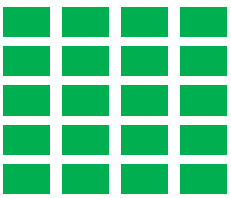
VOLUME I – ESIA REPORT

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT STUDY FOR THE PROPOSED CHANGAMWE MIXED USE DEVELOPMENT ON LR. NO. MN/VI/4836, MN/VI/3830 AND MN/VI/4106, IN MOMBASA COUNTY, KENYA

LAPTRUST
— Fulfilling Lives —

JULY 2024

Prepared by:



AWEMAC

CERTIFICATION

ESIA EXPERT

I, **Prof. Jacob K. Kibwage**, on behalf of Africa Waste and Environment Management Centre (AWEMAC), submit this **Environmental and Social Impact Assessment (ESIA) Study Report** for the proposed **Changamwe Mixed Use Development on LR. No. MN/VI/4836, MN/VI/3830 and MN/VI/4106,** in Changamwe Sub-County, Mombasa County, Kenya. To the best of my knowledge, all information contained in this Report is an accurate and truthful representation of all findings as relating to the proposed project as per project information provided by proponent.

Signed in Nairobi on this .....18th.....day of....July **..., 2024.**

Signature: ……

Africa Waste & Environment Management Centre (AWEMAC) P. O. Box 14365 - 80160 Nairobi

Designation: ***Lead ESIA Consultant, NEMA Firm Reg. No. 0527***

PROJECT PROPONENT

I, **.....**, on behalf of the Local Authorities Pension Trust (LAPTRUST), submit this **Environmental and Social Impact Assessment (ESIA) Study Report** for the proposed **Changamwe Mixed Use Development on LR. No. MN/VI/4836, MN/VI/3830 and MN/VI/4106,** in Changamwe Sub-County, Mombasa County, Kenya. To the best of my knowledge, all information contained in this **Environmental and Social Impact Assessment (ESIA) Study Report** is an accurate and truthful representation of all findings as relating to the proposed project.

Signed in Nairobi on this .....day of **....., 2024.**

Signature: .....

Designation: **.....**

LIST OF PLANNING AND CONTRIBUTING EXPERTS

NAME	ROLE
Prof. Jacob K. Kibwage, PhD **Lead Expert,** Reg. No. 0126	Project Lead ESIA and RAP Expert
Ms. Wilfridah Nyambeki **Lead Expert,** Reg No. 11543	Sociologist/ RAP Expert
Mr. Jeremiah Wahome **Lead Expert,** Reg No. 1795	Lead ESIA Expert
Mr. Daniel Sila **Associate Expert,** Reg No. 9649	Environmental Expert
Mr. John Omung'ala Aywa **Lead Expert,** Reg No. 2414 **Safety & Health Adviser,** Reg No. OSH\ADV 197	Occupational Health and Safety Expert
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NAME	ROLE
Dr. Justus Nderitu Maina, PhD	Land Valuer Technical Assistant
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ESIA Technical Assistants

NAME	QUALIFICATIONS
Ms. Lucille Kariuki	Bachelor of Arts in International Relations
Ms. Miriam Wambui	Bachelor of Business Management (Supplies and Procurement Management)

LIST OF ACRONYMS

ACC	Assistant County Commissioner
AEA	Annual Environmental Audit
ALARP	As low as reasonably practicable
AWEMAC	Africa Waste and Environment Management Centre
CBD	Central Business District
CPF	County Pension Fund Financial Services Limited
CC	County Commissioner
CSR	Corporate Social Responsibility
DCC	Deputy County Commissioner
DOSHS	Directorate of Occupational Safety and Health Services
EHS	Environmental Health and Safety
EIA	Environmental Impact Assessment
EMCA	Environmental Management and Coordination Act
EMS	Environmental Management System
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMP	Environmental and Social management Plan
FPIC	Free Prior and Informed Consultations
GBV	Gender-based Violence
GDP	Gross Domestic Product
GIS	Geographic Information System
GoK	Government of Kenya
GPS	Geographic Position System
GRM	Grievance Redress Mechanism
HASP	Health and Safety Plan
HCVs	Heavy Commercial Vehicles
HDI	Human Development Index
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HOSP	Home Ownership Savings Plan
ICT	Information, Communication and Technology
ILO	International Labour Organization
ISUDP	Integrated Strategic Urban Development Plan
ISWMS	Integrated Solid Waste Management System
KCAA	Kenya Civil Aviation Authority
KEBS	Kenya Bureau of Standards
KeNHA	Kenya National Highways Authority
KERRA	Kenya Rural Roads Authority

KESHP	Kenya Environmental Sanitation and Hygiene Policy
KURA	Kenya Urban Roads Authority
LAPTRUST	Local Authorities Pensions Trust
LN	Legal Notice
LR	Land Registration
MCA	Member of County Assembly
MEAs	Multilateral Environment Agreements
MOWASSCO	Mombasa Water Supply and Sanitation Company
MP	Member of Parliament
MSDS	Material Safety Data Sheet
MSME	Micro, Small and Medium Enterprise
MTP	Medium Term Plan
MUHURI	Muslim for Human Rights
NCA	National Construction Authority
NCCRS	National Climate Change Response Strategy
NEAP	National Environmental Action Plan
NECC	National Environment Complaints Committee
NEMA	National Environment Management Authority
NET	National Environment Tribunal
NG-CDF	National Government – Constituencies Development Fund
NGO	Non-Governmental Organization
NHC	National Housing Corporation
NLC	National Land Commission
No.	Number
NPGD	National Policy on Gender and Development
OCS	Officer Commanding Station
OSH	Occupational Safety and Health
OSHA	Occupational Safety and Health Act
PAHs	Project Affected Households
PAPs	Project Affected Persons
PIU	Project Implementation Unit
PLO	Project Liaison Officer
PLWDs	Persons Living with Disabilities
PPE	Personal Protective Equipment
RAP	Resettlement Action Plan
SDGs	Sustainable Development Goals
SEP	Stakeholder Engagement Plan
SGR	Standard Gauge Railway
STDs	Sexually Transmitted Diseases
TIA	Traffic Impact Assessment

ToR	Terms of Reference
TPS	Tenant Purchase Scheme
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value Added Tax
VCT	Voluntary Counselling and Testing
WIBA	Work Injuries Benefits Act
WRA	Water Resources Authority

List of Units

℃	Degree Celsius
dB (A)	A-weighted decibel
M	Metre
M^2	Square Metre

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EXECUTIVE SUMMARY

Introduction

CPF Financial Services Ltd, being the agents of the Local Authorities Pensions Trust (Laptrust) contracted Africa Waste and Environment Management Centre (AWEMAC) to offer Integrated Environmental & Social Impact Assessment (ESIA) consultancy services for the proposed Changamwe mixed use development project on LR. NO. MN/VI/4836, MN/VI/3830 and MN/VI/4106, in Mombasa, Kenya.

The Kenya Government policy on such projects, programmes or activities requires that an Environmental Impact Assessment (EIA) be 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 project.

In accordance with the second schedule (Legal Notice No. 31 of 2019) of the Environmental Management and Coordination Act (EMCA) Cap 387, the project falls under the **'Urban Development'** which is classified as a High-Risk Project. This is because the project will involve:

a) Establishment of shopping and commercial complexes.

b) Establishment of a new housing estate development, exceeding one hundred housing units; and

c) Establishment of a hotel.

Part VI, sections 58 and 59 of EMCA, Cap 387, provides that the proponent shall: before any 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 study report to the National Environment Management Authority, (NEMA), in the prescribed form, giving the prescribed information and which shall be accompanied by the prescribed fee. Further in section 58 (5), the Act states that the Environmental Impact Assessment (EIA) studies and reports required under the Act shall be conducted or prepared respectively by individual experts or a firm of experts authorized in that behalf by the Authority.

ESIA Methodology

The assessment was carried out at different levels including desk study to collect baseline information, onsite assessments/scoping to identify the extent of potential environmental impacts of the project, public consultation to identify the concerns of

the local community in the project site, data analysis and evaluation and the collation of the information gathered to prepare this ESIA report.

The main purpose of this ESIA was to ensure adequate identification of potentially negative environmental impacts of the proposed project, propose workable mitigation measures and formulate an environmental monitoring and management plan articulating anticipated impacts.

The scope of the assessment covered impacts directly or indirectly associated with the construction, operation and decommissioning activities of the proposed project, supply of construction materials and other accessories. The consultant used both conventional and participatory approaches in identifying the potential environmental and social impacts and mitigation measures for the proposed project. In pursuing the exercise in accordance with the Environmental (Impact Assessment and Audit) Regulations, 2003 (rev 2012) and (subsequent amendments 2016 & 2019). The consultant:

a) Identified the anticipated environmental impacts of the project and the scale of the impacts.

b) Identified and analysed alternatives to the proposed project.

c) Proposed mitigation measures to be taken during and after the implementation of the project; and

d) Developed an environmental and social management plan with mechanisms for monitoring and evaluating the compliance and environmental performance, which shall include the cost of mitigation measures and the time frame of implementing the measures.

The principal objective was to highlight the possible positive and negative environmental and social impacts expected during the establishment and operation of the proposed project, with the aim of proposing the possible mitigation measures. This is in line with ensuring that such a development does not negatively impact the environment in terms of the social, health, economic and physical (soil, water, plant and animals) state of the area. The study identified the possible environmental impacts during the implementation and operational phases of the project. The exercise was carried out in accordance with: National Environmental Management Authority (NEMA); and the Environmental (Impact Assessment and Audit) Regulations, 2003 and (Amendment) Regulations, 2019 .

The ESIA process was carried out using a combination of methods including physical examination; site assessments; literature reviews; public meetings and informal

interviews/questionnaires administration with stakeholders i.e. immediate neighbours. The key approach utilized included the following:

a) Environmental screening of the proposed project in line with EMCA Cap 387 and EIA/EA Regulations, we established that the residential development falls under High-Risk Projects (Urban development including establishment of new housing estate developments exceeding one hundred housing units).

b) A site reconnaissance and visual survey to determine the baseline information of the project area and development of the Terms of Reference for approval by NEMA, which was approved in January 2024.

c) Analysis of the project documents such as the architectural plans with the proponent and project team.

d) Assessment of occupational health and safety issues during the implementation of the proposed project.

e) Seeking public views through public meetings, direct Key Informant Interviews and administering of Household questionnaires.

f) Proposal of feasible mitigation measures to minimize anticipated negative impacts during the project cycle.

g) Preparation and submission of the ESIA Study report to NEMA.

Project Description

The Proposed development will sit on an approximately 7-acre site located in Changamwe ward along Mombasa Road, off Magongo-Mombasa Road, positioned approximately 5 km from the Moi International Airport and 6 km from Mombasa CBD, on coordinates 4° 1'38.26"S, 39°37'58.04"E.

The site offers a unique opportunity for mixed-use development that combines retail, hospitality, and residential components. The development site is strategically located, with two access roads connecting to significant establishments in the area. Its proximity to Mombasa CBD, the airport, and the Kenya Ports Authority enhances its attractiveness for a mixed-use project.

The project proponent proposes to establish a mixed-use development consisting of:

- Residential zone comprising of 5 apartment blocks (1, 2, & 3-bedroom units of various size and typology), parking silo, social hall and madrasa/ Day-care
- Commercial zone consisting of a strip mall
- Hospitality zone.

- Utilities including water and sewer systems; and
- Social support infrastructure.

NOTE: *The proponent will implement the residential components subject to market surveys that will be carried out/demand from the tenants and general public to buy or rent the residential units.*

Project Affected Persons (PAPs)

Currently, the proposed project site/project footprint consists of Nineteen (19) blocks which are occupied by LAPTRUST's tenants, while Three (3) blocks are vacant. The vacant blocks had been previously occupied by police officers who have since vacated the premises. Each apartment block has twelve (12) – one-bedroom units. The table below illustrates the total number of blocks and house units that currently occupy the project's footprint.

Table 0-1: Summary of units currently occupying the project's footprint

Category of blocks	Number of blocks	Number of house units per block	Total number of house units
Occupied by LAPTRUST's Tenants	19	12	228
Vacant blocks that were previously occupied by police officers	3	12	36
Total	**22**	**12**	**264**

The blocks/house units initially belonged to the County Government of Mombasa and allocated to the County Government staff but were later transferred to the scheme in lieu of debts of the County government. CPF has undertaken a survey and collected data on the Project Affected Persons (PAPs) who are currently occupying the property. Through the survey, it was noted that most of the occupants were not directly contracted by the county government thus conflicting the data records with the county government.

The Consultant undertook a detailed socio-economic assessment/baseline survey targeting all households/tenants within the New Changamwe Flats and those living within the KeNHA road reserve flats that were formerly in LAPTRUST's land but were acquired by KeNHA during the Nairobi-Mombasa Highway (A109) road expansion.

While the primary focus of the census/socio-economic survey was centered on the households/tenants within New Changamwe Flats, efforts were made to also include PAPs residing in the KeNHA road reserve flats to ensure a holistic understanding of the project affected households. In total, there are 264 occupied households in the

area (228 households in New Changamwe Flats, which are owned by LAPTRUST and 36 households within the KeNHA road reserve, which are owned by KeNHA).

A total of 247 (94%) households were interviewed out of the total number of 264 occupied house units in the area. This was mainly attributed to the fact that some of the PAPs were not available during the period of enumeration despite efforts to reach all the targeted PAPs, including scheduling multiple enumeration sessions and utilizing PAPs/community outreach channels. Out of the 247 households interviewed, 216 (79%) were from the units owned by LAPTRUST and 31 (13%) were from the units owned by KeNHA.

There was a diverse mix of age groups, including families with children and elderly individuals. Majority (32%) of the PAPs were in the age group of (40-49). Only 7% reported to be 70 years and above.

In terms of gender, 129 of all tenants interviewed were male and 118 were female, indicating a slightly higher representation of males. In terms of size of the households and total number of PAPs in New Changamwe Flats, a total of 1152 PAPs were recorded from the respondents who were interviewed.

Majority (98%) of the respondents responded as paying house rent directly to LAPTRUST while 2% confirmed being sub-tenants. This however contradicts the report register collected by LAPTRUST that had more occupants being sub-tenants.

The income of the respondents varied from household to household due to different socio-economic activities that respondents engaged in. Some of the tenants had established small-scale businesses in informal structures (‘*Vibanda’*) within the premise such as retail shops, food kiosks/ hotels, video cinema, salon etc. Some of the tenants also practiced small scale farming within the compound.

Resettlement Action Plan (RAP)

The RAP study process identified, enumerated and assessed all the residents and informal assets within the New Changamwe Estate. The relationship between the residents living in New Changamwe Flats and LAPTRUST is that of Tenants and Landlord, as guided by the Landlord and Tenant Act Cap 301, thus the manner by which the tenants will vacate the premises will be as per the provisions of this Act, i.e. an adequate notice of vacation in the prescribed form, of at least 90 days will be issued to the New Changamwe Estate tenants and structure/business/tree(s) owners, and will be required to move out of the premises by the end of November 2024.

Additionally, LAPTRUST’s tenants who had modified their house units as well as PAPs who owned informal assets within the New Changamwe Estate will be given an opportunity to demolish their structures on their own and salvage them for materials

that can be re-used. This will be carried out in line with the provisions of the Eviction and Resettlement Guidelines, 2009.

The structure/business/tree(s) owners are not entitled to any form of reimbursement for the informal assets, as the structures and trees were put up/planted illegally without any consent from the property owner (LAPTRUST) and are therefore not tenants of LAPTRUST. However, the proponent/landlord, guided by all applicable guidelines and regulations, will at their sole and unfettered discretion, decide on the form of assistance that will be offered to LAPTRUST's tenants as well as the informal structure/business/tree(s) owners that will be affected by the proposed project. Further, consideration for provision of any form of assistance to the KeNHA road reserve flats' tenants will also be at the proponent's discretion, as they don't pay rent to LAPTRUST and they reside outside the project's footprint

Consultation and Public Participation

Consultation and Public Participation was undertaken during the ESIA study. The process involved; (a)Public meetings, (b)Public participation interviews, (c)Key Informant Consultation, (c)Key Stakeholders' meeting, and (d)Household Socio-economic survey

A total of 142 questionnaires were administered in the months of February and March 2024.to the local community and other key stakeholders. Key informant interviews were held in the months of December 2023 and January 2024 with stakeholders from the Mombasa County and area Political leadership.

A key stakeholders meeting took place at the Marina English Point Hotel and Spa on Thursday 22nd February 2024. The meeting had 48 participants with 33(69%) being male and 15(31%) being female.

A public meeting was held on 24th February 2024 at the Changamwe New Flats Compound. The meeting was attended by both PAPs and the community neighbouring the project site. The meeting had 212 participants with 100(47%) being male and 112(53%) being female. The Consultant undertook a detailed socio-economic and cultural assessment/baseline survey targeting all the 264 occupied households in the New Changamwe Estate and those in the KENHA road reserve flats, which housed the potentially affected population.

Stakeholder comments and concerns revolved around the following Key issues:

I. Project Design & Urban Planning Considerations;
II. Social Considerations;
III. Assistance for PAPs when moving out of the estate;

IV. Reimbursement for repairs and renovations undertaken by PAPs in the current houses;
V. Project Phasing Alternatives;
VI. Time frame for vacating the estate;
VII. Fate of former tenants residing in the blocks acquired by KeNHA;
VIII. PAPs Committee;
IX. Employment opportunities for locals;
X. Economic opportunities for locals;
XI. Corporate Social Responsibility (CSR) initiatives;
XII. Existing water and sanitation infrastructure;
XIII. Existing transport infrastructure;
XIV. Ongoing Litigation ;
XV. Aviation Security and Safety Concerns;
XVI. Waste management; and
XVII. Historical land issues.

These issues have been expounded in Chapter 7 of this ESIA Report.

Key Impacts and Mitigation Measures

The potential negative environmental impacts of the proposed project and possible mitigation measures are summarized below:

Table 0-2: Summary of potential negative impacts and mitigation measures

Potential Negative Impact	Proposed mitigation measures
Construction Phase	
PAPs moving out of the estate	▪ At the proponent's discretion, consider providing some form of support to Project Affected Persons (PAPs), to assist them during the process of moving out of the premises. ▪ Consider the school calendar when issuing notices to the PAPs to move out. ▪ Give PAPs a notice of at least 90 days to move out of the estate. ▪ Share project related information through the PAPs Committee. ▪ Implement a robust Resettlement Action Plan (RAP). ▪ Implement a robust Grievance Redress Mechanism (GRM).
Vegetation clearing	▪ Landscape and plant vegetation in all open areas after the completion of the project. ▪ Restriction of construction activities to defined project areas. ▪ Provide drainage channels to minimize erosion. ▪ Soil conservation measures should be adopted at the stockpiles to prevent erosion.
Increased Noise and vibration generation	▪ Serviceable machines should be used for excavation to ensure vibrations are kept at below risk levels. ▪ The contractor should deploy compact machinery and fit them with mufflers and vibration dampers. ▪ Install portable barriers to shield compressors and other small stationary equipment where necessary. ▪ The contractor should endeavour to comply with the provisions of the Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009.
Increased Solid Waste Generation	▪ Efficient use of building material to reduce waste and recycling/reuse where feasible; ▪ Engage the services of registered waste handlers to collect and transport waste to designated disposal sites; ▪ Use of an Integrated Solid Waste Management System (ISWMS); through a hierarchy of options including source reduction, recycling, composting and reuse; ▪ Manage all waste in line with the requirements of Environmental Management and Co-ordination (Waste Management) Regulations, 2006
Air Pollution, Particles and Dust Emission	▪ Minimize the period for idling of machinery and construction vehicles. ▪ Regular and prompt maintenance of construction machinery and equipment to minimize generation of hazardous gases. ▪ Regular sprinkling of water on work areas to prevent fugitive dust violations. ▪ Use of dust nets/screens around the construction site to contain and arrest dust. ▪ Monitor the air pollution levels regularly as per the provisions of the Environmental Management and Coordination (Air Quality) Regulations, 2014.
Occupational Health and Safety risks	▪ Training of workers on construction safety including but not limited to; work at heights, ergonomics, chemical safety, occupational first aid, fire safety, machine safety, transport safety, use of high-visibility safety apparel and emergency management.

Potential Negative Impact	Proposed mitigation measures
	▪ Provide appropriate PPEs to workers. ▪ Keep well-stocked first aid kits of the prescribed standards. ▪ Comply with the provisions of Occupational Safety and Health Act, 2007.
Traffic Congestion and Accidents	▪ Heavy Commercial Vehicles (HCVs) delivering construction materials should observe designated speed limits for the area. ▪ Proper signage and warnings should be placed at appropriate places along the site road to forewarn other motorists ▪ All materials should be offloaded on the site and adequate space for that should be provided. ▪ Flagmen/traffic marshals should be deployed at the entrance to guide traffic.
Operation Phase	
Solid Waste generation	▪ Use of an integrated solid waste management system (i.e. through a hierarchy of options: Reduce, Reuse, Recycling and Dispose) is recommended. ▪ Transportation of wastes from the development to be done by a NEMA registered solid waste handler. ▪ Manage all waste in line with the requirements of Environmental Management and Co-ordination (Waste Management) Regulations, 2006.
Wastewater Generation	▪ Channel all wastewater to MOWASSCO sewer system. ▪ Regular inspection and maintenance of internal sewer system. ▪ Constant monitoring of water resources through regular sampling and testing.
Increased pressure on existing infrastructure	▪ Liaise closely with other development partners and Government/Council Departments, to upgrade the existing shared facilities including roads, water distribution systems etc. ▪ Explore alternative means which are environmentally sound like employing Green Energy Technologies when and where applicable.
Decommissioning Phase	
Solid Waste generation	▪ Manage all waste in line with the requirements of the Environmental Management and Co-ordination (Waste Management) Regulations, 2006.
Air pollution	▪ Install dust trappers around the site to prevent dust from spreading in the neighbourhood. ▪ Sprinkle dusty areas with water to keep the dust level low. ▪ Trucks involved in demolition and transportation activities of soil and other solid materials from the site should be covered to prevent spreading of dust into the surrounding areas.
Noise and Vibration	▪ Workers should be provided with appropriate Personal Protective Equipment (PPE).
Occupational Safety and Health Risks	▪ Establish a Health and Safety Plan (HASP) for the demolition works. ▪ Appoint a trained health and safety team during the decommissioning phase. ▪ Provide workers with adequate drinking water and breaks. ▪ Train workers on safety procedures and emergency response. ▪ Comply with the provisions of Occupational Safety and Health Act, 2007.

Conclusion and Recommendation

In conclusion, this Environmental and Social Impact Assessment (ESIA) Study report has been prepared to provide sufficient and relevant information on the proposed mixed-use development in Changamwe, Mombasa County, to enable the Authority-NEMA to establish the sustainability and compliance of the project and whether activities of the project are likely to have significant or adverse environmental or social impacts. Mitigation measures have been proposed for the identified impacts in this report and an ESMP for the implementation of the proposed measures presented. The ESMP presented in this report is a tool to be used by the project team and contractor during the entire life cycle of the project. From the foregoing analysis, the social and economic rating for this project is highly positive. Evaluation of alternatives has already shown that options are limited and costly. Already the proponent has sunk a substantial amount of money in the project up to the design stage.

Based on the findings of this study, the ESIA study team concludes that the project and subsequent operational activities will generate significant socioeconomic benefits to the public, the proponent, local government and the nation at large. This study has also established a number of negative environmental consequences that the project activities are likely to induce if mitigation measures are not implemented.

The proponent of the proposed project shall be committed to putting in place several measures to mitigate the negative environmental, safety, health and social impacts associated with the life cycle of the project. It is our recommendation therefore, that the project be allowed to go on, provided the mitigation measures outlined in the Environmental and Social Management and Monitoring Plan are adhered to and the developer adheres to the conditions of approval of the project, both by the County Government of Mombasa and NEMA.

1 INTRODUCTION

1.1 Background Information

CPF Financial Services Ltd, being the agents of the Local Authorities Pensions Trust (Laptrust) contracted Africa Waste and Environment Management Centre (AWEMAC) to offer Integrated Environmental & Social Impact Assessment (ESIA) consultancy services for the proposed Changamwe mixed use development project on LR. NO. MN/VI/4836, MN/VI/3830 and MN/VI/4106, Mombasa, Kenya.

The Proposed development will sit on an approximately 7-acre site located in Changamwe ward along Mombasa Road, off Magongo-Mombasa Road, positioned approximately 5 km from the Moi International Airport and 6 km from Mombasa CBD.

The site offers a unique opportunity for mixed-use development that combines retail, hospitality, and residential components. The development site is strategically located, with two access roads connecting to significant establishments in the area. Its proximity to Mombasa CBD, the airport, and the Kenya Ports Authority enhances its attractiveness for a mixed-use project.

The project proponent proposes to establish a mixed-use development consisting of:

- Residential zone comprising of 5 apartment blocks (1, 2, & 3-bedroom units of various size and typology), parking silo, social hall and madrasa/ Day-care;
- Commercial zone consisting of a strip mall;
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1.2 Rationale for comprehensive ESIA

The Kenya Government policy on such projects, programmes or activities requires that an Environmental Impact Assessment (EIA) be 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 project.

In accordance with the second schedule (Legal Notice No. 31 of 2019) of the Environmental Management and Coordination Act (EMCA) Cap 387, the project falls under the **'Urban Development'** which is classified as a High-Risk Project. This is because the project will involve:

a) Establishment of shopping and commercial complexes;
b) Establishment of a new housing estate development, exceeding one hundred housing units; and
c) Establishment of a hotel.

Part VI, sections 58 and 59 of EMCA, Cap 387, provides that the proponent shall: before any 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 study report to the National Environment Management Authority, (NEMA), in the prescribed form, giving the prescribed information and which shall be accompanied by the prescribed fee. Further in section 58 (5), the Act states that the Environmental Impact Assessment (EIA) studies and reports required under the Act shall be conducted or prepared respectively by individual experts or a firm of experts authorized in that behalf by the Authority.

1.3 Scope, Approach, and Criteria of the Integrated Environmental Impact Assessment

The "Integrated Environmental Assessment," which is a more holistic approach to the evaluation of the proposed project, was used to undertake a comprehensive study for the project. It entailed the following:

- ***Environmental Impact Assessment***: This involved an examination, analysis, and assessment of planned activities with a view of ensuring environmentally sound and sustainable development. It is the evaluation of a project's potential environmental risks and impacts in its area of influence; examination of project alternatives; identification of ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation.
- ***Social Impact Assessment***: This entailed analysing, monitoring, and managing the intended and unintended social consequences, both positive and negative, of the projects and any social change processes invoked by the proposed project.

The scope of the assessment covered impacts directly or indirectly associated with the construction, operation and decommissioning activities of the proposed project, supply of construction materials and other accessories. The consultant used both conventional and participatory approaches in identifying the potential environmental and social impacts and mitigation measures for the proposed project. In pursuing the exercise in accordance with the Environmental (Impact Assessment and Audit) Regulations, 2003 (rev 2012) and (subsequent amendments 2016 & 2019), the consultant:

a) Identified the anticipated environmental impacts of the project and the scale of the impacts;

b) Identified and analysed alternatives to the proposed project;

c) Proposed mitigation measures to be taken during and after the implementation of the project; and

d) Developed an environmental and social management plan with mechanisms for monitoring and evaluating the compliance and environmental performance, which shall include the cost of mitigation measures and the time frame of implementing the measures.

The objective of this work was to deliver a Comprehensive Environmental and Social Impact Assessment study report for the purposes of applying for an EIA License.

1.4 Objectives

The principal objective is to highlight the possible positive and negative environmental and social impacts expected during the establishment and operation of the proposed project, with the aim of proposing the possible mitigation measures.

This is in line with ensuring that such a development does not negatively impact the environment in terms of the social, health, economic and physical (soil, water, plant and animals) state of the area. The study identified the possible environmental impacts during the implementation and operational phases of the project. The exercise was carried out in accordance with: National Environmental Management Authority (NEMA); and the Environmental (Impact Assessment and Audit) Regulations, 2003 and (Amendment) Regulations, 2019.

1.5 Justification for the Project

Mombasa County is entirely urban according to the 2019 census. It is projected to have a population of 1,367,714 in 2025 and 1,422,440 in 2027. The population can be attributed to the fact that Mombasa is an industrial city, a port city and a major gateway to the East and Central African region. As a result, many people come into the city in pursuit of employment opportunities, education and investment opportunities. This implies more pressure on infrastructure, housing, transport and other social services, hence there is need to invest in these sectors as well as expand economic activity to create more jobs for the rapidly increasing population.

Changamwe subcounty is an important industrial and residential area within Mombasa County. Most residents live in very congested close quarters and old government, municipal or parastatal housing as well as additions that have been done to cater for growing families.

Laptrust has an underutilized approximately 7-acre parcel of land located in the Changamwe New Flats Estate in Changamwe ward along the Nairobi-Mombasa Road, off Magongo-Mombasa Road approximately 5 km from the Airport and 6 km from Mombasa CBD. The proponent envisages a mixed-use development that will combine retail, hospitality, and residential components.

1.6 Purpose and Terms of Reference

The purpose and terms of reference developed for this project were to assess the impacts that may arise during the construction, operational and decommissioning phase of the proposed project. The consultants, on behalf of the proponent conducted the study by committing themselves to the comprehensive study report standard terms of reference which requires that the report shall specify: -

i. The nature of the project.
ii. The location of the project including proof of land ownership, the Global Positioning System coordinates and the physical area that may be affected by the project activities.
iii. The activities that shall be undertaken during the project construction, operation, and decommissioning phases.

iv. A description of the International, National and County environmental legislative and regulatory frameworks on the environmental and socioeconomic matters.
v. Preliminary design of the project.
vi. The materials to be used, products and by-products, including waste to be generated by the project and the methods of their disposal.
vii. The potential environmental impacts of the project and the mitigation measures to be taken during and after implementation of the project.
viii. An analysis of available alternatives including an alternative project site, design, technologies, and processes; and the reasons for preserving the proposed site design, technologies and processes.
ix. An action plan for the prevention and management of possible accidents during the project cycle.
x. A plan to ensure the health and safety of the workers and neighbouring communities.
xi. The economic and socio-cultural impacts to the local community and the nation in general.
xii. A plan to ensure the relocation or resettlement of persons affected by the project.
xiii. Strategic communication plan to ensure inclusive participation during the study and provide a summary of issues discussed at the public participation forum.
xiv. An environmental management plans.
xv. Integration of climate change vulnerability assessment, relevant adaptation, and mitigation actions.
xvi. The Project cost.
xvii. Any other information the Authority may require.

2 ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT METHODOLOGY

Given the scale of the proposed project, a full Environmental and Social Impact Assessment (ESIA) study was undertaken to ensure comprehensiveness and completeness of the assessment. The study was conducted as guided by the Environmental Management and Coordination Act Cap 387 and the Environmental Impact Assessment/ Audit Regulations of 2003.

The general steps that were followed during the assessment included:

- Environmental screening, in which the project was identified as a high-risk project requiring Environmental Impact Assessment study under Amendment of the Second Schedule of EMCA 1999 *and the,* Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019
- Environmental scoping, that provided the key environmental issues, desktop studies, biodiversity studies and interviews.
- Physical inspection of the proposed project site and surrounding areas, Observations and Application of Geographic Information System (GIS).
- ESIA Public participation and stakeholder consultation via the use of public meetings, key stakeholders meeting, household interviews, questionnaires, and focus group discussions.
- Data analysis; and
- Report preparation.

The environmental assessment aimed at examining, analysing, and assessing the proposed project activities with a view to ensuring environmentally sound and sustainable development systems.

2.1 Environmental Screening

A screening exercise was conducted in the month of November 2023 to determine whether an Environmental and Social Impact Assessment (ESIA) would be required and what level of assessment was necessary. This was done in line with the requirements of the Environmental Management and Coordination Act (EMCA) Cap 387 and the Environmental (Impact Assessment and Audit) Regulations, 2003 and (Amendment) Regulations, 2019 (L.N No. 32 of 2019).

The screening exercise identified that the proposed project is listed in the amended Second Schedule of EMCA 1999 (L.N No. 31 of 2019), and the Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019 as a project for which an Integrated Environmental and Social Impact Assessment study report is required.

2.2 Environmental Scoping

The scoping exercise was carried out during the months of November and December 2023, where key issues identified during screening were further investigated through desktop analysis, field data collection and key stakeholders' engagement to ascertain whether additional information was needed to evaluate baseline conditions and potential impacts within the proposed project area. The desktop evaluation included reviewing applicable environmental and social data collected from external sources with published information. In addition to desktop review, primary data was collected through field studies conducted by the Consultant. The key objectives for the Scoping phase were: -

- To identify stakeholders and inform them of the proposed project and the ESIA process.
- To provide stakeholders with the opportunity to identify any issues and concerns associated with the proposed project; and equally propose potential interventions to the issues raised for consideration in the ESIA process.
- To identify environmental and social issues that may require further investigation at the study level.
- To determine the final Terms of Reference (ToR) for the specialist's baseline and impact assessment studies in response to initial stakeholder input.

The scoping exercise established the need for an ESIA study because of: the nature of the project; its classification by the regulating authorities in Kenya; and the complexity of social issues that required further assessment. The outputs of the scoping exercise were the project's Scoping Report and Terms of Reference (ToR).

2.3 Data Collection Procedures

The Environmental Management and Co-ordination Act No. 8 of 1999, (CAP 387) stipulates that an integrated ESIA study shall be conducted in accordance with the general ESIA guidelines and administrative procedures issued by the National Environment Management Authority ("NEMA" or "the Authority"). The Authority therefore oversees all aspects of Environmental and Social Impact Assessments (ESIA).

It is worth noting that there are multiple methods to meet the necessary requirements for an ESIA and hence our objective was to select an array of methods that could collectively meet the assessment's needs. It is therefore for this reason that AWEMAC undertook environmental screening and scoping to identify the key issues and data requirements.

The full ESIA Study was carried out based on the NEMA approved ESIA Terms of Reference, in compliance with the Government of Kenya's Environment Management

and Coordination Act Cap 387 and the Environmental (Impact Assessment and Audit) Regulations 2003 and its amendment of 2019.

The process of conducting the ESIA Study involved the following methods:

- Questionnaires;
- ESIA Scoping Checklists;
- Field visits, observations, and measurements;
- Field sampling and analysis;
- GIS/ GPS Technologies; and
- Public consultations/ participation meetings.

2.4 Description of the Proposed Project

To provide a comprehensive description of the proposed project, the consultant relied mainly on the review of available literature in regard to the project. Additionally, the consultant reviewed the preliminary designs as provided by the proponent.

2.5 Description of the Environmental and Socio-economic Condition of the Project Area

The consultant sought to provide a clear description of the proposed project including its area of influence and provide baseline information on the existing environmental and the socio-economic situation. The Consultant undertook baseline surveys aiming to provide a measure of existing environment and the socioeconomic situation against which future changes due to the project can be monitored. This entailed conducting detailed environmental assessment and carrying out preliminary social surveys.

The Consultant collected, evaluated, and presented baseline data and information on the relevant environmental characteristics of the present environment, determined from actual site visits, site specific and regional baseline studies in physical, biological, and socioeconomic domains. Collection of baseline data was designed to satisfy information requirements and focused on relevant aspects that were likely to be affected by the proposed project.

2.5.1 Desktop Study

The following key documents were reviewed: -

- Preliminary Project Designs;
- Applicable Multilateral Environment Agreements (MEAs); and
- Applicable legislation and policies in Kenya.

2.5.2 Estate Visits

Estate visits were conducted with the key objective being to sensitize and to create awareness about the proposed project. The visits targeted the residents of the New Changamwe Housing Estate.

2.5.3 Project Site Assessment

Transect walks within the project area were undertaken to collect baseline information for the project area. Observations were made regarding the following:

- Flora;
- Fauna;
- Faith Based Organizations;
- Schools;
- Houses and Structures; and
- Existing Social Infrastructure.

2.5.4 Household Socio-economic Survey

With the help of youth field assistants, who were also project affected persons living in the New Changamwe flats, a systematic door to door walk was undertaken targeting all households/tenants within New Changamwe Flats (228) and those living within the KeNHA road reserve flats (36) that were formerly in LAPTRUST's land but had been acquired by KeNHA during the Nairobi-Mombasa Highway (A109) road expansion. While the primary focus of the census/socio-economic survey was centered on the households/tenants within New Changamwe Flats, efforts were made to also include PAPs residing in the KeNHA road reserve flats to ensure a holistic understanding of the project affected households. This took place in the months of February and March 2024.

Where PAPs were not present, their contacts were obtained from neighbours, the tenants' representative(s) or LAPTRUST's Project Liaison Officer, and were later contacted via mobile calls. The enumerator's and consultant's telephone contacts were also left with the neighbours and chief, to give to the absentee PAPs when they returned home. In some cases, the field assistants made second attempts to interview the PAPs who were initially absent.

The questionnaire generated quantitative information on various aspects of social life in the area. It captured information, particularly: administrative location, household characteristics, sources of livelihood, types of housing and ownership, economic activities, religion, sanitation, education, priorities among others. Details of the results of the socioeconomic survey have been provided in section 4.10 of this ESIA Report.

2.6 Policy, Legislative, Regulatory and Administrative Framework

The Consultant identified the pertinent policy, regulations and standards - both local and international- governing the environmental quality, health and safety, protection of sensitive areas, protection of endangered species, land use control at the national and local levels and ecological and socioeconomic issues. The examination of the legislation included the relevant international conventions to which the Kenyan Government is a signatory. The consultant assessed the relevant government agencies involved in environmental and social management issues, to ensure that the Environmental and Social Management Plan (ESMP), will be effectively implemented. The consultant described how the identified legislations and policies constrain or support the project designs and implementation.

2.7 Stakeholder Engagement and Public Participation

The Consultant carried out stakeholder analysis and prepared a participation plan for the inclusion and consultation with all identified key stakeholders throughout the ESIA process. Gender, different age groups and people with disability were put into consideration during stakeholder identification.

Questionnaires were administered within the project area to ensure adequate public participation and community/stakeholder involvement in the ESIA process. The information gathered was essential in drafting of the baseline information and determination of potential project impacts and mitigation measures. Additionally, key stakeholder engagements and a public meeting were convened. This was done to incorporate the concerns and views of all stakeholders and individuals in the project area.

Prior to scheduling of the above public engagement meeting, the ESIA Consultant made courtesy calls to local area administration leaders for purpose of planning of the meeting. The leaders gave advice on the best date and venue to convene the meeting. The venue selection was based on the ease of site accessibility, population, and renown venues. The participants at the ESIA meeting were briefly sensitized about the RAP procedures and encouraged to attend the scheduled Resettlement Action Plan (RAP) meetings for detailed information.

A comprehensive Stakeholder Engagement Plan (SEP) was prepared and used during the study period and has been discussed in the sub-sections below.

2.7.1 Objectives of the Stakeholder Engagement Plan (SEP)

The main objective of the SEP was to provide the procedures that should be followed during the engagement with different stakeholders during the ESIA and RAP studies, and project implementation to ensure the active involvement and participation of Project Affected Persons (PAPs).

2.7.2 Stakeholder Mapping and Identification

In order to ensure inclusive participation and consultation, various stakeholders were identified as per the table below.

Table 2-1: Stakeholder Mapping Matrix

Stakeholder Categories	Stakeholder Group	Influence Level	Stakeholders
Project Proponent	Main Project Promoters	High	▪ LAPTRUST (CPF Financial Services Ltd)
Government Institutions and Sub-County Security team	National/political/County/ Regional/Local Government	High	▪ Senator- Mombasa ▪ County Commissioner (CC) ▪ County Executive Committee Lands, Housing and Urban Planning ▪ County Director of City Planning ▪ Area Member of Parliament (MP) ▪ Area Member of County Assembly (MCA) ▪ Deputy County Commissioner (DCC) ▪ Assistant County Commissioner (ACC) ▪ County Police Administration ▪ Sub-county Police Administration ▪ Area Chief ▪ National Housing Corporation (NHC) ▪ National Land Commission (NLC) ▪ Kenya Rural Roads Authority (KERRA) ▪ Kenya Power and Lighting Company (KPLC) ▪ Mombasa Water Supply and Sanitation Company (MOWASSCO)
Affected parties/ Project Affects Persons (PAPs)	Local Communities	Low	▪ Representatives of tenants in New Changamwe Estate / Nyumba Kumi ▪ Tenants (Original tenants and sub-tenants) ▪ Traders ▪ Security company ▪ Bethsaida Fellowship Worship Centre ▪ Changamwe Baptist Church ▪ Voice of Salvation Church ▪ Masjidul Eitisam Mosque ▪ Mizizi Youth Organization ▪ Special Squatters

Stakeholder Categories	Stakeholder Group	Influence Level	Stakeholders
Non-governmental Organizations (NGOs)/ Civil Society	Other Interested Groups	Low	▪ Haki Yetu Organization ▪ Muslim for Human Rights (MUHURI)

2.7.3 Participation Plan

To realize an effective and cost-efficient stakeholder consultation, the consultant followed a participation plan as presented in the table below.

Table 2-2: Participation Plan

Stakeholder Group	Benefits of Consultation	Engagement Strategy	Communication Approach	Information Type
Main Project Promoter	▪ Provide technical information on the project description and designs, costs, project development cycle including intended benefits ▪ Improve mitigation and monitoring plans and implementation by generating sense of ownership and accountability in the community	▪ One-on-one interview ▪ Invitation to public and Key Stakeholder Meetings	▪ Invitation Letters ▪ Emails ▪ Phone calls	▪ Legal/ Regulatory/ Standards Compliance ▪ Project Scope, ESIA and RAP process and SEP activities ▪ Summary of environmental and social issues investigations ▪ Conflict resolution and grievance mechanism process
National/ County/Local Government Institutions	▪ Provide technical/expert opinion on the proposed project ▪ Provide information on project design and alternatives ▪ Provide creative solutions not considered by an implementing entity ▪ Identify any improvement needed in the design of the proposed project ▪ Provide advice on legal requirements associated with the proposed project ▪ Identification of impact and mitigation measures	▪ One-on-one interview ▪ Invitation to Key Stakeholder Meetings	▪ Invitation Letters ▪ Emails ▪ Phone calls	▪ Legal/ Regulatory/ Standards Compliance ▪ Project Scope, ESIA and RAP process ▪ Summary of environmental and social issues investigations ▪ Published reports (ESMP/ESIA/RAP/SEP) ▪ Grievance Mechanism Process
Interest Groups	▪ Key opinion shapers among the community ▪ Exercise and protect rights	▪ Invitation to public and key stakeholder meetings	▪ Invitation Letters ▪ Emails ▪ Phone calls	▪ Legal/ Regulatory/ Standards Compliance ▪ Project Scope, ESIA and RAP process

Stakeholder Group	Benefits of Consultation	Engagement Strategy	Communication Approach	Information Type
	▪ Play major role in community sensitization and awareness among the local communities ▪ Identification of potential impacts and mitigation measures ▪ Provide information on gender and vulnerable groups concerns ▪ Build capacity and knowledge base			▪ Summary of environmental and social issues investigations ▪ ESMP/ESIA/SEP/RAP disclosures ▪ Grievance Mechanism Process
Project Affected Persons (PAPs)	▪ Offer knowledge and information about local environmental issues, conditions, or concerns ▪ Provide input in the design of environmental mitigation and monitoring plans, and in the actual monitoring of projects to ensure that mitigation takes place as intended. ▪ Understanding land use systems and rights by various users ▪ Reduce potential for conflict ▪ Access to a broader range of perspectives and opinions ▪ Improve transparency of project and project outcomes ▪ Identification of potential impacts and mitigation measures	▪ Invitation to participate in meetings ▪ Socioeconomic surveys ▪ Household visits	▪ Structured Questionnaires ▪ Open-ended Questionnaires ▪ Phone calls ▪ Emails ▪ Public Notices	▪ Project Scope, ESIA and RAP process ▪ Summary of environmental and social issues investigations ▪ ESMP/ESIA/SEP/RAP disclosures ▪ Facilitation rates and methodology ▪ Conflict Resolution Process ▪ Grievance Mechanism Process

2.7.4 Stakeholder Engagement Programme

Ongoing engagement with stakeholders ensures that stakeholders receive regular updates on project activities and the management of social and environmental impacts. Ongoing engagement should include information disclosure by LAPTRUST/CPF, prior to any significant project activities throughout the project cycle. Provision of clear and accurate project information contributes to building trust and managing stakeholders' expectations.

2.7.5 Stakeholder Engagement Methods

This section outlines the methods that were used to engage the stakeholders. LAPTRUST/CPF is committed to a participatory approach when engaging the stakeholders at various phases of the project.

2.7.5.1 Information Disclosure

To ensure information about the proposed Changamwe Mixed Use Development Project is accessible to all stakeholders, information was or will be disclosed in a variety of ways as shown in the table below.

Swahili and English have been identified as the main languages for stakeholder consultations and communication materials as most people within the proposed project area spoke Swahili and English.

Table 2-3: Information Disclosure Methods

Information to be Disclosed	Method
Relevant information on the Project	▪ Presentations ▪ Posters ▪ Information disclosure to the locals and project affected community was undertaken in an accessible location, using culturally appropriate formats and accessible engagement techniques such as public meeting, considering any disability, mobility, and literacy challenges.
Project documents including ESIA report etc	▪ Through public consultation/ meeting ▪ Copies of the ESIA report and other relevant documents will be made available in hard copies at LAPTRUST/CPF and NEMA offices. ▪ Electronic versions of the approved ESIA report and other relevant documents will be uploaded in official LAPTRUST/CPF Website. ▪ Information disclosure was undertaken in an accessible location using culturally appropriate formats and accessible engagement techniques such public meeting, considering disability, mobility and literacy challenges.
Announcement of project activities and milestones	▪ Public meeting to notify and explain to stakeholders upcoming works ▪ Posters ▪ Meetings with relevant local authorities ▪ Dissemination of project information through community representatives
Date, Time, Venue and Purpose of Upcoming meetings	▪ Meeting invitations were sent at least one week prior to the meetings ▪ The local authorities were informed in advance before any meetings were undertaken ▪ Meeting minutes and attendee list following each meeting.

2.7.5.2 Informed Consultation and Participation

A process of free, prior informed consultation and participation was undertaken with those stakeholders identified who have a high level of influence on the project or those who will be significantly impacted by the project. This process went beyond simple information disclosure and ensured that stakeholders' input was considered in the project's decision-making process and a regular two-way feedback was given between Laptrust/CPF and other stakeholders. Some of the methods that were used as part of the informed consultation and participation process are illustrated in the table below.

Table 2-4: Methods of Informed Consultation and Participation Process

Method	Description	Targeted Stakeholder	Phase
Public Meetings	Forum for providing project information and hosting question and answer session with a large audience. Meeting was held at a community venue which was easily accessed by all project stakeholders and at a convenient time, with sufficient notice. Minutes and attendance taken in the meeting.	Local Community	▪ Pre-construction (RAP Disclosure and project announcement)
One-on-one and small group meetings	Meetings with influential stakeholders and those with access to important baseline information.	Government stakeholders, NGOs and CSOs	▪ Pre-construction ▪ Construction/ implementation (Consultations and discussions for environmental and social management and monitoring activities)
Phone/Email	Opportunity to ask questions or raise concerns about the project and environmental and social issues in a timely manner	All stakeholders	All project phases

Attendance sheets, meeting note forms and public meeting notices were used to support the stakeholder engagement process.

2.7.6 Protocol for Consultation and Participation

The consultant held consultative meetings with key stakeholders and members of the public/tenants as follows:

i. Key stakeholders' meetings; and

ii. Public/tenants/local community/stakeholder meeting.

For engagement with key stakeholders, invitations for meetings were sent well in advance and follow-up phone calls with stakeholders were made to confirm and schedule the meetings.

At the local level, a notice of meeting was also given well in advance through phone calls, Emails and visits to community representatives who shared the information with the rest of the community. A suitable day and time for the meeting was selected factoring in people's work and family commitments; and the meeting was conducted in a culturally sensitive manner.

2.7.7 Meeting Schedule

The consultant held consultative meetings with key stakeholders and members of the public.

2.7.7.1 Key Stakeholder Meetings

Table 2-5 below presents a summary of the consultative meetings held, whereas the full list of key stakeholders in attendance of the key stakeholders meeting has been provided under Table 7-2 of this report.

Table 2-5: National/County/Local government Consultative Meetings Schedule

Stakeholder Group	Tentative Date/Time	Contact Person	Venue	Consultation Method
County Executive	14th December, 2023	County Commissioner (CC)- CGM	CC's Office	One-on-one meetings
		CEC Lands, Housing and Urban Planning	Governor's Office	
		County Director of City Planning		
	20th December, 2023	Area Member of Parliament (MP)	Serena Hotel, Nairobi	
	23rd January, 2024	Area Member of County Assembly (MCA)	Hotel Sapphire	
Sub County Security	22nd February, 2024	1. Deputy County Commissioner (DCC) 2. Assistanct County Commissioner (ACC) 3. Deputy Officer Commanding	Marina English Point Hotel & Spa	Forum

Stakeholder Group	Tentative Date/Time	Contact Person	Venue	Consultation Method
		Station (OCS) Changamwe		
County Political & Administrative Leaders	22nd February, 2024	▪ Area MCA ▪ Chief Officer Lands ▪ Town Planner ▪ County Attorney ▪ Inspectorate Director ▪ County Secretary ▪ Sub-county Administrator ▪ Ward Administrator	Marina English Point Hotel & Spa	Forum

2.7.7.2 Public Meeting

The consultant held a public meeting with the project affected persons as shown in the table below.

Table 2-6: Public Meeting Schedule

Venue	Date
New Changamwe Flats Compound	24th February, 2024

2.7.8 Stakeholder Engagement Tools and Materials

The SEP is to be used in conjunction with stakeholder engagement and community relations management tools including:

i. **Conflict Resolution Mechanism**: to resolve disputes and agree how conflicts will be addressed in a fair and transparent manner;
ii. **Grievance Redress Mechanism (GRM):** which provides a mechanism for communities and affected parties to raise their complaints and grievances and allows the project proponent to respond to and resolve the issues in an appropriate manner;
iii. **Commitment Register:** to record any public commitments made by the project proponent or public concerns raised about the project that require action;
iv. **Engagement Notes Format:** to ensure that accurate and detailed record of information and views are gathered at every stakeholder meeting and a consultation meeting note will be written.

2.7.9 Timeline for Stakeholder Engagement

This SEP provides for procedures and approaches that was or will be followed during the engagement with the different stakeholders during all phases including the pre-construction phase to ensure the active involvement and participation of PAPs.

2.7.9.1 Preconstruction/RAP Implementation Phase

The objectives of engagement during this phase were to:

i. Keep the local community informed about the nature and purpose of pre-construction activities and further environmental and social studies taking place in the proposed project area, respond to questions or concerns about the proposed Changamwe Mixed Use Development project and provide clarity to any unrealistic expectations;
ii. Notify local stakeholders about the expected Changamwe Mixed Use Development Project start date;
iii. Notify PAPs of their full rights;
iv. Introduce stakeholders to the grievance mechanism and how it works;
v. Identify and appoint community intermediaries;
vi. Manage official engagement with local and national authorities in a timely manner in order to achieve the required project permitting schedule;
vii. Maintain a record of all consultations and any other commitments made and update the stakeholder database.

2.7.9.2 Construction Phase

The objective of the engagement during this phase will be to:

i. Continue to provide adequate and timely information about the Changamwe Mixed Use Development Project; keep stakeholders updated about the progress of the project; and provide sufficient notice before any major activities take place;
ii. Track and monitor grievances raised to ensure that all issues are closed out in a timely manner and identify any recurring issue;
iii. Engage both local and national authorities and agencies as required, to ensure all necessary permits are maintained up to date;
iv. Engage local authorities and national agencies as required on specific environmental and social management and monitoring aspects;
v. Maintain a record of all consultations and any commitments made and update the stakeholder database.

2.7.9.3 Operation Phase

This phase requires minimal engagement. The objectives of the engagement during this phase will be to:

i. Maintain indirect communications with the local community through the chief and community intermediaries;
ii. Track and monitor grievances raised to ensure that all issues are closed out in a timely manner and to identify any recurring issue;
iii. Engage local authorities and national agencies as required on specific environmental and social management and monitoring aspects;
iv. Maintain a record of all consultations and any commitments made and update the stakeholder database.

2.7.10 Institutional arrangement for Stakeholder Engagement

Effective stakeholder engagement requires clear lines of communication and effective coordination within the project; between the proponent/partners, and with stakeholders. The key participants in the management of stakeholder engagement for Changamwe Mixed Use Development Project are as outlined in the table below.

Table 2-7: Institutional arrangement for stakeholder engagement

Management Team	Role/ Responsibility
LAPTRUST/CPF	• Ensure stakeholder engagement strategy is communicated internally amongst the staff and resources & systems are in place to enable the SEP to be implemented. • Ensure coordination across all stakeholder activities by all parties. • Ensure the stakeholder database is regularly updated. • Assist with communication with key national and local authorities and agencies. • Plan and attend key consultation meetings as required. • Assist in management of grievance resolution.
Construction/ Operations Team	• Ensure the project workforce is briefed in a timely manner about SEP. • Plan and attend key consultation meetings as required. • Assist in management of grievance resolution. • Report any key developments and incidences of the project on a regular basis.
Project/ Community Liaison Officer	• Focal point for communication between the local communities and project management team. • Regular reporting to project management officials on engagement and grievances. • Implement and monitor grievance mechanism. • Record all engagement activities and update stakeholder database as required.
Environmental Health and Safety (EHS)/ Operations Team	• Provide assistance in planning, scheduling and attending meetings arranged when required. • Attend stakeholder review meetings as required. • Assist in management of grievance resolution.

2.7.11 Monitoring and Reporting

Implementation of the SEP should be monitored. The effectiveness of engagement activities should be evaluated against the goals and objectives set out in the plan. This evaluation should examine the extent to which activities were implemented in accordance with the plan and the extent to which they achieved the objectives defined. Where necessary, the SEP should be reviewed, updated and revised. Reports should be prepared to keep the key stakeholders informed about the project status and on any other issues or grievances raised within the said period as per the SEP. The reports should be made available to the public whenever required.

2.8 Environmental and Social Impact Analysis

The Consultant predicted and assessed the environmental and social benefits and negative impacts of the Project as well as any environmental enhancement that may occur. The assessment distinguished between positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts as well as impacts that are unavoidable or irreversible.

2.8.1 Impacts Prediction and Analysis

When predicting and analysing the impacts, the consultant considered ***Intensity*** and ***severity*** of Impacts. Impact prediction was done through: Checklists; Environmental modelling; GIS & Overlays; and Professional judgment.

2.8.2 Intensity of Impacts

Intensity covers all dimensions of the predicted impact on the natural and social environments, namely:

- The nature of the change (which resource or which receiver is allocated and how);
- The spatial extent of the affected area or the part of the population or affected community;
- Its temporal extent (duration, frequency, reversibility); and
- If so, the probability of an impact following accidental or unexpected phenomenon.

The table below highlights the various dimensions considered while determining the intensity of impacts.

Table 2-8: Predicting the intensity of impacts

Intensity	Impacts
Type	**Direct** - resulting from direct interaction between the project and resource / receiver.

	Indirect - resultant direct interaction between the project and its environment, due to interactions occurring thereafter.
	Armature - impacts from other follow-up activities to the project.
Scope	**Local** - limited impact in the project area and its surroundings.
	Regional - impacts felt beyond the local areas, even in the extended region.
	International - impacts felt at the international level, thus affecting another country.
Duration	**Temporary** - Short-term impacts, on the order of hours to weeks.
	Short term - impacts predicted to last only during drilling and construction operations (up to about 2 years).
	Medium term - impacts predicted to last between two years and the end of the project (20 years)
	Long-term - anticipated impacts of a longer duration than the project but which will cease in time.
	Permanent - impacts causing a permanent change on the receiver or the affected resource (s) and extending well beyond the lifetime of the project.
Frequency	**Keep on going**- impacts occurring frequently or continuously
	Intermittent- occasional impacts or appearing only in specific circumstances.
	Unlikely- but unlikely event that may take place during the project.
Probability	**Possible** - event likely to occur at some point during the project.
	Likely- the phenomenon will occur during the project (e.g., it is inevitable)

2.8.3 Severity of Impacts

The consultant assessed the severity of impacts to provide information on the importance of different impacts of the project. It is important to note that there is no statutory definition of the severity of an impact. Thus, as part of the ESIA, the evaluation of the severity of impacts is based on the Consultant's professional judgments using objective criteria, when available, legal norms, national government policies, regionally recognized good industry practices and opinions of stakeholders.

An impact is **negligible** when a resource / receptor (including people) is assigned in any way by a particular activity or when the intended effect is judged "Imperceptible" or indistinguishable, from natural background.

An impact is **minor** when a resource / receptor is affected, but the intensity of the impact is small enough to remain within the limits of applicable standards (i.e.,

regulations and guidelines applicable) or in the absence of standards when sensitivity / vulnerability / importance of the resource / receptor is low.

An impact is **moderate** when its intensity remains within the standards but is between a threshold below which the impact is minor and a level likely to be on the verge of a legal offense. For moderate impacts, it should reduce impacts to a level "as low as reasonably practicable" (ALARP). This does not necessarily mean that the so-called impact "moderates" must be reduced to minor impacts, but they are managed efficiently and effectively.

A **major** impact is when the acceptable or allowable standards limits may be exceeded, or high intensity impacts can allocate resources / receptors quality / importance / high sensitivity. One ESIA's goals is to get to a configuration where the project is not associated with any major residual impact, or any impact that would remain in the long term or a significant extent. However, in some respects, there may be major residual impacts, once all mitigation options (a level as low as reasonably achievable is then applied) have been exhausted. It can be for example the visual impact of an installation. Regulators and stakeholders must then balance these negative factors with respect to the positive aspects such as employment.

The consultant assessed the magnitude and significance of impacts based on the following factors:

- Location or extent: The area/volume covered.
- Timing: Whether immediate or delayed.
- Duration: Short term, long term, intermittent or continuous.
- Reversibility or irreversibility.
- Likelihood: Probability of the impact taking place.
- Significance: Whether it is local, regional or global.

The consultant used the scale in the table below in the analysis of impacts and quantified them in the scale of 0 – 5.

Table 2-9: Levels of Scale used in the Analysis of Impacts

Value	Description	Scale Description
0	No impact	This means that to the best knowledge of the expert, the activity/action will not have any known impact on the environment. Such an impact will not in any way affect the normal functioning of either the human or the natural systems and does not therefore warrant any mitigation.

1	Minimal impact	Any activity with little impact on the environment calls for preventive measures, which are usually inexpensive and manageable. Such activities have minimum impacts on either natural or human environment or both.
2	Moderate impact	A moderate impact will have localized effect on the environment. If the effect is negative and cumulative, action in form of mitigation measures needs to be put in place to ensure that it doesn't become permanent and /or irreversible.
3	High impact	An impact is high if it affects a relatively large area (spatial), several biological resources (severity) and/or the effect is felt for a relatively long period (temporal) e.g., more than one year. In case the effect is negative, such an impact needs to be given timely consideration and proper mitigation measures put in place to prevent further direct, indirect or cumulative adverse effects.
4	Very high impacts	Such an activity rates highly in all aspects used in the scale i.e., temporal, spatial and severity. If negative, it is expected to affect a huge population of plants and animals, biodiversity in general and a large area of the geophysical environment, usually having trans-boundary consequences. Urgent and specialized mitigation measures are needed. It is the experts' opinion that any project with very high negative impacts MUST be suspended until sufficient effective mitigation measures are put in place.
5	Not known	There are activities for which impacts are not yet known e.g., some chemicals are suspected to produce carcinogenic effects, but this has not yet been confirmed.

2.9 Analysis of Alternatives

The Consultant systematically compared feasible alternatives to the proposed project site, technology, design, and operation including the "without project" situation in terms of their potential environmental and social impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. After the analysis, the Consultant recommended the preferred alternative and stated why it was chosen.

2.10 Preparation of an Environmental and Social Management Plan (ESMP)

During the ESMP preparation, the consultant presented the mitigation measures that would need to be implemented by the proponent/contractor to prevent or reduce significant negative impacts to acceptable levels.

The consultant also prepared a detailed schedule to monitor the implementation of the mitigation measures and the impacts of the project during its construction and operation phases.

3 PROJECT DESCRIPTION

The project proponent proposes to establish a mixed-use development consisting of:

- Residential zone comprising of 5 apartment blocks (1, 2, & 3-bedroom units of various size and typology), parking silo, social hall and madrasa/ Day-care
- Commercial zone consisting of a strip mall
- Hospitality zone.
- Utilities including water and sewer systems; and
- Social support infrastructure.

3.1 Project Site

The site is in Changamwe, Mombasa County on LR. NO. MN/VI/4836, MN/VI/3830 and MN/VI/4106. The Proposed development sits on an approximately 7-acre site located in Changamwe ward along the Nairobi-Mombasa (A109) Road, off Magongo-Mombasa Road. Positioned approximately 5 km from the Airport and 6 km from Mombasa CBD.

The site borders the Refinery Rd to the North, Nairobi-Mombasa highway to the East, KRA Estate to the South and the National Housing estate to the West as shown in the figure below.

Figure 3-1: Site location

3.2 Project Components

The Proposed development will sit on an approximately 7-acre site located in Changamwe ward along Mombasa Road, off Magongo-Mombasa Road. The site offers a unique opportunity for a mixed-use development that combines retail, hospitality, and residential components. The development site is strategically located, with two access roads connecting to significant establishments in the area. Its proximity to Mombasa CBD, the airport, and the Kenya Ports Authority enhances its attractiveness for a mixed-use project.

As shown in the table below, the proposed project site will be split into 3 zones (A, B & C) to accommodate various components of the mixed-use development.

Table 3-1: Proposed Project Zones

CHANGAMWE MIXED USE DEVELOPMENT SCHEDULE								
ZONE	**ACRES**	**CATEGORY**	**BLOCKS**	**No OF FLOORS**	**GROSS AREA**	**NET AREA**	**EFFICIENCY %**	**PARKING No**
A	1.1	HOSPITALITY	HOTEL /GYM/POOL	G+8	5,083	4,141	81	27
B	0.3	COMMERCIAL	STRIP MALL	G+2	2,304	1,902	83	15
C	2.9	RESIDENTIAL	1+2 BEDROOM APARTMENTS - STANDARD	G+14	12,510	10,320	82	
			1 BEDROOM APARTMENTS - PREMIUM	G+18	7,038	6,544	93	
			2 BEDROOM APARTMENTS - PREMIUM	G+18	20,844	19,305	93	
			3 BEDROOM APARTMENTS - PREMIUM	G+18	6,876	6,192	90	
			CLUB HOUSE	1	268	242	90	
			PARKING SILO	G+5	5,025			368
			SOCIAL HALL	1	400			
			MADRASA/ DAYCARE	1	577			
TOTAL	**4.3**				**60,925**	**48,646**		**410**

UNIT TYPE	**UNIT AREAS**	**UNIT NUMBERS**
HOTEL STANDARD ROOM	21	88
HOTEL DELUXE ROOM	42	24
		112
STRIP MALL SHOP UNITS	25	42
		42
1 BEDROOM APARTMENTS - STANDARD	30	60
2 BEDROOM APARTMENTS - STANDARD	40	150
1 BEDROOM APARTMENTS - PREMIUM	50	144
2 BEDROOM APARTMENTS - PREMIUM	60	288
3 BEDROOM APARTMENTS - PREMIUM	80	72
		714
PLOT ACREAGE	**6.4**	
PLOT AREA	**26,010**	
TOTAL BUILT UP AREA	**55,900**	
TOTAL NET AREA	**48,646**	
OVERALL EFFICIENCY %	**87.0**	
GROUND COVERAGE/BUILDING FOOTPRINT	**5,889**	
GROUND COVERAGE %	**23**	
PLOT RATIO	**2**	

3.2.1 Zone A

This is the Hospitality zone which will comprise of the hotel. It will be located in close proximity to the junction of Nairobi-Mombasa (A109) road and Magongo Road targeting traffic from the Moi International Airport. The Hotel will cater to the growing demand for accommodation in the area, especially considering the proximity to the airport and Kenya Ports Authority. The table and figure below present details of the hotel.

Table 3-2: Proposed Hotel units

Unit Type	Unit Area(M^2)	Unit Numbers
Hotel Standard Room	21	88
Hotel Deluxe Room	42	24
Total		**112**

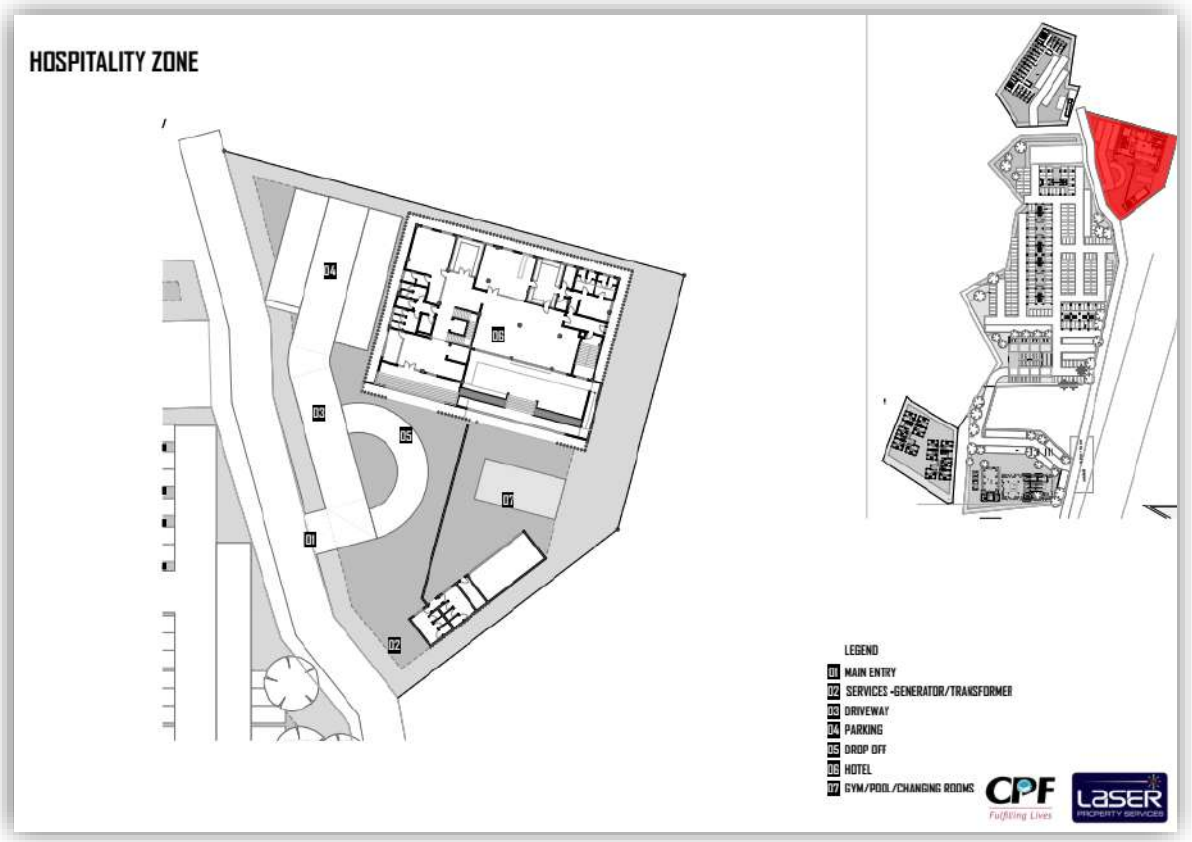

Figure 3-2: Hospitality zone layout

3.2.2 Zone B

This is the Commercial zone which will comprise of a strip mall fronting the main road. The mall will serve the residents in the Mixed-use complex and the neighbouring residents. The table and figure below present the details of the strip mall.

Table 3-3: Proposed Strip Mall units

Unit Type	Unit Area (M^2)	Unit Numbers
Strip mall shop units	25	42
Total		**42**

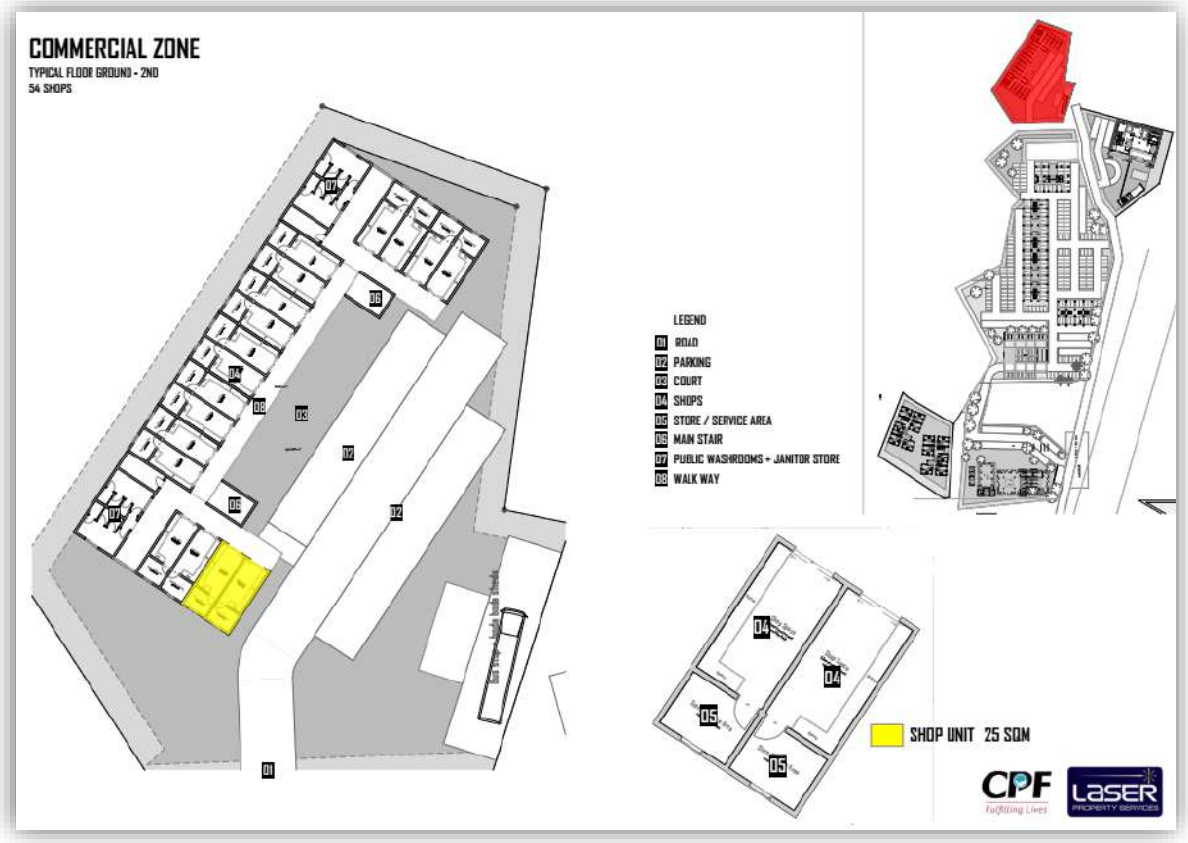

Figure 3-3: Commercial zone layout

3.2.3 Zone C

This is the Residential zone which will be considered upon demand or guaranteed uptake, and it will comprise of 5 apartment blocks, that will accommodate 1-, 2- & 3-bedroom units of various sizes and typology.

- **Typology 1 and 2-bedroom units:** Targeting young families and professionals seeking modern living spaces.
- **Mix of 3-bedroom units:** Catering to high-income earners seeking luxurious and spacious residences.

The zone will also have the following:

- Club house;
- Parking silo;
- Social hall;
- Madrasa/ Day-care.

The table and figure below present details of the residential zone.

Table 3-4: Proposed Residential units

Unit Type	Unit Area(M^2)	Unit Numbers
1 Bedroom Apartments - Standard	30	60
2 Bedroom Apartments - Standard	40	150
1 Bedroom Apartments - Premium	50	144
2 Bedroom Apartments - Premium	60	288
3 Bedroom Apartments - Premium	80	72
Total		**714**

NOTE: *The proponent will implement the residential components subject to market surveys that will be carried out/demand from the tenants and general public to buy or rent the residential units.*

Figure 3-4: 3-D Layout of the proposed project

3.3 Project Phasing Plan

The project will be implemented in four (4) development phases to accommodate various components of the mixed-use development. The phases are outlined in the table and figure below.

Table 3-5: Project phasing plan

Phase	Details
Phase 01	1+2-bedroom apartment block& Parking silo
Phase 02	1 bedroom, 2-bedroom &3-bedroom apartment blocks Social hall
Phase 03	Commercial Strip mall
Phase 04	Hospitality block

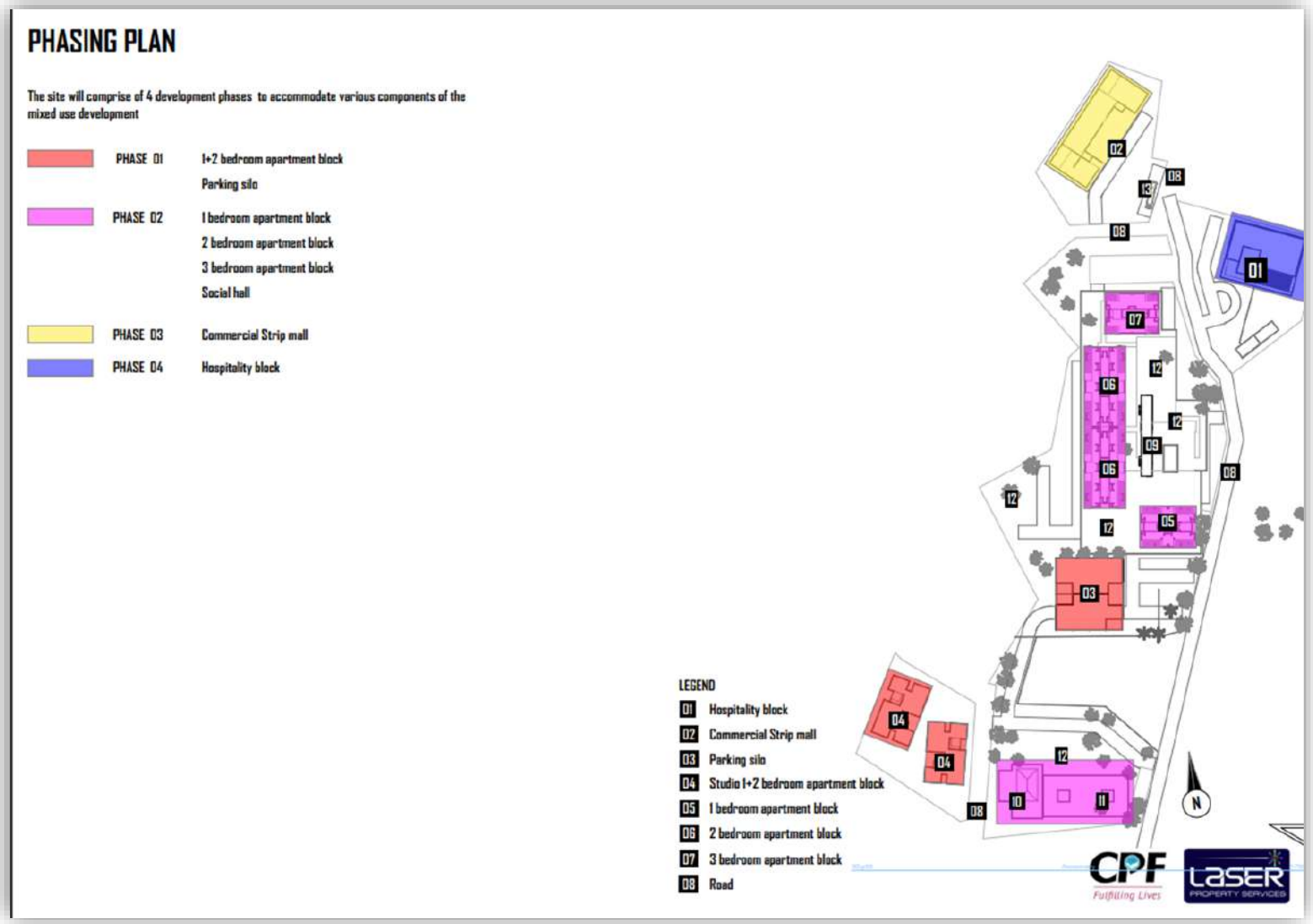

Figure 3-5: Project phasing plan

3.4 Project Activities

Key project activities during the construction phase

The Key Construction Works will include:

- Site Clearance and preparation including demolition of existing units and informal structures;
- Acquisition and transportation of building materials;
- Excavation and land filling works;
- Civil works;
- Water Reticulation System;
- Structural Steel works;
- Masonry, Concrete Work and Related Activities;
- Solid Waste Management;
- Plumbing & Mechanical Works;
- Electrical and ICT Infrastructure Works; and
- Sewerage: Wastewater will be channelled to Mombasa Water Supply and Sanitation Company Limited (MOWASSCO).

Key project activities during the operation phase

The mixed-use development shall offer housing services during the operation phase. It is also expected to provide commercial and hospitality services.

Key project activities during the decommissioning phase

The major activities envisaged during the decommissioning phase are:

- Demolition; and
- Site restoration activities

3.5 Materials to be Used, Products and By-products

a) Materials to be used/ Inputs

The materials to be used in the project include:

- Construction raw materials: i.e. sand, cement, stones, crushed rock (gravel/ ballast), ceramic tiles and other ceramic fittings, parquet, clay vent blocks, steel and wooden fixtures and fittings (such as doors windows), glass, steel metals, timber, painting materials among others. All these should be obtained from licensed dealers and especially those that have complied with the environmental management guidelines and policies.
- Construction machines: including machinery such as trucks, concrete mixers, and tools and other construction equipment.

- A construction labour force: of both skilled and non-skilled workers. These will require services such as, water supply and sanitation facilities.
- Large volumes of water for construction purposes: It will be supplied from the County mains as well as mobile bowsers with approval by the relevant departments.
- Power: from the mains grid or provided by generators.

b) Products

The products will include:

- Residential zone comprising of 5 apartment blocks that will accommodate 1, 2 & 3-bedroom units of various size and typology;
- Commercial zone with space with a strip mall;
- Hospitality zone;
- Utilities including water and sewer systems; and
- Social support infrastructure.

c) Waste

The table below presents a summary of waste that will be generated by the project activities and proposes appropriate waste management strategies.

Table 3-6: Waste generation and management summary

Waste Types /classification	Material recovery	Disposal
Soil	▪ Cut to fill	▪ Clean fill
Soil & rock	▪ Concrete aggregate,	▪ Clean fill
Excess concrete / set concrete inert	▪ Crushing and reuse of materials ▪ Water recovery and reuse ▪ Roading and pavements	▪ Construction and Licensed disposal site
Concrete washings /potentially toxic in receiving environment	▪ Water recovery and reuse	▪ Treat wash water by pH correction & evaporation in lined pit; construction and demolition landfill
Iron & scrap steel /non hazardous	▪ Segregated and stored for reuse or market	N/A
Non-ferrous metal /non hazardous	▪ Segregated and stored for reuse or market	N/A
Bricks and tiles / non-hazardous	▪ Segregated and stored for reuse or market	N/A

Waste Types /classification	**Material recovery**	**Disposal**
Packaging / non-hazardous	▪ Segregated and stored for reuse or market	N/A
Pallets / non-hazardous	▪ Segregated and stored for reuse or market	N/A
Plastics / non-hazardous	▪ Segregated and stored for reuse or market	N/A
Paper and cardboard /non hazardous	▪ Segregated and stored for reuse or market	N/A
Timber untreated	▪ Segregated and stored for reuse or market	N/A
Timber treated /potentially hazardous	▪ Segregated and stored for reuse or market	▪ Disposed in a licenced facility
Paints and chemicals /hazardous	N/A	▪ Stored in sealed containers in bunded storage / disposal in licensed facility
Contaminated soil /hazardous	N/A	▪ Disposed in a licenced facility

3.6 Estimated Project Cost

The proposed Changamwe Mixed-Use development is estimated to cost Kenya Shillings Three Billion, five hundred and seventy-seven million, one hundred and forty-four thousand, two hundred and ninety-two shillings and fifty-one cents **(Kshs. 3,577,144,292.51)**, as shown in the Summarized Bill of Quantities provided as ***Annex 12*** of this ESIA Report.

This project falls under the 'Urban Development' class of "High Risk Projects" category, according to Legal Notice No. 31 of 2019, on amendment of the second schedule of EMCA, 1999. Due to the classification of this project in the above-mentioned category, section 48 of the Environmental (Impact Assessment and Audit) Regulations, 2003, read with the revisions made by Gazette Notice No. 13211 of 2013, provides that this project is subject to an EIA license fee of 0.1% of the total project cost with no upper capping.

Therefore, the EIA license fee payable to the National Environment Management Authority (NEMA) for this proposed project is estimated to be: **Kenya Shillings Three Million, five hundred and seventy-seven thousand, one hundred and forty-four shillings and twenty-nine cents (Kshs. 3,577,144.29)**.

4 BASELINE ENVIRONMENT

4.1 Location and Size

The site is in Changamwe, Mombasa County on LR. NO. MN/VI/4836, MN/VI/3830 and MN/VI/4106. The Proposed development sits on an approximately 7-acre site located in Changamwe ward along the Mombasa Road, off Magongo-Mombasa Road. Positioned approximately 5 km from the Airport and 6 km from Mombasa CBD.

The site borders the Refinery Road to the North, Nairobi-Mombasa (A109) highway to the East, KRA Estate to the South and the National Housing Estate to the West. The key geographical coordinates of the project's footprint are as listed in Table 4-1 and the topographical survey map of the proposed site has been provided under ***Annex 6*** of this report.

Table 4-1: Key coordinates of the proposed site

S/N	Latitude	Longitude
1.	-4.025309°	39.632693°
2.	-4.025404°	39.632905°
3.	-4.025722°	39.632849°
4.	-4.025909°	39.632966°
5.	-4.026918°	39.633096°
6.	-4.028504°	39.632569°
7.	-4.028549°	39.632131°
8.	-4.028193°	39.631612°
9.	-4.027806°	39.631768°
10.	-4.027923°	39.632141°
11.	-4.027583°	39.632366°
12.	-4.027071°	39.632140°
13.	-4.026539°	39.632509°
14.	-4.026162°	39.632113°

4.2 Physical Environment

4.2.1 Climate

The project is located within Mombasa County and thus has similar climatic conditions as the County. Mombasa County lies within the coastal strip in the hot tropical region where the climate is influenced by monsoon winds. The rainfall pattern is characterized by two distinct long and short seasons corresponding to changes in the monsoon winds. The long rains occur in April – June with an average of 1,040 mm and correspond to the South-eastern Monsoon winds. The short rains start towards

the end of October lasting until December and correspond to the comparatively dry North-eastern Monsoons, averaging 240mm. The annual average rainfall for the county is 640mm.

The annual mean temperature in the county is 27.9°C with a minimum of 22.7°C and a maximum of 33.1°C. The hottest month is February with a maximum average of 33.1°C while the lowest temperature is in July, with a minimum average of 22.7°C. The average humidity at noon is about 65%.

4.2.2 Physical and Topographic Features

The County lies within the coastal lowland which rises gradually from the sea level in the East to about 132m above sea level in the mainland. The terrain is characterized by three distinct physiographic features, which includes the **coastal plain**, which is found along the shoreline, covering parts of the South Coast, the Island, parts of Changamwe and the North Coast. The plain consists of an expansive flat land with raised beach terraces covered mainly by coral limestone and back reef sand deposits that not only provide firm foundation for construction but also provide building materials.

The second category is the **hilly areas** mainly found within the Western part of the County that is underlain by shells and rises gently from 45m to 132m above sea level. This is characterized by poorly drained clay soils which restrict settlement and infrastructural development.

The third category is the **Indian Ocean and the shoreline** covered with geologically sedimentary rocks of Jurassic to recent age. The topography has evolved as a result of the lowering of the sea level over time leading to severe erosion by the storm water draining into the sea. In addition, the subsequent rise in sea level led to the submergence of the valleys and the creation of Mombasa Island, surrounded by deep natural creeks, ports and harbours such as the Kilindini, Tudor, Makupa, and Old Port creeks.

4.2.3 Air Quality

The project site is surrounded by residential developments. There are no industries in the vicinity of the estate. The key impacts on the air quality in the area is vehicle traffic along Magongo and Nairobi - Mombasa Highway.

4.2.4 Ambient Noise

A sound level meter type SL821, S/No. P20009485 with Omni- directional microphone set at a slow response was used to measure noise levels at various locations bordering the site. The instrument was calibrated using a Multifunction Acoustic Calibrator Type CR:262A S/No. B20447FA with a standard uncertainty of±

0.075. The meter was duly calibrated by the Kenya Bureau of Standards (KEBS). GPS Coordinates were recorded using the GPS Essentials software, Version 4.4.25

Plate 4-1: Noise measurements

The meter was set to measure the A-weighted noise level, which varies with the frequency and intensity like the sensitivity of the human ear and vibration. Measurements were taken within the project area near noise receptors shown in the figure below. The measurements were taken on 23rd February 2024 at peak hours between 9am to 11am. The measured baseline noise levels for each location are presented in the table below:

Figure 4-1: Noise measurement points within and around the proposed site

Table 4-2: Noise measurement results

S/No	Latitude	Longitude	Noise Level in dB(A)
MP 1	-4.026766°	39.633175°	70.4
MP 2	-4.024937°	39.633373°	68.1
MP 3	-4.026345°	39.632041°	55.7
MP 4	-4.027103°	39.631656°	55.5
MP 5	-4.028226°	39.631599°	56.1
MP 6	-4.027401°	39.632527°	57.0

The ambient noise levels at all locations were above the NEMA Noise and Vibration limit set for Mixed residential zones of 55 dB(A). Key noise contributors within the project area include:

- ✓ Traffic along Magongo and A109 Roads
- ✓ Household activity noise
- ✓ Noise from commercial interactions in shops and the various stalls
- ✓ Crows

4.3 Flora and Fauna

The site has several mature trees and farm crops. These include: *Adansonia digitata L* (Baobab), *Monoon longifolium* (Ashoka tree), *Pithecellobium dulce* (Madras thorn), Coconut, Mango, Pawpaw, Maize, Beans, Amaranth (*terere/ mchicha*), Kales (Sukuma wiki), Cassava and Bananas.

No Faunal groups were observed within the site.

Monoon longifolium (Ashoka tree)

Adansonia digitata L (Baobab)

Pithecellobium dulce (Madras thorn)

Carica papaya (Pawpaw)

Mangifera indica (Mango)

Cocos nucifera (Coconut)

Zea mays (Maize), *Manihot esculenta* (Cassava) & *Phaseolus vulgaris L* (Beans) planted in the estate

Musa spp. (Banana plant)

Plate 4-2: Vegetation at the proposed site

4.4 Administrative Units

Administratively, Mombasa County is divided into six sub-counties/constituencies namely Changamwe, Jomvu, Kisauni, Nyali, Likoni, and Mvita. Changamwe and Jomvu are situated in Mainland West, which is the industrial hub of the city. Kisauni and Nyali are situated in Mainland North, which is the most populous. Likoni is situated in Mainland South and Mvita is situated in the Island, which houses the most developments per unit area. These constituencies or sub-counties are further divided into Electoral Wards and Mombasa County has a total of 30 electoral wards as shown in the table below.

The proposed project site is in Mainland North, Changamwe Ward, Changamwe Sub-County, Mombasa County, Kenya.

Table 4-3: Wards in Mombasa County

Constituency/Subcounty	County Assembly Wards	Number of wards
Changamwe	Chaani, Changamwe, Kipevu, Port Reitz and Airport	5
Jomvu	Jomvu Kuu, Mikindani and Miritini	3
Kisauni	Mjambere, Magogoni, Junda, Mtopanga, Bamburi, Shanzu and Mwakirunge	7
Nyali	Ziwa la Ng'ombe, Frere town, Kadzandani, Kongowea and Mkomani	5
Likoni	Likoni, Bofu, Shika Adabu, Mtongwe and Timbwani	5
Mvita	Tononoka, Old Town, Ganjoni/shimanzi, Tudor, Majengo/Mwembe-Tayari	5
Total		**30**

4.5 Demographic Features

Population distribution and settlement patterns in Mombasa County are influenced by proximity to vital social and physical infrastructure networks such as roads, housing, water and electricity. Other factors that influence settlement patterns include accessibility to employment opportunities and security

The distribution of population by sex, number of households, land area, population density in Changamwe sub county is presented in the table as follows.

Table 4-4: Changamwe subcounty demographic features

Sex				Households			Land Area	Density
Total	**Male**	**Female**	**Intersex**	**Total**	**Conventional**	**Group quarters**	**Sq. Km**	**Persons Per Sq. Km**
131,882	68,761	63,121	0	46,614	46,439	175	18	7,457

Source: Kenya National Bureau of Statistics, 2019 KPHC.

The population in Changamwe subcounty is projected to grow to 149,277 by 2025 and 155,250 by 2027 as shown in the table below.

Table 4-5: Population projections in Changamwe subcounty

Census (2019)				Projection (2025)				Projection (2027)			
M	**F**	**Inter-sex**	**Total**	**M**	**F**	**Inter-sex**	**Total**	**M**	**F**	**Inter-sex**	**T**
68,761	63,121	0	131,882	76,770	72,444	-	149,277	79,833	75,351	-	155,250

Source: Kenya National Bureau of Statistics, 2019 KPHC

4.6 Human Development Index

The Human Development Index (HDI) is a composite statistic (composite index) of life expectancy, education, and per capita income indicators, which are used to rank countries into four tiers of human development. This statistic is being computed for Counties and can be used to assess the County's development conditions and also for comparison purposes. According to Human Development Report 2021/22 by UNDP, Kenya's 2021 HDI value is 0.575, positioning it at 152 out of 191 countries and territories. The 2021 HDI value is lower than the 2019 HDI value of 0.581, whilst comparable to the 2020 level of 0.578. Regarding the Counties' HDI, National Human Development Report (NHDR, 2012) for Kenya; Mombasa County mean score index for

the year 2021 was 0.537. Mombasa County contributes positively to the national mean score indices to all human development indicators.

4.7 Land use

Lands in Mombasa County have a number of land tenure regimes which include public land, private land and community-owned land. Land use zoning includes mainly for residential; industrial and warehousing; physical infrastructure; social amenities; urban; agriculture; mining; and tourism activities. The proposed site is situated in a residential zone within a private land owned by Laptrust.

4.7.1 Changamwe New Flats

The estate is comprised of 25 blocks/apartments named A13 to A37 and set out in seven clusters as follows:

- Cluster 1. - Comprises of Blocks A13, 14 and 15
- Cluster 2. - Comprises of Blocks A16, 17, 18 and 19
- Cluster 3. - Comprises of Blocks A20, 21 and 22
- Cluster 4. - Comprises of Blocks A23, 24, 25, 26 and 27
- Cluster 5. - Comprises of Blocks A28, 29 and 30
- Cluster 6. - Comprises of Blocks A31, 32, 33 and 34
- Cluster 7. - Comprises of Blocks A35, 36 and 37

Each apartment block has 12 – one-bedroom units. Of these, 19 blocks are currently occupied by LAPTRUST's tenants while 3 blocks are vacant. The vacant blocks (A13, A14 and A15) had been occupied by police officers who have since vacated the premises. The other 3 blocks (A20, A21 and A31) were acquired by the Kenya National Highways Authority (KeNHA) during the dualling of the Nairobi – Mombasa (A109) Road, and the blocks still have occupants who don't pay rent (Squatters). This is as shown in the table below.

Table 4-6: Breakdown of blocks and units occupying New Changamwe Estate

Category of blocks	Number of blocks	Number of house units per block	Total number of house units
Occupied by LAPTRUST's Tenants	19	12	228
Vacant blocks that were previously occupied by police officers	3	12	36
Blocks owned by KENHA and currently occupied by squatters	3	12	36
Total	**25**	**12**	**300**

The table below presents details of tenants in the estate.

Table 4-7: Current tenants in the New Changamwe Housing Estate

Category	**Registered Tenants**		**Sub-Tenants**	
	No.	**Percentage**	**No.**	**Percentage**
Male	129	73%	88	59%
Female	48	27%	62	41%
Total	**177**	**100%**	**150**	**100%**

Plate 4-3: A view of the vacant blocks

Plate 4-4 : A view of the occupied blocks

4.7.2 Perimeter Wall

The site is surrounded by a perimeter wall, with six (6) gates which are manned by a private security firm. The coordinates for the gates are as shown in Table 4-8.

Plate 4-5: A view of part of the perimeter wall.

Table 4-8: Point location of gates within the estate

PONT NAME	LATITUDE	LONGITUDE
GATE 1	-4.025865°	39.632897°
GATE 2	-4.026720°	39.633067°
GATE 3	-4.026304°	39.632206°
GATE 4	-4.027864°	39.632821°
GATE 5	-4.028510°	39.632217°
GATE 6	-4.028385°	39.632128°

4.7.3 Kiosks/ Informal Business structures

There are approximately 80 kiosks/ informal business structures within the site. Most of the structures are made of iron sheets.

Plate 4-6: A view of an informal business structure within the site

4.7.4 Faith Based Organizations

There is Church (Bethsaida Fellowship Worship Centre and a Madrassa within the site. Additionally, the Masjidul Eitisam mosque has encroached the site. The boundary wall restricted access to the Voice of Salvation Church neighbouring the site.

Plate 4-7: A view of a church within the site

Plate 4-8: A view of a Madrassa at the site

4.7.5 National Government Constituencies Development Fund (NG-CDF) Projects

There are three NG-CDF (Changamwe constituency) projects developed within the site. These are:

i. Chief's office. The office is currently occupied by Mizizi Youth Organization without the consent of Laptrust);
ii. Borehole and a water tank; and
iii. Streetlights.

Plate 4-9: A view of the Chief's office

4.7.6 Small scale farms

A few small-scale farms were observed within the estate with maize and beans being the dominant crops.

Plate 4-10: View of a small-scale farm in the estate

4.8 Key findings of the Resettlement Action Plan (RAP)

A participatory and consultative approach was employed by the consultant ensuring: meaningful; pro-active; accessible and communicative; and inclusive consultation of PAPs and interested parties or other stakeholders and individuals/groups/entities in the process.

The RAP study also combined qualitative and quantitative methods of data collection. These included: literature review; Free Prior and Informed Consultations (FPIC) with the PAPs; PAPs census and socio-economic survey, consultation with interested parties and stakeholders; key informant interviews; RAP commencement/awareness meetings; meetings with PAPs and vulnerable individuals; and households' meetings. All mobilization for field activities/data collection was undertaken through the office of the County Commissioner and Chief. Other announcements were made in religious gatherings, notices, and letters, 'Nyumba Kumi'/Tenants' Committee.

The RAP study process identified, enumerated and assessed all the residents and informal assets within the New Changamwe Estate. The relationship between the residents living in New Changamwe Flats and LAPTRUST is that of Tenants and Landlord, as guided by the Landlord and Tenant Act Cap 301, thus the manner by which the tenants will vacate the premises will be as per the provisions of this Act, i.e. an adequate notice of vacation in the prescribed form, of at least 90 days will be

issued to the New Changamwe Estate tenants and structure/business/tree(s) owners, and will be required to move out of the premises by the end of November 2024.

Additionally, LAPTRUST's tenants who had modified their house units as well as PAPs who owned informal assets within the New Changamwe Estate will be given an opportunity to demolish their structures on their own and salvage them for materials that can be re-used. This will be carried out in line with the provisions of the Eviction and Resettlement Guidelines, 2009.

The table below presents findings of the census exercise undertaken as part of the RAP process, in the months of February and March 2024.

Table 4-9: RAP study findings

No.	Aspect	Number/Quantity
1	Informal Structures	80
2	Trees	55
3	House units in LAPTRUST blocks	228
4	House units in KeNHA blocks	36

The structure/business/tree(s) owners are not entitled to any form of reimbursement for the informal assets, as the structures and trees were put up/planted illegally without any consent from the property owner (LAPTRUST) and are therefore not tenants of LAPTRUST. However, the proponent/landlord, guided by all applicable guidelines and regulations, will at their sole and unfettered discretion, decide on the form of assistance that will be offered to the LAPTRUST's tenants as well as the informal structure/business/tree(s) owners that will be affected by the proposed project. Further, consideration for provision of any form of assistance to the KeNHA road reserve flats' tenants will also be at the proponent's discretion, as they don't pay rent to LAPTRUST and they reside outside the project's footprint.

4.9 Infrastructure and Services

4.9.1 Roads and Accessibility

There is a total of 257.17km of bitumen surface roads, 127km of gravel surface roads and 91.29km of earth surface roads in the county. Main classified roads include Mombasa-Nairobi highway, Mombasa-Malindi Road and Likoni – Lunga-Lunga Road connecting Kenya and Tanzania. While the major roads are in fair condition, access roads within the residential and industrial areas are in deplorable state. The situation is worsened by the poor storm drainage systems most of which are in dilapidated conditions. The roads are maintained by the national government through Kenya Rural Roads Authority (KERRA) and overseen by Sub-county Road Committees, Kenya

Urban Roads Authority (KURA) and the Kenya National Highways Authority (KeNHA) and the private sector. The County has key bridges linking the Island with the mainland and other coastal areas; these include Nyali and Mtwapa bridges. The construction of the Dongo-Kundu by-pass will ease congestion at the central Business Sub- County as traffic from Nairobi to South coast shall be diverted at Miritini towards Likoni and Diani.

The Site lies along the Mombasa-Nairobi highway and Magongo road as shown in the figure below.

Figure 4-2: A view of the roads near the site

4.9.2 Railway

The County has ten kilometres of railway line and three railway stations from the colonial era. The Standard Gauge Railway (SGR) replaces this parallel and colonial Uganda Railway that was originally built during the British colonial rule in the 19th century. It is the country's largest infrastructure project since independence. Under the East African Railway Master Plan, the Mombasa–Nairobi SGR will link up with other standard gauge railways that are being built in East Africa.

4.9.3 Port

The port of Mombasa is also a key resource and the gateway to the East and Central African region, as it serves the entire region's export and import needs. In 2012, dredging was being undertaken with a view of deepening the Likoni channel to

facilitate usage of the port by larger post panamax vessels. The figure below depicts the container terminal at the port of Mombasa.

4.9.4 Ferries

The Likoni Ferry links the Island to Likoni and subsequently to Kwale and Tanzania through the Lunga-Lunga Border. Kenya Ferry Services operates more than 7 ferries and carries over 250,000 people and over 5,000 vehicles per day across the Likoni channel. It also operates in Mtongwe area at peak hours to minimize congestion at the Likoni Ferry crossing.

4.9.5 Airport

The County has one international airport, the Moi International Airport in Changamwe sub-county. The airport is the second largest airport in Kenya and is used by both domestic and international flights. The airport is essential in the promotion of tourism and investment opportunities in the county and in the coast region.

4.9.6 Sewer system

The sewerage system faces a similar predicament with only one sewerage system serving the County. The system is connected to two treatment plants i.e. Kipevu treatment plant located on the mainland and Kizingo treatment plant located in Kizingo. Whereas the Kizingo plant is currently non-functional, the Kipevu one operates at 70% potential leading to the disposal of partially treated sewage into the sea at Makupa, Ziwani and Port Tudor. The rest of the municipality depends on privately constructed soak pits and pit latrines which have the potential to pollute water sources. The site is connected to the Mombasa Water Supply and Sanitation Company (MOWASSCO) system.

4.9.7 Water resources

Water in the County is managed by the Mombasa Water Supply and Sanitation Company Limited. Water supply for the county is from Mzima Springs in Taita Taveta County, Marere, and Sabaki/Baricho in Kilifi County and Tiwi Boreholes in Kwale County. This supply only meets 65 per cent of the county water demand. Additionally, most residents rely on borehole water that contains a high percentage of Faecal contamination and not very safe for domestic use. In total, 73.9 per cent of the total population has access to safe water.

The proposed project site will be connected to the Mombasa Water Supply and Sanitation Company supply network.

4.9.8 Solid waste Management

The main waste generation sources are domestic, commercial ventures, hotels, markets, industries and institutions including health facilities. All types of waste are transported to the waste disposal (Mwakirunge) site including hazardous types containing pesticides, heavy metals, oils, batteries, acids, domestic and hospital wastes. The private sector has initiated ways to address the problem of waste

management through construction of compost pits in areas where collection is limited and providing waste disposal services to complement those provided by the County Government.

The County Government or a private garbage company would not be able to dispose of construction site waste. Therefore, the proponent will provide a sound waste management system during construction to dispose waste all debris and liquid waste. All solid wastes should be dumped in approved dumpsites and in accordance with the County regulations. The proponent proposes to contract a private waste handler to collect and dispose waste from the residents when the project becomes operational

Plate 4-11: A view of the waste holding area

4.9.9 Energy

The main source of cooking energy for the county residents is paraffin at 53.6 per cent, charcoal at 30 per cent, firewood at 8.8 per cent LPG at 4.7 per cent and electricity at 1.7 per cent. This trend continues when it comes to lighting where paraffin also leads at 51.5 per cent followed closely by those relying on electricity at 47.5 per cent. The Kipevu power plant produces power which is fed into the national grid. The county has a high potential for generation of solar and wind energy, but this remains unexploited.

Construction machinery will require energy during the construction phase. Electrical power will come in handy in driving the selected construction machinery. It will also be needed during the occupation phase (on completion of the project). The estate is connected to the national grid (electricity) while petroleum fuels will power some machinery/equipment.

Plate 4-12: A view of KPLC lines in the estate

4.9.10Communication

Telecommunication services are available in literally every part of Mombasa County. The project area is well served by all the mobile phone network providers and the wireless phone connections including Safaricom, Airtel and Telkom service providers in the country. All these will facilitate communication throughout the project cycle.

4.10 Socio-economic survey

The Consultant undertook a detailed socio-economic assessment/baseline survey targeting all households/tenants within the New Changamwe Flats and those living within the KeNHA road reserve flats that were formerly in LAPTRUST's land but had been acquired by KeNHA during the Nairobi-Mombasa Highway (A109) road expansion. The survey was conducted in the months of February and March 2024.

While the primary focus of the census/socio-economic survey was centered on the households/tenants within New Changamwe Flats, efforts were made to also include PAPs residing in the KeNHA road reserve flats to ensure a holistic understanding of the project affected households. In total, there are 264 occupied households in the

area (228 households in New Changamwe Flats, which are owned by LAPTRUST and 36 households within the KeNHA road reserve, which are owned by KeNHA).

A total of 247 (94%) households were interviewed out of the total number of 264 occupied house units in the area. This was mainly attributed to the fact that some of the PAPs were not available during the period of enumeration despite efforts to reach all the targeted PAPs, including scheduling multiple enumeration sessions and utilizing PAPs/community outreach channels. Out of the 247 households interviewed, 216 (79%) were from the units owned by LAPTRUST and 31 (13%) were from the units owned by KeNHA.

The survey was undertaken with the involvement of the project affected persons (PAPs) and the objectives of the exercise were to:

i. Obtain population data characterizing individual and household characteristics of the PAPs;
ii. Identify vulnerable persons and groups;
iii. Identify the impacts of the project on the livelihoods of the PAPs;
iv. Document the concerns of PAPs

A total of 119 (48%) tenants out of the 247 respondents interviewed had lived in New Changamwe Estate for more than 30 years. The rest were distributed as shown in the table below.

Table 4-10: Years Tenants have lived in New Changamwe Estate

Years lived in New Changamwe Estate	No. of Respondents	% of Respondents
Less than 1Year	2	0%
1-5 Years	17	7%
6-10 Years	31	13%
11-15 Years	23	9%
16-20 Years	22	9%
21-25 Years	16	7%
26-30 Years	17	7%
More than 30 Years	119	48%
Grand Total	**247**	**100%**

4.10.1 Age of Respondents

There is a diverse mix of age groups, including families with children and elderly individuals. Majority (32%) of the PAPs were in the age group of (40-49), 25% were in (50-59) age group, 18% were in (60-69) age group while 15% were in (30-39) age

group. Only 7% reported to be 70 years and above while 4% were in the age group of (18-29).

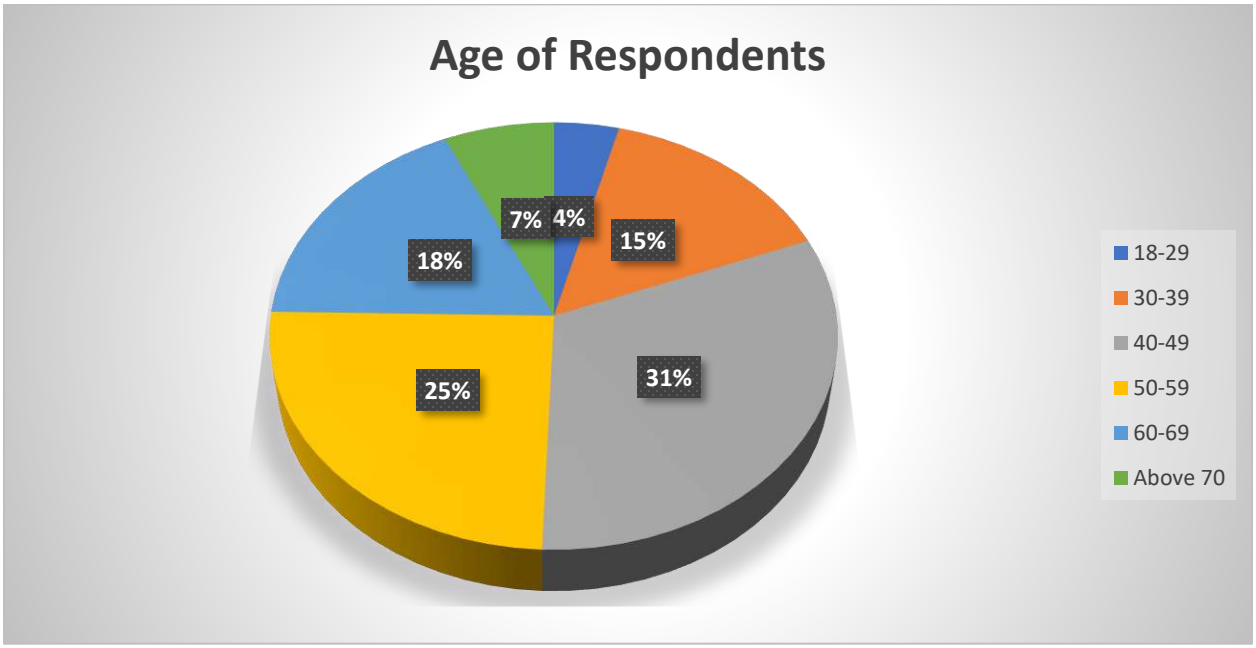

Figure 4-3: Age of Respondents

4.10.2Ethnic and Gender Distribution

The households interviewed were ethnically distributed as follows: majority (30%) were kikuyu, Kamba 21%, Luo 16%, Somali 7%, Luhya 6%, Mijikenda 6%, Taita 5%, Giriama 4%, Kisii 1%, while the least ethnic group was Maasai with only one person recorded. The other 4% were Nubian, Meru, Arab, Mkauma, Bajun and Embu.

Table 4-11: Ethnic Distribution

Ethnic Group	No. of Respondents	% of Respondents
Giriama	10	4%
Kamba	51	21%
Kikuyu	75	30%
Kisii	2	1%
Luhya	15	6%
Luo	39	16%
Maasai	1	0%
Mijikenda	14	6%
Other	9	4%
Somali	18	7%
Taita	13	5%
Grand Total	**247**	**100%**

In terms of gender, 129 (52%) of all tenants interviewed were male and 118 (48%) were female, indicating a slightly higher representation of males. This might also be because of modern and progressive civilizations on efforts towards gender equality and empowerment.

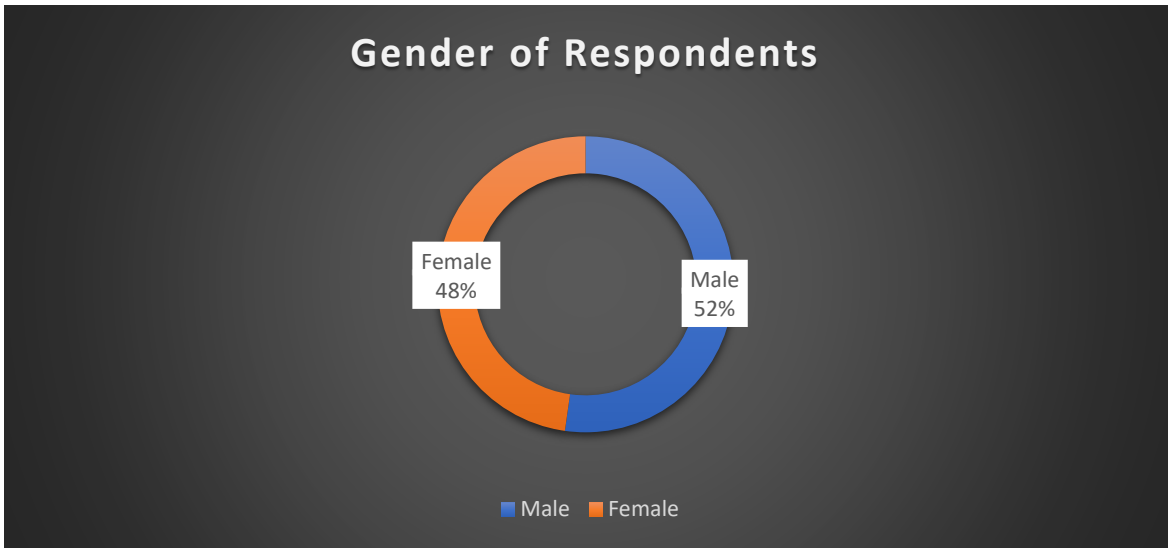

Figure 4-4: Gender of Respondents

4.10.3Religion

Majority (86%) of the PAPs interviewed were Christians while 14% were Muslims. This was also evidenced from three churches within New Changamwe Flats Compound namely: Voice of Salvation Church, Bethsaida Fellowship Worship Centre and Baptist Church; a mosque (Masjidul Eitisam Mosque), that is neighbouring New Changamwe Flats and a Madrasa that is operated by Masjidul Eitisam Mosque within the project area.

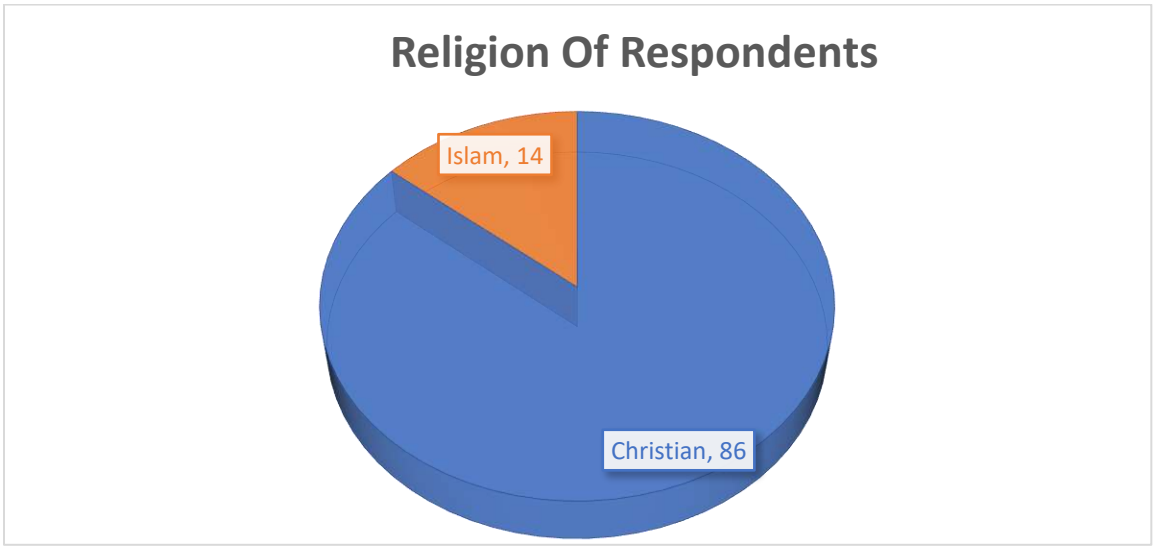

Figure 4-5: Religion of Respondents

4.10.4Marital Status

Among the 247 PAPs interviewed, 61% were married, 23% were single; 15% were widowed while 2% were separated. This implied most of them were in family-set-ups and hence any assistance offered to PAPs when moving out of the estate should take into consideration this fact and provide support in such a way as not to separate family members or jeopardize their rights such as denying children the right to education by issuing notice to vacate to families before education year end.

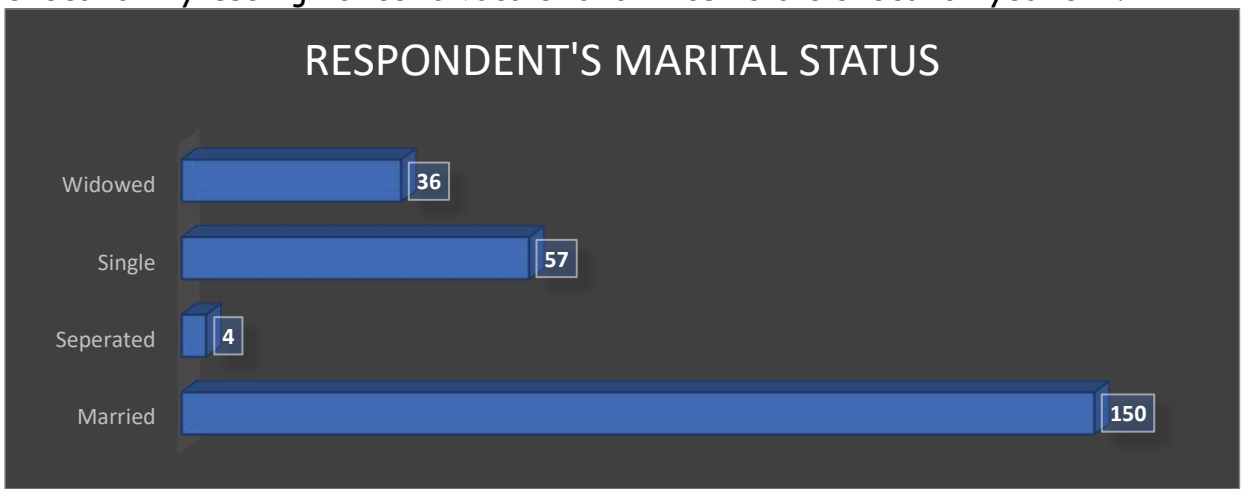

Figure 4-6: Respondent's Marital Status

4.10.5Formal Education

For the sample size of the population interviewed, the PAPs highest level of education attained was as follows: 45% had attained College education, 30% had reached the secondary level of education and 17% University. The other 7% and 1% reported to having primary education and no formal education respectively.

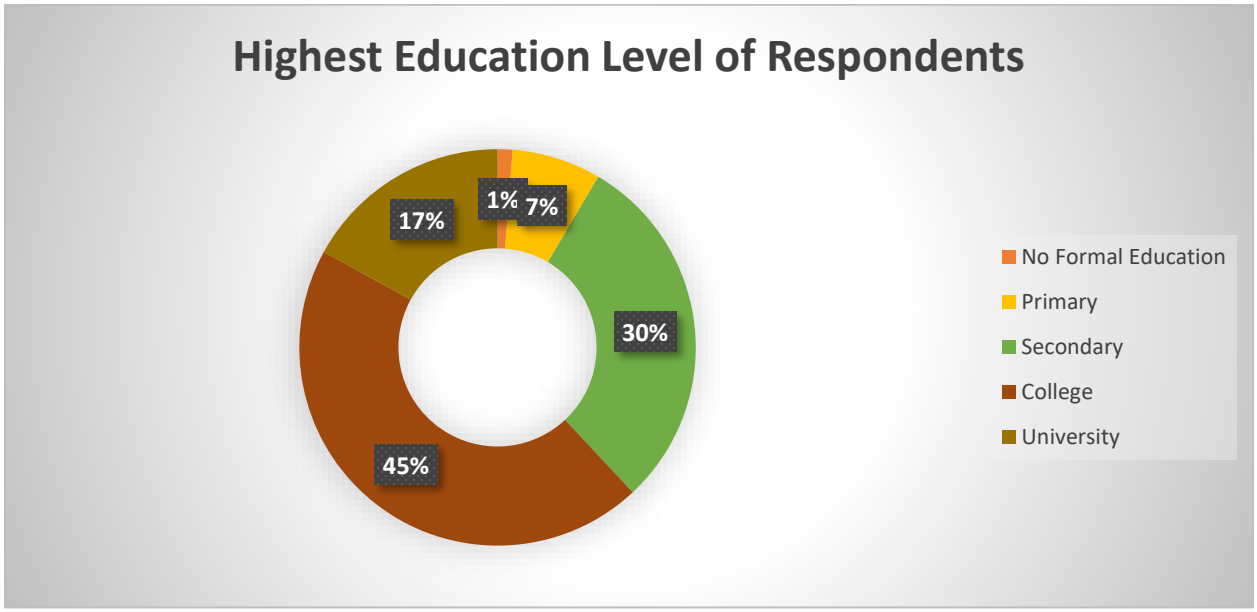

Figure 4-7: Highest Education Level of Respondents

4.10.6Respondents' Source of Income

Majority (53%) of the respondents reported to be self-employed. From the field visit, the occupants of New Changamwe Estate consisted of traders and practiced small-scale farming. Some of the businesses in the area included retail kiosks, tailoring businesses, community video cinema, salon, food kiosks and *Tuk-Tuk* garage. 21% of the respondents were employed in the private sector; 8% were unemployed while 4% were casual labourers. The remaining 7% were retired employees.

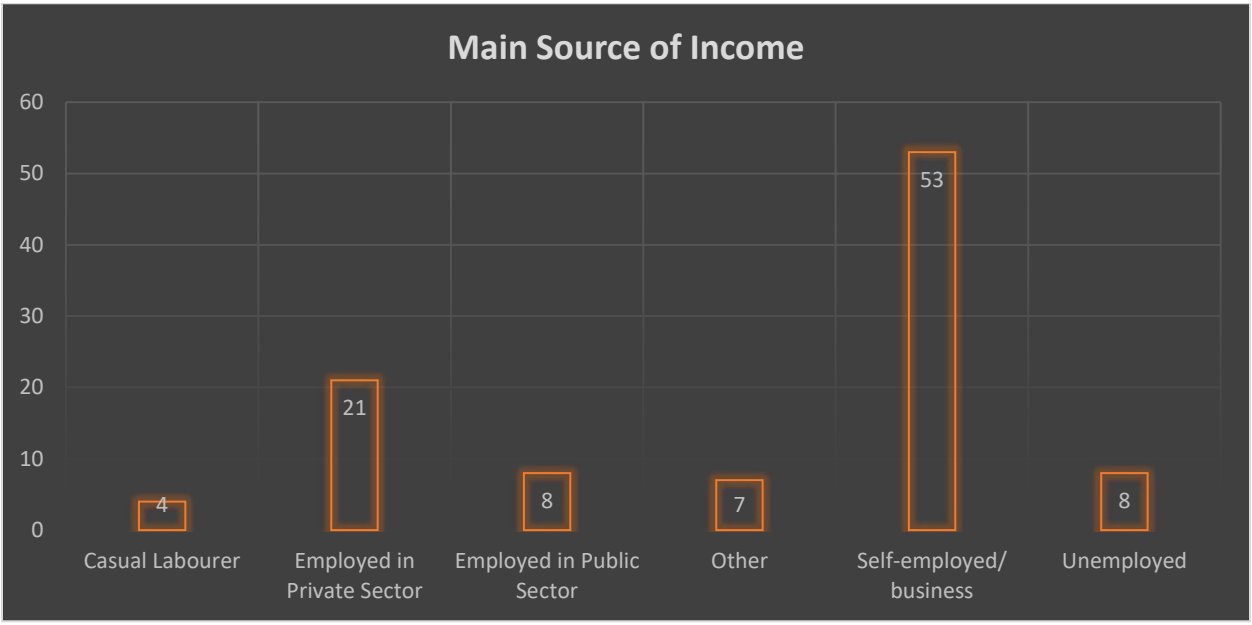

Figure 4-8: Main Source of Income for Respondents

The income of the respondents varied from household to household due to different socio-economic activities that respondents engaged in. 28% of households had an income ranging between Kshs. 10,000-20,000 while 20% either had an income of Kshs. 10,000 or less, or no regular income at all. This suggests that a number of the households in New Changamwe Estate are poor. Those earning between Kshs. 30,000-40,000 and Kshs. 20,000-30,000 were recorded to be 17% each while Kshs. 40,000-50,000 and Kshs. 50,000-100,000 were 10% and 7% respectively. Only 1% reported to earning Kshs. 100,000 or above that figure.

Table 4-12: Monthly income of household head

Monthly income of HH Head	No. of Respondents	% of Respondents
0 – 10,000	49	20%
10,001 – 20,000	69	28%
20,001 – 30,000	41	17%
30,001 – 40,000	43	17%
40,001 – 50,000	24	10%

50,001 – 100,000	18	7%
Over 100,000	3	1%
Grand Total	**247**	**100%**

4.10.7Household Size

In the survey conducted, the average household size was determined to be 4 individuals per household. This average was derived from a range of household sizes observed, with the highest recorded number of individuals in a single household being eleven (11) while the lowest number of individuals in a household was one (1). These findings provide valuable insights into the diversity of household compositions among the tenants/ PAPs.

Among the elderly people recorded to be 70 years or above, only 4 of them were registered with INUA Jamii Cash Transfer Programme for older persons, while 19 were not registered. The rest (3) did not want to disclose the information.

Out of the 247 respondents interviewed, 18 respondents reported as having a member or more with disability aspects. They were either having mental, physical, hearing or visual challenges.

From the total 247 respondents interviewed, 26 respondents said they had orphans in their households.

4.10.8New Changamwe Flats Rent Paying Tenants

Majority (98%) of the respondents indicated that they paid house rent directly to LAPTRUST while 2% confirmed being sub-tenants. This however contradicts the report register collected by LAPTRUST that had 158 occupants out of 228 registered tenants (excluding the blocks affected by KeNHA Road Expansion Project) being sub-tenants.

Table 4-13: Entity of Rent Payment

Entity of Rent payment	No. of Respondents	% of Respondents
Different landlord	6	2%
LAPTRUST	241	98%
Grand Total	**247**	**100%**

4.10.9Health Status

For the past one year, 55% of the households interviewed did not have any of their household member suffering from any illness while 45% responded to having them or their household member sick.

Table 4-14: Household health within the past 12 months

Illness in the past 12 months	No. of Respondents	% of Respondents
No	136	55%
Yes	111	45%
Grand Total	**247**	**100%**

Most of the conditions mentioned by the respondents included blood pressure, malaria, flu, fever, stomach-ache, eye problem, diabetes, and diarrhoea. The data revealed a prevalence of minor illnesses without any notable concerns or major health issues among the residents living in New Changamwe Flats

In case of any medical attention needed, 85% of the respondents stated that they went to government hospital/ health centres, 25% mentioned that they went to private hospital/ health centres while 8% went to the pharmacy/chemist. Other health facilities utilized by the PAPs are presented in the figure below.

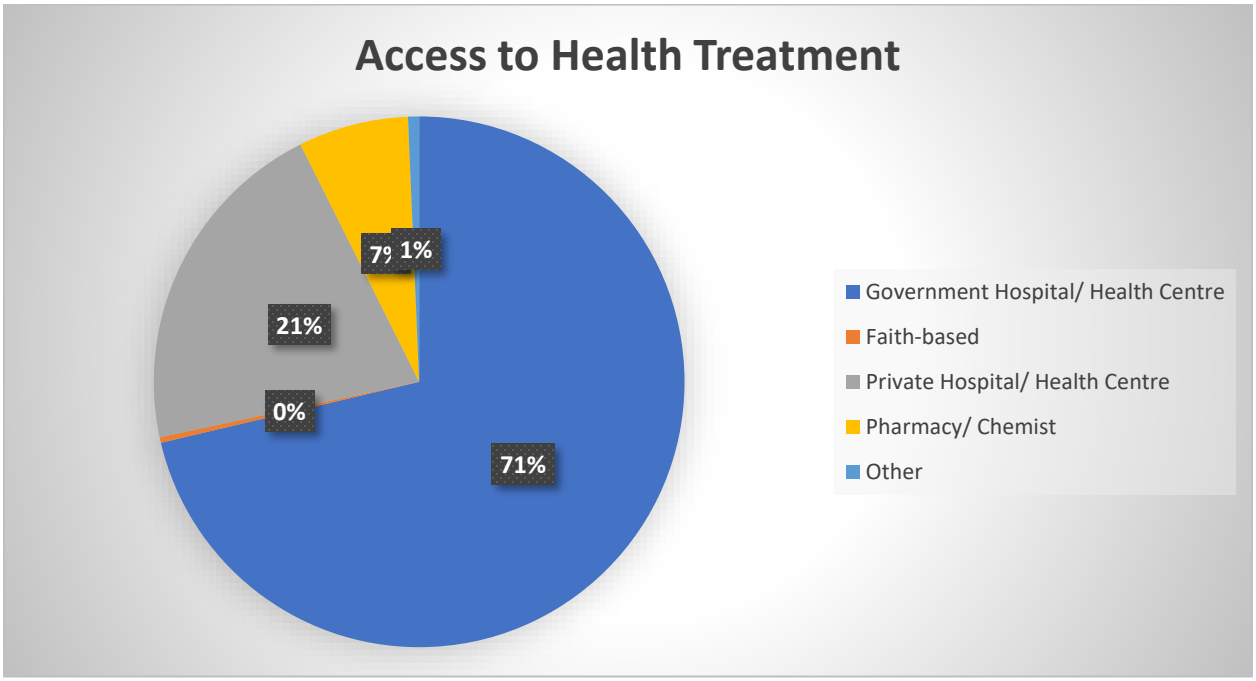

Figure 4-9: Access to Health Treatment

4.10.10 Water and Sanitation

4.10.10.1 Water

Majority (52%) of the respondents got their water from water vendors while 45% relied on water piped to the premise. 2% mentioned that they relied on bottled water as their main source of water.

Table 4-15: Sources of Water for Domestic Use

Source of water for domestic use	No. of Respondents	% of Respondents
Borehole	6	2%
Bottled water	1	1%
Piped to estate	111	45%
Water vendor	129	52%
Grand Total	**247**	**100%**

From the responses above, 98% of the respondents paid for water they use, while 2% mentioned not to pay for water.

4.10.10.2 Sanitation

Majority (99%) of the project affected households had their garbage collected by community associations/groups while 1% used the County Government to dispose their garbage. This was also evidenced from the field visit where there was a garbage collection point set aside in the premises, where the group of youths who collect garbage from people's houses at a fee, dumped them for later collection and disposal by a private company.

Table 4-16: Mode of Garbage Disposal

Mode of garbage disposal	No. of Respondents	% of Respondents
Collected by Community Association/ Group	244	99%
Collected by County Government	3	1%
Grand Total	**247**	**100%**

4.10.11 Source of Energy

All the respondents used electricity as their main source of lighting in their households. For cooking energy, 89% of the respondents used gas in their households, 43% used charcoal and 4% used kerosene. The rest used electricity and Koko fuel as shown below.

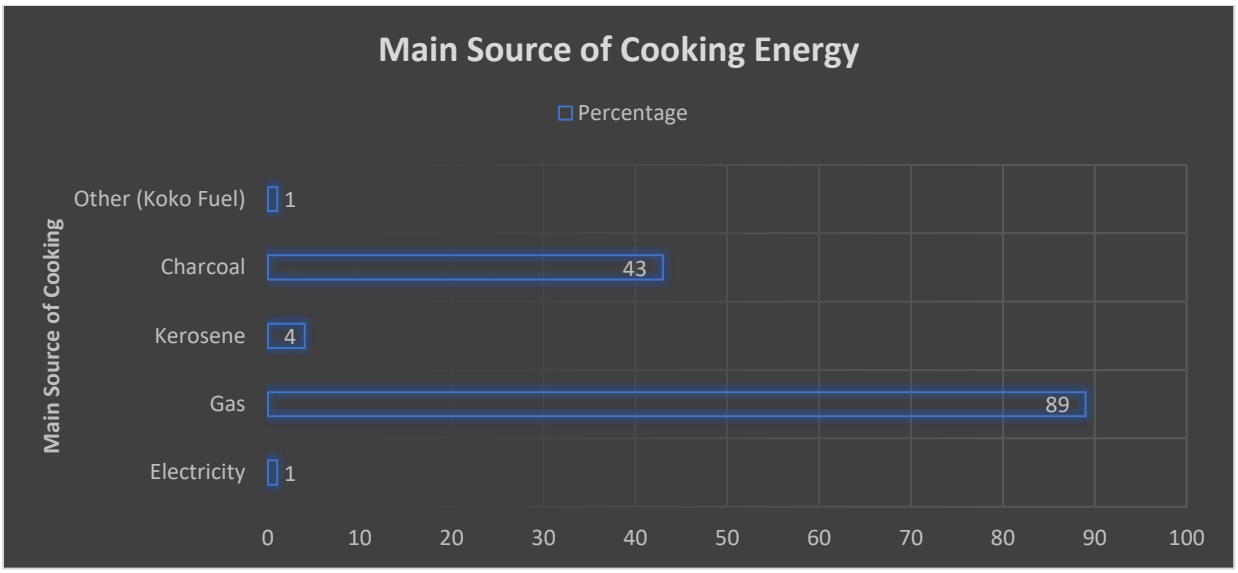

Figure 4-10: Main Source of Cooking Energy

4.10.12 Means of Transport and Communication

4.10.12.1 Transport

The use of public means/matatu is the most common mode of transport amongst the PAPs. Out of the total 247 respondents, 91% used public transport, 4% used a private vehicle, 3% used a bicycle/motorbike/boda-boda (3%), 2% used a tuk-tuk and 1% preferred walking.

Table 4-17: Main Mode of Transport

Mode of transport used	No. of Respondents	% of Respondents
Bicycle/ motorbike (boda-boda)	7	3%
Private vehicle	9	4%
Public transport - Matatu	224	91%
Tuk-tuk	4	2%
Walking	3	1%
Grand Total	**247**	**100%**

4.10.12.2 Communication

The most common mode of communication used by the respondents was mobile phone (92%) while the least used was E-mail (1%). This was also evidenced during the household survey exercise where most PAPs who were not in their houses were reachable via phone calls to make appointments for interviews. The other modes of communication used included letters (5%) and passing information through the

chief/Nyumba-Kumi (2%).

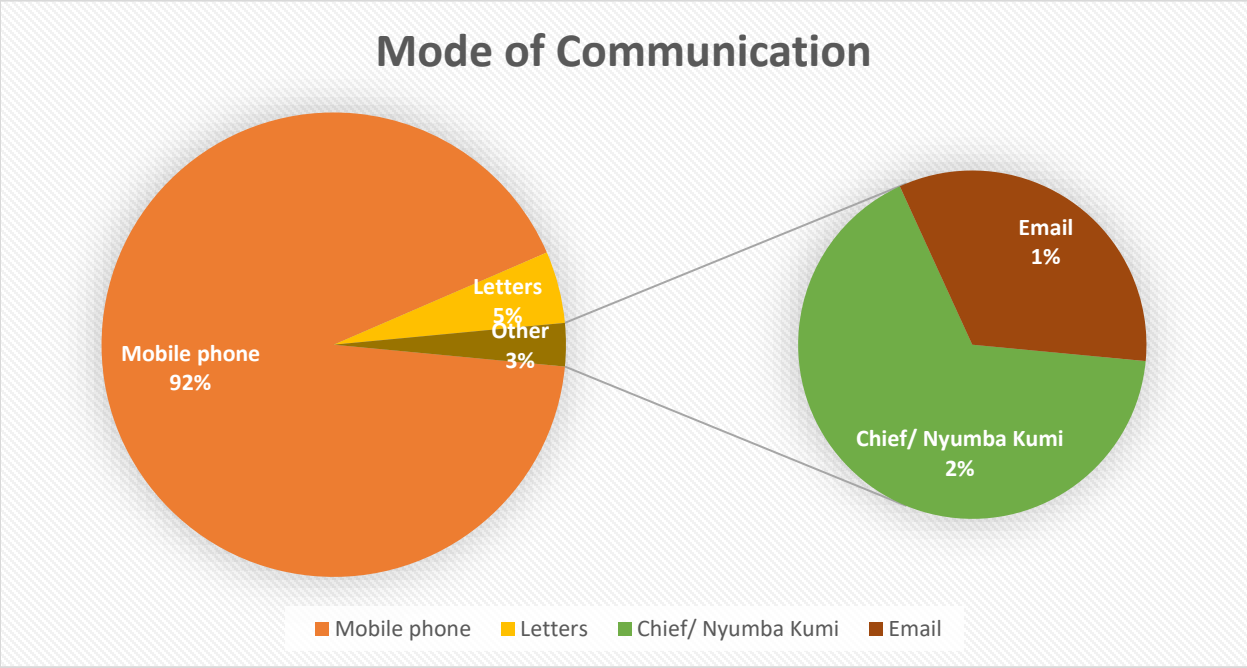

Figure 4-11: Main Mode of Communication

5 RELEVANT POLICY, LEGISLATIVE AND REGULATORY FRAMEWORK

This Chapter outlines the existing national and international environmental and social legislation, policies, and institutions applicable to housing development that guide the development of the proposed project. As Kenya is a signatory to various international conventions and laws, national projects need to be aligned with their requirements. Relevant international conventions and laws are therefore presented in this chapter.

The principal National legislation is the Environmental Management & Coordination Act of 1999 and its subsequent amendments EMCA (2015). EMCA empowers stakeholders to participate in sustainable management of the natural resources. The sole purpose of this section is to provide the proponent with quick reference to the critical legal and policy provisions to enable proper planning and impact assessment during project planning and implementation. The following is an outline of the relevant legislative, policy and regulatory framework for which the Proponent and the contractor shall observe.

5.1 The Constitution of Kenya, 2010

The Constitution of Kenya is the supreme law of Kenya. It establishes the structure of the Kenyan government and defines the relationship between the government and the citizens of Kenya. The constitution clearly provides for environmental protection and recognizes the right to clean environment as a fundamental human right.

The Bill of Rights

Chapter 4 outlines the rights and fundamental freedoms for all Kenyans. Article 42 of the same chapter states that every person has the right to a clean and healthy environment which includes the right:

- To have the environment protected for the benefit of present and future generations through legislative and other measures, particularly those contemplated in Article 69; and
- To have obligations relating to the environment fulfilled under Article 70.

5.2 Relevant Policies and Strategies

Table 5-1: Relevant Policies and Strategies

Relevant Policies and Strategies	
Kenya Vision 2030	This development blueprint aspires to transform Kenya into a newly industrializing, middle-income country by 2030 with three pillars – Economic, Social and Political. These pillars are anchored on the following foundations: macroeconomic stability; continuity in governance reforms; enhanced equity and wealth creation opportunities for the poor; infrastructure; energy; science, technology and innovation; land reform; human resources development; security and public sector reforms. The Vision 2030 aims at transforming Kenya into a globally competitive, newly industrialized, middle income and prosperous country. The growth objectives underpinning the Vision 2030 require a sustainable annual economic growth rate of more than 10% supported by industry, agriculture and services. The Kenyan Vision 2030 has a housing and urbanization strategy within its second pillar on investing in the Kenyan society. *The proposed Project will facilitate construction of residential houses which is a timely project in line with this vision*
The Big Four Agenda (GOK, 2017)	The Big Four Agenda was launched during the 54th Jamhuri Day Celebrations on 12 December 2017 and elaborates the specific agenda and measures the Jubilee administration will focus on over the period 2018-2022. The areas of focus set out are -food security, affordable housing, manufacturing and universal healthcare. *The proposed residential development is aimed at addressing the fourth agenda in regard to housing within the Country.*
The Fourth Medium Term Plan (MTP IV) 2023-2027)	▪ The Fourth MTP will implement the fourth and second-last phase of Kenya Vision 2030 and will set the momentum for transition to the next long-term development agenda for the Country. The Fourth MTP will prioritize implementation of economic recovery strategies to re-position the economy on a steady and sustainable growth trajectory. ▪ The Core Pillars for the Fourth MTP include, Agriculture, Micro, Small and Medium Enterprise (MSME) economy, Housing and Settlement, Healthcare, Digital Superhighway and Creative Economy

Relevant Policies and Strategies	
	The proposed project is hence in line with the MTP IV as it will support housing.
The National Environmental Action Plan (NEAP), 1994	▪ The NEAP for Kenya was prepared in 1994. It was a deliberate policy to integrate environmental considerations into the country's social and economic development process. The integration was achieved through a multi-sectorial approach to develop a comprehensive framework that ensures that environmental management and conservation of natural resources is an integral part of our societal decision-making process. *The proponent should comply with the NEAP policy with regards to preventing, controlling, or mitigating specific as well as general adverse impacts on the environment.*
Sessional Paper No. 10 of 2014 on the National Environment Policy	▪ The overall goal of this Session Paper is to ensure better quality of life for present and future generations through sustainable management and use of the environment and natural resources. This Session Paper calls for the use of environmentally sound technologies based on the best available techniques and policies as a way of minimizing negative impacts to the environment. ▪ Section 5.6 of this Session Paper focusses on infrastructure development and environment and makes explicit policy statements to ensure sustainable management and use of the environment and natural resources during the construction and operation of infrastructure developments. These policy statements require the commitment of the government to: i. Ensure Strategic Environmental Assessment; Environmental Impact Assessment, Social Impact Assessment and Public participation in the planning and approval of infrastructural projects. ii. Develop and implement environmentally friendly national infrastructural development strategy and action plan. iii. Ensure that periodic Environmental Audits are carried out for all infrastructural projects. *In line with the above policy statements, this ESIA has been conducted for the proposed mixed-use development to ensure that potential environmental and social issues are appropriately addressed. Once approved by NEMA, the Project Proponent will also need to conduct periodic Environmental Audits to ensure continuous conformity with the overall goal of this Session Paper. In addition, this ESIA has considered*

Relevant Policies and Strategies	
	analysis of alternatives including alternatives to technology to ensure that the best available and appropriate technology is used.
Sessional Paper No. 1 of 2017 on National Land Policy	▪ The overall goal of the national land use policy is to provide legal, administrative, institutional and technological framework for optimal utilization and productivity of land related resources in a sustainable and desirable manner at national, county and community levels. ▪ The Policy is premised on the philosophy of economic productivity, social responsibility, environmental sustainability and cultural conservation. ▪ Key principles informing it include efficiency, access to land use information, equity, elimination of discrimination and public benefit sharing. ▪ Amongst the key principles envisioned by the policy include; i. Land use planning, resource allocation and resource management for sustainable development to promote public good and general welfare; ii. Environmental management and sustainable production in the utilization of land resources; iii. Coordination and integration of institutional linkages in planning at sectoral and cross-sectoral levels to foster collaboration and decision making among different land users; iv. Equitable utilization of land resources to meet governance, social-economic and cultural obligations of the people of Kenya; *The proposed project will need to be consistent with the provisions of this Policy in order to avoid conflicts.*
Sessional Paper No. 6 of 1999 on Environment and Sustainable Development Policy.	▪ The policy defines approaches that will be pursued by the Government in mainstreaming environment into development. ▪ The policy harmonized environmental and developmental objectives with the broad goal of achieving sustainable development. *The policy paper also provided guidelines and strategies for the government's action regarding environment and development. This policy is relevant to the proposed project in view of the potential impacts on the environment*
National Climate Change Response	▪ NCCRS has the following key recommendations: adaptation and mitigation measures in key sectors; necessary policy, legislative and institutional adjustments; enhancing climate change awareness,

Relevant Policies and Strategies	
Strategy (NCCRS), 2010	education and communication in the country; capacity building requirements; enhancing research and development as well as technology development and transfer in areas that respond to climate change, among many others. *It is prudent to ensure that the proposed project infrastructure design is climate-proof over its lifespan, and designing infrastructure that can withstand the prevailing climatic conditions, e.g., structures that can withstand strong winds and high temperatures.*
National Sustainable Waste Management Policy of 2021	▪ The goal of the policy is to: protect public health and the environment and drive job and wealth creation by creating an enabling environment for sustainable, integrated waste management and the minimization of waste generation, to contribute to a circular economy. ▪ The policy highlights interventions in the application of the waste hierarchy and circular economy model for managing waste in Kenya as well as the enabling framework to support its implementation and realization of a zero-waste economy. *The proponent should comply to this policy through frequent awareness creation to the staff and workers of the project throughout its lifecycle; and contracting a waste management company that is licensed by NEMA to handle all waste that will be generated from the site and its allocated infrastructure.*
National Policy on Gender and Development (NPGD) 2019	▪ The overall objective of the Gender and Development Policy is to facilitate the mainstreaming of the needs and concerns of men and women in all areas in the development process in the country. The construction sector plays a key role in socio-economic development. *The proponent should ensure gender concerns are mainstreamed into the planning and implementation of the project to ensure that the needs and interests of each gender are addressed.*
Kenya Environmental Sanitation and Hygiene Policy (KESHP) 2016-2030	▪ It aims to increase the proportion of the population with access to improved sanitation to 100% by 2030 and ensure a clean and healthy environment for all in Kenya. *The proponent and the contractor should seek to comply with the provision of this policy to achieve 100% Open Defecation Free (ODF) at the project area during the construction period.*
Kenya AIDS Strategic Framework (II) (2020/21-2024/25)	▪ It provides guidance for implementing an evidence-based HIV response. It outlines priority interventions and emphasis on the need

Relevant Policies and Strategies	
	to create an enabling system to maximize on the impact of interventions. ▪ Its vision is to maintain a Kenya free of HIV infections, stigma and AIDS-related deaths. It seeks to provide comprehensive HIV prevention, treatment, care and support towards Universal Health Coverage for all people in Kenya. *Due to the large of number of workers who will be involved in the proposed project and the associated social issues with projects of such as scale, HIV/AIDS has been considered as one of the proposed impacts, hence adequate mitigation measures are proposed to that effect.*
Kenya Health Policy of 2014-2030	▪ It gives directions to ensure significant improvement in overall status of health in Kenya in line with the Constitution of Kenya 2010, the country's long-term development agenda, Vision 2030 and global commitments. ▪ It focuses on: ensuring equity; people centeredness and a participatory approach; efficiency; a multi-sectoral approach; and social accountability in the delivery of healthcare services. ▪ It also embraces the principles of protection of the rights and fundamental freedoms of specific groups of persons, including the right to health of children, persons with disabilities, youth, minorities, the marginalized and older members of the society, in accordance with the Constitution. *The proposed project is expected to employ both skilled and unskilled workers some who might come from the marginalized groups within the project area. The rights and fundamental freedoms of these workers will be protected in compliance with the requirements of this policy.*
Integrated Strategic Urban Development Plan (ISUDP) for Mombasa Town (2015-2035)	▪ The purpose of the ISUD Plan is to: i. Define a vision for future growth and development of the areas over the next 20 years; ii. Provide an overall integrated physical framework for urban growth of Mombasa city; iii. Provide a basis for coordinated programming of projects and budget, thereby serving as a downstream management tool. ▪ The ISUDP proposes to accommodate thirty-five percent of additional housing demand through brownfield development. With objective of making use of vacant and underused properties in already developed areas. For optimal utilization of resources, it is proposed that at-least twenty five percent of brownfield re-densification should be done both on formally and informally

Relevant Policies and Strategies	
	developed parts of the city, in form of mass housing in areas where it is feasible for example Buxton, Changamwe, Makande and Likoni. *The proposed project is hence in line with the ISUDP as it will support modern housing through the approximately 714 residential units that will be incorporated in the mixed-use development project.*

5.3 Relevant Laws

Application of national statutes and regulations on environmental conservation suggest that the Proponent has a legal duty and social responsibility to ensure that the development is carried out without compromising the status of the environment, natural resources, public health, and safety. This position enhances the importance of this Environmental and Social Impact Assessment for the site, to provide a benchmark for its sustainable operation.

Kenya has approximately 77 statutes that relate to environmental concerns. Most of these statutes are sector specific, covering issues such as public health, soil erosion, protected areas, endangered species, water rights and water quality, air quality, noise and vibration, cultural, historical, scientific & archaeological sites, land use, resettlement, etc. The key national laws that govern the management of environmental resources in the country have been discussed below. It is noteworthy that wherever any of the laws contradict each other, EMCA 1999 (Amended in 2015) prevails.

Table 5-2: Relevant Laws

Relevant Laws	
Environmental Management and Co-ordination Act (EMCA), 1999 (Amended in 2015)/ (EMCA Cap 387)	▪ Environmental Management and Co-ordination Act, No. 8 of 1999, provides a legal and institutional framework for the management of the environment and development related matters. It is the framework law on the environment, which was enacted on the 14th of January 1999 and commenced in January 2002. The Act was amended in June 2015. Top-most in the administration of the Act is the National Environment Management Authority (NEMA), *This ESIA is in compliance with Section 58 of the Environmental Management and Coordination Act (EMCA)* *No.8 of 1999, (Amendment Act, 2015) and the Second Schedule, Part 3 (a). Environmental quality conservation aspects of this project will be realized through the implementation of the Environmental and Social Management*

Relevant Laws	
	Plan aimed at mitigating the potentially negative impacts and enhancing the potentially positive impacts predicted through this ESIA study. ***Permit / license Requirements:*** *Obtain EIA License prior to commencement of the project. Through EMCA, various regulations have also been gazetted which the proponent is expected to abide as discussed below.* *Under the Act, the client will:* *i. Safeguard and enhance the environment;* *ii. Ensure the project undertakes annual environmental audits; and* *iii. Comply with all regulations issued under this Act*
Environmental (Impact Assessment and Audit) Regulations 2003	▪ Environmental Impact Assessment under the EMCA Cap 387 Act is guided by the Environmental Impact Assessment (Assessment and Auditing) Regulations of the year 2003, which is given under legal notice no. 101 and (Amendment) Regulations, 2016 (L.N 149) & 2019 (L.N 32) *This Report complies with the requirements of the Environmental Regulations in the coverage of environmental issues, project details, impacts, legislation, mitigation measures, management plans and procedures. The Proponent shall be required to commit to implementing the environmental management plan laid out in this report and any other conditions laid out by NEMA.* ***Permit / license Requirements:*** i. Undertake Annual Environmental Audits (AEA) of the project during operation. ii. The proponent will undertake/implement the project only after the ESIA Study Report is approved by NEMA.
Environmental Management and Coordination (Water Quality) Regulations, 2006	▪ The regulations also provide guidelines and standards for the discharge of poisons, toxins, noxious, radioactive waste or other pollutants into the aquatic environment in line with the Third Schedule of the regulations. The regulations have standards for discharge of effluent into the sewer and aquatic environment. *Everyone, including the proposed project proponent, is required to refrain from any actions, which directly or indirectly causes water pollution, whether the water resource was polluted before the enactment of the Environmental Management and Coordination Act (EMCA) Gazetted in Cap 387.*

Relevant Laws	
	Permit / license Requirements: *i. Undertake Quarterly, effluent discharge quality and quantity monitoring through sampling and analysis.* *ii. The proponent is required to ensure that wastewater from the project is not released to the environment unless it meets the stipulated standards.*
Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009	▪ These regulations also relate noise to its vibration effects and seek to ensure that the level of noise causes no harmful vibrations. Any person(s) intending to undertake activities in which noise is suspected to be injurious or endangers the comfort, repose, health or safety of others and the environment, must make an application to NEMA and acquire a license. ▪ Minimal Noise is expected during construction phase therefore, contractor is required to implement the provisions of the Environmental and Social Management and Monitoring Plan (ESMMP), to ensure noise reduction. In addition, he shall be required to adhere to the provisions of maximum permissible levels for construction sites. *The proponent should not 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.*
Environmental Management and Coordination (Air Quality) Regulations, 2014	▪ The objective this regulation is to provide for prevention, control and abatement of air pollution to ensure clean and healthy ambient air. ▪ Although impacts on air pollution is listed minor, the Proponent shall observe policy and regulatory requirements and implement the mitigation measures proposed in this document to comply with the provisions of these Regulations on abatement of air pollution. *The proponent will ensure that operations at the site do not generate excessive dust, particulates and other emissions* *beyond allowable limits, especially during construction, by deploying efficient dust screens, PPE and other dust* *suppression measures.*

Relevant Laws	
Environmental Management and Coordination (Waste Management) Regulations, 2006	▪ These Regulations are meant to streamline the handling, transportation, and disposal of various types of waste. ▪ The aim of the Waste Management Regulations is to protect human health and the environment. The regulations place emphasis on waste minimization, cleaner production, and segregation of waste at source. ▪ The Proponent shall observe the guidelines as set out in the environmental management plan laid out in this report as well as the recommendation provided for mitigation /minimization /avoidance of adverse impacts arising from the Project activities. **Permit/license Requirements:** Obtain waste transportation and disposal Permit or Contract a licenced waste transport and disposal company. *The proponent will:* *i. Segregate waste by separating hazardous waste from non-hazardous waste.* ii. *Ensure waste is transported and disposed of by NEMA-licensed waste handlers.*
Water Act, 2016	▪ Provides that a permit shall be required for any use of water from a resource, especially where there is abstraction and use of water with the employment of works. The legislation provides for the management of water resources at national and county level. Article 40(4) provides that an application for a permit shall be subjected to public consultation and, where applicable, an EIA, in accordance with the requirements of EMCA Cap 387. ▪ Section 108(1) of the Water Act, 2016 provides guidelines that will ensure that sewage & effluent management is undertaken to avoid environmental pollution. **Permit/license Requirements:** *A permit/abstraction license will be required from the Water Resources Authority (WRA), for any borehole construction works. The proponent will comply fully with the Act.*

Relevant Laws	
Public Health Act, CAP 242	▪ The Public Health Act (Cap 242) aims at protecting and promotes human health and the prevention, limitation or suppression of infectious, communicable or preventable diseases within Kenya. It also aims to advise and direct local authorities in regard to matters affecting public health and to promote or carry out researches and investigations in connection with the prevention and treatment of human diseases. This Act provides the impetus for a healthy environment and gives regulations to waste management, pollution and human health. ▪ Section 119 states that a medical officer may require the owner of dwelling causing nuisance to remove the nuisance in the dwelling failure to which legal proceedings may be taken against the owner of the dwelling and penalties. ▪ Under section 126 the act includes The Public Health (Drainage and Latrine) Rules, which in section 63, deals ▪ with sewerage and prohibits the disposal of solid or liquid sewage or sewage effluent in such a manner or in ▪ such a position as to cause or be likely to cause dampness in any building or part thereof, or to endanger the purity of any water supply, or to create any nuisance. *Health issues will be integrated into the project to ensure environmental health. Measures to mitigate all forms* *of nuisance will be put in place throughout the phases of the project. Licensed waste handlers will manage solid* *waste arising during the operational phase.*
Food, Drugs and Chemical Substances Act, CAP 254	▪ The proponent is prohibited from selling food that has in or upon it any poisonous or harmful substance; or is unwholesome or unfit for human consumption; or consists in whole or in part of any filthy, putrid, disgusting, rotten, decomposed, or diseased substance or foreign matter; or is adulterated.
Occupational Safety and Health Act (OSHA), 2007	This is an Act of Parliament to provide for the safety, health and welfare of all 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. It applies to all workplaces where any person is at work, whether temporarily or permanently. The relevant sections to the proposed project include; 6 (1) Every occupier shall ensure the safety, health and welfare at work of all persons working in his workplace

Relevant Laws	
	(6) It is the duty of every occupier to register his workplace unless such workplace is exempted from registration under this Act. 7 (1) Except in such cases as may be prescribed, it is the duty of every occupier to: - prepare and, as often as may be appropriate, revise a written statement of his general policy with respect to the safety and health at work of his employees and the organization and arrangements for the time being in force for carrying out that policy; and to bring the statement and any revision of it to the notice of all his employees. 9 (1) Every occupier shall establish a safety and health committee at the workplace in accordance with regulations prescribed by the minister if (a) there are twenty or more persons employed at the workplace; or (b) the Director (of Occupational Safety and Health) directs the establishment of such committee at any other workplace 13 (1) (c) Every employee shall 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. 16 (1) No person shall engage in any improper activity or behaviour at the workplace which might create or constitute a hazard to that person or any other person. 21 An employer or self-employed person shall notify the area occupational safety and health officer of any accident, dangerous occurrence or occupational poisoning which has occurred at the workplace. Where an accident in a workplace causes the death of a person therein, the employer or self-employed person shall – inform the area occupational safety and health officer within 24 hours of the occurrence of the accident; and send a written notice of the accident in the prescribed form to the area occupational safety and health officer within 7 days of occurrence of the accident 22 (3) An occupier shall send a written notice of any disease specified in the second schedule of the Act occurring in the workplace to the Director 47 (1) Every workplace shall be kept in a clean state, and free from effluvia arising from any drain, sanitary convenience or nuisance 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

Relevant Laws	
	of the same family dwelling there), such conveniences shall afford proper separate accommodation for persons of each sex. 78 (1) All stocks of highly inflammable substances shall be kept either in a fire resisting store or in a safe place outside any occupied building, provided that no such store shall be so situated as to endanger the means of escape from the workplace or from any other part thereof in the event of fire occurring in the store 81 (1) In every workplace or workroom, there shall be: – provided and maintained, and conspicuously displayed and free from any obstruction so as to be readily accessible, means for extinguishing fire, which shall be adequate and suitable having regard to the circumstances of each case; and Present persons trained in the correct use of such means of extinguishing fire during all working hours. (2) Every workplace shall be provided with adequate means of escape, in case of fire, for persons employed therein, having regard to the circumstances of each case. 82 (1) Every occupier of a workplace shall design evacuation procedures to be used during any emergency and have the procedures tested at regular intervals. 84 (3) Every employer shall ensure the availability at the workplace of material safety data sheets for all chemicals and other hazardous substances in use at the premises of the employer, containing detailed essential information regarding the identity, supplier's classification of hazards, safety precautions and emergency procedures. The proponent is required to: i. *Ensure the safety, health, and welfare employees.* ii. *Obtain a workplace registration for the different components of the project.* iii. *Send a notification to the Directorate of Occupational Safety and Health Services (DOSHs)* ***two weeks prior to commencement*** *of the project's construction.* iv. *Post at site the OSHA 2007 Abstract.* v. *Develop and publicize the company's OSH policy.* vi. *Appoint a site safety supervisor.* vii. *Obtain and keep at site a General register.* viii. Report any non-fatal accident **within 7 days** to the area Occupational Safety and Health Officer.

Relevant Laws	
	ix. Report any fatal accident to the area Occupational Safety and Health Officer **within 24 hours**.
Factories and Other Places of Work (Fire Risk Reduction) Rules, 2007 (L.N No. 59)	These regulations were made in exercise of the powers conferred on the Minister of labour by section 41 (2) (k) of the Factories and Other Places of Work Act. The rules provide for secure storage of vessels containing dangerous liquids and measures for prevention of fire. The proponent is required to: *i. Provide firefighting and fire detection appliances at the development and ensure they are regularly inspected.* ii. *Conduct Fire audits.*
Factories (First-Aid) Rules, 1977 (L.N No. 160)	These rules stipulate that there shall be provision of well-maintained and readily available and accessible first aid boxes or cupboards. Section 7 of the rules provide that no person shall be placed in charge of a first aid box or cupboard unless he or she has received adequate training in the application of first-aid to the injured persons and holds a certificate of competence issued by: The St. John Ambulance of the St. John Council of Kenya; or The Kenya Red Cross Society; or such other body or society as may be approved from time to time, by the Labour Commissioner. *The proponent will adhere to the provisions of section 2 (c) and 5 of these rules. Additionally, the proponent will ensure the first aid boxes/cupboards are plainly and clearly marked on the outside with the words "FIRST AID" and contact information of the First Aider on-duty.*
Factories and Other Places of Work (Medical Examination) Rules, 2005 (L.N No. 24)	These Rules provide for the conducting of medical examination on various occupations including work involving exposure to noise. There should be Pre-employment and annual repeat examinations within two weeks where abnormal examination results are noted. Examinations are to involve clinical examinations, biological monitoring and other necessary tests depending on the type of exposure. *The proponent is required to ensure that all employees undergo a pre-employment and periodic medical testing within the course of the project activities to survey on their health*
Factories and Other Places of Work (Noise Prevention and Control) Rules, 2005 (L.N No. 25	According to section 5 of the rules, where noise in a workplace exceeds the continuous equivalent of 85 A-weighted decibel (dB (A)) the occupier must develop and implement an effective noise control and hearing conservation programme which must be in writing and should address: Noise measurement; Education & training; Engineering noise control;

Relevant Laws	
	Hearing protection; Posting of notices in noisy areas; and Annual programme review Where the noise level will be above 90 dB (A), the proponent will be required to: i. Post a sign at the entrance to and in every room or conspicuous place, clearly and prominently marked "DANGER HEARING PROTECTION MUST BE WORN". ii. Supply hearing protection to all persons required to enter such an area. iii. Ensure that all workers and any other person entering this area wear hearing protectors.
Work Injuries Benefits Act (WIBA, 2007)	▪ It provides guidelines for compensating employees on work-related injuries and diseases contracted in the course of employment. It requires provision of compulsory insurance for all employees. **Permits and license:** *Employees will be covered under the WIBA cover.*
National Construction Authority Act (NCA), 2011	▪ The National Construction Authority Act, Number 41 of 2011 is set to streamline, overhaul and regulate the construction industry in Kenya. ▪ The industry has for many years suffered poor legislative framework and has been dominated by quacks and unqualified persons. The industry has also suffered a lot of competition from foreign contractors who are seen to offer cheaper and more quality work. The Act is a win for the public as it guarantees public safety. All contractors must be registered with the Authority-NCA, meaning that shady contractors and quacks will be locked out of the industry. It is an offence to carry out any construction work without first having been registered. *The proponent will comply fully with the Act.*
Occupiers Liability Act Cap 34	▪ An act of parliament to amend the law as to liability of occupiers and others for injury or damage resulting to persons or goods lawfully on land or property from dangers due to the state of the property or to things done or omitted to be done there. *The proponent will ensure safety of workers during construction and possible decommissioning phases and occupants upon occupation of the housing units.*
Urban Areas and Cities Act, 2011 and (Amendment) Act, 2019	▪ The Act came into function with regard to Article 184 of the Constitution providing regulations on the classification, governance and management of urban areas and cities and further providing the criteria of establishing urban areas.

Relevant Laws	
	▪ Part III of the Act gives the regulations and functions of every city or municipality with regard to integrated development plans, which shall include but not limited to environmental plans and disaster preparedness, within the area of jurisdiction in achieving objects of devolved governments under section 174 of the constitution while maintaining the socio-economic rights of the people. ▪ Moreover, in the first schedule, the Act enlists the services that any municipality shall provide to its residents which include but not limited to traffic control and parking, water and sanitation, refuse collection, solid waste management, pollution abatement services among others. *The project is in line with the County Integrated Development Plan.*
Land Act, 2012 and Land Laws (Amendment) Act, 2016	▪ Provides for the sustainable administration & management of land & land-based resources & connected purposes. The Act also provides for the repeal of the Way leaves Act (Cap 292) and the Land Acquisition Act (Cap 295). ▪ The Act requires that there is proper marking and maintenance of boundaries. An interested person who has made an application to the Registrar for his/her boundaries to be ascertained, the Registrar shall give notice to the owners and occupiers of the land adjoining the boundaries in question of the intention to ascertain and fix the boundaries. ▪ With regard to the maintenance of boundaries, the Act requires every proprietor of land to maintain in good order the fences, hedges, stones, pillars, beacons, walls and other features that demarcate the boundaries, pursuant to the requirements of any written law. *The proposed project site is registered & has a title deed.*
Environment and Land Court Act, 2011	▪ The Act enacts Article 162(2) (b) of the Constitution; to establish a superior court to hear and determine disputes relating to the environment, use, occupation of, title to land, and to make provisions for its jurisdiction, functions, and powers, and connected purposes. ▪ The Court has the power to hear and determine disputes relating to; (a) environmental planning and protection, climate issues, land use planning, title, tenure, boundaries, rates, rents, assessment of property, mining, minerals, and other natural resources; (b) compulsory acquisition of land; (c) land administration and management; (d) public, private and community land and contracts, choices in action or other instruments granting any enforceable interests in land; and (c) land administration and management; (d) and any other dispute relating to environment and land.

Relevant Laws	
	This Act complements the Land Act, 2012 in addressing grievances that are likely to arise from the RAP implementation process for the proposed project.
Landlord and Tenants Act Cap 301	The relevant sections related to the proposed project include: ▪ 4(2) - A landlord who wishes to terminate a controlled tenancy, or to alter, to the detriment of the tenant, any term or condition in, or right or service enjoyed by the tenant under, such a tenancy, shall give notice in that behalf to the tenant in the prescribed form. ▪ 4(4) - No tenancy notice shall take effect until such date, not being less than two months after the receipt thereof by the receiving party. ▪ 4(5) - A tenancy notice shall not be effective for any of the purposes of this Act unless it specifies the grounds upon which the requesting party seeks the termination, alteration or reassessment concerned and requires the receiving party to notify the requesting party in writing, within one month after the date of receipt of the notice, whether or not he agrees to comply with the notice. ▪ 4(6) - A tenancy notice may be given to the receiving party by delivering it to him personally, or to an adult member of his family, or to any other servant residing within or employed in the premises concerned, or to his employer, or by sending it by prepaid registered post to his last known address, and any such notice shall be deemed to have been given on the date on which it was so delivered, or on the date of the postal receipt given by a person receiving the letter from the postal authorities, as the case may be. ▪ 5(2) - Where a landlord gives a tenancy notice to his tenant, he may at the same time give a similar notice to any person to whom the tenant has sub-let the whole or any part of the premises concerned and thereupon the provisions of this Act shall apply to the sub-tenant, and his sub-tenancy, as if he were the tenant of such landlord. *The relationship between the residents living in New Changamwe Flats and LAPTRUST is that of Tenants and Landlord, as guided by the Landlord and Tenant Act Cap 301, thus the proponent will be guided by the provisions of this Act when evicting the tenants from the premises.*
Eviction and Resettlement Guidelines, 2009	▪ The guidelines seek to provide for a humane involuntary resettlement of people from land. That in the event forceful eviction becomes necessary, the exercise shall be done at appropriate timing and not at night or harsh weather seasons. *The Project Affected Persons (PAPs) will be in full knowledge of the intended exercise and will be given an opportunity to demolish their structures on their own and salvage their structures for materials that can*

Relevant Laws	
	be re-used. The proponent will further be guided by these guidelines and at own discretion, will decide on the form of assistance that will be offered to the PAPs.
Prevention, Protection and Assistance to Internally Displaced Persons and Affected Communities Act, 2012	▪ The provisions of this Act apply to all internally displaced persons that arise either through calamities, social conflict or development projects and is guided by the Bills of Right under the Constitution of Kenya. ▪ Section 5 of the Act lists development projects among the displacement factors and outlines involvement of the affected persons through awareness, sensitization, training and education on causes, impacts, consequences and prevention measures. ▪ Section 6 of the Act provides that displacements and relocation as a result of development project sites will only be justified by compelling and overriding public interest. The procedures to follow are listed under section 22 and include: i. Justification as to why the displacement is unavoidable and that there is no other feasible alternative. ii. Seeking free and informed consent from the affected person iii. Holding public hearing on project planning iv. Provision of reasonable notice time to allow the affected persons review and react to the displacement conditions; and v. Displacement process should reflect respect to human rights. ▪ *The Act provided enacted guidelines which could be adapted for the New Changamwe Flats Tenants.*
HIV and AIDS Prevention and Control Act, 2006	▪ The relevant sections related to the proposed project include: i. 24(1) A person who is and is aware of being infected with HIV or is carrying and is aware of carrying the HIV virus shall; a) take all reasonable measures and precautions to prevent the transmission of HIV to others; and b) inform, in advance, any sexual contact or person with whom needles are shared of that fact. ii. 24(2) A person who is and is aware of being infected with HIV or who is carrying and is aware of carrying HIV shall not, knowingly and recklessly, place another person at risk of becoming infected with HIV unless that other person knew that fact and voluntarily accepted the risk of being infected *The proponent and contractor will promote educational and informational campaigns and organize for Voluntary Counselling and Testing of workers during the construction phase. Additionally, the proponent will ensure there is no discrimination of workers on the basis of their HIV status.*

Relevant Laws	
Mombasa County Environmental Health and Sanitation Act, 2017	▪ The relevant sections related to the proposed project include: i. 10(1) It shall be the duty of every person to protect and improve the environment and ensure ecologically sustainable development and use of natural resources, including surface and groundwater. This includes the obligation to: ✓ prevent, stop or refrain from any act or omission harmful to the environment; ✓ co-operate with state organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources. ii. 11(1) It shall be the duty of every person or governmental agency or any other entity whose act causes, has caused or may cause significant harm to the environment or public health to take all reasonable precaution to prevent or minimize such harm from occurring, continuing or recurring. iii. 30(b) A user of sanitation services has the duty to cooperate with the sanitation service provider in the provision of sanitation services. iv. 71 (3) A person shall not develop or use land other than in accordance with the county spatial development plan, physical planning laws and any other relevant laws or regulations. v. 71 (4) Any land classified or building erected for any purpose shall not be subsequently used for other purposes materially different from its purpose without prior consent of the County Government as to the intended change of user. *The proponent will comply fully with the provisions of this Act.*
Mombasa County Solid Waste Management Act, 2021	▪ The relevant sections related to the proposed project include: i. 12(1). A waste generator shall separate waste at source into: dry waste and wet waste. ii. 16(1). The owner of a premise shall: (a) designate or construct an area within the premises where solid waste generated shall be deposited or stored; (b) place appropriate receptacles and maintain them in accordance with public health standards; and (c) ensure no waste is deposited within five metres of a premise. iii. 16(2). The area designated for waste storage shall be enclosed to avoid open exposure and emission of obnoxious smell. iv. 18. There shall be a designated waste collection point in each zone. v. 19. A person shall dispose waste generated in a designated waste collection point.

Relevant Laws	
	vi. 24. Dry solid waste shall be transferred from a waste collection point to a waste transfer station for treatment and recovery. vii. 25(1). Wet waste shall be transported from a waste collection point to a composting facility or landfill for disposal. viii. 25(2). Waste from the transfer station shall be transported to the landfill for disposal. ix. 26. A person shall transport solid waste in a designated route. The proponent should ensure that solid waste in the premise will be managed through an integrated approach and relevant licenses are obtained from the county department of "Environment and Solid Waste Management". Additionally, the proponent will contract a waste handler that has been licensed by the county Department and/or NEMA, to collect, transport and dispose waste in areas designated for disposal within the county.

5.4 Relevant Institutions

The Government established some of the following institutions to implement the provisions of EMCA Cap 387. In addition, there are several other relevant institutions established by the reviewed regulations to guide in implementation and coordination of the legislative framework.

Table 5-3: Relevant Institutions

Relevant Institutions	
National Environment Management Authority (NEMA)	▪ The responsibility of the National Environment Management Authority (NEMA) is to exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of government in the implementation of all policies relating to the environment. ▪ In addition to NEMA, the Act provides for the establishment and enforcement of environmental quality standards to be set by a technical committee of NEMA known as the Standards and Enforcement Review Committee. *NEMA will issue Approval of this ESIA report and provide general supervision to ensure the proposed project activities are not detrimental to the environment.*

Relevant Institutions	
County Environment Committee	▪ The County Environment Committee is responsible for the proper management of the environment within the county for which it is appointed and also develop a county strategic environmental action plan every five years for consideration and adoption by the County Assembly. ▪ The committee contribute to decentralization of activities undertaken by NEMA and thus enable local communities to have access to environmental management information. The committees also conduct quick site visits and review environment related reports of the projects and on occasions could attend site meetings. *The project is in Mombasa County and will be subject to site visits by the County Environmental Committee. The committee will review environment related reports of the project and on occasions could attend site meetings.*
National Environmental Tribunal (NET)	▪ The National Environmental Tribunal (NET) is formed under section 125 of EMCA Cap 387 and handles all cases related to environmental offences in the Republic of Kenya. The tribunal's principal function is to receive, hear and determine appeals arising from decisions of the National Environment Management Authority (NEMA) on issuance, denial or revocation of environmental impact assessment (EIA) licenses, among other decisions. *If disputes with respect to the proposed housing project arise, the NET will function very much like a court of law.*
National Construction Authority (NCA)	▪ National Construction Authority (NCA) is a statutory body whose main function is to regulate, streamline and build capacity in the construction industry. In order to do this; the authority registers projects, provides supervisors and workers accreditation and also does contractor registration. *The projects and contractors will be registered under NCA*
Directorate of Occupational Safety and Health Services (DOSHS)	▪ DOSHS is responsible for the enforcement of Occupational Safety and Health Act (OSHA),2007 and associated regulations. DOSHS undertakes workers' safety and health inspections at its own initiative or upon receiving reports on any associated issues and requires that all Construction sites be registered with the Directorate. ▪ The project construction site will be registered with this authority as workplaces before the commencement of the construction works and the safety management plans, training and emergency preparedness, done in accordance with the relevant guidelines issued by DOSHS.

Relevant Institutions	
State department of Lands and Physical planning	▪ Its main objective is to facilitate the improvement of the livelihood of Kenyans through efficient land administration, equitable access, secure tenure and sustainable management of land resource. ▪ Its responsible for; lands policy management, physical planning, land transactions, land adjudication, settlement matters, land registration, as well as land and property assessment services. *The proposed project is expected to align with the policies and programs of this Ministry notably the requirements of Lands Act, Land Registration Act, Environment & Land Court Act, and its implementing regulatory Authority- National Land Commission (NLC), all which are enshrined within this Ministry.*
Kenya Civil Aviation Authority (KCAA)	▪ It is responsible for regulating the aviation industry in Kenya and for providing air navigation services in the Kenya flight region. *The proposed development is located approximately 5Km from the Moi International Airport. Constructing high-rise residential buildings requires a permit from the Kenya Civil Aviation Authority to ensure that the development does not compromise the safety and security of the Airport's operations. The proponent will be therefore be needed to obtain relevant permits and clearance from KCAA.*
Mombasa County Government	▪ The Mombasa County Government was formed under County Governments Act No. 17 of 2012 and its mandate is to provide services to residents of the county. Among other functions, the county government is responsible for the provision of essential services like water, sewer and public safety. ▪ Some of the County Government departments whose functions are pertinent to the project include the following: i. Health Department; ii. Water, Natural Resources and Climate Change Resilience Department; iii. Public Service Administration, Youth, Gender, Social Services and Sports Department; iv. Tourism, Culture and Trade Department; v. Transport and Infrastructure Department; vi. Lands, Housing and Urban Planning Department; vii. Environment and Solid Waste Management Department. The County Government of Mombasa is expected to actively be engaged in coordinating various project related activities such as environmental conservation and consultative public participation. This will be achieved through the county's department of 'Environment and Solid Waste Management Department'.

Relevant Institutions	
	Additionally, the proponent will adhere to the provisions of relevant Mombasa County Legislations.

5.5 Relevant Multilateral Environmental Agreements (MEAs)

Kenya has signed a number of international conventions and treaties on environment and natural resources also known as multi-lateral environmental agreements (MEAs) that obligate the country to promote sustainable environmental and natural resources management and social equity. Conventions are legally binding bilateral, regional or international agreements that binding to the states that are parties thereto. Kenya has ratified some of the most important conventions on the environment as discussed below which apply to the proposed project hence the contractor is bound to comply by the respective provisions.

Table 5-4: Relevant Multilateral Environmental Agreements (MEAs)

Multilateral Environmental Agreements	Key areas of application
United Nations Framework Convention on Climate Change (UNFCC)	▪ UNFCCC has near universal membership and is the parent treaty of the 1997 Kyoto Protocol. The Kyoto Protocol has been ratified by 192 of the UNFCCC Parties. ▪ The ultimate objective of both treaties is to stabilize greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system. *The proposed project should ensure all activities and development plans are undertaken in line with the provisions of the Convention aimed at stabilizing greenhouse gas concentrations in the atmosphere.*
Vienna Convention for the Protection of the Ozone Layer	▪ The Vienna Convention for the Protection of the Ozone Layer was adopted in 1985 and entered into force on 22nd September 1988. In 2009, the Vienna Convention became the first Convention of any kind to achieve universal ratification. ▪ The objectives of the Convention were for Parties to promote cooperation by means of systematic observations, research and information exchange on the effects of human activities on the ozone layer and *to adopt legislative or administrative measures against activities likely to have adverse effects on the ozone layer.*
Rio Declaration on Environment and Development	▪ The Rio Declaration on Environment and Development, often shortened to Rio Declaration, was a short document produced at the 1992 United Nations "Conference on Environment and Development" (UNCED), informally known as the Earth Summit. ▪ The declaration aimed at establishing a new and equitable global partnership through the creation of new levels of co-operation among States, key sectors of societies and people, working towards international agreements which respect the interests of all and protect the integrity of

Multilateral Environmental Agreements	Key areas of application
	the global environmental and developmental system, recognizing the integral and interdependent nature of the Earth, our home. ▪ The Rio Declaration consisted of 27 principles intended to guide countries in future sustainable development. It was signed by over 170 countries. *Principle 17 of the Rio Declaration provides key relevance to the proposed project; the principle denotes that environmental impact assessment as a national instrument shall be undertaken for proposed activities that are likely to have a significant impact on the environment and are subject to a decision of a competent national authority*.
Earth Summit on Sustainable Development (Agenda 21)	▪ Agenda 21 is a non-binding, voluntarily implemented action plan of the United Nations regarding sustainable development. It is a product of the Earth Summit (UN Conference on Environment and Development) held in Rio de Janeiro, Brazil, in 1992. ▪ It is also regarded as an action agenda for the UN, other multilateral organizations, and individual governments around the world that can be executed at local, national, and global levels. The "21" in Agenda 21 refers to the 21st Century. Agenda 21 Section I on Social and Economic Dimensions is directed toward combating poverty, especially in developing countries, changing consumption patterns, promoting health, achieving a more sustainable population, and sustainable settlement in decision making. ▪ Section II on Conservation and Management of Resources for Development Includes atmospheric protection, combating deforestation, protecting fragile environments, conservation of biological diversity (biodiversity), control of pollution and the management of biotechnology, and radioactive wastes. ▪ Section III focuses on strengthening the Role of Major Groups including the roles of children and youth, women, NGOs, local authorities, business and industry, and workers; and strengthening the role of indigenous peoples, their communities, and farmers. Kenya continues to implement Agenda 21 to support sustainable development through the integration of environmental concerns into the national development policies, plans, and programmes. Also relevant is the implementation of Agenda 17. The proposed project would need to be consistent with the objectives of Agenda 21.
The World Commission on Environment and Development (The Brundtland Commission of 1987)	▪ The Commission in its 1987 report dubbed "Our Common Future" focused on the environmental aspects of development, in particular the emphasis on sustainable development that produces no lasting damage to the biosphere and to particular ecosystems. ▪ In addition to environmental sustainability is economic and social sustainability. Economic sustainable development is development for which progress towards environmental and social sustainability occurs within available financial resources. ▪ While social sustainable development is development that maintains the cohesion of a society and its ability to help its members work together to achieve common goals, while at the same time meeting individual needs

Multilateral Environmental Agreements	Key areas of application
	for health and well-being, adequate nutrition, and shelter, cultural expression and political involvement. The key aspect of sustainability is the interdependence of generations. *The concept of EIA is embodied in many multilateral environmental agreements. Principle 17 of the Rio Declaration provides that environmental impact assessment as a national instrument shall be undertaken for proposed activities that are likely to have a significant impact on the environment and are subject to a decision of a competent national authority.*
The Paris Agreement	▪ This agreement was adopted on 12th December 2015 at the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in Paris, it then came into force on 4th November 2016 after meeting the ratification threshold. ▪ The Agreement provides the framework to address climate change for a safer and sustainable future, it has an objective of preventing a global temperature increase above 1.5 degrees Celsius relative to pre-industrial levels by reduction of Greenhouse gas emissions. ▪ Kenya ratified the Paris Agreement and welcomed it into force on 28th December 2016. As at now a total of 171 parties out of 197 have ratified the agreement. *The proposed project should ensure all activities are in line with the tenets of the Paris Agreement to minimize greenhouse gas emission.*
International Labour Organization (ILO)	▪ The International Labour Organization (ILO) is built on the constitutional principle that universal and lasting peace can be established only if it is based upon social justice. The ILO has generated such hallmarks of industrial society as the eight-hour working day, maternity protection, child-labour laws, and a range of policies which promote workplace safety and peaceful industrial relations. The ILO has four principal strategic objectives: i. To promote and realize standards, and fundamental principles and rights at work. ii. To create greater opportunities for women and men to secure decent employment. iii. To enhance the coverage and effectiveness of social protection for all. iv. To strengthen tri-parties and social dialogue. ▪ The key ILO Conventions applicable to the proposed mixed-use development project includes**:** a) Equal Remuneration Convention (1951) (No. 100) - Calls for equal **pay and benefits for men and women for work of equal value**. b) Discrimination (Employment and Occupation) Convention (1958) (No. 111) - **Calls for a national policy to eliminate discrimination in access to employment,** training, and working conditions, on grounds of race, colour, sex, religion, political opinion, national extraction or social origin, and to promote equality of opportunity and treatment.

Multilateral Environmental Agreements	**Key areas of application**
	c) Minimum Age Convention (1973) (No. 138) - **Aims at the abolition of child labour,** stipulating that the minimum age for admission to employment shall not be less than the age of completion of compulsory schooling. d) Worst Forms of Child Labour Convention (1999) (No. 182) - **Calls for immediate and effective measures to secure the prohibition and elimination of the worst forms of child labour** which include slavery and similar practices, forced recruitment for use in armed conflict, use in prostitution and pornography, any illicit activity, as well as work which is likely to harm the health, safety, and morals of children.
Sustainable Development Goals (SDGs)	▪ The Sustainable Development Goals (SDGs) are a new, universal set of goals, targets and indicators that UN member states will be expected to use to frame their agendas and political policies over the next 15 years. The SDGs include 17 Sustainable Development Goals and 169 targets. The 17 sustainable development goals (SDGs) include i. GOAL 1: No Poverty ii. GOAL 2: Zero Hunger iii. GOAL 3: Good Health and Well-being iv. GOAL 4: Quality Education v. GOAL 5: Gender Equality vi. GOAL 6: Clean Water and Sanitation vii. GOAL 7: Affordable and Clean Energy viii. GOAL 8: Decent Work and Economic Growth ix. GOAL 9: Industry, Innovation and Infrastructure x. GOAL 10: Reduced Inequality xi. GOAL 11: Sustainable Cities and Communities xii. GOAL 12: Responsible Consumption and Production xiii. GOAL 13: Climate Action xiv. GOAL 14: Life Below Water xv. GOAL 15: Life on Land xvi. GOAL 16: Peace and Justice Strong Institutions xvii. GOAL 17: Partnerships to achieve the Goal ▪ The GOALs seek to build on the Millennium Development Goals that expired in 2015. Most notably SDGs are integrated, indivisible and balance the three dimensions of sustainable development: the economic, social and environmental. *This project is expected to cut-across the three dimensions of sustainable development hence making SDGs a key reference point. The SDGs are also linked to several Kenyan legal frameworks such as Water Act, and EMCA Cap 387.*

6 ANALYSIS OF PROJECT ALTERNATIVES

6.1 Introduction

The consideration of alternatives is one of the more proactive sides of environmental assessment. This process enhances the project design through an examination of potential options instead of only focusing on the more defensive task of reducing adverse impacts of a single design; this therefore calls for comparison of feasible alternatives for the proposed project in terms of site, technology, design and operation.

6.2 No Action Alternative

The No Action Alternative in respect to the proposed project implies that the status quo is maintained, that is, no construction/redevelopment activity takes place. This option is most suitable alternative from an extreme environmental perspective as it ensures non-interference with the existing conditions. However, the need for such redevelopment is high and the anticipated environmental and social impacts resulting from construction have already been experienced. The land will remain under-utilized or neglected. The No Project Option is the least preferred from the socio-economic and partly environmental perspective since if the project is not done:

- The economic benefits especially during construction i.e. provision of jobs for skilled and non-skilled workers will not be realized.
- There will be no generation of income by the developer and the Government.
- The social-economic status of New Changamwe Estate and local people would remain unchanged.
- The local skills would remain underutilized.
- No employment opportunities will be created for Kenyans who will work in the project area.
- Investors will be discouraged to produce this level of developments in future.

6.3 Alternative Site

Relocation option to a different site is an option available for the project implementation. At the moment, there are no alternative sites for the proposed development (i.e. the project proponent does not have an alternative site). This means that the proponent has to look for the alternative land if relocation is proposed. Looking for the land to accommodate the scale and size of the project and completing official transaction on it may take a long period. In addition, it is not a guarantee that such land would be available. It is also worth noting that the said project is already underway in terms of seeking development approvals in various government departments and conducting of various other essential activities like socio-economic surveys, neighbourhood analysis and geotechnical surveys. Therefore, the project

proponent would spend another long period of time on design and approvals of the plans by the relevant government departments. The project design and planning before the stage of implementation would call for costs; already incurred in the proposed development i.e. whatever has been done and paid to date would be counted as a loss to the proponent. In consideration of the above concerns and assessment of the current proposed site, relocation is not a viable option.

The proposed site is ideal for the following reasons:

- Proximity to Mombasa CBD and major access roads enhances the project's visibility and accessibility.
- Strategic location near the airport and Kenya Ports Authority taps into the demand for convenient housing options for professionals working in these areas. Market Demand.

6.4 Alternative Designs

All designs made for this project have been done professionally taking into account the topography, soil types and structure and with all environmental considerations to make sure that the developments do not negatively affect the surrounding environments and the people in the area. The architectural designs, structural engineering of the proposed buildings and roads are specially designed and the construction will use modern technologies that are in accordance to sustainable development and green economy.

Sustainability design principles and construction parameters will be incorporated in the proposed project. Thus, the selection of materials will be informed by sustainable environmental practices. Equipment that saves energy and water consumption and those that minimizes hazards, will be given first priority without compromising on cost or availability factors. The recruitment of labour and procurement of materials and equipment will be guided by national laws and best practice guidelines.

6.5 Materials

There is a wide range of construction and furnishing materials which can be sourced locally and internationally. In this construction, certified raw materials/equipment and modern technology will be used. Also, electrical appliances that save energy will be given first priority. The concrete pillars and walls will be made using locally sourced stones, cement, sand (washed and clean), metal bars and fittings that meet the Kenya Bureau of Standards (KEBS) requirements.

6.6 Solid Waste Management Alternatives

Solid wastes will be collected from the site for safe disposal by a NEMA licensed waste collector after necessary contractual agreement during both construction and operational phases. For solid wastes management, an integrated solid waste management system is recommended which is as follows:

a) First, the proponent should give priority to reduction at source of the materials. This option will demand a solid waste management awareness programme.
b) The proponent should also consider recycling and reusing the waste as a second alternative in priority. This shall call for at-source separation programme to be put in place. The recyclables may be sold to waste buyers locally or directly to any company that recycles waste such as plastic bags.
c) The third priority in the hierarchy of options is landfilling of the waste that is not recyclable or reusable. It is to the interest of the proponent and the community that the waste is effectively managed so as to maintain a safe and healthy environment to the workers and the community at large through appropriate disposal mechanism.

6.7 Wastewater Management Alternatives

6.7.1 Use of Septic Tanks

This involves the construction of underground concrete-made tanks to store the sludge. It is expensive to construct, maintain and requires regular emptying.

This option is not preferred because it is uneconomical

6.7.2 Use of Stabilization Ponds/Lagoons

This entails construction of a series of pond/lagoon which allow biological decomposition of effluent before being released to the environment. The treatment ponds occupy large spaces but are less costly. No chemicals are used and if non-biodegradable trace elements are available, they are released to the environment. The ponds hold effluent for long time to allow complete decomposition and release foul smell to the environment.

This alternative is not viable because of limited space and the foul smell will be a nuisance to the neighbours.

6.7.3 Use of Constructed/Artificial Wetland

Constructed wetland plants act as filters for toxins and biologically degrade pollutants. They use simple technology, low capital and have low maintenance costs. However, they require space and a longer time to function. Long term studies on plant species on the site will also be required to avoid weed biological behavioural problems. This alternative is therefore not suitable for this project.

6.7.4 Connection to the Existing Sewer Line System

There is an existing MOWASSCO sewer line within the estate. The line will require repairs and upgrades to be able to handle the expected increased sewerage from the proposed project.

This is the **most viable option** and ensures waste water is treated appropriately

6.8 Water supply Alternatives

Water is a finite resource and is becoming scarce by the day in most parts of the country and even globally. The available sources of water supply are discussed below:

6.8.1 Rainwater Harvesting

This entails installation of rain gutters and storage tanks for rainwater harvesting from the roofs of the buildings. This water can be used for non-portable purposes such as watering lawns, gardens, flushing toilets and general cleaning.

The option is ideal for water conservation but would not be adequate to fulfil water needs of the development.

6.8.2 Groundwater

Currently, there is a borehole in the estate developed by the Changamwe CDF. Due to overuse, most boreholes in Mombasa dry up for long spans every year.

Relying on borehole water wouldn't guarantee a constant water supply for the development.

6.8.3 Connection to the Water Supply Network

The project area has access to Mombasa Water Supply and Sanitation Company (MOWASSCO) water supply line. It was however reported by the current residents that the supply from the line is unreliable, with prolonged periods of rationing.

Relying solely on supply from the MOWASSCO line would not meet water needs for the development.

6.8.4 Tankers/Bowsers Water Supply

Several commercial water supply companies operate in Mombasa County. These are usually licensed by Water Resources Authority (WRA) to supply water to clients when normal piped water supply system is rationed. The proponent can use these services as a supply option.

This option is not sustainable since it is expensive and there is no guarantee of being supplied with clean water.

6.8.5 Multiple Water Supply Option

Due to the inadequacies of each water supply option available, the proponent should consider water supply from all the above sources, i.e. Rainwater harvesting, Groundwater, MOWASSCO and Bowsers.

This is the **most viable option** as it would guarantee uninterrupted water supply for the proposed development.

6.9 Land Use Alternatives

Land is a finite resource and thus its use should be optimal. The following land use alternatives were considered:

6.9.1 Commercial Use

This would imply developing the plot for commercial use only. A purely commercial development would not offer optimal land use as uptake of the commercial properties might be slow, affecting return on investment. Due to the size of the plot, utilizing it for commercial use would imply the introduction of light industries which might not be environmentally friendly especially for the neighbouring residential areas and schools.

This option is therefore not recommended from an environmental and economic perspective.

6.9.2 Hospitality Use

Utilizing the entire 7 acres for hospitality purposes would imply establishing a luxury hotel only. The hospitality industry in Mombasa is characterized by access to the beach. This would not be a viable option since the property lacks a beach front. The type of hotel ideal for the area would target arrivals from the Moi International Airport and Business travellers. Such a hotel would occupy an area of 2 acres at most, leaving the other portion of the land underutilized.

6.9.3 Residential Use

Because the current use is purely residential, this would seem like the best option for the land. However, residents would have to travel considerable distances to access commercial services such as shopping, hospitals etc. Travelling would increase their carbon footprint due to GHG emissions from vehicles.

From an economic standpoint, numerous housing projects are coming up in the area and would thus affect sustainability of a purely residential development project due to existing competition.

Thus, this isn't the ideal option for land use.

6.9.4 Mixed Development Use

Mixed-use developments serve multiple functions simultaneously. This would imply the project integrating residential, commercial and hospitality uses.

One of the key benefits of mixed-use development is that it can enhance the liability and walkability of urban areas, by providing a mix of housing, employment, services, and amenities within a short distance. This can reduce the dependence on cars, lower the greenhouse gas emissions, and promote healthier and more active lifestyles for the residents. Moreover, mixed-use development can foster social interaction and community cohesion, by creating more opportunities for people to meet, communicate, and participate in various activities.

Additionally, mixed-use development can stimulate economic growth and diversity, by attracting more customers, investors, and entrepreneurs, and creating more jobs and income for the local economy.

This is the therefore the **most preferred option**.

7 CONSULTATION AND PUBLIC PARTICIPATION

7.1 Introduction

Consultation and Public Participation process is a policy requirement by the Government of Kenya and a mandatory procedure as stipulated by EMCA Cap 387 section 58, on Integrated Environmental Impact Assessment, for the purpose of achieving the fundamental principles of sustainable development. Therefore, this section describes the process of the consultation and public participation followed to identify the key issues and impacts of the proposed development.

7.2 Objectives of the Consultation and Public Participation

The key objectives of the consultation and public participation for the proposed development was to:

i. ***Inform:*** Promote stakeholder understanding of issues about the project with special reference to its key components and description, problems, alternatives, opportunities, and solutions through balanced and objective information sharing.

ii. ***Consult:*** To obtain feedback and acknowledge concerns and aspirations of stakeholders and interested parties on analysis, alternatives, and decisions regarding the project.

iii. ***Engage:*** Work directly with stakeholders to ensure that their concerns and aspirations are understood and considered in the EIA; and to assure them that their concerns / aspirations would be directly reflected in the developed alternatives; and that feedback will be provided on how their input influenced the final decision.

iv. ***Empower:*** Make stakeholders partners in each aspect of the decision, including development of alternatives and identification of preferred solution to ensure ownership of the project.

The aim for consultation and public participation was to:

- Disseminate and inform the stakeholders about the project with Special reference to its key components and location.
- Gather comments, suggestions and concerns of the interested and affected parties about the project.
- Incorporate the information collected in the Comprehensive Project Report

7.3 Methodology used in Public Consultation

A team of experienced registered and licensed environmental experts conducted the exercise. The entire process involved:

- Key informant consultation
- Key stakeholders' meeting
- Public participation interviews
- Public meeting
- Household socio-economic survey

7.4 Sources of information

7.4.1 Key Informant Interviews

The Consultant held a series of one-on-one meetings with Key stakeholders, and was carried out in the months of December 2023 and January 2024. The following Key stakeholders were consulted:

- Mombasa County Commissioner
- Mombasa County CEC Lands, Housing& Urban Planning.
- Mombasa County Director of City Planning
- Changamwe MP
- Changamwe ward MCA

7.4.2 Key Stakeholders Meeting

A key stakeholders meeting took place at the Marina English Point Hotel and Spa, on Thursday 22nd February 2024. The table below presents the meeting attendance:

Table 7-1: Key stakeholders meeting attendance

Date & Time	Venue	Targeted Group	Attendance				
			Male		Female		Total
			No.	(%)	No.	(%)	
Thursday 22nd February 2024 9:00 a.m.	Marina English Point Hotel & Spa	Key Stakeholders from Mombasa and Nairobi Counties	33	69%	15	31%	**48**

Plate 7-1: The ESIA Consultant making a presentation to the Key Stakeholders

Plate 7-2: A representative from the MP's office expressing his views

The table below presents a summary of stakeholder categories in attendance at the Key stakeholders meeting.

Table 7-2: Categorization of Key Stakeholders in Attendance

S/N	Category	Stakeholder
1.	**Mombasa County Administration**	County Commissioner (CC)
		Deputy County Commissioner (DCC)
		Assistant County Commissioner (ACC)
		Changamwe Sub-County Administrator
		Changamwe Ward Representative
		Changamwe Chief
		Changamwe Assistant Chief
2.	**Political Leadership**	Representatives from the office of the Senator
		Representatives from the office of Changamwe Member of Parliament (MP)
		Changamwe Member of County Assembly (MCA)
3.	**National Police Service (NPS)**	Deputy OCS – Changamwe Police Station
4.	**County Departmental Offices**	Environment and Solid Waste Management
		Lands, Housing and Urban Planning
		County Attorney
5.	**Government Agencies**	National Land Commission (NLC)
		Kenya National Highway Authority (KeNHA)
		Kenya Urban Roads Authority (KURA)
		Mombasa Water Supply and Sanitation Company (MOWASSCO)
		Director of Occupational Safety and Health Services (DOSHs)
		Kenya Civil Aviation Authority (KCAA)
6.	**Non-Governmental Organizations (NGOs)**	Haki Yetu Organization
		Muslim for Human Rights (MUHURI)
7.	**Spiritual Leadership**	Bethsaida Fellowship Worship Centre
		Changamwe Baptist Church
8.	**Learning Institutions**	Deputy Principal- Changamwe Secondary school
		Deputy Principal - Changamwe Girls Secondary Sch.

7.4.3 Public Meeting

A public meeting was held on Saturday, 24th February 2024, at the Changamwe New Flats Compound. The meeting was attended by both PAPs and the community neighbouring the project site. The tables below present a summary of the meeting attendance.

Table 7-3: Analysis of Current Tenants' attendance in the Public Meeting

Date & Time	Ward	Targeted Group	Venue	Attendance				
				Male		Female		Total
				No.	(%)	No.	(%)	
Saturday 24th Feb 2024 (11:00 a.m.)	Changamwe	Current Tenants	Changamwe New Flats Compound	61	40%	91	60%	**152**

Table 7-4: Analysis of the General Public's attendance in the Public Meeting

Date & Time	Ward	Targeted Group	Venue	Attendance				
				Male		Female		Total
				No.	(%)	No.	(%)	
Saturday 24th Feb 2024 (11:00 a.m.)	Changamwe	General Public	Changamwe New Flats Compound	39	65%	21	35%	**60**

Plate 7-3: Mombasa Senator addressing the public during the public meeting

Plate 7-4: Mombasa Women Representative expressing her remarks

Plate 7-5: Mombasa Deputy County Commissioner chairing the meeting

Plate 7-6: ESIA Consultant addressing participants in attendance

Plate 7-7: A participant expressing his views

Plate 7-8: A representative of the women expressing her views

Plate 7-9: A representative of the elderly expressing his views

Table 7-5: Analysis of the total participants' attendance in the Public Meeting

Date & Time	Ward	Targeted Group	Venue	Attendance				
				Male		Female		Total
				No.	(%)	No.	(%)	
Saturday 24th Feb 2024 (11:00 a.m.)	Changamwe	Current Tenants and General Public	Changamwe New Flats Compound	100	47%	112	53%	**212**

7.4.4 Public participation interviews

The exercise was conducted in the months of February and March 2024, by the consultant through the use of questionnaires. The questionnaires were administered to the local community and other stakeholders.

The table below presents a summary of the questionnaires administered.

Table 7-6: Summary of Questionnaires administered

Respondents	Attendance				
	Male		Female		Total
	No.	(%)	No.	(%)	
Questionnaires administered to key stakeholders	16	67%	8	33%	**24**
Questionnaires administered to tenants and general public	72	61%	46	39%	**118**
Total	**87**	**62%**	**54**	**38%**	**142**

7.4.5 Household Socioeconomic Survey

The Consultant undertook a detailed socio-economic assessment/baseline survey targeting all households/tenants within the New Changamwe Flats and those living within the KeNHA road reserve flats that were formerly in LAPTRUST's land but had been acquired by KeNHA during the Nairobi-Mombasa Highway (A109) road expansion. While the primary focus of the census/socio-economic survey was centered on the households/tenants within New Changamwe Flats, efforts were made to also include PAPs residing in the KeNHA road reserve flats to ensure a holistic understanding of the project affected households. In total, there are 264 occupied households in the area (228 households in New Changamwe Flats, which are owned by LAPTRUST and 36 households within the KeNHA road reserve, which are owned by KeNHA).

A total of 247 (94%) households were interviewed out of the total number of 264 occupied house units in the area. This was mainly attributed to the fact that some of the PAPs were not available during the period of enumeration despite efforts to reach all the targeted PAPs, including scheduling multiple enumeration sessions and utilizing PAPs/community outreach channels. Out of the 247 households interviewed, 216 (79%) were from the units owned by LAPTRUST and 31 (13%) were from the units

owned by KeNHA, as earlier mentioned in previous sections of this report. Details of the results of the socioeconomic survey have been provided in section 4.10 of this ESIA Report.

7.5 Key Issues from Stakeholder Consultations

The table below presents a summary of the key issues raised by stakeholders.

Table 7-7: Issues raised during Key Informant Consultations

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
1)	**Project Design & Urban Planning Considerations**	a) The project should consider recreational areas especially for kids.	▪ The proponent noted that the project design was revised to include a Club house, swimming pool, Gardens and Kids play area.
		b) The project's plan should conform to the neighbouring Old Changamwe Masterplan for the Affordable Housing Project in collaboration with the National Housing Corporation (NHC).	▪ The project design was revised to harmonize it with the neighbouring Old Changamwe Masterplan for the Housing Project in collaboration with the National Housing Corporation (NHC).
		c) There is need to harmonize the proposed LAPTRUST/ CPF project with the neighbouring NHC Masterplan/ Site Layout to ensure proper planning for public facilities such as ***access roads, sewerage, water supply, schools, health centres, play areas for kids and other social amenities.***	▪ The revised design included day-care, madrassa, day-care, kid's play area and a social hall. ▪ The nearby Old Changamwe Masterplan has zones for schools, healthcare and a playground.
		d) Ensure compactness (high density but with adequate social amenities and public services) when planning the mixed-use development to avoid informality i.e. development of informal structures such as kiosk.	▪ The revised project design has ensured compactness between the hospitality, commercial and residential zones
		e) General façade / interior design and height/ levels of apartments allowed in the area	▪ The proponent has designed the proposed blocks with a maximum height 18 floors. The Old Changamwe Masterplan has a block design with a maximum height 16 floors. ▪ The proposed design conforms to the height range of blocks proposed within the area.
		f) LAPTRUST/CPF should officially request for the Mombasa City Masterplan and specifically the Old Changamwe Masterplan/ Site Plan for the Affordable Housing Project. The CPF design team should integrate the two projects on various aspects indicated above.	▪ The proponent obtained the Integrated Strategic Urban Development Plans (ISUD Plan 2015-2035), Mombasa. 2015 and the Masterplan for the proposed re-development of National Housing Estate in Changamwe.

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
			▪ The project designs were revised to conform to these plans.
		g) Begin the Change of User process. NEMA shall require it before approval stage	▪ The proponent will begin the process of Change of User at the Mombasa County Government offices.
		h) The proponent should include a CSR component in the project design. The proponent should include a CSR component in the project. Ideas of CSR (Social infrastructure) should come from the residents during the existing tenants public meeting.	▪ The revised designs incorporate a Motorbike/Bus stage for use by the community.
		i) Dedicate a public access road/foot path for ease of access during traffic and emergencies. This will maintain the current access to Changamwe secondary school	▪ The Consultant indicated that it was important to dedicate a public access road/path as there is an existing access through the estate. ▪ The proponent indicated that a public access will be considered
		j) Some of the features that can be considered for implementation include: *i. Recreational facilities such as swimming pool, gaming activities and children's playground which are important for a residential estate.* *ii. A Day-care to benefit parents with small children in the area.* *iii. A Madrasa since there is one in existence within the proposed project area.* *iv. A Health Centre or Clinic* *v. A Library for the estate residents* *vi. Social Halls which can be used for community meetings, community capacity building programs, etc.*	▪ The revised design includes a day-care, madrassa, day-care, kid's play area and a social hall. ▪ The nearby Old Changamwe Masterplan has zones for schools, healthcare, and a playground.

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
		vii. *ICT centre or Free WIFI hotspots for the youths*	
2)	**Social Considerations**	a) Public participation is Key for the success of the project and should start with community leadership.	▪ Both the proponent and the Consultant agreed that public participation is vital for the success and sustainability of the proposed project. ▪ The Consultant engaged the area MP& MCA prior to the public meeting.
		b) Public Participation should begin with consensus building between the proponent and the PAPs; thus, there is need for a robust RAP.	▪ The Consultant shall conduct a robust RAP exercise in line with the Laws of Kenya and Industry Best Practise.
		c) PAPs should select a representative committee (PAPs Committee) to represent them during future meetings with the proponent.	▪ The Consultant noted that the selection of a PAPs Committee shall be part of the RAP Process
		d) Continuous engagement with the PAPS committee is recommended.	▪ The Consultant will develop a Stakeholder Engagement Plan (SEP) to ensure constant engagement with the PAPs Committee.
		e) There is a need for proper and organized communication from CPF to the tenants and other stakeholders on the project plans and tenant issues.	▪ The proponent will present project information during public participation meetings. ▪ Further information shall be available in the project office
		f) A Key stakeholder meeting should be convened after the PAPS meeting to brief the stakeholders on the outcome of the PAPS meeting	▪ A Key stakeholder meeting will be convened to brief stakeholders on the Key PAPs Issues
		g) Deal with the tenants and avoid subtenants. The tenants have legitimate claim to tenancy in the estate	▪ The proponent and consultant will deal with tenants as per the guidance from stakeholders.
		h) Project implementation program should be clearly communicated (start and end date) and when the notices will be given to PAPs to move out of the estate	▪ The proponent will present project information during public participation meetings. ▪ Further information shall be available in the project office

<table>
<tr><th>S/No</th><th>Issues Raised by Stakeholders</th><th>Brief Explanation</th><th>Response</th></tr>
<tr><td></td><td></td><td>i) Implement the project in phases, with tenants/PAPs getting priority to buy units from the first phase of the project.</td><td>▪ The project will be phased as below:<table><tr><th>▪ Phase</th><th>▪ Details</th></tr><tr><td>▪ Phase 01</td><td>▪ 1+2-bedroom apartment block& Parking silo</td></tr><tr><td>▪ Phase 02</td><td>▪ 1 bedroom, 2-bedroom &3-bedroom apartment blocks
▪ Social hall</td></tr><tr><td>▪ Phase 03</td><td>▪ Commercial Strip mall</td></tr><tr><td>▪ Phase 04</td><td>▪ Hospitality block</td></tr></table></td></tr>
<tr><td></td><td></td><td>j) A low price should be reserved for the tenants, with payments modelled on the affordable housing concept.</td><td>▪ The proponent indicated that the residential units shall be designed based on the market survey that will be carried out/demand from the tenants and general public to buy or rent the residential units. It was further pointed out that the current tenants would be given priority to secure the residential units.</td></tr>
<tr><td></td><td></td><td>k) Current traders within the estate should be given priority when renting out stalls in the strip mall</td><td>▪ The proponent will consider giving a priority to the current traders within the estate when renting out stalls in the strip mall</td></tr>
<tr><td></td><td></td><td>l) Support the community through CSR initiatives such as supporting local schools. For instance, Changamwe Girls school lack laboratory equipment, which could be provided under CSR.</td><td>▪ The proponent will consider CSR initiatives suggested by the community</td></tr>
<tr><td>3)</td><td>Clarifications and Comments on the Proposed Project</td><td>A community member sought to know whether the proposed residential units that will be incorporated in the mixed-use development will allow for a Rent-to-own option.</td><td>The proponent confirmed that the proposed housing units will include a Rent-to-own option.</td></tr>
<tr><td></td><td></td><td>Stakeholders wanted to know whether the ownership of the proposed residential units will</td><td>The proponent confirmed that the proposed residential units will be open for purchase by anyone who is</td></tr>
</table>

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
		only be reserved for pensioners, or they will also be open to the public.	interested, subject to compliance of the terms and conditions.
		Stakeholders sought for more information regarding the procedure for purchasing the proposed residential units and the cost of the various units based on their typologies.	The proponent explained that a buyer will be required to make an initial deposit of 10% of the value of the unit and then pay the remaining amount in a period ranging from 5 years to 20 years. It was also mentioned that a study was ongoing to determine the pricing of the residential units.
		Stakeholders, including community leaders, noted that there wasn't consideration for a church and a mosque in the Changamwe Mixed-Use Development Proposal.	The ESIA Consultant noted that there were churches and a mosque bordering the estate which would serve the residents. The Consultant added that the Social hall included in the proposal will have rooms which could be used as prayer rooms for both Christians and Muslims.
		A stakeholder sought clarification on the land use breakdown – green space vs-built space.	The project's design team stated that the design contained 60 -70% green spaces and 30 -35% built space. He added that this was done intentionally to avoid a 'Concrete Jungle' and to ensure sustainability of the project.
		A stakeholder enquired about the number of proposed housing units, the heights of the high-rise blocks and the number of parking slots in the silo	The project's design team explained that the residential zone in the proposed development will have a total of 714 units, subject to demand from the current tenants/general public to purchase/rent the units during the pre-construction phase of the project. These will include 1 and 2-bedroom units: targeting young families and professionals seeking modern living spaces,

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
			and a mix of 3-bedroom units catering to high-income earners seeking luxurious and spacious residences. Further, the highest block in the proposed project will have a maximum of 18 floors. The project's architect further pointed out that the parking slots will be adequate to serve the entire development.
		A stakeholder asked about the disaster risk-reduction elements of the proposed design in terms of Fire and Evacuation. i.e. Where the main access and secondary access points will be located. He further expressed concern that the current roads in the area couldn't accommodate the increased traffic expected as a result of the mixed-use development.	The project's Architect stated that a traffic study will be conducted to determine the accesses to the proposed development and the adequacy of existing roads.
		A stakeholder sought to know the elements of sustainability considered in the proposed project design.	The ESIA Consultant highlighted the following elements of the proposed project, that will promote its sustainability: i. There will be more green spaces. ii. Old trees onsite will be preserved iii. Rainwater harvesting is being considered. iv. Recommendations on energy conservation measures and technologies and the solar use in common areas in parking have been made to the design team. v. Water conserving technologies have been recommended.

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
			vi. Use of natural materials and colours shall be recommended to the contactor. During Landscaping and gardening, less water intensive trees and flowers shall be selected.
		A stakeholder noted that Persons Living with Disabilities (PLWDs) had not been considered in the project design.	The project's Architect stated that the vertical towers will have lifts. He further stated that ramps will be considered especially in common areas. The ESIA Consultant added that a household socioeconomic survey would be launched on 24th February 2024, to identify vulnerable people & special groups to be included in the design and also in the project benefits both during construction and operation phases.
4)	**Assistance to move out of the estate**	Stakeholders enquired whether tenants would be facilitated with some form of assistance that could support them incur the costs associated with moving out of the estate, and whether tenants who had modified their house units would be reimbursed for the same. They further requested LAPTRUST to ensure that women and the Vulnerable and Marginalized Groups (VMGs) are provided with as much as assistance as possible, and not be limited to cash payment.	The proponent acknowledged the request from the stakeholders and pointed out that the relationship between the residents living in New Changamwe Flats and LAPTRUST is that of Tenants and Landlord, as guided by the Landlord and Tenant Act Cap 301, thus the manner by which the tenants will vacate the premises will be as per the provisions of this Act. Therefore, tenants would be notified early enough regarding the proposed project, would be given at least a 3-months' notice to seek alternative accommodation and tenants who had modified their house units will also be given an opportunity to demolish their structures on their own and salvage their structures for materials that can be re-used.

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
			The proponent further mentioned that at their sole and unfettered discretion, will decide on the form of assistance that will be offered to the tenants and those who require special attention especially the VMGs.
		Stakeholders mentioned that in case LAPTRUST decides to provide support in the form of cash facilitation, they should consider making the facilitation as a one-time lumpsum amount as opposed to the proposed instalments of 50% before and 50% after moving out of the estate.	The ESIA Consultant noted that this would be considered in consultation with the PAPs Committee.
		A stakeholder expressed concern that some of the current occupants in the New Changamwe flats were not the registered tenants of the units. The stakeholder sought to know how these subtenants will be dealt with.	The ESIA Consultant acknowledged that the subtenant issue was complex and stated that the proponent will consult the PAPs committee during decision making on the form of support that will be offered to the subtenants.
		A stakeholder urged LAPTRUST to consider the vulnerable tenants when providing support to the PAPs during the process of moving out of the premises.	The ESIA Consultant explained that while the support offered to each PAP will be the same, the process will be different especially for the Vulnerable tenants (above 70 years old, People Living with Disability and households headed by minors – under 18 years). For such cases, the PAPs Committee and the Chief will guide the proponent on the process.
		A stakeholder sought clarification on whether tenants with rent arrears would receive their cash facilitation (in case Laptrust decides that this will be the form of support) as a net, after rent arrears has been deducted.	The proponent informed the stakeholders that debt cancellation would be considered on a case-by-case basis.

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
		Community leaders urged LAPTRUST to consider Debt Cancellation for tenants with arrears.	
5)	**Reimbursement for repairs and renovations**	Stakeholders pointed out that they had carried out renovations in their units over the years. They enquired whether they will be reimbursed for the renovations.	The ESIA Consultant and the proponent clarified that there wouldn't be reimbursement for renovations/modifications done on the house units, as guided by the Landlord and Tenant Act Cap. 301. However, the tenants would be given at least a 3 months' notice period and will be allowed to demolish, remove and salvage materials for reuse when vacating the units.
6)	**Project Phasing Alternative**	Stakeholders, including community leaders, urged LAPTRUST to consider constructing houses for the current tenants on the Northern portion of the estate with vacant blocks as Phase 1 of the project. The tenants would then relocate to the new houses thus giving way for the proposed mixed-use project. Community leaders urged LAPTRUST to build the phase 1 houses under the social housing model to ensure they are within the budget of the current low-income tenants.	The proponent clarified that construction of the residential units during the project's phasing would depend on the tenants' or general public's demand and commitment to buy or rent the units.
7)	**Time frame for moving out of the estate**	Stakeholders acknowledged the time frame (4 months from March 2024) put forth by LAPTRUST for vacating the estate. However, stakeholders noted that the time frame for vacating the estate was inadequate, citing difficulties in securing alternative accommodation and disruption of school going children as the date	The proponent acknowledged the request from the stakeholders to extend the time frame for PAPs to vacate the estate. LAPTRUST informed the PAPs that they shall be given a notice of at least 90 days (3 months) to move out of the estate.

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
		proposed for tenants to vacate the premises would be within the school year. Some stakeholders urged LAPTRUST to be humane and accord the PAPs adequate time to vacate the estate, cautioning that provision of a limited period to move out of the premises might affect the mental health of PAPs.	
8)	**Fate of Former tenants residing in the blocks owned by KeNHA**	A Stakeholder enquired on the fate of former tenants occupying the 3 blocks that were acquired by the Kenya National Highways Authority (KeNHA) during the expansion of the Nairobi-Mombasa (A109) highway.	The proponent acknowledged the concern raised and mentioned that the matter would be discussed internally amongst the management, guided by consultations with the chief and PAPs committee, and will decide on the form of support that will be facilitated to the former tenants as well.
9)	**PAPs Committee**	Stakeholders, including community leaders, urged LAPTRUST to be honest and transparent in its dealings with the PAPs Committee. The leaders urged the PAPs to choose the committee members wisely as they will be instrumental in handling all issues with LAPTRUST.	The ESIA Consultant acknowledged that the PAPs Committee will be the key link between the PAPs and LAPTRUST. He reiterated the call for the PAPs to choose the committee members wisely.
10)	**Employment opportunities for locals**	Stakeholders sought assurance that PAPs and locals will be given priority when recruiting for skilled and unskilled roles during the construction phase of the proposed project.	The ESIA Consultant stated that the contractor will give priority to PAPs when recruiting staff during construction. He added that the PAPs Committee and the area Chief shall give the contractor recommendations for recruitment.
	Economic opportunities for locals	Stakeholders enquired whether the locals could be given an opportunity to supply building materials during project's construction.	The ESIA Consultant explained that opportunities for supply of building materials and services to the construction workers will be available to the locals.

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
			He urged the locals to form and register groups to ensure they have capital to take advantage of the business opportunities.
11)	**Corporate Social Responsibilities (CSRs)**	The community leaders urged LAPTRUST to support the community through CSR initiatives such as supporting local schools. For instance, Changamwe Girls school lacks a laboratory equipment, which could be provided under CSR.	The proponent stated that they would consider CSR initiatives suggested by the community.
12)	**Existing water and sanitation infrastructure**	A representative from Mombasa Water Supply & Sanitation Company Limited (MOWASCCO), the water service provider in the New Changamwe flats, stated that some tenants had water bill arrears. He wanted to know how MOWASCCO could recover the debt owed by the tenants to the company.	The proponent stated that LAPTRUST and MOWASSCO shall engage to come up with a strategy that will ensure both parties recover debts owed to them by the tenants.
		The MOWASCCO representative urged LAPTRUST to harmonize the proposed project design with the existing water and sanitation infrastructure in the estate.	The project's design team noted that they would incorporate the existing water and sanitation infrastructure in the proposed project's design.
		While referencing to the upcoming National Housing Corporation (NHC) housing development and other projects within the county, a stakeholder asked whether there were alternatives for handling sewer and water provision in the proposed project.	The project's design team stated that these issues would be considered in the final design of the proposed mixed-use development.
13)	**Existing transport infrastructure**	KeNHA & KURA representatives were concerned with the impacts of material haulage on the roads around the project site i.e. A109 - Highway, Magongo Road and Refinery Road.	The proponent stated that the existing KeNHA and KURA protocols/guidelines to protect the road from damages will be adhered to by the project's contactor i.e. there will be no overloading of trucks, to ensure roads are not

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
			damaged. The Contractor will also be required to comply with rules and regulations regarding the use of roads.
14)	**Ongoing Litigation**	A stakeholder noted that there was ongoing litigation with tenants. He sought to know the way forward and options LAPTRUST was considering.	The proponent acknowledged that there were ongoing disputes in Court. The constitution recommends alternative dispute resolution mechanisms. It was further stated that there was an ongoing engagement to settle the issues out of court.
15)	**Aviation Security and Safety Concerns**	The Kenya Civil Aviation Authority (KCAA) representatives in attendance noted that the project's aerodromes proximity could impact aviation safety. The following concerns were raised: i. Poor waste management could attract wildlife, especially birds which could result in bird strikes and damage of aircraft equipment which lead to accidents. ii. Dust during construction may impair visibility for pilots when landing or taking off. iii. Flat roof high-rise buildings might be used for launching missile weapons at aircrafts approaching or taking-off from Moi International Airport. iv. Materials used for external finishes of the building might present glare and reflect electromagnetic communication signals.	The project's design team took note of the comments from KCAA on issues of flight safety and security. They assured the stakeholders that the project design shall be harmonized to address the issues raised. The proponent also pointed out that they shall follow all the procedures and guidelines to ensure compliance with KCAA requirements.

S/No	Issues Raised by Stakeholders	Brief Explanation	Response
		The representatives further noted that KCAA will analyse the applications that will be done by the proponent before the National Construction Authority (NCA) gives the project a license. They further noted that it was vital to strike a balance between safety and development.	
16)	**Waste management**	A stakeholder noted that construction debris from demolitions of existing infrastructure could be useful for landfilling at the Mwakirunge dumpsite.	The ESIA Consultant noted that the contractor shall be required to deposit debris to the Mwakirunge dumpsite Further, NEMA-Licensed operators shall be used for handling waste generated during all phases of the proposed project.
		A stakeholder noted that the Mombasa County Sessional Paper No. 1 of 2019 on Solid Waste Management, advocates for waste segregation at source. The stakeholder expressed concern that the proposed project design didn't indicate waste collection and segregation points for each block.	The project's design team stated that waste collection and segregation facilities for every block shall be included in the design. The ESIA Consultant stated that Recovery at source will be recommended.
17)	**Historical land issues**	A stakeholder pointed out that the proposed project site was community land before it was handed over to the defunct Municipal Council of Mombasa. The stakeholder stated that the community didn't benefit from the debt-swap agreement.	The proponent acknowledged that the Kenyan Constitution allows for Community, Public, Private land ownerships. The proposed project site is currently private land. A legal procedure was followed to change the land ownership from county land to LAPTRUST/CPF land. The proponent further pointed out that they have a private ownership Title deed for the land.

8 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

8.1 Introduction

The project characteristics, form the basis for impact identification and evaluation. The impacts that are expected to arise from the project are either positive, negative, direct, indirect, short-term, and temporary. There are no adverse or permanent impacts anticipated in the proposed project. This assessment is done for all the project phases namely, construction, operation, and decommissioning phases.

8.2 Positive Impacts During the Construction Phase

8.2.1 Job Opportunities

Several employment opportunities will be created for construction workers during this phase of the project and will employ both skilled and unskilled labour. Most of the construction labour will be sourced locally and this will benefit the local residents, especially the youth who are the main victims of the high rate of unemployment in the project area.

8.2.2 Gains in the Local and National Economy

The project construction phase will generate revenue for both the national and county government. The national government will benefit from various taxes (e.g. income tax, Value Added Tax (VAT) etc.) and approval fees (e.g. NCA). The county government will gain revenue in the form of construction plan approvals, local business licenses/permits etc. All materials will be imported through the existing transports hubs which will earn revenue to the county.

8.2.3 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. This provides ready market for local building materials. This will in turn improve income generation for local materials suppliers, quarrying companies, hardware shops etc.

8.2.4 Improved Infrastructure

The project activities will involve installation of new public utility infrastructure like roads, electricity network, water supply network and wastewater treatment system as well as improvement of existing ones. Improvement of infrastructure has the potential to spur further development in the project area.

8.2.5 Optimal use of land

The designs of the housing units have incorporated an optimal use of the available land, bearing in mind that land is a scarce resource in Kenya. With only 228 houses

occupying the project footprint during the time of this study, the proponent intends to construct 714 housing units (subject to demand from the current tenants/general public to purchase/rent the units during the pre-construction phase of the project), a strip mall with 42 shop units and a hotel with 112 rooms, including social infrastructure, therefore maximizing on use of the land.

8.3 Negative Impacts During the Preconstruction and Construction Phase

8.3.1 PAPs Moving out of the Estate.

The existing tenants and squatters will be affected by the demolition of existing houses and structures to pave way for the mixed-use project to be built.
The RAP process has outlined the affected tenants and assets as shown in the table below.

Table 8-1: Affected tenants and assets

No.	Asset	Number/Quantity
1	Informal Structures	80
2	Trees	55
3	Tenants in LAPTRUST blocks	228
4	Tenants in KeNHA blocks	36
5	Vacant blocks previously occupied by the police officers	36

The disruption will be in the form of social networks disruptions, loss of livelihoods and social support structures, that have been developed over the lengthy period of time that most of the tenants have been residing in the estate. This will also affect school going children where vacating the premises might require transfer of pupils in the middle of the school calendar year. The issues associated with PAPs moving out of the estate could also have a negative impact on the mental health of the tenants due to anxiety and lack of information on project timelines.
This impact will be **High**, hence a **value of 3.**

Potential Mitigation Measures

- At the proponent's discretion, consider providing some form of support to Project Affected Persons (PAPs), to assist them during the process of moving out of the premises;
- Consider the school calendar when issuing notices to the PAPs to move out;
- Give PAPs a notice of at least 90 days to move out of the estate;
- Share project related information through the PAPs Committee;
- Implement a robust Resettlement Action Plan (RAP);

- Implement a robust Grievance Redress Mechanism (GRM).

8.3.2 Disruption of Services

Currently, the estate is served by electricity, water and sewer services. Demolition of existing informal structures and clearance of the site might necessitate the relocation of these services. This might lead to disruptions within the Changamwe area. This impact will be **minimal,** hence a **value of 1.**

Potential Mitigation Measures

- Contact and maintain communication with service companies including Kenya Power and Lighting Company (KPLC) and Mombasa Water Supply and Sanitation Company (MOWASSCO), to minimize impacts from service interruptions by determining the best time for service interruptions and strategies to minimize the duration of service interruptions.
- Inform users of planned service interruptions sufficiently ahead of time for them to put in place strategies to mitigate the consequences of the interruptions.

8.3.3 Vegetation clearing

Most of the vegetation within the project site will be cleared as part of the site preparation for construction. The top-soil will be stripped as part of site preparation. Site clearance activities are associated with loss of biodiversity, soil erosion and increased run off. The loss of vegetation also has a great effect on the general and localized environment and normally can modify the areas' microclimate. With regards to flora, there are no known red list species or significant indigenous vegetation on-site or within the project area. The only areas of concern with regards to biodiversity are a few mature trees, crops and grass vegetation. This impact will be **minimal,** hence a **value of 1.**

Potential mitigation measures

- Landscape and plant vegetation in all open areas after the completion of the project;
- Restriction of construction activities to defined project areas;
- Provide drainage channels to minimize erosion;
- After completion of earthworks, grasses should be planted on all open areas to minimize soil erosion;
- Stockpiles should not be allowed to become contaminated with oil, diesel, petrol, garbage or any other material, which may inhibit the later growth of vegetation;
- Soil conservation measures should be adopted at the stockpiles to prevent erosion; and

- Soil stockpiles should not be higher than 2.5 m or stored for a period longer than 2 months.

8.3.4 Increased Noise and vibration generation

The demolition and construction works will generate noise and vibrations in the area. The main sources of noise expected will be from demolition of existing informal structures, earth movers, material delivery vehicles and communicating workers. This impact will be **High**, hence a **value of 3.**

Potential mitigation measures

The following noise-suppression techniques will be employed to minimise the impact of temporary construction noise at the project site.

- Serviceable machines should be used for excavation to ensure vibrations are kept at below risk levels;
- Construction work and delivery of raw materials should be limited to daytime on weekdays only;
- Implement hearing conservation programmes (including provision of ear protectors and periodic audiometric tests) to Employees exposed to higher levels of noise;
- The contractor should deploy compact machinery and fit them with mufflers and vibration dampers;
- The contractor should endeavour to comply with the provisions of the Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009.
- Install portable barriers to shield compressors and other small stationary equipment where necessary;
- Install sound barriers for pile driving activity;
- Limit pickup trucks and other small equipment to a minimum idling time and observe a common-sense approach to vehicle use and encourage workers to shut off vehicle engines whenever possible; and
- Construction/Demolition works should be done during the day when people are away.

8.3.5 Increased Solid Waste Generation

Solid waste will consist of construction and demolition debris, cement bags, wood, broken glasses, containers, metal, sharp objects such as nails, organic waste, paper, and plastic among others during the development's construction phase. This impact will be **High**, hence a **value of 3.**

Potential Mitigation measure

- Efficient use of building material to reduce waste and recycling/reuse where feasible;

- Engage the services of registered waste handlers to collect and transport waste to designated disposal sites;
- Provision for waste management rooms at strategic places within the development facility;
- Segregation of waste at the source during the project cycle;
- Use of an Integrated Solid Waste Management System (ISWMS); through a hierarchy of options including source reduction, recycling, composting and reuse; and
- Manage all waste in line with the requirements of the Environmental Management and Co-ordination (Waste Management) Regulations, 2006.

8.3.6 Liquid Waste Generation

During construction a large number of workers will be employed who will require adequate sanitation facilities. Wastewater will also be generated during construction activities such concrete curing. This will be a concern that the contractor has to address as he engages in construction of the proposed houses. This impact will be **moderate**, hence a **value of 2**.

Potential mitigation Measures

- The contractor should install portable toilets that will be maintained, cleaned and supplied with adequate water;
- Control of water usage during construction activities to minimize on wastage.

8.3.7 Air Pollution, Particles and Dust Emission

Air pollution will be a negative impact during the site preparation, demolition, and construction phase as a result of increased amounts of dust emanating from the demolition, excavation, construction activities and stockpiled earth materials. Air pollution may also be as a result of emission of fumes and particles or combustion of fossil fuels from the construction machinery. This impact will be **Moderate**, hence a **value of 2**.

Potential Mitigation measure

- Ensure all waste such as papers and plastic containers are transported off-site for processing at designated areas and not burnt or stored for any longer than is absolutely necessary;
- Minimize exposed areas through the schedule of construction activities to enable dust control;
- Minimize the period for idling of machinery and construction vehicles;
- Onsite dirt piles or other stockpiled material should be covered, wind breaks installed, water and/or soil stabilizers employed to reduce wind-blown dust emissions;

- All staff employed at the construction site and visitors must be provided with dust masks and other relevant PPEs;
- Fuelled construction equipment should be used where feasible;
- Perform construction activities at times that persons are expected to be at work and school;
- All raw materials where possible must be sourced as close as possible to the construction site thus reducing the emissions from vehicular traffic;
- Regular and prompt maintenance of construction machinery and equipment to minimize generation of hazardous gases;
- Regular sprinkling of water on work areas to prevent fugitive dust violations;
- Restricting heights from which materials are to be dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading;
- Use environmentally friendly fuels such as low sulphur diesel;
- Buffer area of trees and other vegetation will serve as natural windbreaks;
- Use of dust nets/screens around the construction site to contain and arrest dust;
- Where a vehicle leaving a construction, site is carrying load composed of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials will not leak from the vehicle;
- Monitor the air pollution levels regularly as per the provisions of the Environmental Management and Coordination (Air Quality) Regulations, 2014;
- Watering of the access road prior to delivery of materials to limit particulate dust emissions.

8.3.8 Oil Leaks and Spills

During construction phase, some of the site's construction equipment will require diesel and/or oil. It is also important to note that oil/grease spills are prevalent in construction sites and in most areas that make use of petroleum products. Such products contain detrimental elements to the environment. Though this may not be common at the site, it is wise to control and observe the little that could occur especially during maintenance of the involved machinery.

There is therefore the risk of leaks or spills and the potential for contaminating the site's soil. The impacts of improperly stored fuel and other chemicals could prove detrimental if these fluids infiltrate the surface waters or groundwater systems. Management guidelines should be implemented in order to regulate and document the use of explosives, chemicals and fuels within the project site. Operators should express due caution when it comes to the re-fuelling of equipment on site, as an accidental oil spill is more likely to occur during these activities. This impact will be **minimal**, hence a **value of 1**.

Potential mitigation measures

- Train personnel on the risks of oil spills and leakages;

- Refuelling and maintenance construction vehicles and equipment should only take place at designated areas/protected service bays, where oils are completely restrained from reaching the ground. Such areas should be covered to avoid stormwater from carrying away oils into the soil or water systems;
- All hazardous materials should be stored in appropriately bunded containers and placed on concrete floor as where applicable;
- Maintaining spill response kits at the construction site at all times;
- Prepare and display on site spill response procedures and training of workers on spill response and management;
- The site design should incorporate oil sumps at the parking areas to isolate oil spills from parked vehicles that might spill to the storm drains;
- No solid waste, fuels or oils should be discharged on land surface or into drains.
- All oil products and materials should be stored in site stores;
- Any wash off from the oil/grease handling area or workshop should be drained through impervious drains;
- Regularly check for leaks from paint containers;
- Unwanted paint should not be disposed by pouring it on soil or storm water drains;
- All machinery must be keenly monitored to prevent oil leaks on the ground. This can be affected through regular maintenance of the machinery.

8.3.9 Occupational Health and Safety Risks

Construction workers will be susceptible to health and safety hazards during demolition and construction activities. Inherent occupational risks include muscular-skeletal injuries, cuts and bruises, falls into un-marked/uncovered trenches, and falls from height. This impact will be **High**, hence a **value of 3.**

Potential mitigation measures

- Ensure workers have proper instruction and supervision;
- Training of workers on construction safety including but not limited to; work at heights, ergonomics, chemical safety, occupational first aid, fire safety, machine safety, transport safety, use of high-visibility safety apparel and emergency management;
- The area around which elevated work is taking place should be barricaded to prevent unauthorized access. Working under personnel on elevated structures should be avoided;
- Ladders should be used according to pre-established safety procedures for proper placement, climbing, standing, as well as the use of extensions;

- Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others;
- Provide appropriate PPE to workers;
- Keep well-stocked first aid kits of the prescribed standards;
- Install appropriate fire-fighting equipment;
- Provide sanitary facilities for employees;
- Provide wholesome drinking water for employees;
- Post appropriate site safety signages;
- Develop & publicize an emergency response plan;
- Carry out Occupational Safety and Health Risk Assessment;
- Carry out Fire Safety Audit;
- Carry out Occupational Air Quality Monitoring;
- Carry out Noise Survey Measurement;
- Ensure all Lifting Plant Equipment are examined by an Authorized Plant Examiner;
- Ensure proper traffic management including having a flag man at the access road area under construction in addition to having a hazard tape;
- Carry out Occupational Medical Examination for workers;
- Comply with the provisions of OSHA, 2007; and
- The contractor should implement all the measures outlined in the EHS Action plan in Chapter 12.

8.3.10Community Health and Safety risks

The local community will be susceptible to health and safety hazards posed by construction and demolition works. Risks include falling objects, falls into un-marked/ uncovered trenches and accidents from construction vehicles. The impact is anticipated to be moderate and given a rating of 2.

Potential mitigation measures

- Install catch platforms around the site perimeter to arrest any falling objects;
- Immediate neighbours and other stakeholders should be sensitized on the dangers and risks associated with the construction works for enhanced self-responsibility on personal safety;
- Disabled access features and safety signages should be placed strategically around and within the buildings;
- The contractor should comply with the provisions of: OSHA, 2007; Public Health Act Cap 242; Public Roads and Roads of Access Act Cap 399; Traffic Act Cap 403; and the Kenya Roads Act, 2007;

- Limit the movement of workers and contractors to within project-defined areas and designated traffic and transport routes or locations;
- Control access to the site and implement a permit system for vehicle access for the duration of construction;
- Establish an alternative route for access to Changamwe Secondary School;
- Control access for all new access roads/paths within the project;
- The Contractor should develop an Induced Access Management Plan, which will as a minimum incorporate the measures described above and develop site-specific procedures for the monitoring program, to be agreed by the proponent.

8.3.11 Increased water demand and consumption

Construction projects utilize significant quantities of water for concrete mixing laying and curing. Water will also be required for human use including drinking and sanitary needs. This could lead to strain on the available water resources. This impact will be **moderate** hence a **value of 2.**

Potential Mitigation measures

- The contractor should ensure that there is conservation of water in all activities;
- Water should be recycled where possible without compromising on quality and health of consumers;
- Ensure good use of water resources during construction by installing taps on all outlets and minimize wastage by ensuring regular repair and replacement of broken or worn-out pipes and fittings;
- The contractor should put in place sound and sufficient water storage reservoirs that are leak-proof; and
- The contractor should instil water-use discipline among employees.

8.3.12Visual Impacts

Changes in landscape views during the construction period will negatively impact the visual amenity of the area. Visual intrusion is however not a major issue of concern based on the proposed facility design. Mitigation measures will be documented to mitigate visual impacts hence this impact will be **minimal** thus a **value of 1.**

Potential Mitigation measures

The contractor should implement the following:

- Restore active work areas through backfilling and landscaping, by planting of indigenous trees, shrubs, and grass on the open spaces, to re-introduce visual barriers.

8.3.13Traffic Congestion and Accidents

This will occur as vehicles bring in deliveries at the site and as workers leave or come to the site. The site will generate higher traffic than normally experienced in the project area. Considering the existing traffic which is mainly *boda-boda/tuk-tuks*, intra and intercounty PSV transport vehicles, the additional vehicles serving the project will definitely be a significant number. This has the potential to cause an increase in road accidents. Precautions must be put in place to reduce traffic accidents and incidents. This impact will be **moderate** hence a **value of 2.**

Potential Mitigation measures

- Heavy Commercial Vehicles (HCVs) delivering construction materials should observe designated speed limits for the area;
- Speed bumps should be erected on road sections passing through populated residential and market centres and near schools and worship centres;
- Proper signage and warnings should be placed at appropriate places along the site road to forewarn other motorists of HCVs turning and transportation of abnormal loads;
- Delivery of material for the installation should be undertaken during off-peak hours; and
- All materials should be offloaded on the site and adequate space for that should be provided. Flagmen/traffic marshals should be deployed at the entrance to guide traffic.

8.3.14Increased energy demand

Construction activities will use engine-driven machinery such as transportation vehicles, concrete mixers and vibrators, compressors and power generators that require fossil fuel inputs such as diesel and petrol. Their continual application will increase the demand for energy. This impact will be **moderate** hence a **value of 2.**

Potential Mitigation measures

- Switch off engines when not in use;
- Use well serviced construction machinery that is efficient in fuel consumption;
- Maximize the use of natural lighting by limiting construction works to day time;
- Create awareness among workers on the importance of conservation of energy resources;
- Employ technologies that demand less energy consumption; and
- Use energy saving lighting systems.

8.3.15Insecurity

Construction sites in Kenya attract all manner of people not directly engaged in the work. These will include people hoping to secure some form of casual work, outside

caterers and idlers. This introduces an element of insecurity at the construction site. This impact will be **moderate** hence a **value of 2.**

Potential Mitigation measures

- Secure the site and have a security personnel manning the site;
- The contractor to give out information of suspecting conduct within the site to the local administration;
- Hire services of security firm to monitor personnel or visitor movement within and close to the site;
- Formulate and instil a place of work conduct; and
- The contractor should work closely with the Ministry of Interior to ensure the government provides security during construction.

8.3.16Emergence and Spread of Social Vices

The proposed development will lead to potential for employment opportunities and access to new services which will draw people to the area, more specifically, the project site. This factor will further lead to a temporary increase in economic activities and employment of skills for the development. This will lead to population influx which might lead to changes in or unwanted behaviours in the area. This unwanted or change in behaviour may be in the form of loose morality, an increase in school drop-out due to cheap labour, child labour, drug use and abuse, theft/robbery and increased incidences of HIV/AIDS & Sexually Transmitted Diseases (STDs) and other communicable diseases. This impact will be **moderate** hence a **value of 2.**

Potential Mitigation Measures

- Conduct periodic sensitization forums for employees on ethics, morals, general good behaviour and the need for the project to co-exist with the neighbours;
- Ensure enforcement of relevant legal policy on sexual harassment and abuse of office;
- Contractor to employ workers from the immediate/local area where possible to avoid social conflict;
- The contractor should ensure that external project workers are sensitized on the local culture;
- Provide condoms to employees;
- Offer awareness, guidance and counselling on HIV/AIDS and other STDs to employees;
- Ensure that the information provided is accurate, accessible, gender specific and culturally appropriate;
- Records should be kept on awareness training and education of site personnel;
- Provide Voluntary Counselling and Testing (VCT) to construction workers onsite, focusing on prevention and proactive treatment of the disease;

- Risky behaviour should be identified and addressed;
- Partnerships should be formed with other stakeholders and operational HIV initiatives in the area in order to align initiatives, gain insight from those with experience on the ground and to get organizational support;
- Information should also be made available to vulnerable groups;
- HIV/AIDS training and education modules should include the prevention and management of HIV co-infection, and other STDs.

8.4 Positive Impacts During the Operation Phase

8.4.1 Provision of Housing Facilities

The project will provide modern housing facilities. The proponent will ensure availability of power, water supply and sanitation utilities. The project will utilize improved construction standards, materials, and technology, with a shift from the old construction methods. This will ensure health and safety standards are maintained for the benefit of the occupants.

8.4.2 Employment Opportunities

More employment opportunities will be created during the operation phase. These will include estate management personnel, security guards, repair and maintenance technicians, waste management service providers etc.

8.4.3 Improved Security

During the occupation phase there will be need to improve the security of the project area due to increase in population occasioned by the arrival of new settlers. Part of the security apparatus to be put in place will include street lighting along the access roads as well as enhanced vigilance through the *Nyumba-Kumi* Initiative.

8.4.4 Promotion of social cohesion

The development will bring together people with diverse traditions and culture. It will lead to promotion of cultural interaction. The proposed project shall bring approximately 714 households to live on the same estate. This may help the households in saving some of the overheads such as security, waste disposal etc, since if they were to live on individual plots, some of these costs would have to be borne individually without any economies of scale which are otherwise shared.

8.5 Negative Impacts During the Operation Phase

8.5.1 Solid Waste Generation

The new settlements will generate substantial volumes of solid waste from human household activities both from the commercial, hospitality and residential zones. These will include waste papers, plastics, broken glass, kitchen waste etc. The waste may accumulate to undesirable volumes if not segregated and disposed of regularly, thereby becoming a nuisance. This impact will be **moderate** hence a **value of 2.**

Potential Mitigation measures

- Use of an integrated solid waste management system (i.e. through a hierarchy of options: Reduce, Reuse, Recycling and Dispose);
- Provide a central waste receptacle;
- Transportation of wastes from the development to be done by a NEMA registered solid waste handler; and
- Manage all waste in line with the requirements of the Environmental Management and Co-ordination (Waste Management) Regulations, 2006.

8.5.2 Wastewater Generation

Large volumes of wastewater will be generated from kitchens, laundry activities, ablution, toilets etc. This has a potential to infiltrate and contaminate both ground and surface water sources if not well managed. This may pose a health risk for both humans and animals when they consume polluted water through diseases and poisoning. This impact will be **moderate** hence a **value of 2.**

Mitigation Measures

- Channel all wastewater to MOWASSCO sewer system;
- Regular inspection and maintenance of internal sewer system; and
- Constant monitoring of water resources through regular sampling and testing.

8.5.3 Traffic Congestion

The hotel and strip mall will attract traffic resulting in congestions along the A109 and Magongo roads. Residents accessing their homes will also create congestion especially in peak hours.

This impact will be **moderate** hence a value of **2**.

Potential mitigation measures

- The proponent should undertake a Traffic Impact Assessment (TIA) study.

8.5.4 Increased pressure on the existing infrastructure

The mixed-use development will increase pressure on existing transport, energy, and water infrastructure.

This impact will be **moderate** hence a **value of 2.**

Potential mitigation measures

- Liaise closely with other development partners and Government/Council Departments, to upgrade the existing shared facilities including roads, water distribution systems etc;
- In conjunction with KeNHA, construct slips roads into the hotel and strip mall;
- Explore alternative means which are environmentally sound like employing the Green Energy Technologies when and where applicable like the use of Solar Panels in water heating and pumping among others. This will rather reduce the

over dependence on fossils-based energy sources which are arguably presently threatened with the idea of having a private borehole in itself being a way of relieving an existing water supply system;
- Utilize water and energy conserving technologies.

8.6 Positive Impacts During the Decommissioning Phase

8.6.1 Rehabilitation

Upon decommissioning the project, rehabilitation of the project site will be carried out to improve the site. This will include replacement of topsoil and vegetation, which will lead to improved visual quality of the area. Alternatively, a new different structure may be put up.

8.6.2 Employment Opportunities

Employment opportunities will be created for the demolition staff as well as those involved in loading, transportation and unloading of the demolished materials.

8.6.3 Recycling of usable materials

Not all the demolished materials will go to waste as some may be recycled for alternative uses.

8.7 Negative Impacts During the Decommissioning Phase

8.7.1 Solid Waste Generation

Demolition of the project's buildings and related infrastructure will result in large quantities of solid waste. The waste will contain the materials such as blocks of concrete, metal, drywall, wood, glass, paints, adhesives, sealants and fasteners. Although demolition waste is generally considered as less harmful to the environment, since they are composed of inert materials, there is growing evidence that large quantities of such waste may lead to release of certain hazardous chemicals into the environment. In addition, even the generally non-toxic chemicals such as chloride, sodium, sulphate and ammonia, which may be released as a result of leaching of demolition waste, are known to lead to degradation of groundwater quality. This impact will be **minimal (value of 1).**

Mitigation measures

- Manage all waste in line with the requirements of the Environmental Management and Co-ordination (Waste Management) Regulations, 2006.

8.7.2 Air Pollution

Large quantities of dust will be generated during demolition works. This will affect demolition staff as well as the neighbouring residents. This impact will be **minimal (value of 1)**.

Mitigation measures

- Truck drivers should maintain low speeds to avoid raising dust;
- Employees should be provided with dust masks, safety goggles and other relevant PPEs;
- Install dust trappers around the site to prevent dust from spreading in the neighbourhood;
- Sprinkle dusty areas with water to keep dust level low; and
- Trucks involved in demolition and transportation activities of soil and other solid materials from the site should be covered to prevent spreading of dust into the surrounding areas.

8.7.3 Noise and Vibration

The demolition works will lead to significant deterioration of the environment within the project site and the surrounding areas through noise and vibrations. This impact will be **minimal (value of 1).**

Mitigation measures

- Workers should be provided with appropriate Personal Protective Equipment (PPE).

8.7.4 Occupational Safety and Health Risks

Demolition work involves many of the same hazards that are common during construction activities, but demolition may also introduce additional hazards like sharp objects. This impact will be **minimal (value of 1)**.

Mitigation measures

- Ensure workers have proper instruction and supervision;
- Establish a Health and Safety Plan (HASP) for the demolition works;
- Appoint a trained health and safety team during the decommissioning phase;
- Provide workers with adequate and appropriate PPEs;
- Provide workers with adequate drinking water and breaks;
- Comply with the provisions of Occupational Safety and Health Act, 2007; and
- Train workers on safety procedures and emergency response.

9 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

9.1 Introduction

This section highlights the mitigation measures for the expected negative impacts of the proposed building. The potential impacts and the possible mitigation measures have herein been analysed under three categories: Construction, Operational and Decommissioning. An Environmental and Social Management Plan (ESMP) has been provided.

The proponent acknowledges that the proposed project activities will have some impacts on the environment, health and safety of its employees. A comprehensive Environmental and Social Management and Monitoring Plan (ESMMP) has been developed to assist the proponent in mitigating and monitoring environmental impacts associated with the life cycle of the project. The focus was on reducing the negative impacts and maximizing the positive impacts associated with the project activities through a continuous improvement programme.

9.2 Environmental and Social Management

The Environmental and Social Management Plan (ESMP) has been developed to provide a basis for an Environmental Management System (EMS) (EMS; ISO 14001 principles) for the project. The ESMP has outlined potential impacts including proposed mitigation measures, responsibility for Mitigation, timeline for mitigation and cost for mitigation.

9.3 Environmental and Social Monitoring

The Environmental and Social Management and Monitoring Plan (ESMMP) contains environmental indicators to be monitored during the project phases namely the construction; operation and decommissioning are also described in table below. On monitoring, the ESMMP has outlined potential impacts, parameters to be monitored, monitoring points, responsibility for monitoring, frequency of monitoring and cost for monitoring. The monitoring parameters will be revised in the project lifecycle to enable incorporate and foreseen indicators.

9.4 Environmental and Social Management Plan

Table 9-1: Environmental and Social Management Plan

Potential Negative Impact	Proposed mitigation measures	Responsibility	Timelines	Cost (Kshs)
Construction Phase				
PAPs moving out of the Estate	▪ At the proponent's discretion, consider providing some form of support to Project Affected Persons (PAPs), to assist them during the process of moving out of the premises. ▪ Consider the school calendar when issuing notices to the PAPs to move out. ▪ Give PAPs a notice of at least 90 days to move out of the estate. ▪ Share project related information through the PAPs Committee; ▪ Implement a robust Resettlement Action Plan (RAP); ▪ Implement a robust Grievance Redress Mechanism (GRM).	Proponent	Preconstruction Phase	RAP Budget
Disruption of services	▪ Contact and maintain communication with service companies including Kenya Power and Lighting Company (KPLC) and Mombasa Water Supply and Sanitation Company (MOWASSCO), to minimize impacts from service interruptions by determining the best time for service interruptions and strategies to minimize the duration of service interruptions. ▪ Inform users of planned service interruptions sufficiently ahead of time for them to put in place strategies to mitigate the consequences of the interruptions.	Contractor	Construction Phase	No additional costs. Costs will be within the construction budget
Vegetation clearing	▪ Landscape and plant vegetation in all open areas after the completion of the project; ▪ Restriction of construction activities to defined project areas; ▪ Provide drainage channels to minimize erosion; ▪ After completion of earthworks, grasses should be planted on all open areas to minimize soil erosion; ▪ Stockpiles should not be allowed to become contaminated with oil, diesel, petrol, garbage or any other material, which may inhibit the later growth of vegetation; ▪ Soil conservation measures should be adopted at the stockpiles to prevent erosion;	Contractor	Construction Phase	No additional costs. Costs will be within the construction budget

Potential Negative Impact	Proposed mitigation measures	Responsibility	Timelines	Cost (Kshs)
	▪ Soil stockpiles should not be higher than 2.5 m or stored for a period longer than 2 months;			
Increased Noise and vibration generation	▪ Serviceable machines should be used for excavation to ensure vibrations are kept at below risk levels; ▪ Construction work and delivery of raw materials should be limited to daytime on weekdays only; ▪ Implement hearing conservation programmes (including provision of ear protectors and periodic audiometric tests) to Employees exposed to higher levels of noise; ▪ The contractor should deploy compact machinery and fit them with mufflers and vibration dampers; ▪ The contractor should endeavour to comply with the Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009. ▪ Install portable barriers to shield compressors and other small stationary equipment where necessary; ▪ Install sound barriers for pile driving activity; ▪ Limit pickup trucks and other small equipment to a minimum idling time and observe a common-sense approach to vehicle use and encourage workers to shut off vehicle engines whenever possible; ▪ Construction/Demolition works should be done during the day when people are away	Contractor	Construction Phase	No additional costs. Costs will be within the construction budget
Increased Solid Waste Generation	▪ Efficient use of building material to reduce waste and recycling/reuse where feasible; ▪ Engage the services of registered waste handlers to collect and transport waste to designated disposal sites; ▪ Provision for waste management rooms at strategic places within the development facility; ▪ Segregation of waste at the source during the project cycle; ▪ Use of an Integrated Solid Waste Management System (ISWMS); through a hierarchy of options including source reduction, recycling, composting and reuse;	Contractor	Construction Phase	500,000

Potential Negative Impact	Proposed mitigation measures	Responsibility	Timelines	Cost (Kshs)
	▪ Manage all waste in line with the requirements of the Environmental Management and Co-ordination (Waste Management) Regulations, 2006			
Liquid Waste Generation	▪ The contractor should install portable toilets that should be maintained, cleaned and supplied with adequate water. ▪ Control of water usage during construction activities to minimize on wastage.	Contractor	Construction Phase	300,000
Air Pollution, Particles and Dust Emission	▪ Ensure all waste such as papers and plastic containers are transported off-site for processing at designated areas and not burnt or stored for any longer than is absolutely necessary; ▪ Minimize exposed areas through the schedule of construction activities to enable dust control; ▪ Minimize the period for idling of machinery and construction vehicles; ▪ Onsite dirt piles or other stockpiled material should be covered, wind breaks installed, water and/or soil stabilizers employed to reduce wind-blown dust emissions; ▪ All staff employed at the construction site and visitors must be provided with dust masks and other relevant PPEs; ▪ Fuelled construction equipment should be used where feasible; ▪ Perform construction activities at times that persons are expected to be at work and school; ▪ All raw materials where possible must be sourced as close as possible to the construction site thus reducing the emissions from vehicular traffic; ▪ Regular and prompt maintenance of construction machinery and equipment to minimize generation of hazardous gases; ▪ Regular sprinkling of water on work areas to prevent fugitive dust violations; ▪ Restricting heights from which materials are to be dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading; ▪ Use environmentally friendly fuels such as low sulphur diesel; ▪ Buffer area of trees and other vegetation will serve as natural windbreaks; ▪ Use of dust nets/screens around the construction site to contain and arrest dust;	Contractor	Construction Phase	300,000

Potential Negative Impact	Proposed mitigation measures	Responsibility	Timelines	Cost (Kshs)
	▪ Where a vehicle leaving a construction, site is carrying load composed of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials will not leak from the vehicle; ▪ Monitor the air pollution levels regularly as per the provisions of the Environmental Management and Coordination (Air Quality) Regulations, 2014; ▪ Watering of the access road prior to delivery of materials to limit particulate dust emissions.			
Oil Leaks and Spills	▪ Train personnel on the risks of oil spills and leakages; ▪ Refuelling and maintenance construction vehicles and equipment should only take place at designated areas/protected service bays, where oils are completely restrained from reaching the ground. Such areas should be covered to avoid stormwater from carrying away oils into the soil or water systems; ▪ All hazardous materials should be stored in appropriately bunded containers and placed on concrete floor as where applicable; ▪ Maintaining spill response kits at the construction site at all times; ▪ Prepare and display on site spill response procedures and training of workers on spill response and management; ▪ The site design should incorporate oil sumps at the parking areas to isolate oil spills from parked vehicles that might spill to the storm drains; ▪ No solid waste, fuels or oils should be discharged on land surface or into drains. ▪ All oil products and materials should be stored in site stores; ▪ Any wash off from the oil/grease handling area or workshop should be drained through impervious drains; ▪ Regularly check for leaks from paint containers; ▪ Unwanted paint should not be disposed by pouring it on soil or storm water drains; ▪ All machinery must be keenly monitored to prevent oil leaks on the ground. This can be affected through regular maintenance of the machinery.	Contractor	Construction Phase	300,000

Potential Negative Impact	Proposed mitigation measures	Responsibility	Timelines	Cost (Kshs)
Occupational Health and Safety risks	▪ Ensure workers have proper instruction and supervision. ▪ Training of workers on construction safety including but not limited to; work at heights, ergonomics, chemical safety, occupational first aid, fire safety, machine safety, transport safety, use of high-visibility safety apparel and emergency management. ▪ The area around which elevated work is taking place should be barricaded to prevent unauthorized access. Working under personnel on elevated structures should be avoided. ▪ Ladders should be used according to pre-established safety procedures for proper placement, climbing, standing, as well as the use of extensions. ▪ Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others. ▪ Provide appropriate PPE to workers. ▪ Keep well-stocked first aid kits of the prescribed standards. ▪ Install appropriate fire-fighting equipment. ▪ Provide sanitary facilities for employees. ▪ Provide wholesome drinking water for employees. ▪ Post appropriate site safety signages. ▪ Develop & publicize an emergency response plan. ▪ Carry out Occupational Safety and Health Risk Assessment. ▪ Carry out Fire Safety Audit. ▪ Carry out Occupational Air Quality Monitoring. ▪ Carry out Noise Survey Measurement. ▪ Ensure all Lifting Plant Equipment are examined by an Authorized Plant Examiner. ▪ Ensure proper traffic management including having a flag man at the access road area under construction in addition to having a hazard tape. ▪ Carry out Occupational Medical Examination for workers. ▪ Comply with the provisions of OSHA, 2007.	Contractor	Throughout the Construction Phase	Covered under Construction budget

Potential Negative Impact	Proposed mitigation measures	Responsibility	Timelines	Cost (Kshs)
Community Health and Safety risks	▪ Install catch platforms around the site perimeter to arrest any falling objects; ▪ Immediate neighbours and other stakeholders should be sensitized on the dangers and risks associated with the construction works for enhanced self-responsibility on personal safety; ▪ Disabled access features and safety signage should be placed strategically around and within the buildings; ▪ The contractor should comply with the provisions of: OSHA, 2007; Public Health Act Cap 242; Public Roads and Roads of Access Act Cap 399; Traffic Act Cap 403; and the Kenya Roads Act, 2007; ▪ Limit the movement of workers and contractors to within project-defined areas and designated traffic and transport routes or locations; ▪ Control access to the site and implement a permit system for vehicle access for the duration of construction; ▪ Establish an alternative route for access to Changamwe Secondary School; ▪ Control access for all new access roads/paths within the project. ▪ The Contractor should develop an Induced Access Management Plan, which will as a minimum incorporate the measures described above and develop site-specific procedures for the monitoring program, to be agreed by the proponent.	Contractor	Throughout the Construction Phase	Covered under Construction budget
Increased water demand and consumption	▪ The contractor should ensure that there is conservation of water in all activities; ▪ Water should be recycled where possible without compromising on quality and health of consumers; ▪ Ensure good use of water resources during construction by installing taps on all outlets and minimize wastage by ensuring regular repair and replacement of broken or worn-out pipes and fittings; ▪ The contractor should put in place sound and sufficient water storage reservoirs that are leak-proof; and ▪ The contractor should instil water-use discipline among employees.	Contractor	Throughout the Construction Phase	Covered under Construction budget

Potential Negative Impact	Proposed mitigation measures	Responsibility	Timelines	Cost (Kshs)
Visual Impacts	▪ Restore active works areas through backfilling, landscaping by planting of indigenous trees, shrubs, and grass on the open spaces to re-introduce visual barriers	Contractor	Throughout the construction phase	Covered under Construction budget
Traffic Congestion and Accidents	▪ Heavy Commercial Vehicles (HCVs) delivering construction materials should observe designated speed limits for the area; ▪ Speed bumps should be erected on road sections passing through populated residential and market centres and near schools and worship centres; ▪ Proper signage and warnings should be placed at appropriate places along the site road to forewarn other motorists of HCVs turning and transportation of abnormal loads; ▪ Delivery of material for the installation should be undertaken during off-peak hours; and ▪ All materials should be offloaded on the site and adequate space for that should be provided. Flagmen / traffic marshals should be deployed at the entrance to guide traffic.	Contractor	Throughout the construction phase	Covered under Construction budget
Increased energy demand	▪ Switch off engines when not in use. ▪ Use well serviced construction machinery that is efficient in fuel consumption. ▪ Maximize the use of natural lighting by limiting construction works to day time. ▪ Create awareness among workers on the importance of conservation of energy resources. ▪ Employ technologies that demand less energy consumption. ▪ Use energy saving lighting systems	Contractor	Throughout the construction phase	Covered under Construction budget
Insecurity	▪ Secure the site and have a security personnel manning the site; ▪ The contractor to give out information of suspecting conduct within the site to the local administration; ▪ Hire services of security firm to monitor personnel or visitor movement within and close to the site; ▪ Formulate and instil a place of work conduct; and	Contractor	Throughout the construction phase	1,000,000

Potential Negative Impact	Proposed mitigation measures	Responsibility	Timelines	Cost (Kshs)
	▪ The contractor should work closely with the Ministry of Interior to ensure the government provides security during construction.			
Emergence and Spread of Social Vices	▪ Conduct periodic sensitization forums for employees on ethics, morals, general good behaviour and the need for the project to co-exist with the neighbours; ▪ Ensure enforcement of relevant legal policy on sexual harassment and abuse of office; ▪ Contractor to employ workers from the immediate/local area where possible to avoid social conflict; ▪ The contractor should ensure that external project workers are sensitized on the local culture; ▪ Provide condoms to employees; ▪ Offer awareness, guidance and counselling on HIV/AIDS and other STDs to employees; ▪ Ensure that the information provided is accurate, accessible, gender specific and culturally appropriate; ▪ Records should be kept on awareness training and education of site personnel; ▪ Provide Voluntary Counselling and Testing (VCT) to construction workers onsite, focusing on prevention and proactive treatment of the disease; ▪ Risky behaviour should be identified and addressed; ▪ Partnerships should be formed with other stakeholders and operational HIV initiatives in the area in order to align initiatives, gain insight from those with experience on the ground and to get organizational support; ▪ Information should also be made available to vulnerable groups; ▪ HIV/AIDS training and education modules should include the prevention and management of HIV co-infection, and other STDs	Contractor	Throughout the construction phase	500,000
Operation Phase				
Solid Waste generation	▪ Use of an integrated solid waste management system (i.e. through a hierarchy of options: Reduce, Reuse, Recycling and Dispose) is recommended. ▪ Provide a central waste receptacle.	Proponent	Throughout the operation phase	200,000 Annually

Potential Negative Impact	Proposed mitigation measures	Responsibility	Timelines	Cost (Kshs)
	▪ Transportation of wastes from the development to be done by a NEMA registered solid waste handler. ▪ Manage all waste in line with the requirements of the Environmental Management and Co-ordination (Waste Management) Regulations, 2006.			
Wastewater Generation	▪ Channel all wastewater to MOWASSCO sewer system; ▪ Regular inspection and maintenance of internal sewer system; ▪ Constant monitoring of water resources through regular sampling and testing.	Proponent	Throughout the operation phase	100,000 Annually
Traffic Congestion	▪ The proponent should undertake a Traffic Impact Assessment (TIA) study.	Proponent	Throughout the operation phase	To be determined during the Traffic Impact Assessment (TIA) study
Increased pressure on the existing infrastructure	▪ Liaise closely with other development partners and Government/Council Departments, to upgrade the existing shared facilities including roads, water distribution systems etc; ▪ In conjunction with KeNHA, construct slips roads into the hotel and strip mall; ▪ Explore alternative means which are environmentally sound like employing the Green Energy Technologies when and where applicable like the use of Solar Panels in water heating and pumping among others. This will rather reduce the over dependence on fossils-based energy sources which are arguably presently threatened with the idea of having a private borehole in itself being a way of relieving an existing water supply system; ▪ Utilize water and energy conserving technologies.	Proponent	Throughout the operation phase	No additional costs. Expenditure covered under operation costs
Decommissioning Phase				
Solid Waste Generation	▪ Manage all waste in line with the requirements of the Environmental Management and Co-ordination (Waste Management) Regulations, 2006.	Demolition Contractor	Throughout the decommissioning phase	No additional costs

Potential Negative Impact	Proposed mitigation measures	Responsibility	Timelines	Cost (Kshs)
Air pollution	▪ Truck drivers should maintain low speeds to avoid raising dust; ▪ Employees should be provided with dust masks, safety goggles and other relevant PPEs; ▪ Install dust trappers around the site to prevent dust from spreading in the neighbourhood; ▪ Sprinkle dusty areas with water to keep dust levels low; and ▪ Trucks involved in demolition and transportation activities of soil and other solid materials from the site should be covered to prevent spreading of dust into the surrounding areas.	Demolition Contractor	Throughout the decommissioning phase	No additional costs
Noise and Vibration	▪ Workers should be provided with appropriate Personal Protective Equipment (PPE).	Demolition Contractor	Throughout the decommissioning phase	No additional costs. Expenditure covered under demolition costs
Occupational Safety and Health Risks	▪ Ensure workers have proper instruction and supervision; ▪ Establish a Health and Safety Plan (HASP) for the demolition works; ▪ Appoint a trained health and safety team during the decommissioning phase; ▪ Provide workers with adequate and appropriate PPEs; ▪ Provide workers with adequate drinking water and breaks; ▪ Comply with the provisions of Occupational Safety and Health Act, 2007; and ▪ Train workers on safety procedures and emergency response.	Demolition Contractor	Throughout the decommissioning phase	No additional costs. Expenditure covered under demolition costs

9.5 Environmental and Social Management and Monitoring Plan (ESMMP)

Table 9-2: Environmental and Social Management and Monitoring Plan (ESMMP)

Component	Action	Standards / Targets	Location	Frequency	Responsibilities	Annual Cost (Kshs)	Supervision
Construction Phase							
Ambient Air Quality	Conduct regular visual inspection of construction site and access roads.	Avoid significant degradation of baseline conditions associated with dust production	Work sites	Continuous during construction activities	Contractor	No additional costs	Construction Management Team
Ambient Noise	Inspect construction site and measure dB levels, at locations where noisy activities are realized close to sensitive receptors (houses, schools, etc.) and following reception of specific noise related grievances.	Respect the noise levels set in the EIA Licence conditions	work sites and neighbouring property boundaries.	Continuous during construction activities	Contractor	Minimal – 10,000 Kshs	Construction Management Team
Worker Health and Safety	Provide all workers with Health and Safety sensitisation	100% of workers sensitized on Safety	Entire construction workforce	Continuous during construction activities.	Contractor	No additional costs	Construction Management Team
	Assess proportion of work accidents duly reported.	0 accidents	Entire construction workforce	Continuous during construction activities.	Contractor	No additional costs	Construction Management Team
Operation Phase							
Wastewater	Effluent monitoring	Effluent standards for discharge into the environment	Discharge point	Quarterly	Proponent	Costs covered under the project's	LAPTRUST Management

Component	Action	Standards / Targets	Location	Frequency	Responsibilities	Annual Cost (Kshs)	Supervision
						operational costs	
Mixed use development Monitoring	Self-Environment Audit	Comply with all Environmental legal requirements	Entire development	Annual	Proponent	Costs covered under development's operational costs	LAPTRUST Management
Decommissioning Phase							
Worker Health and Safety	Provide all workers with Health and Safety sensitisation	100% of workers sensitized on Safety	Entire construction workforce	Continuous during demolition activities.	Contractor	No additional costs	LAPTRUST Management
	Assess proportion of work accidents duly reported.	Number of accidents	Entire construction workforce	Continuous during demolition activities.	Contractor	No additional costs	LAPTRUST Management

10 GRIEVANCE REDRESS MECHANISM (GRM)

10.1 Introduction

A fundamental principle of any project implementation is to prevent or minimize grievances rather than going through a redress process. This can be achieved through: commitment to a human rights-based approach when PAPs move out of the estate; thoughtful project design; ensuring full participation and consultation of the PAPs; and establishing extensive communication and coordination between the PAPs and the project proponent. However, despite proactive stakeholder engagement, this does not always preclude grievances from arising, given the involuntariness of displacement and the inconvenience that accompanies it.

The RAP implementation process, therefore, provides opportunities for the PAPs to air and articulate their queries, concerns, issues, complaints, dissatisfaction or sense of injustice or unfairness, and seek to have these resolved amicably, and in the shortest time possible. Any PAP should be able to file a grievance for any difficult decision, practice or activity, arising from the project activities.

Therefore, a Grievance Redress Mechanism (GRM) as a mechanism, or set of procedures and processes, or organizational systems and resources, to be used as a means to hear, address and resolve issues and complaints related to project implementation (which can include support to be facilitated, mitigation measures and other arising issues) in a timely manner, is critical for the project's success. The stakeholders input handled through these systems and procedures may be called grievances, complaints, feedback, or any other functionally relevant terminology or concept.

Some of the possible grievances that can be anticipated or are most likely to occur during the implementation of this project may include:

- Misidentification and/or omission of genuine assets and PAPs from the PAP and Asset register;
- Errors could be committed in the recording of PAPs details concerning structures;
- Disputes or contestations over the ownership of assets/property; Two or more people claiming an asset or business (owner and the operator are different persons);
- In-fighting between families due to lack of spousal/ family consultation in the disposal of assets or facilitation funds;
- Disagreements over ownership shares of joint assets;
- Interruption of community social or other services and infrastructure e.g. water; and

10.2 Objectives of a Grievance Redress Mechanism

Primarily, GRMs are designed as a conduit for soliciting inquiries, inviting suggestions, and increasing community participation in a project. To the extent that projects can achieve success on these dimensions, mainly, an effective GRM mechanism can be useful in various ways:

- Generating public and stakeholder awareness about the project and its objectives;
- Increasing stakeholder involvement in the project;
- Improving project outcomes: through timely resolution of issues and problems, GRMs can contribute to timely achievement of project objectives;
- Providing feedback to different levels of the project-on-project performance such as providing project staff with practical suggestions/feedback;
- Acting as an early warning mechanism, GRMs can identify and resolve implementation problems in a timely and cost-effective manner. They help teams catch problems before they become more severe, widespread and/or escalated (which promotes efficient utilization of project funds and protection of the project's reputation), thus avoiding time-consuming disputes. They therefore act as a useful risk management tool;
- Building community-project relations, through creating and maintaining trust with affected persons and community stakeholders, thus enhancing the project's legitimacy among stakeholders;
- Allowing staff involved in project implementation to be more accountable, transparent and responsive to PAPs;
- Deterring or curbing fraud and corruption; and,
- Assessing the effectiveness of internal organizational processes but also improving the operational processes and performance of an organization.

10.3 Guiding Principles for an Effective Grievance Redress Mechanism

Several guiding principles should drive the design of an effective GRM. GRMs that involve these principles are more likely to provide effective resolution of grievances.

Table 10-1: Principles of GRM Formation

Principles	How it is adhered in the proposed Project
Start early in the project cycle: GRM (or at least the lowest level) institution at PAP level should be put in place as	PAPs Committee to be formed. The PAPs elected and confirmed the members during the public participation meeting.

Principles	How it is adhered in the proposed Project
early as possible, and later modified as the need arises.	
Accessible and straightforward: should be accessible to diverse members of the community, with multiple points of entry and access. Should be known to all intended to use it.	The procedures and mechanisms are simple and easily understandable. After the explanation/presentation most PAPs expressed understanding of how the GRM would function PAPs Committee (lowest level) established at the settlement level thus within reach of the PAPs, including the vulnerable. Multiple points of complaints provided. Sensitization of communities in the area of influence on the grievance procedure and how to access it recommended in this RAP.
Legitimate: Enabling trust from the stakeholders intended to use it	Elected by the tenants/PAPs in the public participation meeting, to enable trust and acceptance.
Participatory and Inclusive: developed in a participatory manner and includes representatives from the main actors/categories relevant to the project/area.	Membership drawn from main groups among the PAPs relevant in a specific case, including gender consideration. All key categories of PAPs, local leadership and Government included.
Contextualization and appropriateness (e.g. Cultural and Context-Sensitive): need to be localized to ensure its appropriate to the local context, keeping in line with local structures; incorporates context-specific cultural attributes as well as traditional mechanisms for raising and resolving issues.	No insistence on a single number to be met but consultant advised that committee be of sizable number (not too large or small using 11 as example and who were elected on that day) is vital to the functioning of the committee. Where necessary, as many as 15 and as low as 7 could be chosen. An effort to incorporate context-specific factors e.g. tenants' committee /*Nyumba Kumi*. Government administration e.g. chief or assistant chief incorporated in the PAPs Committee. Other institutions with authority and function as dispute resolution centres incorporated e.g. Imams, pastors
Responsive, Timely, and Efficient: Should be responsive to the needs of all complainants, and resolutions should be reached in the soonest time possible to discourage lengthy suits that are time-wasting.	Short response periods recommended to the GRM. Regular feedback to all who raise grievances is recommended. Training of the committee is recommended to ensure effective action.

Principles	How it is adhered in the proposed Project
	Lengthy administrative and legal procedures should be avoided and resorted to as the last option.
Transparency/Confidentiality: Users must be informed how they can access the mechanism. All complaints should be handled fairly, impartially and confidentially (on sensitive issues such as Gender Based Violence, GBV and where complainant prefers anonymity) The committee members should act independently of any external influence while concerned parties can air their views and complaints without fear of reprimand.	General sensitization on the GRM needed (some minimal level of sensitization achieved during the PAPs meeting). Clear and known procedures with an indicative timeframe for each stage and clarity on the types of process and outcome incorporated. Confidentiality of the dialogue between parties and of individuals' identities should be provided where necessary. Use of a representative / unique serialization can be adopted for grievance tracking purposes.
Formalized: the mechanism needs to be formally established, predictable and well known, and not ad hoc. It needs rules for addressing grievances, holds regular meetings/deliberations on specific and well-known days to discuss the issues. Laid out and expected timetable for key process milestones is essential.	Official activation of the PAPs Committee was recommended, and the PAPs informed of the same. Set timelines and procedures established. Documentation, e.g. through minutes integrated into the proposed mechanism procedures.
Appropriate Protection: The mechanism should prevent retribution and should not impede access to other remedies.	Sensitization included relaying that complainants will not be targeted with reprisal. Legal recourse was provided for in the GRM as a valid grievance redress option.

The process sought to rebuild and maintain relationships between the affected parties and the proponent, thus being beneficial not only to the PAPs but also to the project, since delays that can derail the project's implementation for an extended period of time will be avoided.

The process does not negate the rights of any PAP, thus ensuring its consistency with international best practices and standards. Additionally, it should not restrict access

to other redress mechanisms. Legal means for dispute resolution therefore remains open and available to the PAPs, when the need arises. Finally, it is vital that the redress mechanism enables continuous learning and flexibility to allow modifications and improvements from emerging lessons. Therefore, regular review and acting upon grievances data and existing trends will be essential.

10.4 The Grievance Structure

The RAP proposes a two-tier grievance redress mechanism at the community level and the project proponent level. The community level consists of PAPs Committee whereas project proponent level will resolve complaints through its internal processes including redress by the Project Implementation Unit (PIU), or seek an arbitration/mediated resolution before informing the complainant to seek judicial resolution if they are still not satisfied. The table matrix below shows GRM composition and functions.

Table 10-2: GRM Composition and Functions

Institution	Membership	Functions
PAPs Committee	Established at the community level. PAPs elected 12 members though it varies from a 7 to 15-member committee (to ensure there are no ties in case they need to vote on a case) Membership drawn from a variety of factors including project affected persons (male, female, informal structure owners, affected institutions where needed, persons living with disabilities, council of elders' representatives, Youth, religious groupings etc. A representative of the local government administration such as chief or assistant chief is a default member. (if needed) A project liaison person representing the firm that implements the RAP or hired by LAPTRUST if need be, can be included. Project Liaison Officer (PLO) will be the link between the PAPs Committee and LAPTRUST For authority, the local chief or assistant chief representation in the committee will be the convener.	Assist PAPs to file a complaint. To address PAPs grievances as 1st point of contact, within 15 days and at no cost to PAP. Publicize the grievance management procedures. Receive, review, investigate and keep track of grievances through the grievance logs/registers. Adjudicate and develop redress options for the raised grievances. Monitor fulfilment of agreements achieved through the committee. Provide inputs into the monitoring and evaluation process such as monthly reports on grievances.

Institution	Membership	Functions
	At activation, the group will select a chairperson, vice chairperson, secretary and assistant secretary. The secretary must be someone who can read and write in English.	
If no amicable solution or settlement is reached, the aggrieved person is not satisfied or does not hear from the PAPs Committee within the required time limits, they can escalate the grievance to the next level		
Project Implementation Unit (PIU)	Largely, LAPTRUST based Project Implementation Unit (PIU) who will consider grievance reports forwarded to it and decide. Membership consists of Department of Environment and Social Safeguards (with a minimum of a social safeguards / RAP Expert / Sociologist, a surveyor and assessor of property), and other representatives from LAPTRUST's other departments (including a finance officer, a legal counsel/advisor, a project liaison person, communications officer etc.). Team to be headed by a Project Coordinator or Manager, preferably a senior staff from Environment and Social Safeguards. The LAPTRUST Office in to provide secretarial services.	Escalation Mechanism to determine grievances unresolved by PAPs Committee - within 14 days and at no cost to PAP. LAPTRUST will acknowledge receipt of complaints within two weeks and will strive to resolve each complaint within two months. Responsible for monitoring the complaints – handling performance at lower levels. Providing inputs into the monitoring and evaluation process, such as quarterly reports on grievances handled.
The aggrieved person can go to court as a last resort. Given the above mechanism, it is not foreseen that many disputes will end up in court.		
Court of Law	The Land and Environment court deals specifically with land and environment-related disputes.	PAPs not happy with the project process will be free to seek legal redress at their own cost. The legal option will only act as an avenue of last resort and will be sought after all other redress mediums have been exploited and exhausted.

10.4.1 Community Level/ PAPs Committee

Following the sensitization of the PAPs on the need for grievances redress, the consultant during the public meeting with PAPs explained the criteria of selection and representation of PAPs Committee members. Thereafter, the members were given 30 minutes to elect their PAPs Committee representatives. The exercise was chaired by the MCA, Changamwe. Participants were guided on the criteria and procedure for electing the PAPs Committee members. The criteria included that members:

- Be a project affected member;
- Must be over 18 years;
- Be of sound mind and character according to Chapter Six of Kenyan Constitution 2010
- Be a fulltime resident of New Changamwe Flats;
- Must include: representatives for PAPs, men, women, youth, churches and People Living with Disability, and Elderly;
- Be willing and available to serve as members of the PAPs Committee.

The PAPs Committee election procedure was decided on by the participants. The election procedures included consensus by all members and voting through a show of hands. The PAPs Committee members were elected as per the criteria listed above. After the elections, the names were loudly read to the PAPs in attendance of the public meeting, for confirmation and endorsement by the participants. The details including names, ID, contacts and representatives of various groups were then recorded in the minutes.

The committee will support in resolving grievances as soon as they arise, through the agreed/strengthened socio-cultural approach. Some of the anticipated roles will include confirming identities of PAPs, dispute resolution as well project monitoring and liaison with LAPTRUST to mitigate against and assist to resolve any unforeseen negative project impacts. Those elected were presented to the participants in plenary and their terms of service affirmed. A detailed list containing the names, ID numbers and contacts of the PAPs Committee members is in the public meeting minutes provided as ***Annex 10*** of this ESIA report.

10.4.2LAPTRUST Level

The second level grievance redress will be the LAPTRUST level. LAPTRUST will seek to resolve complaints through its internal processes or seek an arbitration/mediated resolution before informing the complainant to seek judicial resolution if they are still not satisfied. LAPTRUST's internal project grievance redress process will include redress by the PIU, or the institution of an arbitration/mediation process by the Company Secretary where appropriate. At the LAPTRUST level, grievances will be received through email, letters, verbal, suggestion box or from the Project Liaison

Officer (PLO) or the PAPs Committee. Once grievances are received, they will be logged into the grievance log in the office. Some grievances may be resolved immediately, especially those that need LAPTRUST's project staff to provide information to the complainant. If not, they will be escalated to LAPTRUSTs PIU. LAPTRUST will acknowledge receipt of complaints within two weeks and will strive to resolve each complaint within two months.

10.5 Grievance Redress: Process, Procedures and Timelines

Grievance procedures may be invoked at any time, depending on the complaint. No person should experience any further impact until any complaint he/she has are satisfactorily resolved, following the procedures below:

10.5.1 Grievance Uptake: Receipt and Lodge/ Register

The community level grievance redress procedure should start with registration of the grievances with LAPTRUST's PLO on site or with the PAPs Committee. The PLO should convene a meeting with the PAPs Committee, invite the aggrieved party/ parties to the meeting and present the grievance to the committee for hearing. It is envisaged that the PAPs Committee should acknowledge receipt of the complaints and grievances within two weeks and strive to resolve the matter within one month.

The Committee should ensure that grievances reported to it are dealt with in a fair, consistent and timely manner, in accordance with the agreed timelines and resolution modes. The Committee should be encouraged to resolve matters objectively and to escalate to LAPTRUST any disputes that they are not able to resolve within established timelines. In this regard, the PAPs Committee should seek to eliminate unreasonable or illegitimate claims which may be driven by other factors that are not genuine, or project related, and satisfy legitimate claimants by reconciling the aggrieved PAP(s) either with one another, or with LAPTRUST as the case may be.

LAPTRUST's Project Liaison Officer (PLO) should be the link between the PAPs Committee and LAPTRUST. If the PAPs Committee is unable to satisfy the claimant, then the matter will be escalated to LAPTRUST through the PLO or directly by the claimant. Being a support to the PAPs Committee, the PLO in agreement with the committee, should escalate the unresolved complaints to the PIU, with documentation about the issue and how it has been dealt with by the PAPs Committee.

A number of avenues should be made available to the PAPs for communication of grievances, e.g. through e-mail, text messaging, telephone calls, face to face interactions with members of the committee, by post e.g. to LAPTRUST.

Ideally, at the settlement method, and despite the use of the variety of channels, the secretary of the PAPs Committee is responsible for receiving, referencing,

registering, and filing all grievances. The person will listen to the complainant and where necessary assist in filling the grievance form. Both the complainant and PLO will sign the form, after the complainant verifies the accuracy. Ideally, a grievance should be lodged orally or in written form and in the language the complainant is comfortable in. The PLO then translates this into an English form.

The PLO then logs the grievance into the grievance log or register giving each case a unique number, date complaint was lodged, complainant (if not a sensitive issue), nature of complaint, and in later stages action taken, or not taken, with reasons for the latter. As per the grievance register the PLO should ensure confidential reporting while handling sensitive cases such as Gender-based Violence (GBV) and anonymous reporting for those who choose to report anonymously. The use of unique assigned number should guide in tracking the grievances.

10.5.2Sorting and Processing: Acknowledge, Access and Assign

A written acknowledgment of receipt of the grievance is sent to the aggrieved person within 5 days, having been signed by the chairperson of the committee, and showing that the grievance has been received, will be logged and reviewed for eligibility, and if eligible, and will generate an investigation. This is key for accountability and shows the complainant the committee takes him/her and the grievance seriously.

The committee sits, and since various types of grievances will be lodged, and not all will be handled by the PAPs Committee, this siting will first assess the eligibility of the issue for the GRM mechanism while those not related to project eliciting an immediate response and referral to the right process or organisation. Such may include complaints constituting criminal activity and violence.

For eligible complaints, these are categorized as a) comments, suggestions, or queries; b) complaints to be handled by PAPs Committee; c) complaints to be referred directly to LAPTRUST and other parties.

Some, e.g. (a) above, may only require an immediate clarification or a simple explanation, while for (b), type of complaints, these will be assigned priority for investigation.

In each, the action required is written down in the grievance registry.

Collaborative: Not all complaints should be handled through a GRM. For example, grievances that allege corruption, coercion, or significant and systematic violations of rights and/ or policies are typically referred to organizational accountability mechanisms or administrative or judicial bodies for formal investigation, rather than to GRMs for collaborative problem-solving.

10.5.3Verification and Investigation

The PAPs Committee will then hold a meeting on the grievance and may work in consultation with the aggrieved person. In this step, they will also gather information on the grievance and decide on the corrective action within 10 days. The proposed action will be lodged in the register.

10.5.4Develop and Communicate Response

The committee will inform the complainant through a meeting, followed by a summarised written communication of the decision and resolution of the results of investigations and the actions proposed, seeking agreement on the response. The actions can be:

- Direct action to resolve the complaint;
- Further assessment and engagement with the complainant and/or involving other actors to jointly determine the best way to resolve the complaint.

Two possible scenarios can result from this meeting:

- **The aggrieved party accepts the proposed corrective action:** A written agreement is developed, detailing the time frame for implementing the corrective action as well as responsible party. This is signed by the PAPs Committee chairperson or PLO and the aggrieved party, and the corrective action commences. The acceptance is also lodged in the log, and later the completion date will be lodged after verification that recommended action was undertaken by the PAPs Committee, or concerned party.
- **The aggrieved party rejects the proposed corrective action:** The aggrieved party rejects the proposed corrective. The default position in that case/matter is referred to LAPTRUST level.

If the project-based GRM does not result in an action acceptable to the aggrieved party, he/she can resort to the judicial recourse.

10.5.5Action: Implement Response and Review if Successful

When there is agreement between a complainant and the PAPs Committee such as acceptance of a proposed action, thus enabling the process to move forward with the proposed action or stakeholder process, then the response should be implemented.

10.5.6Closeout or Refer the Grievance

Where the response has been successful, the secretary of the committee and PLO should document the satisfactory resolution in the grievance resolution form. It is best to have the complainant countersign to show their satisfaction with the response. The grievance is then indicated as closed.

10.5.7Monitoring, Evaluation and Providing Feedback

At all levels, regular progress monitoring of grievances filed, their status and actions taken and recommendations/resolution will be constantly undertaken. The PIU is individually responsible for monitoring and tracking grievances, assessing the extent to which progress is being made to resolve them, and generate quarterly reports. These reports and data/lessons generated should be used to make policy and/or process changes to minimize similar grievances in the future or to adapt the GRM to correct or remove inefficiencies.

10.5.8Documentation

At all levels, keeping of documentation should be ensured, including the grievance registers and grievance forms. Every meeting should have written minutes and approved by the relevant parties.

10.5.9Sensitization and Capacity Building

To create demand for the GRM mechanism, thus avoiding escalation of issues to court, LAPTRUST will undertake the following:

i. Sensitization of the PAPs on the grievance mechanism and its procedures

The effective working and use of the PAPs Committee depend on the awareness of its existence. Therefore, PAPs need to understand and support the purpose of the project GRM. Although the consultant undertook some level of sensitization, comprehensive exercise is required to publicize the existence of the GRM, its procedures, the levels, and other relevant information. The communications strategy should also reach out to disadvantaged and marginalized groups, which often cannot access GRMs.

Communication methods and materials should include meetings, project website and notices in strategic sites (for instance at the chief's office) summarizing the GRM process. Particular messages which need to be reinforced continually may include:

- The project-based GRM is cost-free: there are no financial charges for PAPs to access or have the committees hear a dispute; however, PAPs not happy with the project-based GRM process will be free to seek legal redress. This means they will be expected to bear the costs associated with legal redress through courts.
- The GRM is open to all;
- There exist mechanisms to escalate an issue if one committee is not able to address it satisfactorily;
- There is no retribution for complainants such as they are not punished;
- The types of grievances that can be submitted;
- The procedures to lodge a complaint and timeframes;

- Confidentiality can be assured where needed; and
- The project welcomes suggestions, recommendations, and grievances as they help improve the project's policies and systems.

ii. Capacity Building of the PAPs committee

The twelve (12) PAPs committee members should undergo training, e.g. on grievance redress, monitoring, and evaluation to enable them be more effective in their work. The Committee members will also need to be oriented to the grievance management system. Capacity building of the committee members will be built around issues of conflict identification, conflict information analysis, and conflict resolution. This exercise should include detailed terms of reference for the committees.

10.5.10 Phasing Out of Committee

Often, development programmes form various committees and tend not to phase them out after completion of the project. Committees such as the PAPs Committee can easily metamorphosis, increasingly undertaking activities, not within their mandate, and cause conflict with other institutions. Therefore, after completion of the RAP implementation, LAPTRUST should hold official phasing out ceremony to acknowledge the committee and indicate the end of their terms of reference. Part of the appreciation, in this case, can include certificates of recognition.

10.5.11 Client Commitment to Grievance Redress: Process, Procedures and Timelines

The success of procedures and activities in the previous sections much depend on LAPTRUST commitment towards ensuring the effectiveness and efficiency of the system, thus requiring:

- Regular monitoring;
- Commitment to learning and adapting systems;
- Provision of sufficient budgets and tools (e.g. grievance registers, forms, files, facilitation fees) to cover their operation and implementation of functions; and
- Continuous capacity building of the committees.

11 ENVIRONMENT, HEALTH AND SAFETY ACTION PLAN

11.1 Introduction

In today's highly competitive industry, the advancement of technology and processes has brought about an increased concern for environmental, health and safety issues facing the business community. Because of these issues, there is need for the Main Contractor for the proposed project to commit to move from compliance driven by reactionary concerns to the development of a central strategic management plan. At the heart of the environmental, health and safety strategy lies the ability to measure performance and relate EHS programs to financial success. The contractor must therefore integrate the management of environmental, health and safety issues as early as possible in the business and financial planning cycle.

It is vital for the contractor to understand that competitive advantages can be derived from such programs and that the greatest opportunities exist in providing environmentally sound and safe products to differentiate themselves from competitors. In order to facilitate the integration of environmental, health and safety issues into the business activities, the contractor should implement this Environmental, Health and Safety (EHS) action Plan which has been designed by the Consultant.

This will enable the contractor to deal with any EHS challenges that may emerge during the construction phase and to proactively manage environmental, health and safety issues and obligations. The EHS action Plan encompasses the combined areas of environmental, health, safety and transportation of hazardous materials due to the often-overlapping activities and agency regulations. This plan identifies the important issues that may arise during the implementation of the project, establishes goals designed to actively address these issues, sets forth a framework in which to operate and establishes a mechanism to monitor progress and assure continual improvement.

11.2 Mission

This Health and Safety Action Plan will guide the Main Contractor to:

- Manage all activities in a manner that meets or exceeds compliance with all applicable regulations.
- Protect and enhance the environment and assure the health and safety of workers, associates, customers and our communities.
- Manage and minimize potential liability exposure in environmental, health and safety areas.

- Develop team players who share a positive global view with the skills and willingness to perform all necessary tasks and who assume responsibility for their actions regarding EHS matters.

11.3 Policies

It is important for the Main Contractor to reaffirm their commitment to Directives and policies regarding environmental, health and safety issues. They are expected to:

- Maintain a copy of and adhere to the Directives and policies regarding environmental, health and safety issues at the site.
- Maintain a copy of the EHS Management Plan at the site and ensure the communication of and adherence to the plan.
- Identify a responsible, qualified person (professional or manager) and equip that person with the authority, tools and support necessary to coordinate and implement the environmental, health and safety program.
- Measure performance against the Environmental, Health and Safety Management Plan.
- Provide necessary training programs to associates to equip them with the skills and knowledge required to support the Environmental, Health and Safety Management Plan.
- Update the Environmental, Health and Safety Management Plan on an annual basis.

11.4 Roles and Responsibilities

11.4.1 Main Contractor

The Main Contractor in charge of the project will be responsible for:

- Preparing, updating, and implementing this Environmental Health and Safety Action Plan (EHS), including all associated procedures and local regulations such as the Occupational Safety and Health Act, 2007.
- Identifying and observing all legal health and safety requirements;
- Ensuring that all works are conducted in a safe manner without posing any risks to workers and the neighbouring community;
- Planning to do all work safely;
- Participating in the planning and design stages of trade activities;
- Employing a full time qualified and experienced EHS Supervisor and staff;
- Identifying health and safety training required for an activity;
- Ensuring workers undertake identified H&S trainings;
- Communicating and consulting with workers through general/ project meetings and daily toolbox meetings;

- Investigating identified hazards and other safety breaches reported and ensuring that corrective actions are undertaken;
- Assisting with rehabilitation and return to work initiatives;
- Dispute resolution.

11.4.2 Sub-Contractors

The Sub-Contractors and other contractors who are engaged in the proposed project are responsible for:

- Fulfilling the duties of as per the contract required for their own operations;
- Identifying all high-risk construction work associated with their activities and ensuring safe work method statements are developed and implemented;
- Following all safety policies and procedures and site rules;
- Complying with this H&S Management Plan;
- Complying with any directives given to them by Client;
- Undertake site specific induction and participate in any client related briefings;
- Employ a qualified and experienced EHS Supervisor and support staff (e.g. trained staff in First Aid and Fire Fighting);
- Ensuring the workers undergo the site-specific induction;
- Ensuring they have the correct tools and equipment that are in a serviceable condition for the task.

11.4.3 Workers

All workers on the project (including those employed by contractors) will be responsible for:

- taking reasonable care of their own health and safety;
- taking reasonable care that their conduct does not adversely affect others;
- complying with instructions, so far as they are reasonably able;
- cooperating with reasonable notified policies or procedures.

11.4.4 EHS Supervisor

The Environmental Health and Safety supervisor for the Project will be responsible for:

- Preparing Personal Protective Equipment (PPE) requirements for the project and conduct Regular Monitoring and Supervision of all workers to ensure use of PPE to minimize accidents at workplaces.
- Identifying health and safety training required for an activity.
- Undertake weekly and monthly internal EHS Audits on all project activities and recommend improvements for implementation to the contractor through monthly reports.
- Provide EHS related services between the contractor and all relevant government agencies only in relevant / applicable areas.

- Regular Monitoring and Supervision of the implementation of the NEMA approved Environmental Management Plan in the ESIA report & NEMA EIA License conditions and provide technical advice to the contractor for the implementation to reduce the level of impacts of the project to the environment and local communities.
- Regular Monitoring and Supervision of the implementation of the Occupational Health and Safety (noise, dust, accidents, working at heights safety, etc) legal requirements as per OSHA, 2007.
- Attend all project site meetings and respond to all emerging issues on Environment, Health and Safety.

11.5 Emergency and Incident Response

11.5.1 Emergency preparedness

To ensure adequate preparation in case of an emergency during project works, the contractor is expected to:

- show all workers and subcontractors the emergency exit points and assembly area as part of their induction (this shall be included in the induction checklist);
- display emergency procedures in the site office or other visible locations;
- cause inspection and testing of all firefighting appliances in the work place to be carried out by a competent person at least once every three months.
- conduct emergency drills in order to evaluate the effectiveness of evacuation procedures and determine the necessary changes or adjustments to procedures to improve performance.

11.5.2 Emergency procedure

The Main Contractor is expected to have procedures in place. In the event of a fire or similar emergency evacuation, dedicated and trained fire marshals should ensure that:

- the workers stop work immediately and vacate the site prior to start up.
- they assist anyone in the workplace who may not be familiar with the evacuation procedures.
- emergency services are called from a mobile phone. Other emergency numbers should be made available and displayed in the numerous locations at site.
- the site office is notified of the occurrence via an incident report.
- workers assemble at the nominated assembly points until all the workers receive further instructions from the site manager or emergency services personnel.

11.5.3 Emergency meeting point

The Main Contractor should ensure that there is a designated meeting point at the entrance and exit of the site. Safe zones will be made accessible by the emergency response team to allow ease of evacuation of injured persons to designated health facilities.

11.5.4 Emergency contact list for the site

The Main Contractor shall display a list of emergency contact in numerous locations at the site. The Main Contractor shall also maintain emergency contact details for all workers at site.

11.5.5 Incident procedure

The Main Contractor shall put in place incident and accident reporting procedures at the site. In case of an incident the procedure guide should:

- require workers to immediately notify the site EHS supervisor.
- require workers to avoid interfering with the scene of the incident or accident.
- depending on the nature and severity of the injury, require the EHS supervisor to notify the Directorate of Occupational Safety and Health (DOSH) of the incident.
- require the preparation of an incident/accident investigative report.

The EHS supervisor should record details of the incident and ensure any remedial action is taken.

11.5.6 Notifiable incidents and dangerous occurrences

The Main Contractor should notify the Directorate of Occupational Safety and Health Services of the following incidents and dangerous occurrences:

- the death of a person at site.
- an incident requiring hospitalisation.
- a serious injury or illness of a person.
- bursting of a revolving vessel, wheel, grindstone or grinding heel moved by mechanical power.
- explosion of a receiver or container used for the storage at a pressure greater than atmospheric pressure of any gas or gases (including air) or any liquid of solid resulting from the compression of gas.

In the event of such an occurrence, the site manager through the EHS supervisor shall notify the Changamwe/Mombasa area Occupational Safety and Health officer of any accident, dangerous occurrence, or occupational poisoning which has occurred at the workplace. Where an accident in a workplace causes the death of a person therein, the management shall:

i. inform the area Occupational Safety and Health officer within twenty-four hours of the occurrence of the accident; and
ii. send a written notice of the accident in the prescribed form to the area Occupational Safety and Health officer within seven days of the occurrence of the accident.
iii. where an accident in a workplace causes non-fatal injuries to a person therein, the construction site office shall send to the area Occupational Safety and Health officer, a written notice of the accident in the prescribed form within seven days of the occurrence of the accident.
iv. cause all workplace injuries to be entered in the general register specified in section 122 of OSHA 2007.
v. fulfil any other requirement of OSHA 2007, *Sec 21*.

11.5.7 First aid

The Main Contractor shall supply adequate first aid equipment, which should be available at the site. The contents of the first aid kit shall be replenished to ensure that the requirements of the OSHA (First Aid) Rules, 1977 are adhered to.

The Main Contractor shall ensure that workers are trained in first aid in accordance with the OSHA (First-Aid) Rules, 1977.

11.6 Accident/Incident Reporting and Investigation

11.6.1 Reporting

The Main Contractor shall ensure that all work-related accidents, injuries, and diseases are reported to the site safety office. An accident/incident register shall be kept on site and shall be kept up to date.

11.6.2 Investigation

The main contractor shall ensure that the following accidents/incidents are investigated immediately after the occurrence, and a written report issued:

- accident-causing death or injury requiring medical aid by registered doctor.
- failure of the hoisting device.
- structural failure of a permanent or temporary structure.
- contact with overhead or underground power lines.
- contact with underground pipelines causing breakage or release of contents.
- inadvertent exposure to harmful concentrations of hazardous materials.
- failure of a confined space entry procedure.
- failure of a lockout/ /tagout procedure.
- property damage in excess of one million Kenya shillings.
- a near miss which had the potential for causing serious injury or property damage.

Where corrective action is recommended in the investigation report, a follow-up report shall be issued, within 7 days, detailing the steps taken to prevent a recurrence. A copy of all reports shall be submitted to the area DOSHS.

11.7 Induction and Training

11.7.1 Worker induction

The Main Contractor shall work with other contractors to ensure a site-specific induction is provided for all workers and visitors before starting work or accessing the site. This induction shall outline:

- the expectations outlined in this health and safety Management Action Plan, including all policies and procedures.
- the emergency meeting point.
- the site rules.
- the facilities.
- any site-specific hazards.
- high risk work activities.
- Safe operation and use of any machinery on site.

11.7.2 Statutory training

The Main Contractor shall ensure that the following training is carried out among the workers:

- First aid training in accordance with the OSHA (First Aid) Rules 1977.
- Occupational Health and Safety training in accordance with the OSHA (Safety and Health-Committee)-Rules 2004.
- Fire Safety training in accordance with the OSHA (Fire Risk Reduction) Rules 2007.

The Main Contractor shall establish a Safety and Health committee. The establishment and operations of the committee shall be guided by the OSHA (Safety and Health-Committee)-Rules 2004.

11.7.3 Worker training

The Main Contractor shall:

- ensure workers are trained and competent for the work to be undertaken.
- ensure workers are trained to deal with any risks associated with the work and understand the control measures in place.
- ensure all workers have had relevant training (first aid, firefighting among others)
- ensure on-site training and supervision is provided.
- organise external training for specific tasks where required.

- seek high risk licenses for all high-risk work and maintain a register of licenses.
- communicate with other contractors to ensure their workers are appropriately trained and competent.

11.8 Consultation and Communication

11.8.1 Consultation

The Main Contractor shall ensure that there is adequate consultation with all workers and contractors on Health and Safety issues for the project. This shall be done:

- at toolbox meetings where anyone can raise issues for discussion.
- informally during the planning of activities or the development of Safe Work Method Statements.
- when changes to workplace arrangements could affect the health and safety of workers.
- during investigations into any incident to establish details of the incident or to formulate corrective action to prevent the incident re-occurring.

The Main Contractor shall also consult with contractors and suppliers on health and safety issues associated with any products or services provided for the contract:

- during the negotiation phase before agreeing on the work requirements.
- before starting any contractor operations.
- when any changes to workplace arrangements occur that could affect the health and safety of the contractors or affect their work procedures.

11.8.2 Communication

The Main Contractor shall ensure that workers and other contractors are aware of health and safety requirements by providing them with their Safety Management Plan before commencing any project works. Contractors shall be expected to make their workers aware of all safety requirements.

Further, the Main Contractor is expected to communicate relevant safety information to everyone involved in the project through:

- safety induction
- pre-work meetings
- toolbox meetings
- incident reports and outcomes
- distribution of safety alerts or guidance material about industry specific hazards/incidents

11.8.3 Disciplinary procedures

The Main Contractor shall put in place a disciplinary procedure for errant persons. The procedure shall include:

i. **First violations**: verbal warning.
ii. **Second violation**: written notification.
iii. **Third violation**: Worker dismissal/suspension from the project.

For serious breaches of safety rules, workers shall be immediately dismissed or removed from the site without notice.

11.9 Site Safety Procedures

11.9.1 Site rules

1. Incidents/accidents, regardless of their nature, shall be promptly reported to supervisors.
2. Approved hard hats/helmets shall be worn on the job by all personnel.
3. Clothing shall be appropriate to duties being performed. Long trousers, shirt, reflector jackets and sturdy work shoes are the minimum requirements.
4. Smoking is permitted only in designated areas. “Strike anywhere” matches are prohibited.
5. Running is not permitted anywhere, except in the case of extreme emergency.
6. Safety glasses, goggles or face shields shall be worn when concrete breaking, metal chopping, welding, grinding and for other operations require eye protection.
7. Hand tools shall not be used for any purpose other than that intended. All damaged or worn parts shall be promptly or replaced.
8. Power tools shall be operated only by authorized personnel, with guards furnished by the manufacturer “in place”.
9. All electrical hand tools shall be grounded or double-insulated.
10. Explosive/powder-actuated tools shall be used only by persons who have been instructed and trained in their safe use.
11. Compressed gas cylinders shall be secured in upright position.
12. Riding on any hook, hoist or other material-handling equipment which is used strictly for handling material and not specifically designed to carry riders is prohibited.
13. Welding and burning operations shall be carried out only by authorized personnel with appropriate individual protective equipment.
14. Fighting and possession of firearms are strictly forbidden on the job and constitute grounds for dismissal.
15. Possession or use on the job of intoxicating beverages or unauthorized drugs is strictly forbidden and constitutes grounds for dismissal. A copy of the site rules is displayed in the site office.

11.9.2 Site amenities

The Main Contractor shall provide the following amenities on site.

- Toilets/sanitary conveniences in accordance with rule 139 of the OSH (Building Operations and Works of Engineering Construction) Rules 1984. The toilets should be private, adequate in number and with separate male and female facilities. Sanitary bins shall be provided in female facilities.
- Washing facilities/handwashing facilities as per the requirements of rule 138 of the OSH (Building Operations and Works of Engineering Construction) Rules 1984
- Clean and safe drinking water.
- Accommodation for clothing/Changing rooms.
- Shelters for taking meals.

All workers are to observe good hygiene standards and clean up after themselves.

11.9.3 Site security

The Main Contractor shall, so far as reasonably practicable, secure the site by:

- Securing the construction sites with danger/warning tapes or erecting a fence around the construction site to prevent unauthorised access.
- maintaining a security office where all persons with the intention of going to the construction site must be vetted and checked for appropriate PPE before being allowed in.
- keeping the entry and exits from the project site secure by installing security cameras during the project construction period.
- locking gates to the site outside normal hours of operation.

11.9.4 Site signage

At a minimum, the Main Contractor shall ensure the following signs are displayed on the entrance to the project site:

- the principal contractor's name, contact details and emergency telephone numbers.
- the location of the site office.
- the appropriate PPE.
- abstract of the health and safety policy.
- abstract of emergency response plan.
- abstract of the OSHA 2007.

All signage shall be clearly visible from outside and also from within the buildings. Sufficient lighting/illumination must be provided where the signs may be invisible.

11.9.5 Personal protective equipment

The Main Contractor shall provide personal protective equipment (PPE) to workers at the site, unless the PPE has been provided by another contractor.

The Main Contractor shall ensure that the PPE issued is:

- suitable for the nature of the work and any hazard associated with the work.
- a suitable size and fit and reasonably comfortable for the worker who is to use or wear it.
- maintained, repaired or replaced so that it continues to minimise risk to the worker who uses it, including by:
    - ensuring it is clean and hygienic.
    - ensuring it is in good working order.
    - ensuring it is used or worn by the same worker, so far as is reasonably practicable.

When issuing PPE, the Main Contractor should:

- provide workers with information, training and instruction in the proper use, wearing, storage and maintenance of PPE.
- ensure that any other person at the workplace (such as visitors, clients or inspectors) is appropriately provided with PPE to wear as required.

The main contractor shall ensure that workers are made aware of their responsibility to:

- follow all instructions to wear and use PPE.
- take reasonable care of PPE.

11.10 Managing Building Health and Safety Hazards

11.10.1 General Lighting

During construction, the Main Contractor shall ensure the following:

- provision of adequate artificial lighting on the site.
- suitable colour/material will be used to prevent glare or unnecessary reflection from walls and roof.
- maintenance of light fittings in clean and in good repair.
- ensuring that the emergency lighting operable at all times.
- the installed lighting system will be steady.

11.10.2 Air Quality

Construction may generate emission of fugitive dust caused by a combination of on-site excavation and movement of earth materials, contact of construction machinery with bare soil, and exposure of bare soil and soil piles to wind. A secondary source of emissions may include exhaust from diesel engines of earth moving equipment. To reduce and control air emissions from the site, the Main Contractor shall:

- minimizing dust from material handling sources by using covers and/or control equipment (water suppression, bag house, or cyclone).
- minimizing dust from open area sources, including storage piles, by using control measures such as installing enclosures and covers, and increasing the moisture content.

- implement dust suppression techniques, such as applying water or non-toxic chemicals to minimize dust from vehicle movements.

The Main Contractor shall put in place a monitoring program to ensure dust and fumes do not affect employees and the neighbouring establishments/offices. This shall include periodic measurements of both indoor (on site) and ambient air qualities. The values shall then be compared with the standards outlined in the OSH (Hazardous substances) rules, 2007 for indoor (on site) exposure and the EMCA (Air quality) regulations, 2014 for ambient air quality.

The Main Contractor shall use the results of the measurements to evaluate the effectiveness of the dust & emissions control measures on site.

11.10.3 Noise

The Main Contractor is expected to put in place measures that shall ensure noise reduction. These include:

- selecting equipment with lower sound power levels.
- installing suitable mufflers on engine exhausts and compressor components.
- installing acoustic enclosures for equipment casing radiating noise.
- improving the acoustic performance of constructed buildings, apply sound insulation.
- installing vibration isolation for mechanical equipment.
- limiting the hours of operation for specific pieces of equipment or operations, especially mobile sources operating through community areas.
- developing a mechanism to record and respond to complaints.

Noise from construction activities may have effects on both workers and persons in the vicinity of the project. As such, the Main Contractor shall put in place a noise monitoring program to establish the levels of noise that the workers (occupational noise measurements) and neighbours (environmental noise measurements) are exposed to. The values shall be compared to the standards set out in the OSHA (noise prevention& Control) Rules 2005 and the EMCA (Noise & Excessive vibration pollution control) regulations 2009.

The results of the measurements shall be used to evaluate the effectiveness of the noise control measures on site.

11.10.4 Ventilation System

The Main Contractor shall ensure that workspaces are adequately ventilated. Where natural ventilation is not available, an operable ventilation system capable of supplying clean and good quality air shall be provided by the Main Contractor. The Main Contractor shall ensure that the installed system is:

- capable of withstanding high temperatures.

- in good working condition.
- capable of evacuating any noxious gases, ground gases, dust, heat or fumes present in the buildings.

11.10.5 Transport and materials safety

The Main Contractor shall ensure high standards of both material and transport safety during construction. At a minimum, the Main Contractor is expected to:

- ensure that all containers of hazardous substances are adequately labelled.
- obtain all safety data sheets (SDS) for all hazardous substances in use.
- have in place a robust traffic surveillance system including audible alarm warning systems and signalling for traffic monitoring.

11.10.6 Fire and Emergency Response

The Main Contractor shall put in place the following measures to ensure minimal risk of fire-related hazards:

- monitoring atmospheric conditions such as wind direction.
- ensuring that appropriate fire extinguishers are installed in place and periodically serviced.
- provision of adequate directions towards fire exits.
- ensuring that the catwalks and ladders are clear.
- having a trained firefighting team on standby who can take responsibility in an emergency.
- conducting fire drills to ensure that the emergency response and evacuation plan is well understood.

11.11 Managing construction hazards

11.11.1 Demolitions

The process of demolition is a very technical process in the scheme of construction activities therefore it is incumbent on the contractor to ensure the following areas of safety are addressed under this process:

- Determine the types of hazardous chemicals, gases, explosives, and flammable materials which have been used in any pipes, tanks, or other equipment on the property. Test and purge the hazardous chemicals, gases, explosives, or flammable materials. Survey for asbestos or other hazardous materials.
- The contractor must ensure all workers are equipped with the appropriate PPE during the process of demolition such as head protection, eye protection, hearing protection and respiratory etc.
- Brace or shore the walls and floors of structures which have been damaged and which employees must enter. Inspect and maintain all stairs, passageways and ladders. Properly illuminate all stairways.

- The contractor must ensure the shutting off all electric, gas, water, sewer and other service lines outside the building line. Temporarily relocate and protect any essential power, water, or other utilities in line with the employer.
- The contractor must ensure that he or she covers and secures floor openings with material able to withstand the loads likely to be imposed.
- Debris dropped through holes in the floor without the use of chutes must be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above. Floor openings used for material disposal must not be more than 25% of the total floor area.
- Use enclosed chutes with gates on the discharge end to drop material to the ground. Design and construct chutes that will withstand the loads likely to be imposed without failing.
- Demolition of exterior walls and floors must begin at the top of the structure and proceed downward. Masonry walls must not be permitted to fall on the floors of a building in masses that would exceed the safe carrying capacities of the floors.
- No wall section, one story in height or higher, shall be permitted to stand alone without lateral bracing, unless such a wall was originally designed and constructed to stand without such lateral support, and is safe enough to be self-supporting. All walls must be left in a stable condition at the end of each work shift. Employees shall not work on the top of a wall when weather conditions create a hazard.
- Structural or load-supporting members on any floor must not be cut or removed until all stories above such a floor have been removed. In buildings of "skeleton-steel" construction, the steel framing may be left in place during the demolition of masonry.
- Walkways or ladders must be provided to enable workers to safely reach or leave any scaffold or wall.
- Walls, which serve as retaining walls to support earth or adjoining structures, must not be demolished until the supporting earth has been properly braced or until adjoining structures have been properly underpinned.
- Walls, which will serve as retaining walls against which debris will be piled, must not be used unless they are capable of supporting the imposed load. Dismantle steel construction column length by column length, and tier by tier.
- Storage of material and debris must not exceed the allowable floor load.
- During demolition, continuing inspections by a competent person shall be made as the work progresses to detect hazards resulting from weakened or deteriorated floors, or walls, or loosened material. No employee shall be permitted to work where such hazards exist until they are corrected by shoring, bracing, or other effective means.

- The contractor should ensure during the removal of steel construction that these constructions should be dismantled length by column length and tier by tier and also no structural member should be overstressed.
- Before demolishing any floor arch, debris and other material shall be removed from such arch and other adjacent floor area. Planks not less than 2 inches by 10 inches in cross section, full size undressed, shall be provided for, and shall be used by employees to stand on while breaking down floor arches between beams. Such planks shall be so located as to provide a safe support for the workmen should the arch between the beams collapse. The open space between planks shall not exceed 16 inches.
- Post signs at each level of structures, warning of the hazard of falling materials.
- Demolition methodology through safe utilization of tools and equipment should be prepared and approved by the Project Manager.
- Provision of welding torches and other relevant PPEs.

11.11.2Falls from heights.

The Main Contractor shall manage the risks associated with falls from heights by:

- ensuring that where practicable, any work involving the risk of a fall is undertaken on the ground or on a solid construction (such as an elevated work platform).
- where this is not practicable, providing a fall prevention device such as secure fencing, edge protection, working platforms and/or covers.
- where this is not practicable, providing a work positioning system such as plant or a structure (other than a temporary work platform) that enables a person to be positioned and safely supported.
- where this is not practicable, providing a fall arrest system such as a safety harness system. Workers will be trained in emergency procedures for fall arrest systems.
- use of control zones and safety monitoring systems to warn workers of their proximity to fall hazard zones, as well as securing, marking, and labelling covers for openings in floors, roofs, or walking surfaces.

When undertaking work involving the risk of a fall from height, the Main Contractor shall ensure workers must:

- follow all instructions.
- work with a colleague when using a ladder.
- only use approved work platforms.

11.11.3Struck by Objects

Construction and demolition activities may pose significant hazards related to the potential fall of materials or tools, as well as ejection of solid particles from abrasive

or other types of power tools which can result in injury to the head, eyes, and extremities.

Where such risks are present, the Main Contractor shall ensure that the following control measures are put in place:

- Conducting sawing, cutting, grinding, sanding, chipping, or chiselling with proper guards and anchoring as applicable.
- Maintaining clear traffic ways to avoid driving of heavy equipment over loose scrap.
- Use of temporary fall protection measures in scaffolds and out edges of elevated work surfaces, such as handrails and toe boards to prevent materials from being dislodged.
- Wearing appropriate PPE, such as safety glasses with side shields, face shields, hard hats, and safety shoes

11.11.4Excavation work/trenching

The Main Contractor shall put in place the following measures before any excavation works are conducted:

- Ensure all necessary measures have been put in place to avoid cave-ins and failure of earth walls.
- Find out about any underground services that may be affected by their works, before starting work.
- Implement control measures to avoid direct or inadvertent contact with underground services.
- Potholes be dug (by hand) to expose existing services before any mechanical excavation near the services.
- Provide safe means of access and egress from excavations.
- Each employee at the edge of an excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, or barricades when the excavations are not readily seen because of plant growth or other visual barrier; the contractor shall ensure that proper assessments are done based on the condition of the area such as non-existent vegetation.
- Avoid the operation of combustion equipment for prolonged periods inside excavations areas where other workers are required to enter unless the area is actively ventilated.

11.11.5Work near overhead or underground essential services

The Main Contractor shall ensure, where reasonably practical, that no-one comes within an unsafe distance of an overhead or underground power line.

If maintaining a safe distance is not reasonably practical, the Main Contractor shall:

- assess the risk associated with the proposed work.
- implement control measures consistent with the risk assessment.
- contact and consult with the local essential service providers.

11.11.6Electrical

The Main Contractor shall ensure electrical safety through the following:

- Power supplied to the site shall only come from:
    - an electricity distributer main.
    - an existing switchboard permanently installed at the premises.
    - a compliant low voltage generator.
    - a compliant inverter.
- Switchboards and distribution boards used on site shall:
    - be of robust construction and materials capable of withstanding damage from the weather and other environmental and site influences
    - be securely attached to a post, pole, wall or other structure unless it is of a stable freestanding design able to withstand external forces likely to be present.
    - incorporate suitable support and protection for flexible cords and cables and prevent mechanical strain to the cable connections inside the board.
    - protect all live parts at all times.
    - be individually distinguished by numbers, letters or a combination of both (where multiple boards are present).
    - Flexible cords used on construction sites must be rated heavy duty.
- Ensure hazard reducing devices like cut-outs, earth leakage and isolating devices are in place.
- Flexible cords must be either protected by a suitable enclosure or barrier (flexible or rigid conduit) or located where they are not subjected to mechanical damage, damage by liquids or high temperature (elevated on stands or hung from nonconductive support brackets).
- The Main Contractor shall maintain an in-service inspection and test regime for all portable electrical leads, tools and earth leakage devices.
- The main shall ensure that after the equipment has been inspected and tested, it shall be fitted with a durable, non-reusable, non-metallic tag. The tag shall include the name of the person or company who performed the test and the test and re-test date.
- Records of all inspections, tests, repairs and faults related to all electrical equipment shall be recorded in a testing and tagging register.

- Workers shall report any damaged electrical equipment to the site manager. It will be removed from service and either repaired or replaced and subsequently inspected and tested as required.

11.11.7Plant, machinery, and equipment

To ensure all plant, equipment and machinery used complies with the requirements of the OSHA 2007 *Sec 55*, the Main Contractor shall:

- only use plant for the purpose for which it was designed.
- use all health and safety features and warning devices on plant.
- follow all information, training and instruction provided.
- ensure guarding is permanently fixed and is not permitted to be removed.
- ensure that no person other than the operator may ride on the plant unless the person is provided with a level of protection that is equivalent to that provided to the operator.

Further, the Main Contractor shall ensure that:

- all plant is regularly maintained, inspected, and tested by a relevant competent person.
- the plant has a warning device that will warn persons who may be at risk from the movement of the plant.
- all plant that lifts or suspends loads is specifically designed to lift or suspend that load.
- there is segregation of the location of vehicle traffic, machine operation, and walking areas, and controlling vehicle traffic through the use of one-way traffic routes, establishment of speed limits, and on-site trained flag-people wearing high-visibility vests or outer clothing covering to direct traffic.
- there is visibility of personnel through their use of high visibility vests when working in or walking through heavy equipment operating areas, and training of workers to verify eye contact with equipment operators before approaching the operating vehicle.
- moving equipment is outfitted with audible back-up alarms.

11.11.8Scaffolds

The Main Contractor shall ensure:

- that the scaffold is erected by a competent person
- that before we use the scaffold, the competent person has advised that it is safe.
- that scaffolding is inspected by a competent person:

  - before use of the scaffold is resumed after an incident occurs that may reasonably be expected to affect the stability of the scaffold
  - before use of the scaffold is resumed after repairs
  - at least every 30 days.
- that, if an inspection indicates that any scaffold or its supporting structure creates a risk to health or safety:
  - any necessary repairs, alterations and additions will be made or carried out.
  - the scaffold and its supporting structure will be inspected again by a competent person before use of the scaffold is resumed.
- that scaffolds are provided with safe means of access, such as stairs, ladders, or ramps.
- that every part of a working platform, gangway or stairway of a scaffold from which a person is liable to fall a distance of 2 m is provided with guard-rails and toe-boards.
- that platforms on scaffolds are of adequate dimension, especially in width, for the tasks performed from the scaffold.

The Main Contractor shall ensure that workers:

- do not use incomplete scaffolding.
- report any scaffolding issues to the safety manager/site manager.
- comply with the directions of any tags attached to the scaffold.

11.11.9Ladder safety

The Main Contractor shall manage hazards associated with ladders by:

- using ladders according to the manufacturer's instructions.
- only allowing one person at a time on a ladder.
- performing all work from a ladder while facing the ladder.
- ensuring the ladder stands on a firm and level footing except in the case of suspended ladder.
- ensuring the ladder is equally and properly supported on each stile or side.
- fulfil all other requirements as per OSHA 2007, *Sec 75*.

11.11.10 Manual handling

The Main Contractor shall manage hazards associated with manual handling by:

- ensuring all users follow good manual handling practices.
- assessing risk assessments.
- providing mechanical lifting aids where applicable.

- Not permitting any worker to engage in the manual handling or transportation of a load which by reason of its weight is likely to cause the employee to suffer bodily injury (OSHA, 2007 sec 76 (4).

11.11.11 Slips, trips, and falls

The Main Contractor shall manage hazards associated with slips, trips and falls by:

- Implementing good house-keeping practices, such as the sorting and placing loose construction materials or demolition debris in established areas away from foot paths.
- Locating electrical cords and ropes in common areas and marked corridors.
- ensuring that walking areas are slip resistant.
- using slips, trips and falls checklist as required.
- checking for hazards that could cause someone to slip, trip or fall by doing a visual check.
- ensuring workers keep the site tidy as part of the written site rules.
- use of slip retardant footwear.

11.11.12 Hand operated and power tool use

The Main Contractor shall manage hazards associated with hand operated and power tool use by ensuring that:

- all tools conform to provisions of OSHA 2007 *sec 76 (1)*.
- tools are used only for work for which they have been designed.
- tools are operated only by workers who have been authorised and given appropriate training.
- power tools are provided with protective guards and shields.
- safe operating procedures are established and used for all power tools.
- every power-driven tool is provided with adequate means, immediately accessible and readily identifiable to the operator, of stopping it quickly and preventing it from being started again inadvertently.
- there is regular checking of all tools to ensure they are in a safe working order.
- all electrical tools are recorded in a tag and testing register.
- electrical tools are tested and tagged every 3 months.
- any issues identified with power tools are communicated to workers through a toolbox meeting.

Before using power tools, the Main Contractor must ensure that:

- electrical connections are secure.
- electricity supply is through a Residual Current Device.
- safety guards are in position.
- the machine is switched off before activating the electricity supply.

- appropriate PPE is used as required by manufacturer's guidelines or as guided by the safety manager.

The Main Contractor shall require workers to report any issues with power tools to the safety officer/manager. Unsafe tools shall be tagged and removed from service.

11.11.13 Traffic Safety

The Main Contractor shall ensure prevention and control of traffic related injuries and fatalities through:

- Designing and implementing a concise traffic management plan.
- Emphasizing safety aspects among drivers.
- Improving driving skills and requiring licensing of drivers.
- Adopting limits for trip duration and arranging driver rosters to avoid overtiredness.
- Avoiding dangerous routes and times of day to reduce the risk of accidents.
- Use of speed control devices (governors) on trucks, and remote monitoring of driver actions.
- Minimizing pedestrian interaction with construction vehicles.
- Collaboration with local communities and responsible authorities to improve signage, visibility, and overall safety of roads.
- Employing safe traffic control measures, including road signs and flag persons to warn of dangerous conditions.

11.11.14 Waste Management

The Contractor should implement measures to minimize waste and therefore develop a waste management plan which should include but not limited to the following: -

- Contractor to develop and implement a Waste Management Plan (outlining the waste generation activities, waste types and volumes expected, storage, collection, transportation, recovery and disposal programme) before start of the project
- Collecting litter and managing it accordingly/as per waste management and recovery plan. Construction site should be kept clean, neat and always tidy.
- No burying or dumping of any waste materials, metallic waste, litter or refuse should be permitted.
- Incorporating recyclable materials to reduce the volume and cost of new materials.
- Provision of bottle and can trash disposal receptacles at parking lots designated as hoarding sites for the project to avoid littering.
- Managing sediment and sludge removed from storm drainage systems maintenance activities as a hazardous or non-hazardous waste based on an assessment of its characteristics.

- Sub-contract a NEMA licensed waste handling firm to collect solid wastes (that cannot be reused or recycled) on regular basis and dispose of in a NEMA approved disposal site or recycling facility.

11.11.15 Disease Prevention

A. Occupational diseases

To mitigate the risk of occupational diseases, the Main Contractor shall cause pre-employment and periodic medical examinations to be carried out among workers by a Designated Health Practitioner as outlined in the OSH (Medical Examination) Rules, 2005.

B. Communicable diseases such as HIV/AIDS

The Main Contractor shall launch a HIV/AIDS control program that will provide awareness and education to workers. In partnership with government and non-governmental organizations, voluntary counselling, testing and distribution of condoms among workers shall be achieved.

C. Vector-Borne diseases

The Main Contractor shall put in place a pest and vermin control program to ensure insects and rodents are eliminated within the construction site.

12 CONCLUSION AND RECOMMENDATION

In conclusion, this Environmental and Social Impact Assessment (ESIA) Study report has been prepared to provide sufficient and relevant information on the proposed mixed-use development in Changamwe, Mombasa County, to enable the Authority-NEMA to establish the sustainability and compliance of the project and whether activities of the project are likely to have significant or adverse environmental or social impacts. Mitigation measures have been proposed for the identified impacts in this report and an ESMP for the implementation of the proposed measures presented. The ESMP presented in this report is a tool to be used by the project team and contractor during the entire life cycle of the project. From the foregoing analysis, the social and economic rating for this project is highly positive. Evaluation of alternatives has already shown that options are limited and costly. Already the proponent has sunk a substantial amount of money in the project up to the design stage.

Based on the findings of this study, the ESIA study team concludes that the project and subsequent operational activities will generate significant socioeconomic benefits to the public, the proponent, local government and the nation at large. This study has also established a number of negative environmental consequences that the project activities are likely to induce if mitigation measures are not implemented.

The proponent of the proposed project shall be committed to putting in place several measures to mitigate the negative environmental, safety, health and social impacts associated with the life cycle of the project. It is our recommendation therefore, that the project be allowed to go on, provided the mitigation measures outlined in the Environmental and Social Management and Monitoring Plan are adhered to and the developer adheres to the conditions of approval of the project, both by the County Government of Mombasa and NEMA.

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14 ANNEXES

Annex 1. Proponent Certificate of Registration

Annex 2. Proponent Pin Certificate

Annex 3. NEMA Practicing License (Firm)

Annex 4. NEMA Practicing License (Lead Expert)

Annex 5. Detailed layout and design drawings for the project

Annex 6. Topographical survey map of the proposed site

Annex 7. Land Ownership

Annex 8. Filled Public Consultation questionnaires.

Annex 9. Meeting Invitation and Notices

Annex 10. Public Meeting Minutes

Annex 11. Key Stakeholders Meeting Minutes

Annex 12. Summarized Bill of Quantities