aspects and activities in order to manage risks.

8.3 Health & Safety Purpose

The primary purpose of this HSEMP is to ensure the proponent has an established benchmark for HSE legislative compliance and to ensure the project is carried out safely environmentally and ergonomically. This can be broken down in the following objectives:

- To ensure the project is undertaken without any incidents or accidents to its employees.
- To ensure the project is undertaken without any incidents or accidents to its secondary employees and members of the public.
- To ensure adequate facilities are put in place to carry out the project's principal and ancillary activities.
- To ensure that all of the project's employees are adequately trained, aware of and committed to of all HSE procedures.
- To ensure adequate resources are assigned towards HSE management.
- To ensure that period monitoring of HSE performance is undertaken so as to improve this performance.
- To ensure the project's compliance to HSE legislation is continuously and continually evaluated.

The proponent should also develop a HSE policy creating an umbrella of guidance for all its HSE functions and practices. This policy should be converted into sectorial goals (water, petroleum/energy, OSH etc.) using the above objectives and targets developed for HSE performance. The proponent's top management should lead the commitment to the policy and it should be made available to all employees, contractors, sub-contractors and members of the public. This policy should also be integrated into the project's human resource and labour policies, which would delineate what the proponent would be liable to and what contractual obligations the project would have on the second and third parties involved in its supply and value chain.

8.4 Health & Safety Management Framework

In order for the project to successfully carry out all HSE procedures and achieve the goals of this HSEMP adequate human resources will be required on the part of the client to take a leading role of HSE. As a preliminary dependent on the resources available, the leading HSE responsibilities may be integrated into the roles of either primary or secondary staff charged with site and employee management. However if adequate resources are available it is suggested that the proponent creates a responsibility for an overall HSE manager who will oversee and direct all HSE functions of the project.

Under the HSE manager's docket, the HSE manager or person charged with HSE management duties will be responsible for monitoring, evaluation, reporting and developing internal HSE guidelines in line with national legislation and GIIP. Additionally HSE should be integrated into the procurement and human resources policies of the project, and thus roles should be defined for contractors working on behalf of the proponent. Each contractor should have a role in their company for HSE management if their activities fall within the scope of this HSEMP. They will report to the overall HSE manager and assist in the achievement of the project's HSE goals.

On an administrative scale the effectiveness of the HSEMP will depend upon the collaboration of other key institutional players who are mandated with HSE responsibilities legally and on national and locals scales. These include state agencies and offices that are charged with HSE responsibilities and they should be involved early in the project when developing the final HSE Management Plan and during its implementation.

8.5 Training and Capacity Building in HSEM

To ensure that the project staff with a role to play in HSEM and the implementation of this HSEMP, the proponent should always ensure all staff members are recruited with adequate skills and knowledge in HSE and the HSE aspects of their roles. This also includes making sure the staff are medically fit to carry out their roles as part of its HRM and HSE policies. In addition to this the proponent should integrate training and capacity building in HSEM in its staff and career development training program. This also includes the training suggested in the ESMP.

Training can be undertaken in several ways dependent on its objectives, the initial capacity of the audience, and the level of control the audience has over the project's HSE performance. Some methods can include: Induction training, Supervisor and management training, On-the-job training, Specific hazard training, Work procedures and skills training, Emergency procedure training, and First aid training among other trainings. All training and its content

should be documented to enable monitoring and evaluation, and they should also training and education on social wellbeing and employee welfare through raising awareness of the principles of equal opportunity as well as communicable diseases.

Additionally, the proponent should as part of its capacity building program, create awareness on HSE practices, risks and new developments. This can be done through several ways such as: circulars, white papers, notices on notice boards, email, text messages, social media, meetings, workshops. Similarly these should also be documented to enable monitoring and evaluation.

8.6 Monitoring, Evaluation and Reporting

All aspects of the HSEMP should be recorded as required by its guiding principles, legislation and GIIP. Records should be kept onsite and backed up in case of any eventualities that may damage them. A monitoring plan should be developed as part of the HSEMP through which its different aspects will be monitored and documented based on aspect specific frequencies. The monitoring and records will include: training, training content, incidents, accidents, complaints, internal and external communications, levels of emissions, MSDS etc.

In this regard, the proponent should also develop adequate and efficient communication channels and procedures for the project through which all HSE will be communicated. The records should allow for the HSEMS to be audited or its performance evaluated periodically so that it may be improved continuously through a Plan-Do-Check-Act (PDCA) framework. Additionally audits should be undertaken as required by legislation such EMCA of 1999 (Amended 2015) and OSHA of 2007 and reported to the relevant authorities.

Incident and accidents should also be reported both internally and externally as required by legislations. A reporting schedule should also be developed as part of the HSEMP, which will guide the required reporting procedures based on their frequencies and format. Reporting and documentation should also cover corrective actions taken to close out non-conformities.

8.7 HSE Risk Management Measures

Several risk management measures are proposed in this subsection through which the project will adopt safe and self-improving measures in line with national legislation and GIIP, as part of its HSEMP. However, it is proposed that risks are best avoided early in the design and planning phases of the project following the hierarchy as below:

8.7.1 Risk Register

During all phases of the project, the proponent and their third parties where applicable such as contractors, should develop a risk register of all HSE risks in the project. This identification of risks can be done through an aspects-impacts register or log, which links the project's aspects to impacts and ranks the level of risk by analysing its probability and likely consequences.

Importantly, the risk register should also take into perspective the level of public concern over the risks involved and identified, as a matter of good practice.

As a matter of policy and good practice the proponent should ensure third parties have adequate skills in risk management and systems are put in place to manage all risks. Linked to the risks register are the remedial actions which reduce or avoid the risk where possible. The proponent through either the HSE manager and/or engineers should always seek to avoid risks early enough through design and planning but this is not possible they should develop the requisite remedial actions or plans to legally acceptable standards (such as EMCA of 1999 and OSHA of 2007) and GIIP standards.

The information of the risk register and these remedial actions should be documented, readily available and regularly updated to ensure it stays relevant and actual. Some of the HSE risks from the project will come from the following aspects:

8.7.1.1 Construction Phase HSE Aspects

- Air emissions
- Water emissions
- Moving parts
- Heavy equipment and trucks
- Inflammable materials
- Hazardous/Poisonous chemicals and substances
- Storage areas
- Ladders
- Working at heights
- Electricity
- Open pits
- Heated surfaces, solids and fluids
- Wastes
- Raised materials and equipment

8.7.1.2 Operational Phase HSE Aspects

- Slippery floors
- Moving parts and barriers
- Storage areas

- Heated surfaces, solids and fluids
- Cold surfaces, solids and fluids
- Water emissions
- Vehicles and service truck.
- Hazardous/Poisonous chemicals and substances
- Inflammable materials
- Electricity
- Wastes
- Air emission

8.7.1.3 Decommission Phase HSE Aspects

- Falling debris
- Air emissions
- Water emissions
- Heated surfaces, solids and fluids
- Hazardous/Poisonous chemicals and substances
- Moving vehicles and trucks
- Heavy equipment and materials

8.8 HSE Resources and Responsibilities

An important part of the HSEMP is to delineate all the resources required for its effective implementation so as to ensure it remains as cost effective as possible. This will be the duty of the HSE Manager and all the resources human and financial should be listed alongside the remedial actions employed against each of the project's risks. Financial records should be maintained to ensure the HSE remains accountable and basically makes business sense by showing the costs avoided by maintaining the system in terms of lives saved, man hours saved, health care etc.

Whereas the human resources responsible for undertaking all activities that carry or create risk should be kept in record and maintained. This will ensure the project has a documented, maintained and established method of managing HSE responsibilities. This will in addition keep all the staff undertaking these activities abreast with not only the policies in place but also with the risks involved with their activities and importantly know how to manage the risks and carry out their duties safely. This information will also be vital when undertaking audits and targeting training towards the staff and foster greater accountability in the staff in terms of monitoring and reporting since all duties will be known and documented.

8.9 Medical Program and Insurance

The proponent and his contractors should also ensure the medical program is maintained for the project's staff on induction, during the job and include rehabilitation where appropriate and commensurate to the risks that the staff will be exposed to. This program should include regular check-ups to ensure the project's staff are medically and mentally fit to undertake their duties. It should also form part of training through an ergonomic and social curricular that will also include facilitations for lifestyle improvement and raise knowledge on diseases such as; Covid-19, HIV/AIDS, STIs and other infectious illnesses.

The proponent and his contractors should additionally ensure adequate facilities and services are in place which promote employee rest, relaxation and rejuvenation. This may include rest and recreational areas, provision of clean water, undertaking stress relieving activities such as games, counselling and peer chats among others.

Importantly and as legally required the proponent and his contractors should provide a medical/insurance cover for all staff. The cover should in the least be able cover for all injuries, illnesses and incidents that may occur on the job and follow up with rehabilitation that at least returns the employee(s) to their initial state before the occurrence where possible. It should be noted that although the proponent may provide insurance, it should be mitigation based by firstly promoting the actions of the HSEMP which when followed all risks will well managed.

8.10 Emergency Preparedness and Response Plans

The proponent through an all-inclusive process should develop an EPRP as part of the HSEMP and through which the project will stay ahead of risks presented by both man-made and natural hazards that have the capacity to turn into disasters. The proponent and his contractors should do this by first identifying all hazards pertinent to the project and its site in line with the risks register but with specific difference being that these hazards will have greater potential of turning into a disaster.

This should also be done in line with national policies on disaster management such as the National Disaster Management Response Plan of 2009, and involve all key players in disaster management nationally. This stakeholder involvement will enable the EPRP to be cross sectorial and multidisciplinary and the proponent should lead the process.

8.11Grievance Redress System

The proponent should also develop a GRS and make it accessible to all stakeholders internal and external. The GRS should always seek to address grievances through legally acceptable methods and as fast as possible whilst not preventing any complainants from seeking other legally acceptable methods to justice. Such a GRS should be made available to staff on recruitment and to members of the public either through government agencies/offices through grievance application forms, and internally by establishing procedures for investigation and quick redress that will be recorded and tracked.

The GRS should be monitored through indicators of its efficiency and effectiveness of solving the grievance and producing lessons learnt through which corrective actions can be undertaken to improve the project's HSEMP. Additionally, as part of monitoring and review all grievances should be reported to the relevant authorities and the corrective actions taken, to ensure the system is credible and transparent. The process should also be culturally appropriate, transparent and non-coercive.

CHAPTER NINE

9.0 CONCLUSION AND RECOMMENDATIONS

9.1 Conclusion

The proposed project design has integrated mitigation measures with a view to ensuring compliance with all the applicable laws and procedures. The proposed project will be implemented as per the approvals by among others; public health department, survey office, Physical Planning Department, NEMA and NCA.

During project implementation and occupation, Sustainable Environmental Management (SEM) will be ensured through avoiding inadequate/inappropriate use of natural resources, conserving nature sensitively and guaranteeing a respectful and fair treatment of all people working on the project, general public at the vicinity and inhabitants of the project. In relation to the proposed mitigation measures that will be incorporated during construction phase, the development's input to the society; and cognation that the project is economically and environmentally sound, establishments are considered beneficial and important. It is our considerable opinion that the proposed development is a timely venture that will subscribe to proponent's timely investment and also the government's intention to subsidize fuel in Kenya. It is thus our recommendation that the project be allowed to go ahead with the implementation provided the outlined mitigation measures are adhered to. Major concerns should nevertheless be focused towards minimizing the occurrence of impacts that would degrade the general environment. This will however be overcome through close follow-up and implementation of the recommended Environmental Management and Monitoring Plans (EMPs).

9.2 Recommendations

Recommendations for the prevention and mitigation of adverse impacts are as follows:

- The proponent should therefore follow the guidelines as set by the relevant departments to safeguard and envisage environmental management principles during construction and operation/occupation phases of the proposed project.
- It is important that warning/ informative sign boards be erected at the site. These should indicate the operation hours and when works are likely to be started and completed. The signs should be positioned in a way to be easily viewed by the public and mostly motorists.
- All solid waste materials and debris resulting from construction activities should be disposed at approved dumpsites.
- All construction materials e.g. pipes, pipe fittings, sand just to mention a few should be sourced/procured from bona fide/legalized dealers.
- During construction all loose soils should be compacted to prevent any erosion.
- Other appropriate soil erosion control measures can be adapted. Any stockpiles of earth should be enclosed, covered or sprinkled with water during dry or windy conditions to minimize generation of dust particles into the air.
- Once earthworks have been done, restoration of the worked areas should be carried out immediately by backfilling, landscaping/levelling and planting of suitable tree species.
- Proper and regular maintenance of machinery and equipment will reduce emission of hazardous fumes and noise resulting from friction of metal bodies. Maintenance should be conducted in a designated area and in a manner not to interfere with the environment.
- A fully equipped first aid kit should be provided within the site.
- Workers should get food that is hygienically prepared. The source of such food should be legalized or closely controlled.
- The contractor should have workmen's compensation cover and is required to comply with workmen's compensation Act as well as other relevant, regulations and Agreements.

- The contractor should provide adequate security during the construction period.
- The proponent should consider installing solar panels to power the fuel dispensing pumps, lighting and light activities like charging the phone. Investing in solar panels will help the filling station save on electricity cost.

REFERENCES

Governments of Kenya.2002. Policy Paper on Environment and Development.

Government of Kenya, 1999. National Policy on Water Resources Management and Development, Sessional Paper No 1 of 1999, Government Printer, Nairobi.

Kenya gazette supplement Acts, Environmental Management and Coordination Act No. 8 of 1999 (2018 Revision). Government printer, Nairobi

Kenya gazette supplement Environmental policy 2013

Kenya gazette supplement Energy policy 2018

Kenya gazette supplement Acts, Environmental Management and Coordination (Water Quality) Regulations, 2006. Government printer, Nairobi

Kenya gazette supplement Acts, Environmental Management and Coordination (Waste Management) Regulations, 2006. Government printer, Nairobi

Kenya gazette supplement Acts, Environmental Management and Coordination (Noise and Excessive Vibrations Pollution) Regulations, 2009. Government printer, Nairobi

Kenya gazette supplement Acts Local Government Act (Cap. 265). Government printer, Nairobi

Kenya gazette supplement Acts. The Physical and Land Use Planning Act, 2019. Government printer, Nairobi

Kenya gazette supplement Acts Public Health Act (Cap. 242). Government printer, Nairobi

Kenya gazette supplement the Occupational Safety and Health Act, 2007. Government Printer, Nairobi.

Kenya gazette supplement the Water Act, 2016. Government Printer, Nairobi

Kenya gazette supplement the Standards Act (Cap 496) Government printer, Nairobi

Kenya gazette supplement the Energy Act 2019

The Constitution of Kenya, laws of Kenya 2010. Government Printer, Nairobi.

Uasin Gishu County Integrated Development Plan, 2018-2022

APPENDICES

2021 Environmental Experts practising licences

Proponent certificate of incorporation

Proponent KRA PIN certificate

Land Ownership Documents; title deed and sales agreement

Site design layout and architectural and structural plans

Consultative and public participation interview guide, questionnaires, two public meeting minutes and participants register

Social Impact Assessment report from the social expert

FORM 7 (r.15(2))

nema
mazingira yetu | uhai wetu | wajibu wetu

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY(NEMA)

THE ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

ENVIRONMENTAL IMPACT ASSESSMENT/AUDIT (EIA/EA) PRACTICING LICENSE

License No : NEMA/EIA/ERPL/13690

Application Reference No: NEMA/EIA/EL/18182

M/S **Cornelius Kyalo Kinyili**
(individual or firm) of address

P.O. Box 9034-00300, Nairobi

is licensed to practice in the

capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Lead Expert**
registration number **1150**

in accordance with the provision of the Environmental Management and Coordination Act Cap 387.

Issued Date: **1/13/2021** Expiry Date: **12/31/2021**

Signature…..

(Seal)
Director General
The National Environment Management Authority

P.T.O.

ISO 9001: 2008 Certified

FORM 7 (r.15(2))

nema

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY(NEMA)

THE ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

ENVIRONMENTAL IMPACT ASSESSMENT/AUDIT (EIA/EA) PRACTICING LICENSE

License No : NEMA/EIA/ERPL/14964

Application Reference No: NEMA/EIA/EL/19353

M/S **DOMINIC KIPROTICH KIPTORE**
(individual or firm) of address

P.O. Box 647-20103, ELDAMA RAVINE

is licensed to practice in the capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Associate Expert**

registration number **7169**

in accordance with the provision of the Environmental Management and Coordination Act Cap 387.

Issued Date: **5/17/2021** Expiry Date: **12/31/2021**

Signature.....

(Seal)
Director General
The National Environment Management Authority

P.T.O.

No. **PVT-XYUKBKB**

CERTIFICATE OF INCORPORATION

I hereby **CERTIFY** that,

TARITA TROCADERO LIMITED

is on this date 12 Nov 2019 Incorporated under the Companies Act, 2015 and that the Company is a **PRIVATE LIMITED COMPANY.**

.....

Registrar Of Companies

This is a system generated certificate. To validate this document send the word **BRS** to **21546**

No. **PVT-XYUKBKB**

DEPARTMENT OF THE REGISTRAR
GENERAL,
P. O. BOX 30031,
NAIROBI
12 Nov 2019

THE DIRECTORS,
TARITA TROCADERO LIMITED,
P.O. BOX 45476,
00100

Dear Sir/Madam,

THE COMPANIES ACT, 2015

RE: TARITA TROCADERO LIMITED

According to the records relating to the above company held by this Registry as at 12 Nov 2019 the names of Directors and Shareholders of the above company with their particulars are as follows

Names	Description	Address	Nationality	Shares
BARNABAS TUITOEK BARGORIA	**DIRECTOR**	**P.O. BOX 45476**	**KENYA**	
SIOKWEI TARITA LIMITED	**SHAREHOLDER**	**P.O. BOX 454476**		**ORDINARY: 1,000.00**
DANIEL KIPTOO BARGORIA	**DIRECTOR**	**P.O. BOX 45476**	**KENYA**	
			TOTAL SHARES	**ORDINARY:** 1,000.00

The nominal share capital of the company is **100000.00** divided into **1000.00 ORDINARY shares** of **KES 100.00** each . Company was registered on **12 Nov 2019**. The registered office of the company is situated at **Tarita Centre , Ronald Ngala Street,** P. O. Box **45476 - 00100 - G.P.O NAIROBI**.

Yours faithfully,

.....
Registrar Of Companies

This is a system generated certificate. To validate this document send the word **BRS** to **21546**

KENYA REVENUE AUTHORITY

www.kra.go.ke

PIN Certificate

For General Tax Questions
Contact KRA Call Centre
Tel: +254 (020) 4999 999
Cell: +254(0711)099 999
Email: callcentre@kra.go.ke

Certificate Date 13/11/2019
Personal Identification Number
P051854929R

This is to certify that taxpayer shown herein has been registered with Revenue Authority

Taxpayer Information

Taxpayer Name	TARITA TROCADERO LIMITED
Email Address	TARITA.TRUKADERO@GMAIL.COM

Registered Address

L.R. Number : NA	**Building** Tarita Centre
Street/Road Ronald Ngala Street	**City/Town :** NA
County : Uasin Gishu	**District** Eldoret East District
Tax Area Medi Heal	**Station** Eldoret
P. O. Box 45476	**Postal Code** 00100

Tax Obligation(s) Registration Details

Sr. No.	Tax Obligation(s)	Effective From Date	Effective Till	Status
1	Income Tax - Company	12/11/2019	N.A.	Active

The above PIN must appear on all your tax invoices and correspondences with Revenue Authority. Your accounting end month is June unless a change has been approved by the Commissioner-Domestic Taxes Department. The status of Tax Obligation(s) with 'Dormant' status will automatically change to 'Active' on date mentioned in "Effective Till Date" or any transaction done during the period. This certificate shall remain in force till further updated.

Disclaimer : This is a system generated certificate and does not require signature.

No. C. 109144

CERTIFICATE OF INCORPORATION

I hereby Certify, that—

SIOKWEI TARITA LIMITED.....

is this day Incorporated under the Companies Act (Cap. 486) and that the Company is LIMITED.

Given under my hand at Nairobi this EIGHTH day

of APRIL Two Thousand AND FOUR

Dy. Registrar of Companies

GPK 6249—60m—12/2003—IE/S(916)

KENYA REVENUE AUTHORITY

Taxpayer Registration Certificate

Document Number: 292739

General Data of the Taxpayer

Name	SIOKWEI TARITA LIMITED		
Taxpayer PIN	P051310828R	**TaxPayer Category**	DOMESTIC
Registration Date	Sep 10, 2009		
Activity	Rail transport		

Contact Information

District	TARAGWA (UASIN GISHU SOUTH)	**City/Town**	ELDORET
Street / Road	RONALD NGALA	**Building**	TARITA
Area Name	20	**LR Number**	BLOCK 9/162
P.O. Box	30100 - 2949		
Main Email Address	BARGORIAREBECCA@YAHOO.COM		

Tax Obligation	Obligation Register Date
INCOME TAX COMPANY (IT2C)	DEC 31, 2008
VAT TAX (VAT 3)	JUL 10, 2009

*This certificate is computer generated and therefore not signed. It is valid certificate issued under the authority of KRA.

REPUBLIC OF KENYA

THE REGISTERED LAND ACT
(Chapter 300)

Certificate of Lease

TITLE NO.	APPROXIMATE AREA
ELDORET MUNICIPALITY BLOCK 7/162	0.2852 HA

LESSOR GOVERNMENT OF KENYA

RENT SH.16,000/-

TERM 99 YEARS FROM 1.6.1985

This is to certify that SIOKWEI TARITA LIMITED

-

-

P.O. BOX 2949 ELDORET

is (are) now registered as the proprietor(s) of the leasehold interest above referred to, subject to the agreements and other matters contained in the registered lease, to the entries in the register relating to the lease and to such of the overriding interests set out in section 30 of the Registered Land Act as may for the time being subsist and affect the land comprised in the lease.

GIVEN under my hand and the seal of the

ELDORET District Registry

this 9TH day of MARCH, 2011

(To be completed only when the applicant has paid Sh. 125

At the date stated on the front hereof, the following entries appeared in the register relating to the land :—

EDITION: 1
OPENED: 19.7.1985

PART A—PROPERTY SECTION

REGISTRATION SECTION	PARTICULARS OF LEASE	NATURE OF TITLE
ELDORET MUNICIPALITY/ BLOCK 7	LESSOR: GOVERNMENT OF KENYA	LEASEHOLD
PARCEL NUMBER 162	LESSEE: BARNABAS TUITOEK BARGORIA	
APPROXIMATE AREA 0.2852 HECTARES	RENT: 16000/- TERM: 99 YRS FROM: 1.6.1985	
REGISTRY MAP SHEET No. BLOCK 7	FOR APPURTENANCES *SEE* THE REGISTERED LEASE. N.B. WHERE THE LEASE IS OF A PART OF A PARCEL, THE PARCEL NUMBER REFERS TO THE NUMBER SHOWN ON THE FILED PLAN	

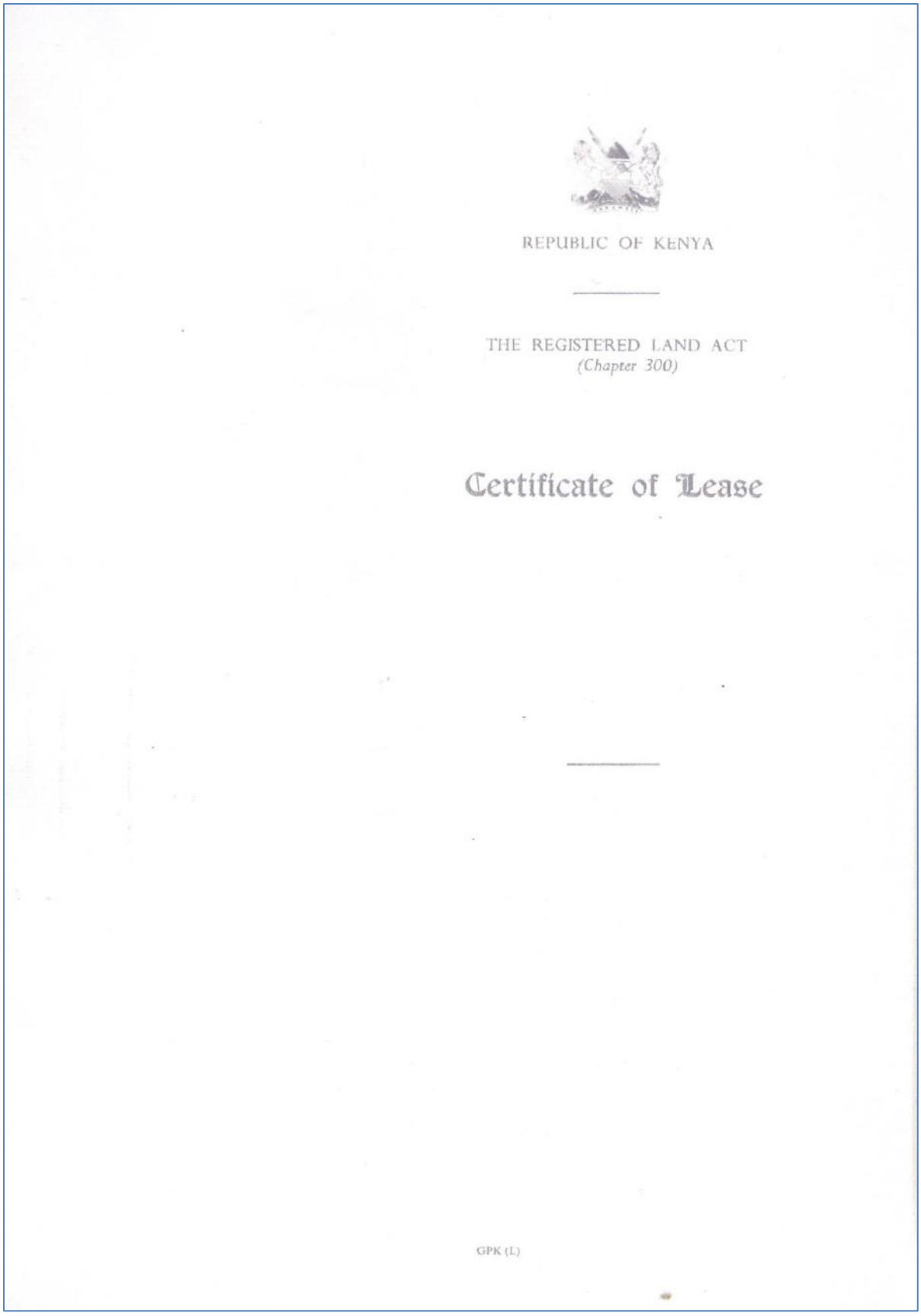
PART B—PROPRIETORSHIP SECTION

ENTRY NO.	DATE	NAME OF REGISTERED PROPRIETOR	ADDRESS AND DESCRIPTION OF REGISTERED PROPRIETOR	CONSIDERATIONS AND REMARKS	SIGNATURE OF REGISTRAR
		RESTRICTION: NO DISPOSITION BY THE PROPRIETOR SHALL BE REGISTERED WITHOUT THE WRITTEN CONSENT OF THE LESSOR (S. 48)			
3	9.3.11	SIOKWEI TARITA LIMITED	P.O. BOX 2949 ELDORET		
4	9.3.11	CERTIFICATE OF LEASE		ISSUED	

PART C—ENCUMBRANCES SECTION

ENTRY NO.	DATE	NATURE OF ENCUMBRANCE	FURTHER PARTICULARS	SIGNATURE OF REGISTRAR
3	9.3.11	Re-placement of Lease no. 2. above to Self Energy Limited for 54 yrs from 1/8/08 Rent: KES.250000. P.M.		

Land Registrar



REPUBLIC OF KENYA

THE REGISTERED LAND ACT
(Chapter 300)

Certificate of Lease

GPK (L)