



# iPlan CONSULT (Intl) LTD.

*Innovative Spatial Use - Planning for the Future*

P.O. Box 28634 - 00100 NAIROBI

**ENVIRONMENTAL & SOCIAL IMPACT ASSESSMENT STUDY REPORT FOR  
THE PROPOSED RESIDENTIAL APARTMENTS ON PLOT L.R. NO.  
NAIROBI/BLOCK15/717 ALONG GITANGA CLOSE OFF GITANGA ROAD,  
KILIMANI AREA, NAIROBI COUNTY.**



**COORDINATE: 1°17'26.4"S 36°45'59.2"E**

**PROPONENT**

MOON VALLEY FOR INVESTMENT LIMITED

P.O. BOX 43146-00100

NAIROBI.

**MAY 2026**

Spatial Planners, Environmental Experts, GIS Experts,  
Land Management Consultants & Project Managers

**CERTIFICATION**

This Environmental Impact Assessment Study report has been prepared by **iPlan Consult (Int'l) LTD.** (NEMA Reg. No. **7597**) in accordance with the Environmental Management and Coordination Act (EMCA) 2015 which requires that every development project must have an EIA report prepared for submission to the National Environmental Management Authority (NEMA). We, the undersigned, certify that the particulars in this report are correct and righteous to the best of our knowledge.

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**Disclaimer:**

*This Environmental Impact Assessment Study Report is confidential to the Moon Valley For Investment Limited, and any use of the materials hereof should be strictly in accordance with the contractual agreement between iPlan Consult (Intl) LTD and Moon Valley For Investment Limited.*

## PROJECT DATA SHEET

Parameter	Details
<b>Project Title</b>	Environmental and Social Impact Assessment (ESIA) Study Report for the Proposed Residential Apartments Development
<b>Project Proponent</b>	Moon Valley for Investment Limited
<b>Proponent Address</b>	P.O. Box 43146-00100, Nairobi
<b>Project Location</b>	Plot L.R. No. Nairobi/Block 15/717, Gitanga Close off Gitanga Road, Kilimani Area, Dagoretti North Sub-County, Nairobi City County
<b>Coordinates</b>	1°17'26.4"S, 36°45'59.2"E
<b>Project Category</b>	High-Risk Project under EMCA (Residential development exceeding 100 units)
<b>Project Type</b>	High-rise residential apartment development
<b>Nature of Development</b>	Construction and operation of a 15-storey apartment complex with associated facilities
<b>Total Number of Units</b>	232 residential units
<b>Unit Composition</b>	98 studio units, 104 one-bedroom units, 30 two-bedroom units
<b>Parking Provision</b>	90 parking spaces located in three basement levels
<b>Key Amenities</b>	Lounge, movie room, gym, swimming pool, children's play area, landscaped areas
<b>Project Cost</b>	KES 674, 495, 318

<b>Project Duration</b>	Construction: 24–36 months; Operational life: 50+ years
<b>Project Phases</b>	Pre-construction, Construction, Operation, Decommissioning
<b>Construction Materials</b>	Cement, steel, aggregates, sand, timber, tiles, glass, paint
<b>Machinery and Equipment</b>	Excavators, cranes, concrete mixers, loaders, transport trucks
<b>Utilities Required</b>	Water, electricity, fuel
<b>Workforce</b>	Skilled and unskilled labour
<b>Approving Authority</b>	National Environment Management Authority (NEMA)

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## **ACRONYMS AND ABBREVIATIONS**

BS	British Standards
CPP	Consultation and Public Participation
CGL	County Government of Nairobi
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
DEO	Designated Environmental Officer
EIA	Environmental Impact Assessment
EA	Environmental Audit
EHS	Environmental, Health and Safety
ESMP	Environmental and Social Management Plan
EMCA	Environmental Management & Coordination Act
ERIMP	Emergency Response and Incident Management Plan
GPS	Global Positioning System
GoK	Government of Kenya
KP	Kenya Power
ISO	International Standards Organizations
NEAP	National Environmental Action Plan
SEM	Sustainable Environmental Management
NEMA	National Environmental Management Authority
NO <sub>x</sub>	Nitrogen oxide
PPEs	Personal Protective Equipment

## **EXECUTIVE SUMMARY**

The proposed residential apartment development is situated in Kilimani, Nairobi, an area experiencing rapid urban transformation driven by population growth, rural-urban migration, and increasing demand for modern housing. The project responds directly to the national housing deficit by providing 232 residential units designed to cater to middle- and upper-income residents. Its location within a well-serviced urban area makes it suitable for high-density development, consistent with national and county planning strategies aimed at promoting efficient land use and sustainable urban growth.

The Environmental and Social Impact Assessment (ESIA) was undertaken to ensure that environmental and social considerations are integrated into all stages of the project lifecycle. The study was guided by relevant legal and policy frameworks and employed a combination of desktop review, field investigations, stakeholder consultations, and direct observations. These approaches ensured that the assessment captured site-specific conditions and community perspectives, thereby supporting informed decision-making and regulatory compliance.

The project comprises a 15-storey residential building with three basement levels dedicated to parking and utilities, a ground floor with shared amenities, and upper residential floors complemented by rooftop recreational facilities. The design incorporates modern architectural features and amenities such as a gym, swimming pool, and social spaces, enhancing the quality of urban living. The development has been planned in accordance with zoning regulations and planning approvals, demonstrating compliance with Nairobi City County requirements.

Implementation of the project will involve several phases, including site preparation, excavation, structural construction, installation of services, and finishing works. These activities will require significant inputs such as construction materials, machinery, labour, and utilities. The project lifecycle also includes an operational phase characterized by residential occupancy and a decommissioning phase at the end of its useful life. Waste generation and resource

utilization have been carefully considered to ensure efficient and environmentally responsible project execution.

The environmental baseline of the project area indicates a highly urbanized setting with existing infrastructure such as roads, water supply, and sewerage systems. The physical environment is characterized by moderate climatic conditions, while the socio-economic environment reflects a dynamic urban population with diverse economic activities. However, the area is also experiencing increasing pressure on infrastructure due to ongoing densification, which is an important consideration in project planning.

Baseline studies further reveal that the biological environment is limited due to urbanization, with minimal natural habitats remaining. The socio-economic assessment highlights the availability of essential services such as education, healthcare, and security, making the area attractive for residential development. These baseline conditions provide a critical reference for assessing potential impacts and designing mitigation measures to ensure sustainability.

The project is guided by a comprehensive policy, legal, and institutional framework that ensures environmental protection and sustainable development. Key legal instruments include EMCA, the Physical and Land Use Planning Act, and the Occupational Safety and Health Act. These laws establish standards for environmental management, land use planning, and worker safety, which the project must comply with throughout its lifecycle.

Institutional oversight is provided by relevant authorities, including NEMA and Nairobi City County, which are responsible for project approval and monitoring. Compliance with these frameworks ensures that the project meets statutory requirements and aligns with national development goals. It also provides a structured approach to environmental governance and accountability.

The assessment identified several positive impacts associated with the project, including job creation, increased housing supply, and economic growth. The development will contribute to improved land use efficiency and generate revenue for the government through taxes and rates. These benefits underscore the project's role in supporting urban development and addressing housing challenges in Nairobi.

However, potential negative impacts were also identified, particularly during the construction and operational phases. These include noise and dust pollution, waste generation, traffic congestion, and increased demand for infrastructure services. Without proper management, these impacts could affect the surrounding environment and community, necessitating the implementation of appropriate mitigation measures.

To address these impacts, a range of mitigation measures has been proposed, including dust suppression, proper waste management, noise control, and traffic management. Occupational health and safety measures will also be implemented to protect workers and site personnel. These measures are designed to minimize adverse effects while enhancing the positive outcomes of the project.

A detailed Environmental and Social Management Plan (ESMP) has been developed to guide the implementation of mitigation measures. The ESMP outlines responsibilities, monitoring indicators, and reporting mechanisms, ensuring that environmental and social considerations are effectively managed throughout the project lifecycle. This structured approach enhances accountability and promotes sustainable project implementation.

Stakeholder engagement formed a critical component of the ESIA process, ensuring that the views and concerns of affected communities were considered. Consultations were conducted through public meetings, interviews, and questionnaires, providing a platform for stakeholders to express their opinions and contribute to project planning.

Key concerns raised included traffic congestion, pressure on infrastructure, privacy issues, and building height. The project design was adjusted to address these concerns, demonstrating responsiveness to stakeholder input. This participatory approach enhances project acceptability and reduces the likelihood of conflicts during implementation.

Various alternatives to the proposed project were analyzed, including the no-project option and alternative designs and technologies. The analysis considered environmental, social, and economic factors to determine the most suitable option. The proposed development was identified as the preferred alternative due to its ability to optimize land use and deliver significant socio-economic benefits.

The evaluation of alternatives also highlighted the importance of adopting efficient technologies and sustainable practices. These considerations ensure that the project not only meets current needs but also contributes to long-term environmental sustainability and resilience.

Measures to ensure occupational health and safety have been incorporated into the project to safeguard workers and the public. These include safety training, hazard identification, emergency preparedness, and provision of personal protective equipment. Such measures are essential in minimizing risks associated with construction activities.

In addition, provisions have been made for the eventual decommissioning of the project, ensuring that environmental impacts are minimized at the end of its lifecycle. This includes safe demolition practices, waste management, and site restoration. Planning for decommissioning demonstrates a commitment to sustainable development beyond the operational phase.

Overall, the ESIA concludes that the proposed project is environmentally and socially viable, provided that the recommended mitigation measures are effectively implemented. The project presents significant benefits in terms of housing provision and economic development, outweighing the potential negative impacts.

It is therefore recommended that the project be approved subject to strict adherence to the ESMP, continuous monitoring, and compliance with all applicable legal and regulatory requirements. This will ensure that the development contributes positively to sustainable urban growth in Nairobi.

## **CHAPTER ONE: INTRODUCTION AND BACKGROUND INFORMATION**

### **1.1 Background and General Overview**

The demand for adequate and decent housing in Kenya has been rising steadily in recent years, primarily driven by rapid urbanization, population growth, and rural-urban migration. Nairobi City County, as the country's economic and administrative hub, experiences the highest pressure on housing supply. According to various national reports, Kenya faces an annual housing deficit of approximately 200,000 to 250,000 units, while annual supply remains significantly lower (often estimated between 50,000 and 100,000 units). This gap is particularly pronounced in urban areas like Nairobi, where the middle-class and young professional population continues to grow.

In response to this challenge, the Government of Kenya, through policies such as the National Housing Policy (Sessional Paper No. 3 of 2016) and the Bottom-Up Economic Transformation Agenda (BETA), has prioritized increasing housing supply to bridge the deficit. These initiatives emphasize public-private partnerships, incentives for developers, and sustainable urban densification to optimize limited land resources while meeting the constitutional right to accessible and adequate housing under Article 43(1)(b) of the Constitution of Kenya 2010.

Kilimani Area, located in Dagoretti North Sub-County within Nairobi City County, has undergone significant transformation over the past two decades. Traditionally characterized by low-density single-family residential units, the neighbourhood is now experiencing rapid densification with modern high-rise apartment developments. This shift aligns with the Nairobi City County Physical and Land Use Development Plan, which encourages vertical development in well-serviced residential zones to accommodate growing demand.

Moon Valley For Investment Limited (the Proponent) proposes to develop a high-rise residential apartment complex on Plot L.R. No. Nairobi/Block 15/717 along Gitanga Close off Gitanga Road in Kilimani Area. The proposed development comprises:

- Three basement levels providing 90 parking spaces.
- Ground floor with shared amenities including a lounge, resting areas, and movie room.

- 15 typical residential floors incorporating recreational facilities such as a swimming pool, changing rooms, and children’s play area.

The project is designed to deliver a total of 232 residential units, consisting of a mix of studio, one-bedroom, and two-bedroom apartments. This configuration targets middle-to-upper income residents, young professionals, and investors seeking modern, secure, and amenity-rich living spaces close to the Central Business District (approximately 5–7 km), major transport corridors, and commercial nodes.

A public consultation (baraza) as part of the stakeholder engagement process. Residents raised concerns regarding potential strain on existing infrastructure (water, sewerage, roads), traffic congestion on the narrow Gitanga Close, parking adequacy, privacy, shadow effects, and the overall character of the neighbourhood. These views have been noted and will be addressed through the ESIA process and subsequent mitigation measures.

## **1.2 Project Justification and Rationale**

The proposed development is justified by the acute housing shortage in Nairobi and the specific demand in Kilimani for contemporary apartment living. Vertical development on this plot optimizes scarce urban land, contributes to economic growth through construction activities, property rates, and employment, and supports broader national goals of increasing housing stock.

By providing 232 quality residential units with adequate parking and amenities, the project will help alleviate pressure on the housing market while promoting sustainable urban growth. It aligns with government efforts to encourage private sector participation in housing delivery.

## **1.3 Objectives of the Environmental and Social Impact Assessment (ESIA)**

The primary objective of this ESIA Study Report is to ensure that environmental and social considerations are systematically integrated into the project planning, design, construction, operation, and decommissioning phases, in line with principles of sustainable development.

Specific objectives include:

- To identify and describe the potential positive and negative environmental and social impacts of the proposed project across all phases.

- To assess the significance of these impacts on the biophysical, socio-economic, and cultural environment of the project area and surroundings.
- To propose appropriate, practical, and cost-effective mitigation measures to minimize adverse impacts and enhance positive ones.
- To develop a comprehensive Environmental and Social Management Plan (ESMP) with clear responsibilities, timelines, monitoring indicators, and reporting mechanisms.
- To facilitate informed decision-making by the National Environment Management Authority (NEMA), the Proponent, and other stakeholders.
- To ensure compliance with relevant national laws, regulations, and international best practices.
- To incorporate public and stakeholder views into project design and implementation for greater acceptance and reduced conflict.

#### **1.4 Legal and Policy Framework**

This ESIA Study Report has been prepared in full compliance with the Environmental Management and Coordination Act (EMCA) Cap 387 (as amended) and the Environmental (Impact Assessment and Audit) Regulations, 2003 (as amended by Legal Notice No. 31 of 2019). The project falls under High-Risk Projects (establishment of new housing estate developments exceeding 100 housing units) as per the Second Schedule of EMCA, thus requiring a full ESIA Study Report and subsequent NEMA licensing.

Other key legal and policy instruments considered include:

- The Constitution of Kenya 2010 (particularly Articles 42 and 43 on environmental rights and housing).
- Physical and Land Use Planning Act, 2019.
- Nairobi City County Physical and Land Use Development Plan.
- Water Quality Regulations, Waste Management Regulations, Noise and Excessive Vibration Pollution Control Regulations, and other subsidiary legislation under EMCA.
- Occupational Safety and Health Act, 2007.
- National Housing Policy and related housing guidelines.

## **1.5 Scope of the ESIA Study**

The study covers the entire project lifecycle: pre-construction/site preparation, construction, operation/occupation, and decommissioning phases. It addresses biophysical aspects (air quality, noise, water resources, waste, biodiversity), socio-economic issues (traffic, infrastructure capacity, community character, employment), and cumulative impacts arising from similar developments in Kilimani.

The geographical scope includes the project site, immediate neighbourhood (Gitanga Close and surrounding properties), and broader Kilimani/Dagoretti North area where relevant.

## **1.6 Study Methodology**

The purpose of conducting the EIA study was to ensure that the proposed project is environmentally sound and fits well within existing land uses. The study has described and quantified impacts associated with the proposed project on the physical environment and neighboring populations.

The activities for the EIA involved desk studies and fieldwork that included direct interviews, questionnaire administration and transect walks among other methods leading to the preparation of this Project Report. Below is a detailed description of methodology pursued during this study.

### **1.6.1 Desktop Review.**

A comprehensive review of literature related to the proposed project and the project area was carried out. The literature included studies on physiography, geology, hydrogeology, water resources and socioeconomics of the project area. Relevant policies and legislation on the housing sector and on environmental management were also reviewed. The Constitution of Kenya 2010; The Kenya Vision 2030; The Kenya National Policy on Gender and Development; Nairobi County Integrated Development Plan (2023-2027); The Kenya National Land Policy just to name a few formed the basis of legislation review. The consultant also took necessary steps to familiarize themselves with the institutional framework and functions of key government ministries, departments and organizations such as Ministry of Public Works, Youth and Gender affairs, the national gender and equality commission among others.

## **1.6.2 Field Study**

The field survey consisted of three elements as follows:

- Public consultation
- Observations and
- Photography.

### **1.6.2.1. Public Consultations**

Legal Notice of 101 of June 2003 requires that all environmental and social assessment process in Kenya to incorporate Public Consultation. A requirement informed by awareness that development and implementation of projects can occasion diverse impacts on stakeholders who should consequently be informed appropriately following which they can make informed decision to the proposed development. It is also important to ensure that all stakeholder interests are identified and incorporated in project development, implementation and operation and, against such background, consultation were undertaken far and wide both within the project area and outside with the following objectives.

- To disclose the Study to both primary, secondary and other stakeholders.
- To obtain the reaction/comments/concerns of all stakeholders so as to understand their perceived view of the proposed project and assess the extent to which their views need to be considered. This is important as it helps to ensure that important social issues are not overlooked and there is ownership from the communities.

Stakeholder consultations were held with community members to identify what the community perceived of the project so as to get their views and give their recommendations.

### **1.6.2.2 Questionnaire administration**

Questionnaires were prepared and administered to various stakeholders identified at the initial stages of the study. Those interviewed provided critical insights with regard to Socio-Economic activities within the project area and how project activities are likely to impact on local populations

### **1.6.2.3 Observations**

Observation was used during data collection exercise and also as a means of ascertaining some of the issues raised during the interviews. Notable issues such as economics, livelihoods and production systems, land use and settlement patterns and facilities as well as natural resources were all identified through observation and captured using camera. Relevant photographs taken at the project site have been attached to this report.

### **1.6.4 Report writing**

The EIA report was prepared and compiled as per the guidelines provided in The Environmental Management and Co-Ordination (Strategic and Integrated Environmental Impact Assessments and Environmental Audits) Regulations, 2025

## **CHAPTER TWO: PROJECT DESCRIPTION**

This section gives a detailed description of the proposed project design and components therein.

### **2.1 Nature of the Project**

The proposed project involves the construction and operation of a high-rise residential apartment development classified as a High-Risk Project under the Second Schedule of the Environmental Management and Coordination Act (EMCA) Cap 387 (as amended in 2015) and the Environmental (Impact Assessment and Audit) Regulations, 2003 (as amended). It entails the development of modern multi-unit residential apartments with associated basement parking, ground-floor amenities, and rooftop recreational facilities on urban land in a densifying residential neighbourhood. The project will provide 232 residential units and supporting infrastructure to address housing demand while optimizing land use through vertical development.

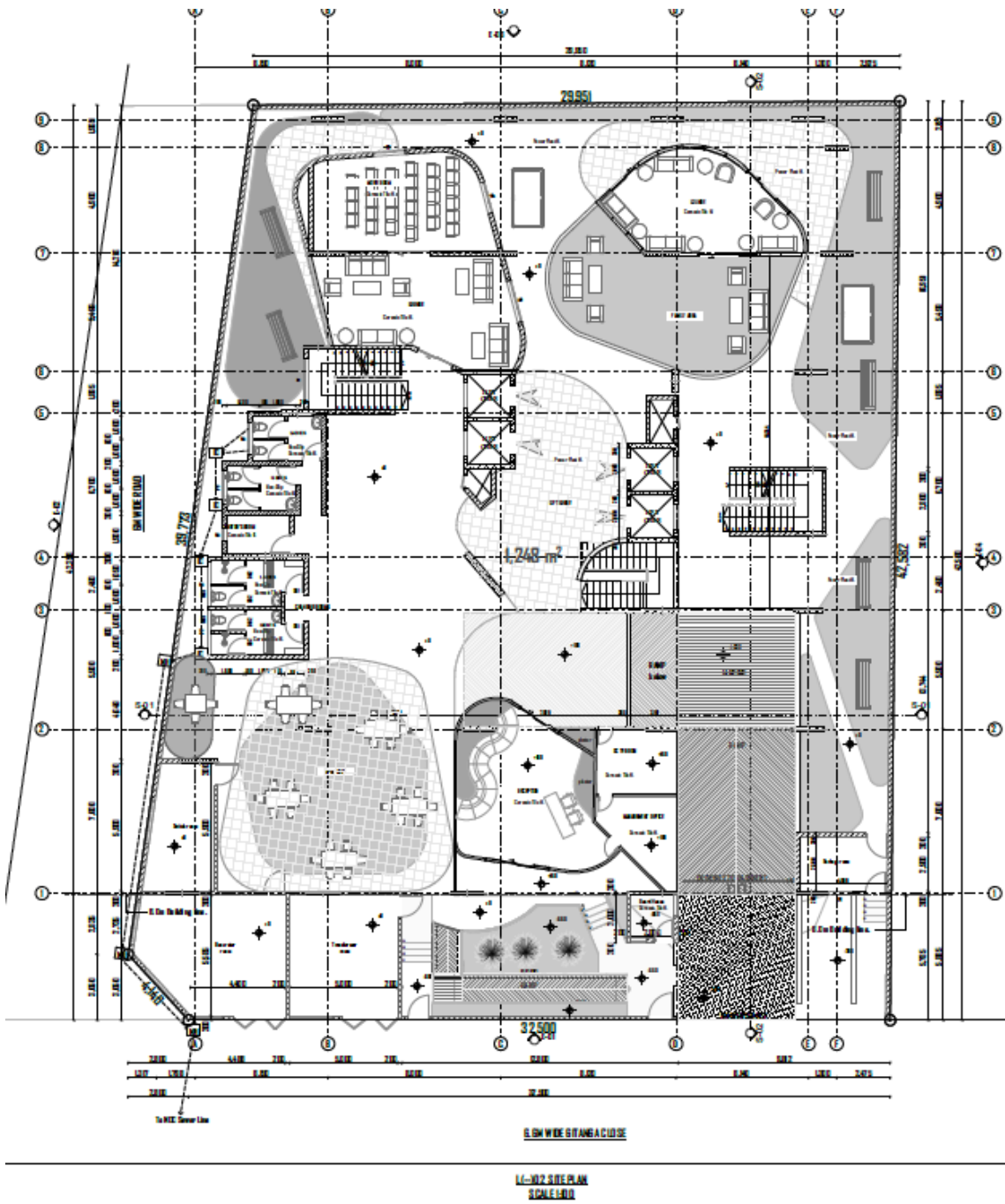
This ESIA Study Report has been prepared in accordance with Section 58 of EMCA and the requirements of the Environmental (Impact Assessment and Audit) Regulations, to identify potential environmental and social impacts, propose mitigation measures, and develop an Environmental and Social Management Plan (ESMP).

### **2.2 Project Proponent**

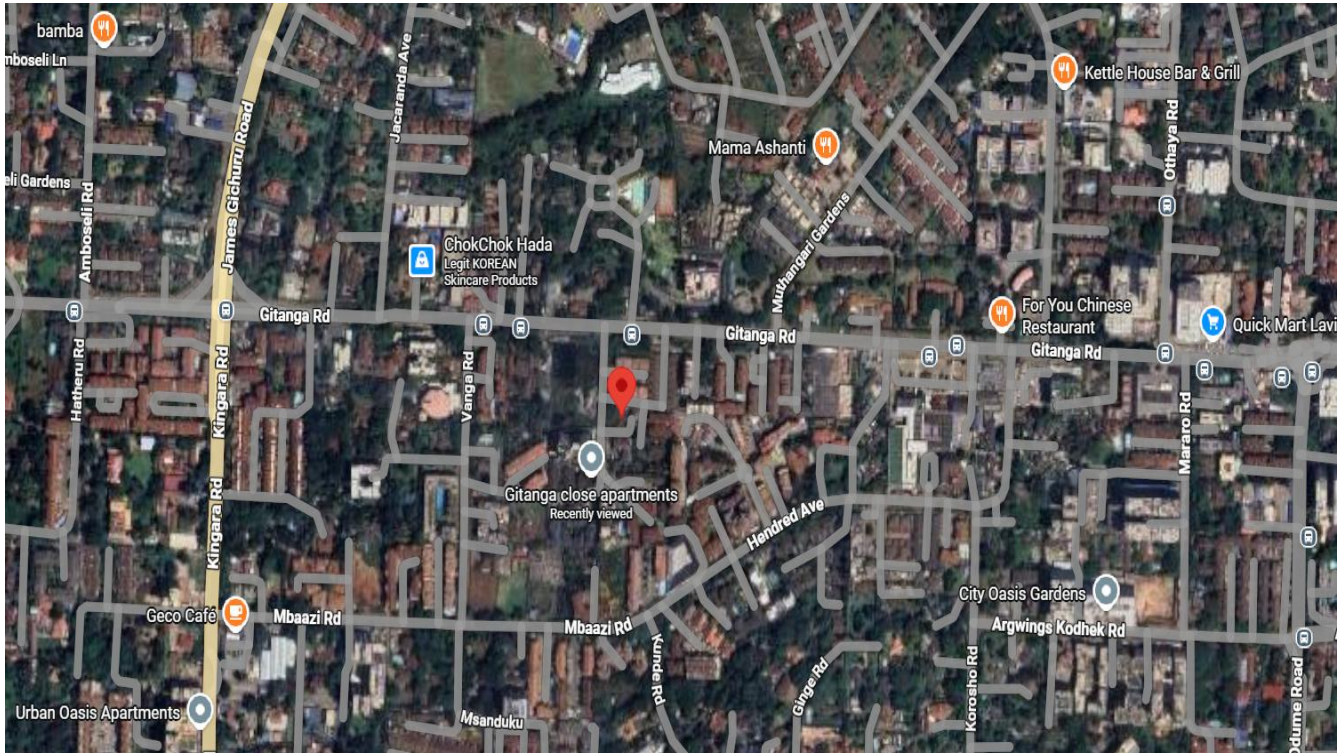
The proponent of the project is Moon Valley For Investment Limited, a registered company in Kenya specializing in real estate investment and development.

### **2.3 Project Location**

The project is situated on Plot L.R. No. Nairobi/Block 15/717 along Gitanga Close off Gitanga Road in the Kilimani Area, Dagoretti North Sub-County, Nairobi City County on coordinates **1°17'26.4"S 36°45'59.2"E**



**Plate: Site plan**



### ***Plate: Project location***

Kilimani is a well-established residential neighbourhood undergoing rapid urban densification, located approximately 5–7 km from Nairobi’s Central Business District (CBD). The site benefits from proximity to major transport corridors, commercial nodes, and employment opportunities. Access is via Gitanga Close, a narrow road off Gitanga Road. The surrounding area consists of a mix of low- to medium-density residential properties transitioning into high-rise apartments, consistent with the Nairobi City County Physical and Land Use Development Plan.

### **2.4 Land Tenure, Ownership, Size, Zoning and Current Land Use**

The plot is held under leasehold title. The proponent has secured Change of Use approval from the Nairobi City County Government’s Department of Urban Planning, permitting the transition from single residential to high-rise multi-unit residential development.

The site currently contains a town house earmarked for demolition. It is zoned for residential use under the applicable county physical development plan.

- Ground Coverage: Legal requirement is 75%; proposed development occupies 65%, allowing for additional open space, landscaping, and circulation.
- Plot Ratio: Allowable is 1500 m<sup>2</sup>; proposed development utilizes 1038 m<sup>2</sup>.
- Building Height: Initially designed for 16 floors; reduced to 15 floors following stakeholder feedback.
- These adjustments demonstrate compliance with local planning standards and responsiveness to community concerns.

## 2.5 Project Design and Layout

The development is 15-storey high-rise residential apartment block modern amenities. The design incorporates sustainable features such as adequate parking, shared spaces, and recreational facilities.

- **Basement Levels (3 Levels) Primary Use:** Resident parking and ancillary facilities (driveways, ramps, storage, and utility rooms).
  - Parking Capacity: 90 parking spaces (revised from initial 94).
  - Allocation Ratio: 1 space per 2-bedroom unit, 0.3 spaces per 1-bedroom unit, and 0.25 spaces per studio unit.
- **Ground Floor:** Dedicated to shared resident amenities to promote community interaction
  - Lounge area
  - Resting and waiting areas
  - Washrooms
  - Dedicated movie room for social interaction and entertainment
- **Typical Residential Floors (1st to 14th Floor)**
  - Each typical floor contains 16 apartment units distributed across three wings:
    - Wing A: 2 units of two-bedroom apartments
    - Wing B: 7 units of one-bedroom apartments
    - Wing C: 7 units of studio apartment
- **Upper Floors and Rooftop**
- 15th Floor: Limited residential units 2 two-bedroom and 6 one-bedroom plus a gym and eat-out area.

Rooftop/Recreational Level: Swimming pool, changing rooms, and children's playing area.

Total residential units: 232 (reduced from initial 246)

- ✓ Studio apartments: 98 units
- ✓ One-bedroom apartments: 104 units
- ✓ Two-bedroom apartments: 30 units

***Architectural drawings, floor plans, elevations, sections, and site layout plans will be appended to the full ESIA report.***

## **2.6 Construction Inputs, Technology, Processes and Materials**

Key Inputs:

- Construction materials: Cement, steel reinforcement bars, aggregates, sand, concrete, timber/formwork, roofing materials, tiles, paint, electrical and plumbing fittings.
- Utilities: Water (for construction and dust suppression), electricity (or standby generators), fuel for heavy machinery.
- Human resources: Skilled labour (engineers, architects, supervisors) and unskilled workers, with preference for local hiring where feasible.
- Machinery: Excavators, loaders, cranes, concrete mixers, vibrators, scaffolding, and transport vehicles.

Technology and Processes:

- Reinforced concrete frame structure with masonry infill.
- Standard civil engineering practices for foundations, super-structure, and finishing works.
- Modern building technology compliant with Kenyan building codes and safety standards.

## **2.7 Project Activities by Phase**

### **2.7.1 Pre-Construction Phase**

- Site clearance and demolition of any existing structures.
- Detailed engineering designs and approvals.
- Procurement of materials and contractor engagement.

- Installation of temporary site facilities (fencing, site office, worker amenities).

### **2.7.2 Construction Phase**

- ✓ Excavation and earthworks for three basement levels.
- ✓ Foundation, structural works (columns, beams, slabs), and super-structure up to 15th floor.
- ✓ Installation of mechanical, electrical, plumbing (MEP) systems, including water, sewerage, electricity, and stormwater drainage.
- ✓ Interior finishes, installation of amenities (gym, pool, etc.).
- ✓ External works: Landscaping, paving, perimeter fencing, and access roads.
- ✓ Waste management and occupational health & safety measures throughout.

Estimated construction duration: 24–36 months

### **2.7.3 Operational Phase**

- Occupation of the 232 residential units.
- Management of common areas, security, parking, waste collection, maintenance of amenities (swimming pool, gym), and utility services.
- Day-to-day residential activities generating domestic waste, wastewater, and traffic.

### **2.7.4 Decommissioning Phase**

At the end of the building's useful life (estimated 50+ years), decommissioning will involve:

- Demolition or adaptive re-use in accordance with then-applicable regulations.
- Safe removal and disposal of materials, with recycling where possible.
- Site restoration guided by an updated ESMP.

## **2.8 Products, By-Products and Waste Generation**

- Products: 232 modern residential apartment units with associated parking and amenities.
- By-Products: None of significant environmental concern.

Wastes:

- Construction Phase: Excavated soil, concrete debris, metal scraps, packaging materials, general construction waste, and minor hazardous waste (oils, paints).
- Operational Phase: Domestic solid waste from residents, wastewater/effluent from apartments and amenities, and stormwater runoff.

All wastes will be managed in compliance with the Environmental Management and Coordination (Waste Management) Regulations. A detailed waste management plan forms part of the ESMP.

**Table: Materials, Wastes Generated and Disposal Methods**

Activity	Materials to be Used	Waste/By-Products Generated	Disposal Method
<b>Construction Phase</b>			
<b>Site Clearance and excavation</b>	<ul style="list-style-type: none"> <li>-Fuel</li> <li>-Spare parts and lubricants/oil</li> <li>-Machines such as excavators and trucks</li> </ul>	<ul style="list-style-type: none"> <li>-Air fumes from vehicle exhausts</li> <li>- Used oil</li> <li>- Dust</li> <li>- Excavated soil</li> </ul>	<ul style="list-style-type: none"> <li><b>-Used oil to be reused for lubricating movable parts of equipment e.g. wheelbarrows.</b></li> <li><b>-Excavated soil to be re-used on site for landscaping in order to restore part of the biodiversity.</b></li> </ul>
<b>Building works</b>	<ul style="list-style-type: none"> <li>- Machine cut stones</li> <li>- Steel</li> <li>- Cement</li> <li>- Paving slabs</li> <li>- Timber</li> <li>- Nails, Galvanized</li> <li>-iron sheets</li> <li>- Gravel, sand</li> </ul>	<ul style="list-style-type: none"> <li>- Plastic pipes</li> <li>- Scrap metal</li> <li>- Used timber</li> <li>- Broken tiles</li> <li>-Sand, cement and building stones</li> <li>-Packaging materials</li> <li>-Glass, paint.</li> </ul>	<ul style="list-style-type: none"> <li><b>- Excavated soil to be reused for landscaping and filling.</b></li> <li><b>-A licensed waste transporter to be engaged for waste transportation and disposal at approved dumpsites</b></li> </ul>

	- Tiles - Glass etc.		<b>-Recyclable waste to be sold to recycling companies/dealers.</b>
<b>Electrical, Mechanical &amp; Plumbing Works</b>	-Cables -Plastic Pipes - Sockets/switches -Metal	-E-waste (cables, sockets, rubber) -Plumbing waste (Plastic Pipes, steel) -Metal waste	<b>- Licensed waste transporters to dispose appropriately off-site at approved dumping sites - Recyclable waste to be sold to recycling companies/dealers</b>
<b>Operation Phase</b>			
<b>Project Operations</b>	<b>- Foodstuff -Cans/bottles - Paper -Batteries -Sockets -Cables</b>	<b>- Organic waste - Plastic containers - Waste Water -Paper waste -e-waste (damaged sockets, cables etc)</b>	<b>-Non-recyclable waste to be segregated and disposed of by a private contractor at approved dumpsites -Waste water to be discharged into the sewer line - E-waste to be sold to recycling companies</b>

## 2.9 Proposed Project implementation (Construction)

The building will be constructed based on applicable building standards of Kenya. These include but not limited to the Building Code and the British Building Standards *BS 8110* and *BS 5950, BS4449, BS446, BS5255, BS497, BS556 etc.* The constructions will also incorporate environmental guidelines, health and safety measures.

## **2.10 Construction activities and inputs**

The following will be required for successful implementation of construction activities:

- The materials that shall be used will include stones, cement, sand, crushed rock (gravel/ballast), ceramic fixtures, reinforcement bars, wood/timber, glass, painting materials, plastic, electrical and mechanical fixtures. All these materials shall be obtained from licensed dealers who have complied with the environmental management guidelines and policies and approved by Kenya Bureau of Standards (KEBS).
- Several machines shall be used which will include earth moving equipment (excavators, loaders, wheel loading shovels and backhoe), material handling equipment (cranes and hoists), construction equipment (concrete mixers and vibrators) and engineering vehicles (trailers, tippers and dumpers).
- The project will also require labour forces of both skilled and non-skilled workers. The skilled personnel will include the project consultants (architects, engineers, quantity surveyors and environmental experts) and a contractor with a team of foreman, masons, plasterers, carpenters, plumbers, welders, electricians, glaziers, painters and casual laborers'.
- Other construction inputs will include wastewater and sewer disposal, water services, power and electricity connectivity and supply from the main power grid provided by generators.

## **2.11 Description of the Project's Construction Activities**

The proponent proposes to develop a comprehensive multi-storey residential complex comprising a 15-storey building with 232 residential units and associated amenities and facilities. A structural engineer will inspect the proposed structures to ensure they are structurally sound, and architectural drawings have been prepared to illustrate the designs and layout of the project. The main construction activities will include hoarding, site clearing, excavation, building works, plumbing, interior finishes, and electrical and mechanical installations, among others. The architectural drawings for the proposed development are attached in Appendix 4. Detailed project activities are described below.

### **2.11.1 Pre-Construction Activities**

Implementation of the project started with preliminary surveys and feasibility study to establish the viability of the proposed project. Investigations also identified all the existing legal and regulatory requirements that may affect the project at any stage of implementation.

### **2.11.2 Hoarding**

A temporary hoarding will be put up before commencement of construction activities. This will help to protect motorists, pedestrians and passers-by from falling debris and injury. Hoarding is also a security measure to prevent theft of construction materials at the site.

### **2.11.3 Clearing of the Site and Excavation**

Site clearance entails removal of any obstruction on the way of the intended construction activities. The clearing process will not involve the use of heavy machinery.

### **2.11.4 Laying out the Site**

The site will then be laid out to identify the location of the proposed building on site. The corner points and edges of the proposed building units will be established accordingly. The marking out will use sticks and strings as well as chalk lines.

### **2.11.5 Mobilization of Building Materials**

The proponent plans to source several building materials locally and expressed confidence that the materials can be procured locally. The great emphasis laid on procurement of building materials from within the local area makes both economic and environmental senses since it reduces negative impacts of transportation of the materials to the project site through reduced distance of travel by the materials transport vehicles. Building materials are transported to the project site from their extraction, manufacture, or storage sites using transport trucks. There is adequate road linkage for the purpose of smooth transport of building materials into the project site.

### **2.11.6 Storage Materials**

Building materials will be stored on site according to their need. Bulky materials such as rough stones, ballast, sand and steel will be carefully piled and covered on site. Materials such as cement, paints and glasses among others are to be stored in temporary storage rooms conveniently within the project site for this purpose.

### **2.11.7 Masonry, Concrete Work and Related Activities**

The construction of the proposed residential complex will involve extensive masonry work and related activities. General masonry and related activities will include stone shaping, concrete mixing, plastering, slab construction, construction of foundations, and erection of building walls and curing of fresh concrete surfaces. These activities are known to be labour intensive and will supplement by machinery such as concrete mixers.

### **2.11.8 Structural Steel Works**

All the beams and floors shall be reinforced with steel metals to enhance the stability of the proposed building. Structural steel works will involve steel cutting, welding and erection.

### **2.11.9 Electrical Work**

Electrical work during construction of the premises will include installation of electrical gadgets and appliances including electrical cables, lighting apparatus, sockets among others. In addition, there will be other activities involving the use of electricity such as welding and metal cutting.

### **2.11.10 Plumbing**

Installation of pipework for water supply and distribution will be carried out from the existing supply and then to associated facilities. In addition, pipes will be installed to connect sanitary facilities with the existing Nairobi County sewerage system serving the area, and for drainage of storm water from the rooftop into the peripheral drainage system. Plumbing activities will include metal and plastic cutting, the use of adhesives, metal grinding and wall drilling among others.

### **2.11.11 Landscaping**

To improve the aesthetic value or visual quality of the site once construction is complete, the proponent will carry out extensive landscaping especially at the front and rear parts of the buildings that shall involve establishment of small and attractive flower gardens. It is noteworthy that the proponent will use plant species that are available locally and fast growing for landscaping.

### **2.11.12 Final Inspection**

Final inspection will be undertaken to ensure that the project has been done properly and according to the terms of the contract. The inspection team will include the project proponent/client, the Architect, Engineer, Environmental Expert and the contractor or their representatives. The inspection will start at the beginning of the construction to the end and look at every detail of construction, functioning of mechanical and electrical installations etc.

### **2.13 Project budget**

The estimated projects costs, which will include purchase of construction materials, construction works and payments to the contractor for the proposed project is estimated to be Kshs. 674, 495,318.

## **CHAPTER THREE: PROJECT BASELINE INFORMATION**

### **3.1 Introduction**

This chapter describes the existing physical, biological, and socio-economic environment of the project site and its environs. The baseline conditions provide a reference point for predicting, evaluating, and mitigating the potential environmental and social impacts of the proposed 232-unit high-rise residential apartment development on Plot L.R. No. Nairobi/Block 15/717 along Gitanga Close off Gitanga Road, Kilimani Area, Dagoretti North Sub-County, Nairobi City County.

Baseline data were collected through desktop studies of relevant literature (including Nairobi City County plans, national environmental reports, and similar ESIA reports for Kilimani developments), site reconnaissance visits, stakeholder consultations (including the public baraza held in March 2026), and secondary sources such as climate data, geological maps, and demographic statistics. The study area covers the project site itself, the immediate neighbourhood along Gitanga Close and Gitanga Road, and the broader Kilimani/Dagoretti North context, where cumulative impacts from ongoing urban densification are relevant.

Kilimani is a middle-to-upper income residential neighbourhood that has transitioned rapidly from low-density single-family homes to high-rise apartments. This densification has increased pressure on infrastructure, traffic, and neighbourhood character—issues repeatedly raised by residents during consultations.

### **3.2 Physical Environment**

#### **3.2.1 Climate and Meteorology**

Nairobi City County, including Kilimani, lies at an altitude of approximately 1,680–1,800 metres above sea level, resulting in a modified tropical highland climate that is cool and temperate rather than hot and humid. The mean annual temperature is about 17–20°C, with average daily maximum temperatures of 23–26°C and minimums of 12–14°C. The warmest months are January to March.

- Rainfall is bimodal:

- Long rains: March to May, with peak rainfall in April (often 150–200 mm or more in western Nairobi areas).
- Short rains: Mid-October to December.

Annual rainfall in Kilimani and western Nairobi averages 800–1,080 mm, higher than eastern parts of the city. Relative humidity is generally high in the mornings (near saturation) but decreases during the day. It can drop to 10–20% during the drier months of January to April. Average potential evaporation ranges from 1,550 to 2,200 mm per year.

Winds are predominantly influenced by the Indian Ocean and local topography. Climate change trends observed in Nairobi include gradual temperature rise, increased intensity of rainfall events (leading to flash flooding), and enhanced urban heat island effects due to reduced vegetation and increased built-up surfaces. These factors are particularly relevant for stormwater management, water demand (from 232 units plus amenities), and construction scheduling for the proposed development.

### **3.2.2 Topography, Geology and Soils**

The project site and Kilimani area feature gently undulating to rolling terrain characteristic of Nairobi's western highlands, with elevation generally increasing westward. The site itself has a gentle slope that supports natural drainage but requires careful engineering during excavation for the three basement levels to prevent soil erosion or instability.

Geologically, the area is underlain by volcanic rocks, including trachytes, phonolites, and tuffs from the Tertiary and Pleistocene periods, associated with the Rift Valley formation. Soils are predominantly fertile, well-drained reddish-brown to dark grey friable clays (Nitisols or similar volcanic-derived soils). These soils generally offer good bearing capacity for high-rise foundations but can become slippery or prone to erosion when wet. Lower, flatter zones may have more acidic or poorly drained clays.

A geo-technical survey has been (or will be) conducted to confirm soil bearing capacity, foundation depths, and suitability for the 15-storey structure with basements. The proposed 65% ground coverage (below the 75% regulatory

maximum) allows for permeable surfaces and landscaping, reducing runoff and erosion risks.

### **3.2.3 Hydrology and Water Resources**

The project area falls within the Athi River Drainage Basin. No major permanent rivers traverse the immediate site, but surface runoff drains into local stormwater systems that ultimately contribute to the Nairobi River and Ngong River systems downstream. These rivers are heavily polluted by urban effluents, sewage, and solid waste.

Water supply in Kilimani is primarily from the Nairobi City Water and Sewerage Company (NCWSC), sourced from dams and treatment works. However, intermittent shortages are common due to high demand from rapid densification, population growth, and infrastructure strain. Many properties supplement with boreholes, subject to Water Resources Authority (WRA) permits.

Groundwater occurs in fractured volcanic aquifers; quality is generally acceptable but vulnerable to contamination from poor waste management or septic systems. The proposed development will connect to the municipal water supply with adequate on-site storage tanks to buffer shortages. Increased water demand from 232 residential units, a cafeteria, gym, swimming pool, and other amenities will add to local pressure on resources.

Stormwater will be managed through designed drainage systems, with the lower ground coverage helping to promote infiltration.

### **3.2.4 Air Quality and Noise Levels**

Baseline air quality in Kilimani is typical of urban Nairobi, influenced by vehicular emissions (from matatus, private cars, and construction), dust, and occasional biomass burning. Particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>) levels are often elevated, particularly near roads like Gitanga Road, sometimes exceeding WHO guidelines. Traffic congestion contributes to localized pollution, with respiratory health concerns noted in broader Nairobi reports.

Noise levels are moderate to high, driven by road traffic, human activities, and sporadic construction. Daytime residential areas typically experience 55–65 dB(A), with peaks near major roads. Baseline monitoring (where conducted or

recommended) will establish site-specific levels for comparison during construction and operation phases. The narrow Gitanga Close is particularly sensitive to additional traffic noise and emissions from the project.

### **3.2.5 Waste Management and Sanitation Infrastructure**

Solid waste collection in Kilimani is handled by Nairobi City County services and licensed private contractors, but challenges persist, including irregular collection and illegal dumping amid rising population density. Wastewater is primarily managed through the public sewer system, though capacity constraints and occasional overflows occur during heavy rains.

The project site will connect to the existing sewer network with proper reticulation. Stormwater will be directed to designated drains. All waste management will comply with the Environmental Management and Coordination (Waste Management) Regulations.

## **3.3 Biological Environment**

### **3.3.1 Flora**

The project site is in a heavily modified urban environment with limited natural vegetation. At the time of site visits, it featured grass cover, scattered trees and ornamental plants typical of residential plots. No rare, endangered, or endemic species were observed. Surrounding Kilimani has experienced significant loss of green cover due to ongoing high-rise developments.

The proposed development's 65% ground coverage leaves room for landscaping, including ground-level greenery and rooftop elements (e.g., around the swimming pool and play area). Post-construction greening measures will be implemented to enhance local biodiversity, mitigate urban heat island effects, and improve aesthetics.

### **3.3.2 Fauna**

Fauna in the area is limited to common urban-adapted species such as birds, insects, rodents, and occasional small mammals. No significant wildlife habitats, migratory routes, or protected species were identified on or near the site. Human activities have long since altered the original ecosystem. Minimal vegetation

clearance during construction and subsequent landscaping will help maintain urban biodiversity.

No sensitive ecosystems (wetlands, forests, or protected areas) exist in the immediate vicinity. The nearest notable green spaces, such as parts of the Nairobi Arboretum or city parks, are several kilometres away.

### **3.4 Socio-Economic Environment**

#### **3.4.1 Demographic Profile**

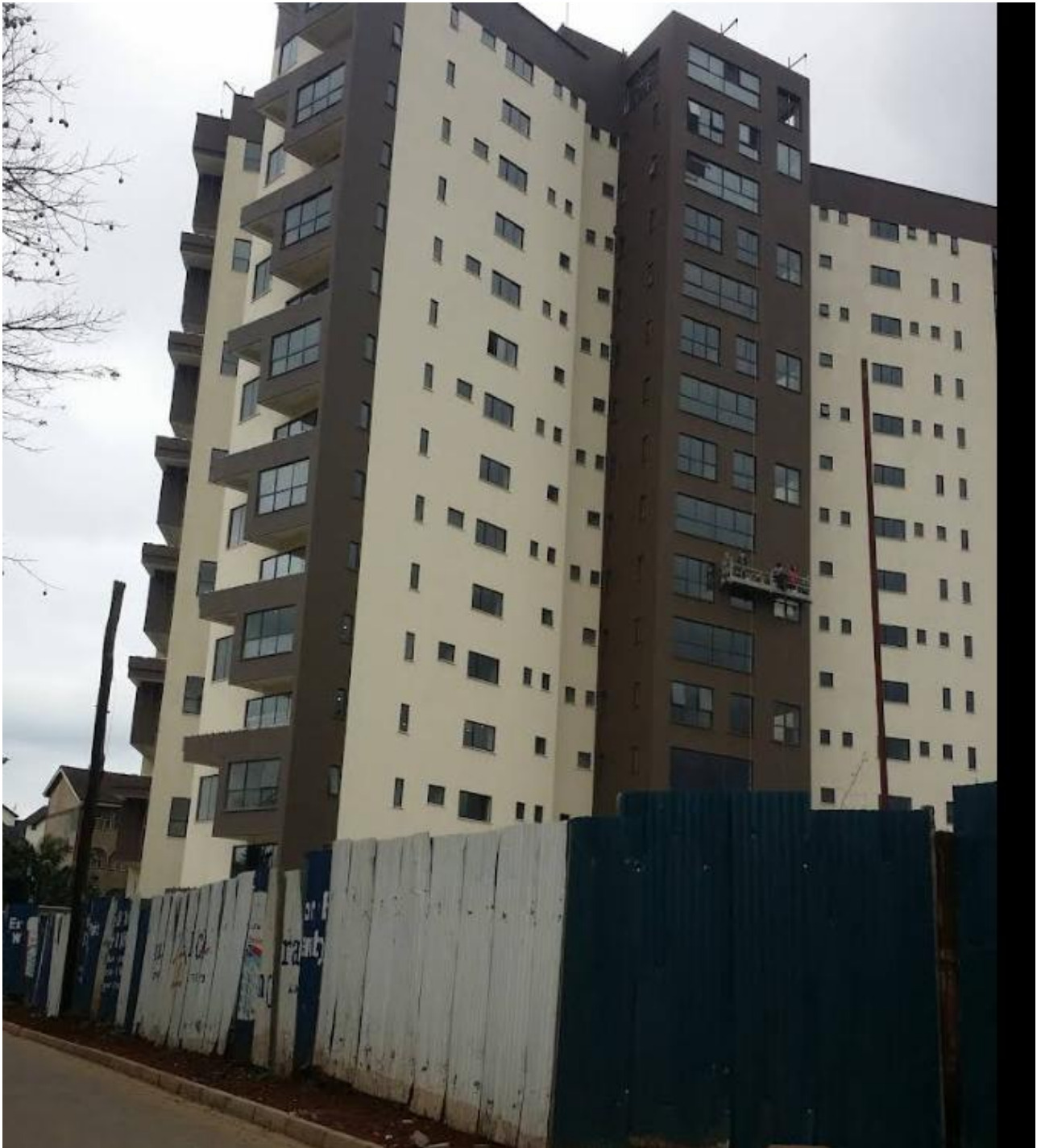
Kilimani Ward (within Dagoretti North Sub-County) has an estimated population of approximately 43,000–50,000 residents across about 16 km<sup>2</sup>, with high population density driven by urban densification. Nairobi City County's 2019 population was 4.397 million, with continued growth due to rural-urban migration and natural increase. Kilimani attracts middle-to-upper income households, young professionals, families, and expatriates seeking proximity to the CBD (5–7 km), employment opportunities, and modern amenities.

The area's demographic shift includes a growing proportion of rental tenants in apartments. Concerns raised during the 21st March 2026 baraza highlighted fears of further strain on services and changes in neighbourhood character from the introduction of studio units.

#### **3.4.2 Land Use and Zoning**

The neighbourhood is predominantly residential, with a clear transition from low-density bungalows to medium- and high-density apartment blocks. The project site is zoned for residential use, and the proponent secured Change of Use approval. Surrounding land uses include other residential apartments, limited commercial nodes, and scattered open spaces. Gitanga Close is a narrow access road, contributing to resident concerns about traffic and parking.

Broader Nairobi trends show residential land use occupying a significant portion of the city, with densification reducing open and agricultural spaces.





***Plate: Similar Neighbourhood developments***

### **3.4.3 Infrastructure and Services**

Roads and Transport: Access is via Gitanga Close off Gitanga Road. The area experiences traffic congestion due to multiple high-rise developments and narrow roads. Public transport (matatus) operates on nearby arteries. Parking is a key concern, with the project providing 90 dedicated spaces.

- Water and Sewerage: Relies on NCWSC; intermittent supply and sewer capacity issues are common amid densifications.
- Electricity and Energy: Supplied by Kenya Power; the project will connect to the national grid, with possible backup systems and energy-efficient designs (e.g., LED lighting, potential solar integration).
- Solid Waste and Sanitation: County and private collection services; challenges with volume. The project will implement segregation and private collection arrangements.

- **Social Amenities:** Good access to schools, hospitals, shopping centres (e.g., nearby malls), and recreational facilities. Communication (mobile and fibre internet) is excellent.

#### **3.4.4 Economy, Employment and Livelihoods**

Kilimani supports a strong rental and property market, with demand for modern apartments. Economic activities include residential leasing, small-scale commerce, and professional services. The project will create temporary construction jobs (skilled and unskilled labour, with local hiring preference) and long-term operational roles (security, maintenance, cleaning, facility management). It contributes to housing supply, property rates, and local economic activity.

#### **3.4.5 Health, Education, Security and Community Issues**

Residents enjoy relatively good access to private and public health facilities and schools. Key community concerns from the March 2026 consultation include infrastructure overload (water, sewer, roads), traffic congestion on Gitanga Close, inadequate parking, privacy and shadow effects from the 15-storey building, and the impact of studio units on family-oriented character. Security is generally maintained through private guards, perimeter walls, and community initiatives like Nyumba Kumi. Broader Nairobi issues include respiratory health linked to air pollution.

#### **3.4.6 Cultural and Archaeological Heritage**

No known significant cultural heritage sites, historical monuments, or archaeological resources were identified on the site. Any chance finds during excavation will be reported to the National Museums of Kenya and handled according to applicable guidelines.

### **3.5 Climate Change and Variability**

Climate change and climate variability are increasingly important considerations in urban development, particularly in rapidly growing cities such as Nairobi. The project area in Kilimani, like much of Nairobi City County, experiences a subtropical highland climate characterized by bimodal rainfall patterns, with long rains typically occurring between March and May and short rains between October and December. However, in recent years, there has been noticeable variability in

rainfall patterns, including delayed onset, shortened rainfall seasons, and increased intensity of rainfall events. These changes are consistent with broader climate change trends observed across Kenya and the East African region.

Temperature trends in Nairobi also indicate a gradual increase in average annual temperatures, accompanied by more frequent heatwaves and warmer nights. These changes have implications for urban environments, including increased energy demand for cooling, altered water demand, and potential impacts on human health and comfort. In densely developed areas such as Kilimani, the urban heat island effect may further exacerbate temperature increases due to reduced vegetation cover and increased built surfaces.

Climate variability has direct implications for the proposed project, particularly in relation to stormwater management, water resource availability, and infrastructure resilience. Increased rainfall intensity may lead to surface runoff, localized flooding, and strain on existing drainage systems, especially in areas already experiencing rapid densification. Conversely, prolonged dry periods may affect water availability, potentially increasing reliance on alternative water sources and placing pressure on existing supply systems.

The project design must therefore incorporate climate-resilient measures to address these risks. This includes the provision of adequate stormwater drainage systems, rainwater harvesting infrastructure, and water-efficient fixtures to reduce overall demand. Landscaping using drought-resistant plant species and the integration of green spaces can also help mitigate urban heat effects and improve microclimatic conditions within the development.

In addition, construction activities may contribute to greenhouse gas emissions through the use of machinery, transportation of materials, and energy consumption. Although these emissions are expected to be relatively small in the broader context, it is important to adopt measures that minimize the project's carbon footprint. Such measures include sourcing materials locally, optimizing construction logistics, and promoting energy efficiency during both construction and operation phases.

During the operational phase, the project is expected to contribute indirectly to climate change through energy and water consumption, as well as waste

generation. However, these impacts can be minimized through the adoption of sustainable practices such as energy-efficient lighting, use of renewable energy technologies where feasible, waste reduction and recycling, and efficient water management systems.

## **CHAPTER FOUR: POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK**

### **4.1 Introduction**

This chapter provides a comprehensive review of the policy, legal, and institutional framework applicable to the proposed high-rise residential apartment development on Plot L.R. No. Nairobi/Block 15/717 along Gitanga Close off Gitanga Road, Kilimani Area, Dagoretti North Sub-County, Nairobi County.

The project entails the construction and operation of a 15-storey residential apartment block comprising 232 residential units (98 studio, 104 one-bedroom, and 30 two-bedroom apartments), supported by three basement levels providing 90 dedicated parking spaces, ground-floor resident amenities (lounge area, resting and waiting areas, washrooms, and dedicated movie room), a 15th-floor gym and eat-out area, and rooftop recreational facilities including a swimming pool, changing rooms, and children's play area. The development has been designed to comply with Nairobi City County zoning parameters, including 65% ground coverage (below the 75% maximum), an optimised plot ratio of 1038 m<sup>2</sup>, and a reduced building height from an initial 16 floors to 15 floors, following the approved Change of Use from single residential to high-rise multi-unit development.

As a project listed under the Second Schedule of the Environmental Management and Coordination Act (EMCA) Cap 387 (as amended), it requires a full Environmental and Social Impact Assessment (ESIA) in accordance with Section 58(1) of EMCA and the Environmental (Impact Assessment and Audit) Regulations, 2003 (as amended by Legal Notice No. 31 of 2019). This chapter identifies all applicable policies, statutes, regulations, and institutional mandates that guide the planning, design, construction, operation, and eventual decommissioning of the project, ensuring alignment with sustainable urban housing development, environmental protection, public health, occupational safety, and infrastructure management in a rapidly densifying residential neighbourhood such as Kilimani.

### **4.2 Policy Framework**

Kenya's policy framework for urban residential developments emphasises sustainable housing provision, orderly urban densification, environmental conservation, and infrastructure adequacy. The following policies are directly relevant to this high-rise residential project:

#### **4.2.1 National Housing Policy (Sessional Paper No. 3 of 2016)**

The policy recognises housing as a basic human right under Article 43(1)(b) of the Constitution of Kenya 2010 and seeks to address the national annual housing deficit through increased supply of decent, modern, and affordable units via public-private partnerships. This project directly supports the policy by delivering 232 quality residential units with adequate parking (90 spaces) and resident amenities in a strategically located urban area, contributing to vertical development and optimisation of limited land resources in Kilimani.

#### **4.2.2 Kenya Vision 2030 and Successive Medium-Term Plans**

Vision 2030 identifies housing and sustainable urbanisation as flagship priorities under the Social and Economic Pillars. It promotes densification in serviced residential zones to reduce sprawl and improve living standards. The proposed 15-storey development aligns with this vision by providing modern apartment housing with recreational facilities, thereby supporting the goal of adequate and quality housing for urban dwellers.

#### **4.2.3 National Land and Environment Policy (Sessional Paper No. 1 of 2017)**

This policy advocates for sustainable land use, environmental protection, and integrated urban planning. It requires developments to undergo ESIA, respect zoning regulations, and minimise impacts on neighbourhood character and infrastructure all of which have been addressed in the design of this project.

#### **4.2.4 National Policy on Water Resources Management and Development (Sessional Paper No. 1 of 1999, updated principles in Water Act 2016)**

The policy promotes systematic development of water and sanitation infrastructure while protecting water resources from pollution. The project will rely on the Nairobi City Water and Sewerage Company (NCWSC) network with on-site storage to ensure reliable supply and will discharge wastewater into the existing sewer system in compliance with effluent standards.

#### 4.2.5 Nairobi City County Physical and Land Use Development Plan and Nairobi Zoning Ordinance 2023 (Sessional Paper No. 1 of 2023 on Nairobi City County Development Control Policy)

These county policies guide controlled densification in residential areas such as Kilimani. The project complies fully with the approved Change of Use and planning parameters, including reduced ground coverage and optimised plot ratio, ensuring compatibility with the area’s residential character.

Additional supporting policies include the National Climate Change Action Plan 2018–2022 (emphasising climate-resilient infrastructure) and the Sustainable Waste Management Policy, which promote resource efficiency and circular economy principles applicable to both construction and operational phases of the development.

#### 4.3 Legal Framework

The table below summarises the principal legal instruments applicable to the project, their key provisions, and specific relevance to the proposed residential apartment development.

Legal Instrument	Key Provisions	Relevance to the Proposed Project
<b>Environmental Management and Coordination (EMCA) Cap 387 (as amended 2015 &amp; 2019)</b>	Requires ESIA for Second Schedule projects; establishes principles of sustainable development, pollution prevention, and environmental rights (Articles 42 & 69 of the Constitution).	The entire ESIA Study Report has been prepared pursuant to Section 58(1). The proponent will comply with water quality (Section 72), air quality (Section 78), waste management (Section 86), and noise standards (Section 101) during construction and operation.
<b>Environmental (Impact Assessment and Audit) Regulations, 2003 (as amended 2019)</b>	Prescribes ESIA content, public participation, alternatives analysis, and mandatory post-licence environmental audits.	The project design, impact assessment, ESMP, and future audits will fully comply with these regulations.

<b>Physical and Land Use Planning Act, 2019</b>	Regulates development control, zoning, Change of Use, and density standards.	Change of Use approval has been obtained from Nairobi City County. The project adheres to Kilimani zoning requirements (65% ground coverage, 1038 m <sup>2</sup> plot ratio, 15-storey height).
<b>Water Act, 2016</b>	Vests water resources in the State; prohibits pollution; requires permits for water use and effluent discharge.	The project will connect to NCWSC mains and sewer system. No new borehole is proposed. Stormwater and effluent management will prevent pollution of water resources.
<b>Sustainable Waste Management Act, 2022</b>	Mandates waste segregation, extended producer responsibility, 3-year waste management plans, and annual reporting.	Construction and operational waste (domestic and construction debris) will be segregated at source, recycled where possible, and handled by licensed contractors. A project-specific waste management plan will be prepared.
<b>Energy Act, 2019</b>	Regulates electrical installations, metering, and promotion of renewable energy.	All electrical works will be undertaken by licensed contractors. Energy-efficient design features (natural lighting, LED lighting) and potential rooftop solar integration will be incorporated.
<b>Occupational Safety and Health Act, 2007 (Cap 514)</b>	Requires safe workplaces, risk assessments, emergency preparedness, and welfare of workers.	A site-specific OSH plan, PPE provision, emergency response systems, and insurance coverage will be implemented during construction and maintenance activities.

<b>Noise and Excessive Vibration Pollution (Control) Regulations, 2009</b>	Prohibits excessive noise; sets permissible levels and control measures.	Construction activities will be limited to daytime hours, with noise suppression measures to protect nearby residents.
<b>Environmental Management and Coordination (Waste Management) Regulations</b>	Requires waste minimisation, segregation, and licensed disposal.	Solid waste from all phases will be segregated and collected by licensed handlers.
<b>The Constitution of Kenya, 2010</b>	Article 42: right to a clean and healthy environment; Article 43: right to adequate housing.	The project upholds these rights by delivering quality housing while implementing mitigation measures to safeguard the environment and community well-being.
<b>Work Injury Benefits Act, 2007</b>	Provides compensation for work-related injuries, diseases, and fatalities; mandates insurance.	All construction and maintenance workers will be covered by compulsory insurance.
<b>National Construction Authority (NCA) Regulations, 2014</b>	Requires registration of contractors, workers, and projects.	The contractor and all skilled personnel will be duly registered and accredited by NCA.
<b>Public Health Act (Cap 242) and Penal Code (Cap 63)</b>	Prohibit nuisances, pollution, and health hazards.	Construction and operation will avoid air, water, or noise pollution and maintain sanitary conditions to prevent any public health nuisance.

#### **4.4 Institutional Framework**

Effective implementation of the project requires coordinated oversight by several national, county, and local institutions. Each institution has clearly defined mandates that directly influence the planning, approval, construction, operation, and monitoring of this high-rise residential development. The proponent will maintain formal working relationships with all relevant institutions to ensure seamless compliance, timely approvals, and ongoing enforcement.

##### **National Environment Management Authority (NEMA)**

NEMA is the principal agency established under EMCA Cap 387 with the mandate to oversee environmental impact assessment, licensing, compliance monitoring, and enforcement. For this project, NEMA will review and approve the ESIA Study Report, issue the Environmental Impact Assessment Licence, and conduct regular inspections and audits during construction and the first five years of operation. NEMA will also ensure that the Environmental and Social Management Plan (ESMP) is implemented and that any residual impacts (e.g., noise, waste, or traffic) remain within permissible limits.

##### **Nairobi City County Government**

Through its Departments of Urban Planning & Land Use, Environment, Roads & Infrastructure, and Public Health, the County Government is responsible for land-use planning, development control, zoning enforcement, and local infrastructure management. It has already granted Change of Use approval (July 2025) and will continue to monitor compliance with approved planning parameters (65% ground coverage, 1038 m<sup>2</sup> plot ratio, 15-storey height, and purely residential character). The County will also approve building plans, issue construction permits, and oversee road access, drainage, and solid waste collection in Kilimani.

##### **Nairobi City Water and Sewerage Company (NCWSC)**

NCWSC is the licensed water service provider for Nairobi County. It will supply potable water, approve and supervise the connection to the existing sewer network, and monitor effluent discharge quality. The project will rely on NCWSC infrastructure with on-site storage tanks to buffer intermittent supply, and

NCWSC will verify that the additional demand from 232 units does not compromise service levels in the area.

### **Kenya Power**

Kenya Power is the national electricity distributor. It will provide grid connection, approve all electrical installations (to be undertaken by licensed contractors), and ensure metering complies with the Energy Act 2019. The institution will also support any future integration of renewable energy sources (e.g., rooftop solar) on the project.

### **National Construction Authority (NCA)**

NCA regulates the construction industry under the National Construction Authority Act and its 2014 Regulations. It will register the main contractor, all skilled workers, and site supervisors, and ensure that the entire project (including the three basement levels) meets national construction standards for structural integrity, safety, and quality. The proponent must ensure NCA registration before tender award and throughout the construction phase.

### **Directorate of Occupational Health and Safety (DOSHS)**

DOSHS, under the Ministry of Labour, enforces the Occupational Safety and Health Act 2007 and the Work Injury Benefits Act 2007. It will review the project's site-specific Occupational Safety and Health Plan, conduct workplace inspections during construction, and ensure that all workers are insured and that any accidents or occupational diseases are reported and compensated.

### **Local Administration (Area Chief and Assistant Chief, Dagoretti North Sub-County)**

The Area Chief and Assistant Chief serve as the grassroots coordination arm of the national and county governments. They will facilitate ongoing community liaison, grievance redress, and local-level monitoring of construction impacts (noise, dust, traffic) on Gitanga Close residents. Their role is particularly important for maintaining the constructive stakeholder engagement established during the ESIA process.

## **CHAPTER FIVE: RELEVANT ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

### **5.1 Introduction**

This chapter presents an assessment of the issues likely to emanate from implementation of the proposed project and associated infrastructure. For each issue, the analysis is based on its nature, the predicted impact, extent, duration, intensity, probability, and the stakeholders and/or values affected. In accordance with best practice, the analysis includes issues relating to the project's environmental and social sustainability. For potential negative impacts judged to be significant and require mitigation, the analysis is followed by notes on mitigation options. Impacts and their possible mitigation are combined in this chapter for easy reference. As in most impact studies, the analyses focus on potential problems and their solutions.

### **5.2 Impact identification**

#### **5.2.1 Sources of impacts**

The impacts associated with the proposed project will emanate from project inputs, activities and outputs. The project inputs that shall be potential sources of impacts include skilled and unskilled workforce exerting indirect demand for energy, water supply, sanitation, health services etc and machinery used at the project site for various purposes. The project activities that shall be potential sources of impacts include site preparation and clearance; topsoil removal; clearing of vegetation; transportation of materials to the site; labour at the site and site restoration. Project outputs likely to lead to adverse impacts include spoil disposal; emissions from site machinery (hydrocarbons and Carbon dioxide); particulate matter; noise pollution from construction activities and hazardous waste (oil) spillage. Table 5.1 below gives summary of impact sources in the proposed project.

**Table: Sources of Impacts**

Project Inputs	Project Activities	Project Outputs
<p><b>(i) Skilled and unskilled workforce</b></p> <p><b>(ii) Machinery used at the project site</b></p>	<p>(i) Mobilization of machinery to the site</p> <p>(ii) Site preparation and clearance</p> <p>(iii) Transportation of materials</p> <p>(iv) Site restoration</p>	<p>(i) Excavated spoils</p> <p>(ii) Gaseous emissions from the site</p> <p>(iii) Noise from site activities</p> <p>(iv) Oil spills</p>

**5.2.2 Receptors of impacts**

The anticipated negative impacts will be experienced on both the physical and human environments. Natural environment likely to be affected by project activities including fauna habitats, surface water resources within the vicinity of the project area and air quality within the project area. Table below gives summary of receptors of impacts in the proposed project.

**Table: Receptors of Impacts**

Human Environment	Physical and Biological Environment
<b>(i) Residential houses within project vicinity</b>	(i) Surface water resources in project area of influence
<b>(ii) Academic institutions including schools</b>	(ii) Plants and animals within project alignment area; and
<b>(iii) Workers on site</b>	(iii) Soil structure within project area of influence

**5.3 Impact Assessment Criteria**

The purpose of impact assessment is to assign relative significance to predicted impacts associated with the project, and to determine the manner in which impacts can be avoided, mitigated or managed. The rating of impacts assumes that standard construction procedures present in the project design will be implemented. The impact assessment criteria include the spatial context of project impacts; temporal context; reversibility, magnitude and significance of potential impacts of project construction and operation. The potentially significant environmental and social impacts have been identified based on the nature of the receiving environment, analysis of the proposed activities and analysis of the issues raised by stakeholders during public participation process.

**5.4 Positive Environmental Impacts**

The proposed construction of this residential complex offers several benefits, including the following:

**Employment Creation**

The proposed development will create business opportunities by providing a market to suppliers of construction materials during the construction phase. It will also provide employment opportunities both directly and indirectly during the construction phase. Casual laborers, semi-skilled and skilled labor professionals such as environmentalists, supervising engineer, contractor staff and architects

among others will benefit from the employment opportunities created by the proposed project.

### **Optimal Use of Land**

The proposed site is currently vacant. By building this residential complex the design has incorporated an optimal use of the currently undeveloped land therefore increasing the rate of return on investment.

### **Promote Local and National Economy**

Implementation of the proposed project will promote local businesses in the area such as food vendors, construction material suppliers etc. The various permits issued by the County Government, including approval of building plans will attract certain charges which will form part of the County's revenue. The National Government will benefit through income tax paid by consultants engaged in the project as well as Value Added Tax (VAT) charged on building materials which will be required during construction, installations and interior finishes.

### **5.5 Measures to Enhance the Positive Impacts**

Construction should adhere to recommended best construction practices that make effective and economical use of locally available resources including materials, expertise and labor. Construction materials will be sourced from certified suppliers in order to enhance the integrity of the proposed buildings.

### **5.6 Environmental Impacts during construction and operation phases**

Construction phase of the proposed project site will involve the implementation of the approved project design. The activities at this stage will include site preparation, hiring of labour, site specific clearance, earthworks and foundation works, delivery of construction materials, masonry and concrete works, structural works, roofing, mechanical, plumbing and electrical works. These works will be undertaken according to structural engineer 's specification.

On the basis of the baseline information gathered during the field study and consultation done with stakeholders, potential impacts of the proposed project have been discussed below. The effects of any form of impacts can be minimized by having an idea of the magnitude of each before the project is implemented. The magnitude of each impact is described in terms of being significant, minor or

permanent, short-term or long term, specific (localized) or widespread, reversible or irreversible. Most of the impacts have been addressed in the proactive design of the proposed project and other mitigations can only be guaranteed through active and responsible management committed to the propositions of the environmental management plan

#### Air quality impacts

The main emissions to air during the construction phase are likely to be emissions of suspended particulate matter and nuisance dust from the movement of vehicles and construction equipment, excavation and rehabilitation, demolition, clearing and grading, truck loading and unloading and wind erosion.

The potential air pollutants generated from the construction of the development are considered to be both:

- Suspended particulate matter
- Deposited dust.

The key potential health and amenity issues associated with construction are:

- Elevated suspended particulate concentrations (PM<sub>10</sub>)
- Nuisance due to dust deposition (soiling of surfaces) and visible dust plumes.

The nearest sensitive receptor is located approximately 10 meters from the nearest site boundary, and the development does not meet any of the screening criteria for human and ecological receptor, therefore detailed assessment on sensitive receptor is not deemed necessary. Sensitivity of the area to soiling is also classified as low. Accordingly, there is a low risk of adverse dust soiling occurring at the off-site sensitive receptor locations if no mitigation measures were to be applied to control emissions during the works.

During the operational phase, the emergency generators would be a source of products of combustion in the event they are required to operate (i.e. during a power failure). As this would occur very infrequently and for a limited time period

#### **Significance of Impact**

The significance of the impacts with or without mitigation is very low as shown in the impact analysis table below

<b>Mitigation status</b>	<b>Spatial extent</b>	<b>Duration</b>	<b>Severity</b>	<b>Frequency of activity</b>	<b>Frequency of Impact</b>	<b>Consequence</b>	<b>Likelihood</b>	<b>Significance</b>
<b>Without Mitigation</b>	1 Activity specific	1 One day to one month	2 Potentially harmful	3 Monthly	2 Highly unlikely	4	5	20 Very Low
<b>With Mitigation Measures</b>	1 Activity specific	1 One day to one month	1 Non harmful	3 Monthly	1 Almost impossible	3	4	12 Very Low

### 5.6.1.1 Mitigation measures for air pollution

- i. Develop a construction management plan to guide construction activities throughout the phase
- ii. During construction, any stockpiles of earth should be enclosed / covered / watered during dry or windy conditions to reduce dust emissions
- iii. Construction trucks removing soil from the site, delivering sand and cement to the site should be covered to prevent material dust into the surrounding areas
- iv. During construction, where water is available, sprinkle the construction area with water to keep dust levels down

- v. Personal protective equipment (PPE) that includes dust masks should be provided to all personnel in areas prone to dust emissions throughout the period of construction
- vi. Maintain all machinery and equipment, including the generators, in good working order to ensure minimum emissions including carbon monoxide, NOX, SOX and suspended particulate matter
- vii. During annual environmental audit air quality monitoring should be part and parcel of the report
- viii. The Proponent should use low sulphur fuels for the power generators
- ix. No burning of any waste materials whatsoever should be permitted within the site both during construction and operation

#### Noise Pollution

Noise and vibrations are expected mainly during the construction phase with the major receptors being the construction workers. Sources of noise would include, materials delivery trucks, as well noise generated by the work force. Earth moving activities are also likely to cause vibrations. Upon occupation, vehicles accessing the facility and backup generator could be a source of noise pollution.

#### **Significance of Impact**

The significance of the impacts with or without mitigation is very low as shown in the impact analysis table below

<b>Mitigation status</b>	<b>Spatial extent</b>	<b>Duration</b>	<b>Severity</b>	<b>Frequency of activity</b>	<b>Frequency of Impact</b>	<b>Consequence</b>	<b>Likelihood</b>	<b>Significance</b>
<b>Without Mitigation</b>	1 Activity	1 One day to one month	2 Potentially harmful	3 Monthly	2 Highly unlikely	4	5	20 Very Low
<b>With mitigation Measures</b>	1 Activity	1 One day to one month	1 Non harmful	3 Monthly	2 Highly unlikely	3	5	15 Low

**Mitigation measures for noise pollution**

- (i) Ensure that all construction equipment is maintained at the best operating conditions and avoid unnecessary noise,
- (ii) All equipment and machinery must be regularly serviced by competent technicians.
- (iii) Ensure workers are provided with the necessary personal protective equipment including earplugs or earmuffs when operating or working with noisy equipment; and
- (iv) The backup generators should be installed in an acoustically designed structure to prevent noise pollution.

## Occupational Safety and Health Impacts

Health and safety impacts during construction include accidents and injuries from machinery used and construction activities at the site.

### Significance of Impact

The significance of the impacts is low without mitigation and very low with institution of mitigation measures as shown in the impact analysis table below

Mitigation status	Spatial extent	Duration	Severity	Frequency of activity	Frequency of Impact	Consequence	Likelihood	Significance
<b>Without Mitigation</b>	2	1	2	3	4	5	7	35
	Area	One day to one month	Potentially harmful	Monthly	Likely			Low
<b>With Mitigation Measures</b>	2	1	1	3	1	4	4	16
	Area	One day to one month	Non harmful	Monthly	Almost impossible			Very Low

### Mitigation measures for occupational health and safety impacts

- (i) Implementation of emergency response plan that includes installation of emergency response plan to combat accidental events;
- (ii) Workers should be provided with suitable personal protective gear (such as nose masks, ear plugs/muffs, helmets, overalls, industrial boots, etc.) and ensure they are used at all times while at their place of work. A fully equipped first aid kit should also be provided at site.

## Soil Erosion

Precise Material Testing Limited were engaged to undertake a geotechnical investigation required to confirm the suitability of the site. Minimal soil erosion is anticipated from the activities of the project during construction phase. Activities expected to loosen top soil include excavations and earth moving activities, as well as movement of the construction vehicles. During operation impact on soil in terms of erosion will be insignificant.

### Significance of Impacts

The impacts are high without mitigation measures. With implementation of mitigation measures, the impacts become low and are unlikely to affect other land uses adversely.

<b>Mitigation</b>	<b>Spatial</b>	<b>Duration</b>	<b>Severity</b>	<b>Frequency</b>	<b>Frequency of Impact</b>	<b>Consequence</b>	<b>Likelihood</b>	<b>Significance</b>
<b>Without</b>	2	5	5	4	5	12	9	108
<b>Mitigation</b>	Are specific	Permanent	Great	Weekly	Definitely			High
<b>With mitigation</b>	2	2	1	4	1	5	5	25
<b>Measures</b>	Are specific	One month to one year	Insignificant	Weekly	Almost Never			Very Low

## **Mitigation Measures**

- Site clearance to be undertaken progressively in accordance with construction management plan.
- Excavations of the site will be confined only within the sections upon which construction is taking place
- Excavated earth will be held away from locations of the site not susceptible to surface runoff of storm water.
- The earth removed for external disposal will require it to be deposited on sites without the risk of being washed down during rains.
- Extra precautions on control of soil erosion will be required on construction during periods of heavy rainfall.
- Re-vegetate exposed areas on the site so as to mitigate further erosion of soil; and
- Landscaping with indigenous species will help to mitigate soil erosion even during the post commissioning phase of the project.

## **Solid Waste**

Solid waste may be generated from construction debris (soil, stones, pipes, packaging, etc), and during the operation phase, in the form of wastepaper, boxes, packaging and wrapping, plastic containers and bottles etc), wood, oil waste, food and organic waste. The waste may be classified as hazardous and non-hazardous. Accumulation of solid waste or its improper disposal could pose health risks.

## **Significance of impact**

Generation of solid wastes impacts are medium to high without institution of mitigation measures. With implementation of mitigation measures, the impacts are low and are unlikely to adversely affect neighbouring populations and land uses.

<b>Mitigation status</b>	<b>Spatial extent</b>	<b>Duration</b>	<b>Severity</b>	<b>Frequency of activity</b>	<b>Frequency of Impact</b>	<b>Consequence</b>	<b>Likelihood</b>	<b>Significance</b>
<b>Without</b>	4	2	4	4	4	10	8	80
<b>Mitigation</b>	Regional	One month to one year	Great / harmful	Weekly	Likely			Medium-High
<b>With mitigation</b>	2	2	2	3	2	6	5	30
<b>Measures</b>	Area Specific	One month to one year	Small / potentially harmful	Six months	Highly unlikely			Low

### **Mitigation measures**

The most appropriate options in waste management are identification of the waste types, segregation into the various categories and establish suitable mechanisms of collection, storage, transfer and final disposal. Ultimate destination for each of the waste categories should also be known and tracked.

The following options are proposed for wastes associated with this project through to the occupation period:

- a) All construction debris and solid waste generated by the workforce must be taken out of the site and disposed of in an appropriate manner, at a specified and approved dump site
- b) The –3Rs‖ philosophy of reuse, recycle and reduce should be adopted. To do this, all solid waste generated at the site should be segregated at source into

organic/biodegradable, metal, plastic, cardboard, hazardous , so that it can be recycled, reused or buried.

- c) Labelled bins should be provided at the sites according to the type of wastes generated.

#### Liquid Waste

During construction phase vehicles and construction machineries that use fuels and oils will be used on site. Unless there is an accidental spill pollution due to oil and fuel, it is unlikely to occur during construction phase. During the operational phase, fuel will be required for the generators and for the vehicles. Pollution due to oil may result from improper storage, handling and disposal of oil and oil products. Leakages and spills may also occur during vehicle and equipment service, and this may find its way into the environment. This can lead to the contamination of soils as well as water sources. The site will also use chemicals such as detergents, cleaning solutions, etc, but on a small scale. There is a minimal chance of pollution due to these chemicals.

#### **Significance of impact**

Liquid waste impacts are low without mitigation measures and very low when mitigation measures are instituted as shown in analysis below

<b>Mitigation status</b>	<b>Spatial extent</b>	<b>Duration</b>	<b>Severity</b>	<b>Frequency of activity</b>	<b>Frequency of Impact</b>	<b>Consequence</b>	<b>Likelihood</b>	<b>Significance</b>
<b>Without</b>	2	2	1	4	2	5	6	30
<b>Mitigation</b>	Area	One	Insignificant /	Weekly	Highly			Low
	specific	month to	Non-harmful		unlikely			
		one year						
<b>With</b>	2	2	1	4	1	5	5	25
<b>mitigation</b>	Area	One	Insignificant /	Weekly	Almost			Very Low
<b>Measures</b>	specific	month to	Non-harmful		impossible			
		one year						

### **Mitigation measures**

- The reservoir water tanks, whether constructed of steel or fibre-glass reinforced plastic should be designed and built according to recognized industry standards.
- Use of corrosion protection in water tanks and piping system
- Any chemicals in use at the site should be stored properly – stores should be well ventilated, with lips at the doors and enclosed. Chemicals and food should not be stored together.

## Biodiversity

The major ecological risks and impacts would come primarily from the project activities. These activities will happen mostly during construction phase of the project, and risks/impacts of different strengths are anticipated on the general biodiversity in the area of Interest (AoI). The project activities with major ecological risks include:

- Clearing of vegetation and land for construction
- Construction of access roads
- Operation of vehicles and machines/equipment
- Storage of materials for construction
- Overall ecological risks and impacts

Project activities would have varying magnitude of impact on various species, habitats and ecological processes. These include impacts on flora and fauna species and ecological indices (population dynamics). The following potential impacts are anticipated:

### **Significance of impact**

Biodiversity impacts are low without mitigation measures and very low when mitigation measures are instituted as shown in analysis table below

Mitigation status	Spatial extent	Duration	Severity	Frequency of activity	Frequency of Impact	Consequence	Likelihood	Significance
Without	2	2	1	4	2	5	6	30
Mitigation	Area specific	One month to one year	Insignificant / Non-harmful	Weekly	Highly unlikely			Low
With	2	2	1	4	1	5	5	24
Mitigation	Area specific	One month to one year	Insignificant / Non-harmful	Weekly	Almost impossible			Very Low
Measures	Area specific	One month to one year	Non-harmful					

**Mitigation measures for biodiversity impacts**

- (i) The project design incorporates landscape planting around the periphery of the site and building and incorporates planting of exotic and indigenous trees. Maintenance of landscape planting, as proposed, should be ongoing to ensure tree canopies remain healthy and thereby provide the visual screening purpose for which they were planted.
- (ii) Mitigation measures to reduce soil erosion and pollutant run-off during construction to be included in a standard erosion and sedimentation control plan.

- (iii) Measures to minimize the generation of dust and chemical spills and associated impacts on adjacent natural environment.
- (iv) The proponent to develop vegetation clearing protocols during construction phase and vegetation rehabilitation plan during operation phase

#### Surface and Subsurface Water Pollution

Run-off from the construction site may have adverse impacts on water quality in surface water bodies in the project area. There is a mad made dam for irrigation purposes in the nearby valley as well as a river. The quantity and quality (physical, chemical) of both surface waters as well as groundwater may be affected by construction activities through contamination with run off from the site. The removal of topsoil, overburden and aggregates may affect the quality of water recharging of an aquifer.

A potential source of water contamination from the operation is oil spills/ leaks from construction machinery. Spills present hazards through contact to skin and eyes or through inhalation of vapours and also hazard to the environment. They may also lead to water and soil contamination which is harmful to plants and animals.

Sanitation will be provided through the use of toilets during construction. During operation, impact on surface water resources will be negligible as proper liquid waste management infrastructure has been put in place in the design.

#### **Significance of Impact**

Water quality impacts are low without mitigation measures and very low when mitigation measures are instituted as shown in analysis table below

<b>Mitigation status</b>	<b>Spatial extent</b>	<b>Duration</b>	<b>Severity</b>	<b>Frequency of activity</b>	<b>Frequency of Impact</b>	<b>Consequence</b>	<b>Likelihood</b>	<b>Significance</b>
<b>Without</b>	2	2	1	4	2	5	6	30
<b>Mitigation</b>	Area	One	Insignificant /	Weekly	Highly			Low
	specific	month to	Non-harmful		unlikely			
		one year						
<b>With</b>	2	2	1	4	1	5	5	24
<b>mitigation</b>	Area	One	Insignificant /	Weekly	Almost			Very Low
<b>Measures</b>	specific	month to	Non-harmful		impossible			
		one year						

### **Mitigation measures for surface / subsurface water pollution**

- Discharge of any wastewater into open environment during the construction and operation phases shall be strictly prohibited
- All vehicles machinery and equipment shall be refueled at designated areas
- Regular audits shall be performed on construction machinery to ensure no leaking or defective equipment are used on site

- Any equipment repairs or maintenance will be carried out in designated areas. No repair of construction machinery or equipment shall be done on active construction site. As best practice, drip trays shall be placed under the vehicles being repaired to capture oils or lubricants discharged
- Any spillage of fuel, oils or other harmful substances shall be cleaned up immediately and reported to the safety officer for logging; and
- Training on spill control and clean-up shall be carried out through toolbox talks.

#### Community Health and safety impacts

The public as well as workers are at risk from projects such as this, particularly from construction traffic, and local commercial sex workers through sexually transmitted diseases. The project will generate relative amount of traffic compared to the non-project situation. This traffic will be using the public roads within the project area. Accidents could occur due to excessive speeds, unsafe loading, poor road surfaces, poor vehicle maintenance, and unwary pedestrians, especially drunken pedestrians and children. Commercial sex workers may take advantage of the cash available to project workers. They may therefore be involved in unsafe sex and be at high risk of becoming infected with (and subsequently passing on) sexually transmitted infections including HIV/AIDS. This is a significant gender issue.

#### **Significance of impact**

The impacts are medium- high without implementation of mitigation measures. The impacts are low when mitigation measures are instituted as shown in the analysis table below

<b>Mitigation status</b>	<b>Spatial extent</b>	<b>Duration</b>	<b>Severity</b>	<b>Frequency of activity</b>	<b>Frequency of Impact</b>	<b>Consequence</b>	<b>Likelihood</b>	<b>Significance</b>
<b>Without</b>	4	2	4	4	4	10	8	80
<b>Mitigation</b>	Regional	One month to one year	Harmful	Weekly	Likely			Medium-High
<b>With mitigation</b>	4	2	1	4	1	7	5	35
<b>Measures</b>	Regional	One month to one year	harmful	Weekly	Almost impossible			Low

**Mitigation Measures for community health and safety impacts**

- a) The project proponent shall establish and enforce a strict code of conduct for all project drivers. The code shall focus on safety, especially speed, and loading, and shall ban all carriage of staff, workers and passengers except in seats; and
- b) The project proponent shall use the existing HIV/AIDS prevention programme to deal with HIV/AIDS issues related to project's construction phase. The programme identifies specific risk groups, specific AIDS awareness campaigns for these risk groups and provision of male condoms to construction workers.

## Mushrooming of Informal Businesses

Usually, such development projects during construction stage have the potential of attracting unplanned commercial activities that come to take advantage of the increased trade prospects. This often leads to mushrooming of kiosks/informal vendors, which are attracted by the prospects of doing business especially selling food. Some have potential to pollute the environment owing to lack of sanitation infrastructure.

### **Proposed Mitigation Measures**

- a. Provide clean and safe drinking water at the site
- b. Provide a toilet at the site to ensure hygiene and proper sanitation is observed
- c. The workers will have designated areas for eating and resting
- d. Food vendors will be allowed to sell food within the hoarded area to avoid littering of the surrounding areas.

## Visual Impact

In order to develop the proposed development, excavation and earthwork will be involved. The main visual impacts would occur during earthworks for construction of the foundation of the building. However, this impact will be generally confined to the site.

### **Proposed Mitigation Measures**

- i. Mandatory construction of adequate hoarding around the project area prior to commencement of any construction activity
- ii. Ensure that all construction activities are carried out within the hoarded area.

## Traffic Congestion

During construction, Gitanga close will experience increased traffic flow especially from construction vehicles. This will impact the road users through damage of roads and traffic snarl ups especially at turning points and along the access road. Appropriate measures will be undertaken to ensure smooth traffic flow.

## **Proposed Mitigation Measures**

- Provide adequate on-site parking dedicated for construction site personnel and heavy vehicles
- All deliveries and collections to and from the site shall be staggered and restricted to off-peak traffic hours to prevent obstruction of other road users
- Traffic speeds for construction and other vehicles coming to and fro the project site shall be restricted to 20 Km/h to ensure pedestrian safety
- Signage to identify the construction site shall be erected at the site entry point
- Appropriate traffic warning signs, informing road users of a construction site entrance ahead and instructing them to reduce speed, shall be placed along the main road in the vicinity of the entrance to the site during the construction period
- Train drivers on road safety
- Limit idling time for pick-up trucks and other smaller equipment, observe a common-sense approach to vehicle use, and encourage workers to put off vehicle engines whenever possible
- Repair any damage on the access road after completion of construction

## **Gender Equality**

There is need to promote gender equality in all aspects of economic development and more so in construction. Women roles in construction are mainly confined to supply of unskilled labor and vending of foodstuffs to the construction workers. During construction, the contractor is likely to be biased against the female gender during hiring of casual laborers. The Contractor shall ensure that either gender constitutes at least 30% of the work force at the site. The contractor shall also develop policies to protect female workers at the site against harassment by their male counterparts.

## **Proposed Mitigation Measures**

- Ensure equitable distribution of employment opportunities between men and women
- Provide toilets and bathrooms for both male and female workers on site
- Enforce workers code of conduct

- The works contractor shall be required, under its contract, to prepare and enforce a No Sexual Harassment and Non-Discrimination Policy, in accordance with national law where applicable
- The contractor shall prepare and implement a gender action plan

### Energy Demand and Usage

The proposed project will lead to increased demand and use of energy during the construction stage (fuel for running machinery and other equipment) and during operation phase (electricity used by the occupants).

### **Potential Mitigation Measures**

- Exterior lights shall be controlled by a programmable timer.
- Generator should be provided as a full backup energy source throughout the development.
- Install and routine maintenance of energy efficient appliances e.g. LED bulbs etc.
- Monitor energy use during construction and set reasonable limit.
- Put off all lights immediately when not in use or are not needed.
- The water booster set will contain inverter pumps for energy saving and precise control of flow and pressure rate.
- Turn off machinery and equipment when not in use.
- Use of backup generator as an alternative source of energy.

## **CHAPTER SIX: ANALYSIS OF PROJECT ALTERNATIVES**

### **6.1 Introduction**

In accordance with the requirements of the Environmental Management and Coordination Act (EMCA) Cap 387 this chapter examines feasible alternatives to the proposed high-rise residential apartment development on Plot L.R. No. Nairobi/Block 15/717 along Gitanga Close off Gitanga Road, Kilimani Area, Nairobi County.

The analysis evaluates options that could minimize adverse environmental and social impacts while achieving the project's primary objective: contributing to Nairobi's housing supply through the delivery of 232 modern residential units (98 studios, 104 one-bedroom, and 30 two-bedroom apartments) with supporting amenities and 90 parking spaces in three basement levels.

Alternatives considered include the No Project Alternative, Relocation Alternative, Alternative Site Layout/Design, Alternative Construction Materials and Technologies, Wastewater Management Alternatives, Solid Waste Management Alternatives, Water Supply Alternatives, and Energy Sources Alternatives. Each alternative is assessed based on technical feasibility, economic viability, environmental and social implications, compliance with planning standards (e.g., ground coverage of 65% against a 75% maximum, plot ratio of 1038 m<sup>2</sup> against 1500 m<sup>2</sup> allowable, and reduced building height to 15 floors), and responsiveness to stakeholder concerns raised during the public consultation.

The preferred alternative integrates mitigation measures into the project design to promote sustainable urban development in a rapidly densifying neighbourhood like Kilimani.

### **6.2 The Proposed (Preferred) Alternative**

The proposed alternative represents the proponent's (Moon Valley For Investment Limited) optimized design following feasibility studies, architectural and engineering reviews, and stakeholder feedback. Key features include:

- Three basement levels with 90 parking spaces allocated according to unit type (1 per 2-bedroom, 0.3 per 1-bedroom, 0.25 per studio).
- Ground floor amenities (lounge, cafeteria, movie room, washrooms, resting areas).
- 15 typical floors with a mix of units.

- 15th floor with limited units, gym, and eat-out area.
- Rooftop recreational facilities (swimming pool, changing rooms, children's play area).
- Planning compliance: 65% ground coverage (below the 75% regulatory maximum in Kilimani), optimized plot ratio of 1038 m<sup>2</sup>, and height reduced from an initial 16 floors to 15 floors.

This design was revised downward from an earlier proposal of approximately 246 units to 232 units in direct response to resident concerns about infrastructure strain, traffic on narrow Gitanga Close, parking, privacy, shadow effects, and neighbourhood character. The alternative fully complies with EMCA requirements, Nairobi City County planning standards, and incorporates an Environmental and Social Management Plan (ESMP) to address construction-phase impacts (dust, noise, waste, traffic) and operational-phase pressures (water/sewer demand, solid waste, energy use).

The proposed alternative balances housing delivery needs with environmental sustainability and community acceptability, making it the most viable option.

### **6.3 Relocation (Alternative Site) Alternative**

Relocation to another site was considered to avoid potential cumulative impacts in the already densifying Kilimani area (e.g., added pressure on water, sewerage, roads, and local character). However, the proponent currently holds no other suitable parcels. Acquiring and securing alternative land of comparable size, zoning (residential high-rise), location advantages (proximity to CBD, ~5–7 km), and market demand in Nairobi would involve lengthy processes, high transaction costs, and uncertainty regarding availability and approvals.

Relocation would result in sunk costs (Change of Use approval already obtained design fees, and preliminary studies) and could delay or derail the project entirely, potentially leading to a No Project scenario. It would also discourage investment in the housing sector, which faces a significant national deficit. Given the fixed nature of land, existing planning approvals, and the site's strategic location in a serviced residential zone, relocation is **not feasible** or economically viable. The current site, with its revised lower-impact design, remains the preferred location.

## 6.4 The No Project (No Action) Alternative

The No Project Alternative would maintain the status quo, with the plot remaining underutilized (vacant or with low-density structures). From a purely environmental perspective, this would avoid all project-related impacts, including construction dust/noise/traffic, increased utility demand, and changes to neighbourhood character.

However, this option would forego significant benefits:

- Contribution to addressing Nairobi's acute housing shortage (annual deficit of ~200,000–250,000 units nationally, with high demand in areas like Kilimani for modern apartments).
- Economic gains: temporary construction employment (skilled/unskilled labour, with local preference), long-term operational jobs (security, maintenance, cleaning), increased property rates/taxes for Nairobi City County, and stimulation of local supply chains for materials.
- Social benefits: provision of 232 quality units with amenities, optimized land use through vertical development (65% ground coverage allows more open space than maximum allowable), and enhanced resident lifestyle options.
- Opportunity cost: continued payment of land rates on underutilized property by the proponent, with no incremental housing stock or revenue generation.

In the context of Kenya's National Housing Policy and constitutional right to adequate housing (Article 43), the No Project Alternative is **not preferred**. It would exacerbate housing deficits and discourage private sector participation in urban development without delivering any net environmental gain in an already urbanized setting.

## 6.5 Analysis of Alternative Designs, Materials, Technologies, and Processes

### 6.5.1 Alternative Project Design and Layout

Initial designs considered a 16-floor structure with higher unit numbers (~246). Following stakeholder input and planning reviews, the design was revised to 15 floors, reduced units (232 total with fewer studios), optimized parking (90 spaces), and lower ground coverage (65%).

This revision minimizes shadow effects, privacy concerns, and infrastructure overload while maintaining economic viability. Alternative layouts (e.g., lower density or different amenity placement) were evaluated but rejected due to reduced

housing output and suboptimal land use in a high-demand urban zone. The current design is the most balanced, compliant with Kilimani planning parameters, and responsive to community feedback.

### **6.5.2 Alternative Construction Materials and Technologies**

The project will primarily use reinforced concrete frame construction with masonry infill for durability, fire resistance, seismic performance, and cost-effectiveness in Nairobi's context. Materials will meet Kenya Bureau of Standards (KEBS) specifications: locally sourced cement, aggregates, sand, steel reinforcement, and tiles.

Alternatives evaluated:

- **Prefabricated panels or Expanded Polystyrene (EPS) technology:** Faster assembly and potential material savings, but higher initial costs, limited local availability, and concerns over long-term durability/fire performance in multi-storey buildings led to their rejection.
- **Timber or steel framing:** Discouraged due to deforestation risks (timber) or higher costs and corrosion concerns (steel). Minimal timber use is planned; exotic species preferred only if necessary.
- **Conventional brick and mortar:** Less efficient for high-rise scale compared to concrete frame.

The selected reinforced concrete technology offers excellent resistance to impact, fire, and disasters, aligns with local expertise/availability, and supports speed without compromising safety or environmental standards. Energy-efficient features (e.g., natural lighting maximization, LED provisions) are incorporated.

### **6.5.3 Wastewater Management Alternatives**

The project will connect to the existing Nairobi City Water and Sewerage Company (NCWSC) sewer system (serving the surrounding area, including a ~1.5 m wide line). This is the most viable and preferred option due to proximity, reliability, and avoidance of on-site space demands.

Other alternatives assessed:

- **On-site Wastewater Treatment Plant (WWTP) with recycling** (for irrigation/toilet flushing): Efficient long-term but expensive to build/maintain and space-constrained on this urban plot.

- **Stabilization ponds/lagoons:** Low-cost but require large space, produce odours (unacceptable in residential Kilimani), and face community opposition.
- **Constructed wetlands:** Low-maintenance and natural but space-intensive and slower to establish; not suitable for high-density urban setting.
- **Septic tank and soak pits:** Only viable for unsewered areas; not applicable here as the site is connected to municipal sewer.

Connection to NCWSC sewer, combined with on-site greywater considerations where feasible and strict adherence to Water Quality Regulations, minimizes pollution risks.

#### **6.5.4 Solid Waste Management Alternatives**

An Integrated Solid Waste Management System is proposed, prioritizing the waste hierarchy per EMCA Waste Management Regulations:

- Reduction at source (awareness campaigns for residents and contractors).
- Reuse, recycling, and composting (source separation; recyclables sold or donated).
- Sanitary landfilling as last resort (via licensed handlers).

Construction wastes (excavated soil, concrete debris, packaging) will be segregated, with reuse of spoil where possible (e.g., backfill). This approach is preferred over direct landfilling due to lower environmental footprint and compliance requirements. No viable on-site incineration or other high-impact options were considered.

#### **6.5.5 Water Supply Alternatives**

Primary supply will be from NCWSC, supplemented by:

- On-site storage tanks to buffer intermittent supply.
- Rainwater harvesting systems for non-potable uses (landscaping, cleaning).
- Potential greywater recycling from treated sources.

Borehole development was considered but deprioritized due to permitting requirements and groundwater vulnerability in urban areas. Rainwater harvesting enhances sustainability and resilience.

### **6.5.6 Energy Sources Alternatives**

The project will connect to the Kenya Power grid as the main source. Energy conservation measures include:

- LED lighting and natural daylight maximization.
- Energy-efficient appliances and automatic controls.
- Potential solar PV integration for common areas (rooftop suitability).

Diesel generators will serve as backup only. Alternatives like full off-grid renewable systems were evaluated but rejected due to high costs and reliability needs in a residential setting. The chosen approach promotes efficiency and aligns with national energy goals.

### **6.6 Comparison and Selection of Preferred Alternative**

A multi-criteria evaluation (technical feasibility, cost, environmental/social impacts, regulatory compliance, and stakeholder acceptance) shows that the proposed revised design with sewer connection, reinforced concrete technology, integrated waste management, and energy-efficiency measures outperforms other alternatives. It maximizes housing benefits while minimizing land footprint (65% coverage), responding directly to Kilimani-specific concerns, and ensuring full EMCA/NEMA compliance.

### **6.7 Conclusion**

The analysis of alternatives demonstrates that the proponent's optimized proposal for the 232-unit residential development is the most appropriate and sustainable option. It delivers essential housing in a strategic urban location, complies with planning and environmental standards, incorporates stakeholder feedback through design revisions, and includes robust mitigation via the ESMP. Implementation of the preferred alternative, with continuous monitoring, will contribute positively to sustainable urban growth in Kilimani without undue environmental or social harm.

## **CHAPTER SEVEN: PUBLIC CONSULTATION AND PARTICIPATION**

### **7.1 Introduction**

Public consultation and participation is a fundamental and mandatory requirement in the preparation of the Environmental and Social Impact Assessment (ESIA) Study Report for the proposed 232-unit high-rise residential apartment development on Plot L.R. No. Nairobi/Block 15/717 along Gitanga Close off Gitanga Road, Kilimani Area, Dagoretti North Sub-County, Nairobi County.

This chapter provides a comprehensive, chronological, and transparent record of all stakeholder engagement activities conducted during the ESIA process. It details the legal and international standards complied with, the methodology employed, the three public barazas held, the specific issues and concerns raised by residents and other stakeholders, the immediate responses provided by the proponent's team, and the direct incorporation of this feedback into the final project design, alternatives analysis, impact mitigation measures, and the Environmental and Social Management Plan (ESMP).

The engagement process was iterative, allowing residents to influence key design changes, including reduction of building height from 16 to 15 floors, reduction of total units from 246 to 232, reduction of studio apartments to 98, adjustment of parking to 90 basement spaces, and optimization of ground coverage to 65%.

### **7.2 Legal and Policy Framework Governing Public Participation**

#### **7.2.1 National Legal and Policy Requirements**

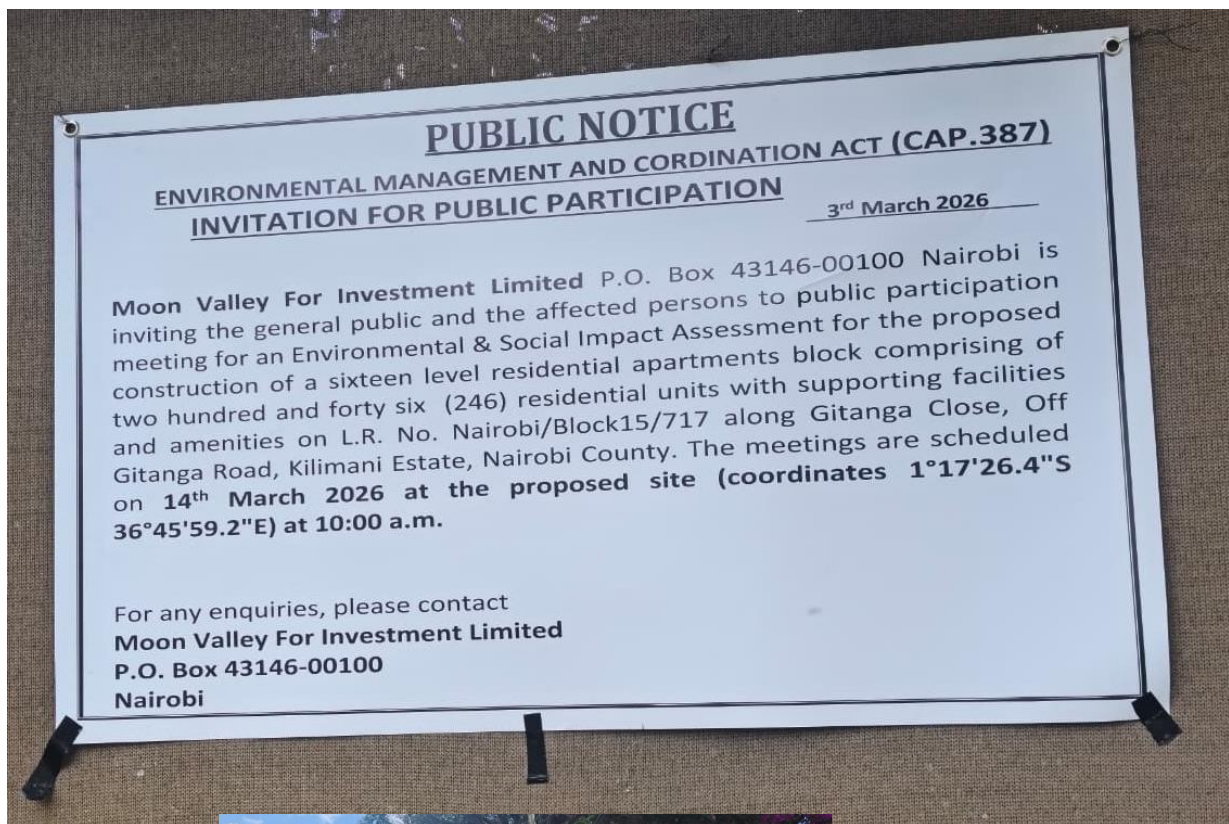
Public participation is explicitly mandated under:

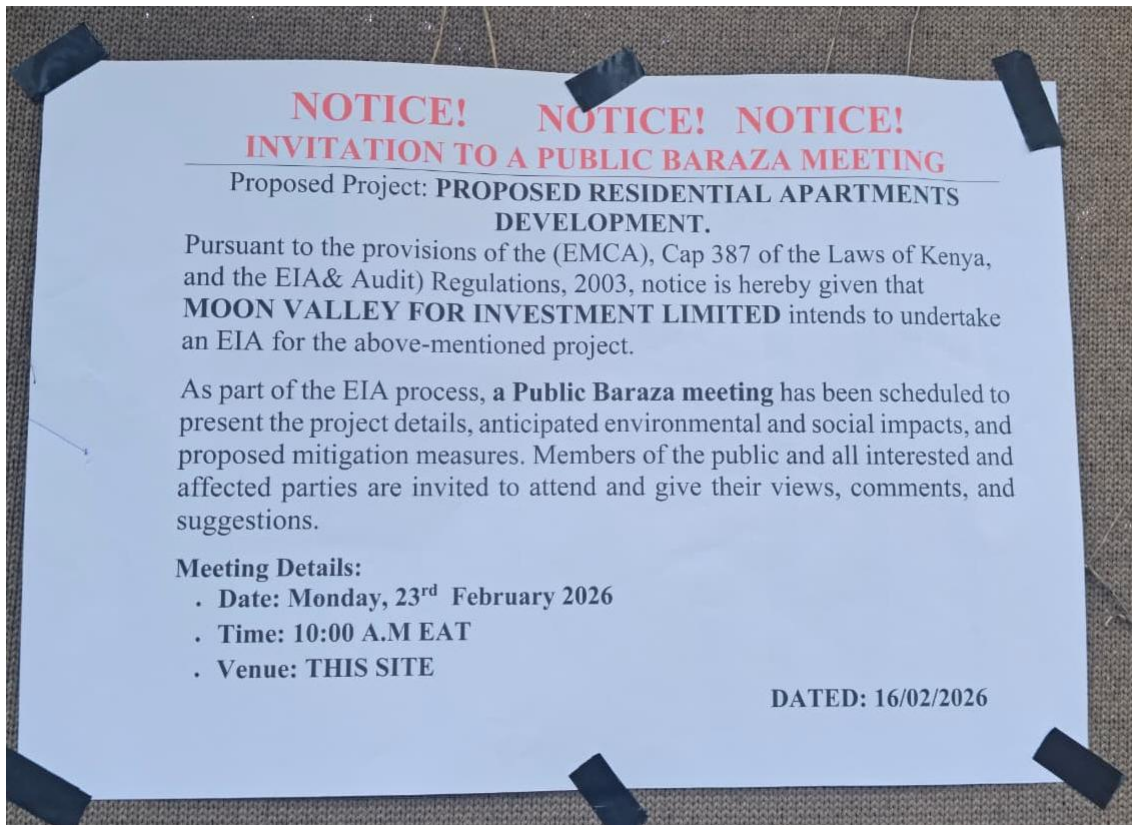
- Environmental Management and Coordination Act (EMCA) Cap 387 (as amended) and the Environmental (Impact Assessment and Audit) Regulations, 2003 (as amended by Legal Notice No. 31 of 2019), particularly Regulations 17 and 18, which require advertisement of the project, site notices, and public barazas at scoping and ESIA stages.
- Constitution of Kenya 2010 (Article 10: national values of public participation; Article 69: right to public involvement in environmental

decision-making; Article 43: right to adequate housing and a clean environment).

- Physical and Land Use Planning Act, 2019 (Sections 28–30: mandatory community input in land-use and zoning changes).
- Nairobi City County Physical and Land Use Development Plan and Nairobi Zoning Ordinance 2023 (Sessional Paper No. 1 of 2023 on Nairobi City County Development Control Policy), which guided the Change of Use approval granted in July 2025.

The project, being a High-Risk Project under the Second Schedule of EMCA (new housing estates exceeding 100 units), required enhanced stakeholder engagement.





***Plate: Site Notices erected at different dates inviting members of the public for public participation***

### **7.2.2 International Standards and Best Practice**

The process aligns with global benchmarks for meaningful participation:

- Aarhus Convention (1998) principles (access to information, public participation in environmental decision-making, and access to justice),

which Kenya observes through various multilateral environmental agreements.

- IFC Performance Standard 1 (Assessment and Management of Environmental and Social Risks and Impacts) – requires free, prior, and informed consultation, disclosure of project information, and establishment of grievance mechanisms.
- World Bank Environmental and Social Framework and Equator Principles – emphasize culturally appropriate, inclusive, and iterative engagement, especially for urban development projects with potential cumulative impacts on infrastructure, traffic, and neighbourhood character.

These standards ensure that affected parties are not only informed but actively shape project outcomes.

### **7.3 Objectives of the Public Consultation Process**

The objectives were to:

- Provide full and timely disclosure of project information (design, scale, benefits, potential impacts, and mitigation measures).
- Identify and document environmental, social, economic, and cultural concerns from directly affected residents, nearby property owners, institutional neighbours (e.g., British High Commission), and community groups.
- Incorporate stakeholder feedback into project redesign, alternatives analysis (Chapter 6), baseline assessment (Chapter 3), and the ESMP.
- Build trust, reduce conflict, and promote social acceptance.
- Fulfil statutory and international requirements for transparency and accountability.

### **7.4 Methodology**

The consultation followed a transparent, multi-stage, and inclusive approach:

- a) Notification: Site notices placed on the plot and Change of Use approval advertised in the newspaper.
- b) Venue and Timing: All meetings held locally along Gitanga Close to maximise accessibility.

- c) Facilitation: Led by the Area Chief (Mrs. Catherine Wawira) and Assistant Chief, with the Lead Consultant (Mr. Shadrack Mbuta / Mr. Shadrack Linge of iPlan Consult International Limited) and Architect (Mr. Ngure) in attendance. The County Planning Department representative (Mr. Moses Nyongesa) participated in the third meeting.
- d) Documentation: Full minutes recorded, attendance registers maintained (though some residents declined to sign or allow photographs), and issues captured verbatim.
- e) Iterative Process: Three consecutive meetings allowed progressive design revisions and follow-up on previous concerns.
- f) Inclusivity: Invitations extended to all neighbouring residents, institutional stakeholders, and interested parties. A WhatsApp group was proposed for ongoing communication.

## **7.5 Detailed Record of Stakeholder Meetings**

### **7.5.1 Meeting 1 – 23rd February 2026 (10:30 AM – 12:20 PM)**

Facilitators: Area Chief Mrs. Catherine Wawira, Lead Consultant Mr. Shadrack Linge, Architect Mr. Ngure, and other team members. Key Presentation: Project overview, architectural plans, 6 m setback from Gitanga Close, 2 m boundary setback, purely residential character, and compliance with county laws.

#### Major Concerns Raised and Responses

- Water source and aquifer depletion: Fear of additional boreholes exhausting groundwater. Response: Underground storage tanks proposed; no borehole drilling planned at that stage.
- Construction noise and dust: Many residents work from home. Response: Netting around site, regular water sprinkling, construction limited to working hours, machines switched off when idle.
- Parking and studio units: Ratio of one- and two-bedroom to studios unreasonable; studios inconsistent with neighbourhood and pose Airbnb/security risks. Response: Feasibility study and further consultations promised before finalising unit mix.

- Construction traffic and safety: Trucks on narrow road, school buses affected. Response: Off-peak deliveries, materials stored on-site; no use of private driveway.
- Property damage and drainage: Sloping land, potential flooding, repair of damaged roads. Response: Geotechnical investigations for excavation; water directed to main road and sewer; commitment to repair any damage.
- Security and British Embassy: Concern over commercial perception. Response: Confirmed purely residential; no commercial component.

The Chief proposed the next meeting on Saturday, 28th February 2026, to accommodate working residents.

### **7.5.2 Meeting 2 – 28th February 2026 (2:30 PM – 4:00 PM)**

Facilitators: Area Chief Mrs. Catherine Wawira, Lead Consultant Mr. Shadrack Mbuta, Architect Mr. Ngure. Key Presentation: Detailed plans and initial responses to Meeting 1 concerns.

#### **Major Concerns and Responses:**

- Zoning and Change of Use (residents): Based on old or new regulations? Response: Approvals issued under new zoning regulations.
- Parking adequacy (residents): Ratio insufficient; spillover parking feared. Response: Parking ratio explained (0.5 for 1- and 2-bedroom, 0.25 for studio); basements to be used.
- Project “out of character”: High-rise not aligned with neighbourhood. Response: Chief requested full professional team for next meeting.
- Building height, density, drainage, water/sewer capacity, traffic, security (studios), and construction insurance (multiple residents). Response: All issues noted for detailed presentation at next baraza.

### **7.5.3 Meeting 3 – 14th March 2026 (10:50 AM – 12:50 PM)**

Facilitators: Area Chief Mrs. Catherine Wawira, Lead Consultant Mr. Shadrack Mbuta, Architect Mr. Ngure, County Planning Representative Mr. Moses Nyongesa.

Key Updates Presented:

- Zoning under Nairobi Zoning Ordinance 2023 and Sessional Paper No. 1 of 2023.

- Ground coverage: Reduced to 65% (legal maximum 75%).
- Building height: Reduced from 16 to 15 floors.
- Plot ratio: Optimised to 1038 m<sup>2</sup> (allowable 1500 m<sup>2</sup>).
- Total units: Reduced from 246 to 232 (studios to 98, one-bedroom to 104, two-bedroom to 30).
- Parking: 90 basement spaces (ratio: 1 per 2-bedroom, 0.3 per 1-bedroom, 0.25 per studio).
- Ground-floor restaurant removed; now resident-only amenities (lounge, movie room).

### **Additional Concerns Raised**

- Emergency access and water deliveries on narrow Gitanga Close.
- Aquifer capacity assessment and security impact on British Embassy residences.
- Need for Traffic Impact Assessment (TIA), geotechnical report, and proof of Change of Use advertisement
- High density incompatible with low-to-medium density character; misleading marketing images (multiple residents).
- Request for all documents (minutes, reports, final ESIA) to be shared.

Responses: Courtyard inward facing; 6 m setback provides extra parking; Change of Use was advertised; all issues to be incorporated into the ESIA report.

### **7.6 Summary of Key Concerns, Responses, and Incorporation into the Project**

The table below consolidates the main themes across the three meetings and demonstrates how feedback was actioned:

No.	Concern (with key speakers)	Proponent Response & Change	Design	ESIA/ESMP Integration
1	Zoning & Change of Use	Confirmed under 2023 Ordinance; publicly advertised		Chapters 2, 4 & Legal Framework
2	Building height & overall density	Reduced 16 → 15 floors; units 246 → 232		Chapter 2 & Alternatives (Chapter 6)
3	Parking inadequacy & spillover	90 basement spaces with revised ratios		Chapter 2 & Traffic section
4	Ground coverage & plot ratio	Reduced to 65% and 1038 m <sup>2</sup>		Chapter 2 & Design compliance
5	Studio units & neighbourhood character	Studios reduced; purely residential		Chapter 2 & Socio-economic baseline
6	Traffic, access & emergency response	6 m setback; TIA to be appended		Traffic Impact Assessment (Appendix)
7	Water, sewer, drainage & aquifer	NCWSC sewer connection; storage tanks; stormwater design		Hydrology & ESMP
8	Construction impacts (noise, dust, damage)	Netting, sprinkling, off-peak deliveries, repair commitment		Construction-phase ESMP
9	Security (studios, British Embassy)	Inward courtyard; residential-only use		Security & Emergency Plan in ESMP
10	Documentation & transparency	Minutes shared; full reports to be provided		This Chapter & Appendices

### 7.7 Grievance Redress Mechanism

- Direct communication via the proposed WhatsApp group.
- Escalation through the Area Chief.
- Formal channels to NEMA or the courts as per EMCA.

### 7.8 Conclusion and Way Forward

The three public barazas conducted between 23rd February and 14th March 2026 represent a robust, transparent, and iterative stakeholder engagement process

that fully complies with EMCA Regulations, the Constitution of Kenya, and international standards (IFC PS1, Aarhus principles). Resident concerns directly shaped the final project design, resulting in a lower-impact, more neighbourhood-compatible development.

## **CHAPTER 8: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN**

### **8.1 Introduction**

The key outcome of the Environmental Impact Assessment (EIA) process for the proposed residential site project is the Environmental and Social Management Plan (ESMP). This ESMP is an instrument that will allow the project proponent to integrate environmental mitigation measures during implementation, operation and decommissioning phases of the project.

### **8.2 Scope and Objectives of the ESMP**

This ESMP focuses on mitigating the impacts identified during the environmental assessment process. The plan is meant to establish measures and procedures to control the identified impacts and monitor their progress. It will achieve the following in the long run:

- (i) Provide the National Environment Management Authority (NEMA) with a tool to make ease the evaluation of the implementation status of commitments made by the proponent during EIA study phase.
- (ii) Provide clear and mandatory instructions to the contractor with regard to their environmental and social responsibilities during project implementation phase.
- (iii) Ensure continuous compliance of the contractor with Kenyan legislation and policies regarding the environment.
- (iv) Assure the regulators and interested and affected parties the satisfaction of their demands in relation to environmental and social performance of the project.
- (v) Ensure that adequate financial and human resources are allocated to the project in order to give effect to such requirements or commitments, and to ensure that the scale of ESMP-related interventions is consistent with the significance of identified impacts.
- (vi) Provide a coherent and pragmatic framework for the implementation of the requirements, ranging from the formation of structures to administer the implementation, through the roles and responsibilities of the key project role-players, to the auditing and reporting of compliance; and

(vii) Ensure suitably qualified personnel with adequate power of authority are integrated within the various project implementation organisations to timeously identify and render appropriate and proactive corrective actions to unforeseen events or changes in project implementation not considered in the EIA process.

### **8.3 Applicable Legislation**

The pieces of legislation applicable to the Environmental and Social Management Plan are described in Chapter four of this Project Report. International normative instruments concerning the environment as well as international best practice have also been considered.

### **8.4 Principles of Environmental and Social Management Plan**

### **8.5 Responsibilities in Environmental and Social Management Plan**

#### **8.5.1 General**

The proponent and the contractor are the main entities responsible for implementing this ESMP. In the interest of environmental protection, health and safety of workers and the public, and in their own interest, the proponent should include in their contractual arrangements with contractors, clauses relating to environmental protection -and, specifically, compliance with the ESMP - that will safeguard the right to require the contractor's compliance with environmental requirements and social action in case of breach.

#### **8.5.2 Responsibility of the Contractor**

All contractors must designate individuals responsible for the overall management of environmental, social, safety, and health aspects throughout all operations. The contractor is also responsible for ensuring relevant staff training to efficiently and appropriately carry out project activities in compliance with the proponent's contractual requirements. Among many tasks, the contractor shall:

- (i) Prepare its own EMP as well as a health and safety plan within 30 days of signing the contract. The EMP implementation plan must be approved by proponent prior to the initiation of construction works.

- (ii) Submit to the proponent the work procedures/methods or equivalent documents for approval.
- (iii) Operate on the basis of valid Licenses/Approvals/Authorizations for the activities to be implemented.
- (iv) Employ techniques, practices and construction methods to ensure compliance with the ESMP.
- (v) Prevent or minimize the occurrence of accidents which might cause damage to the environment and be able to respond positively to an accident if it occurs.
- (vi) Meet the working procedures and environmental requirements and health and safety established by contract with the Proponent; ensure compliance with them by subcontractors who might be hired by him.
- (vii) Minimize environmental damage, waste control, avoid pollution, prevent loss or damage to natural resources and minimize the effects on the users and occupants of surrounding lands and the public.
- (viii) Provide Personal Protective Equipment (PPE) to workers which is appropriate to the tasks to be performed and ensure that it is used.
- (ix) Implement all corrective activities agreed in audit (internal or performed by other agencies) or inspections, within the pre- established deadline.
- (x) Manage the complaints process on the elements that fall within its jurisdiction, or refer complaints to the Proponent, so that they can receive treatment/appropriate response.
- (xi) Prepare a Rehabilitation Plan which shall include preliminary designs on the temporary and permanent landscaping plan during both the construction and post-construction and maintenance period (where applicable).

### **8.5.3 Responsibilities of Regulatory Agencies**

Regulatory Agencies directly involved in this project include the National Environment Management Authority (NEMA), County Labour Officers, KPLC, Nairobi Water and Sewerage Company among others. NEMA is the institution that plays a greater role in the process since it is responsible for taking decision on the EIA process and responsible for regulating the environmental performance of projects in Kenya. They are also responsible for verification, inspection and audit,

before, during and after the implementation of projects (in accordance with (EMCA) 1999 (Revised 2015). NEMA is also a governmental agency with expertise in waste management with regard to: the issuance and dissemination of the mandatory rules on the procedures to be followed for waste management.

The other institutions listed above play a subsidiary role in specific issues of the EIA process and its implementation. For instance, KPLC and Nairobi Water and Sewerage Company shall be responsible for power and water connection to the site.

- (i) Comply with and enforce existing laws and the requirements of environmental agencies and other relevant bodies involved.
- (ii) Ensure that the Environmental Management Plan is fulfilled according to the stipulated standards.
- (iii) Identify and evaluate periodically the effects and results on the basis of established environmental standards and propose, where necessary, changes, additions or new actions and activities, considering also the progress of services and their capacity to contractual deadlines and resources allocated.

#### **8.5.4 Extended Producer Responsibility (EPR)**

Section 13(1) of the Sustainable Waste Management Act 2022 stipulates that every producer shall bear extended producer responsibility obligations to reduce pollution and environmental impacts of the products they introduce into the Kenyan market and waste arising therefrom. It states further that the extended producer responsibility obligations can be fulfilled either individually or collectively in a compliance scheme.

These provisions apply to the proponent, contractor and suppliers for the wastes that arise from their operations. Measures must be put in place for re-use, recycling and proper disposal. Where required, a take back scheme shall be put in place to collect waste products produced by the various parties to this project either individually or collectively.

#### **8.6 Construction Phase Environmental Management Plan**

The EMP for the construction phase mainly focuses on impacts that are likely to affect the environment, the health and safety of the public as well as the workers during the planning and construction process. Mitigation measures are then

proposed to minimize the anticipated impacts. Issues covered by the construction EMP include Occupational safety and health, air pollution, surface and ground water contamination, noise pollution and traffic impact among others. The EMPs have considered both construction and occupation phases.

Table: EMMP for Construction & Occupation Phases

<b>Environmental /Social Impacts</b>	<b>Proposed Mitigation and Aspects for Monitoring</b>	<b>Responsibility during design, Construction and Defects Liability Period</b>	<b>Responsibility after defects Liability Period</b>	<b>Monitoring means (C) = Construction (O) = Occupation</b>	<b>Estimated Cost (Kshs)</b>
<b>Soil disturbance</b>	<ul style="list-style-type: none"> <li>• Control earthworks &amp; compact loose soils</li> <li>• Install drainage structures properly</li> <li>• Landscaping on project completion</li> <li>• Control and manage excavation activities</li> <li>• Control activities especially during rainy conditions</li> <li>• Provide soil erosion control and conservation structures/means where necessary</li> <li>• Ensure appropriate standard practices on the provided gardens.</li> </ul>	Contractor	Proponent	(c) Inspection (o)Routine maintenance  (c) Inspection (o)Routine maintenance	1,000,000
<b>Changes in land use- extent</b>	<ul style="list-style-type: none"> <li>• Plant vegetation after project completion even if in pots.</li> </ul>	Proponent and contractor	Proponent	Inspection and records inspection	500,000

	<ul style="list-style-type: none"> <li>• Ensure compliance with existing planning policy</li> <li>• The project shall be approved by the relevant government bodies before commencement.</li> </ul>				
<b>Changes in hydrology/ impended drainage/deep excavations</b>	<ul style="list-style-type: none"> <li>• proper Installation of drainage structures</li> <li>• Install cascades to break the impact of water flowing in the drains</li> <li>• Ensure efficiency of drainage structures through proper design and maintenance</li> <li>• Provide grants to the drainage channels</li> <li>• A geotechnical survey shall be conducted and the recommendations followed. There shall be no blasting during excavation</li> <li>• A methodology for excavation shall be generated as required by NCA prior to excavation</li> </ul>	Contractor	Proponent	(c) Inspection  (o)Routine maintenance	900,000
<b>Air pollution</b>	<ul style="list-style-type: none"> <li>• Enclose the site with dust-proof net during construction</li> <li>• Water should be sprayed during the construction phase of</li> </ul>	Contractor	Proponent / Contractor	c)Inspection/ observation	1,500,000

	<p>excavated areas during dry conditions</p> <ul style="list-style-type: none"> <li>• Control speed and operation of construction vehicles</li> <li>• Prohibit idling of vehicles</li> <li>• Ensure sound condition of construction machinery and equipment</li> <li>• Engage sensitive construction workers.</li> </ul>				
<b>Noise Pollution</b>	<ul style="list-style-type: none"> <li>• Erect suitable barriers to control noise</li> <li>• Sensitize drivers of construction machinery on effects of noise</li> <li>• Maintain plant equipment (if present)</li> <li>• Construction activities to be restricted to daytime</li> <li>• Workers in the vicinity of or involved in high-level noise to wear safety &amp; protective gear.</li> </ul>	Contractor	Proponent / Contractor	c)Inspection/ observation	840,000
<b>Water quality and sewerage infrastructure</b>	<ul style="list-style-type: none"> <li>• The design of the entire sewerage system should consider the estimate discharges from individual sources and the cumulative discharge of the entire project even during peak volumes</li> </ul>	Contractor	Proponent / Contractor	c)Inspection/ observation	3,000,000

	<ul style="list-style-type: none"> <li>• Provide for adequate drainage systems</li> <li>• Ensure effluents are discharged responsibly to the sewerage system</li> <li>• The proponent shall seek approval from NWSC before connecting to the existing public mains</li> <li>• Monitor quality of wastewater to ensure compliance with the Environmental Management &amp; Coordination (Water Quality) Regulations, 2006 and other relevant Laws.</li> </ul>				
<b>Oil pollution</b>	<ul style="list-style-type: none"> <li>• Proper storage, handling and disposal of new oil and used oil wastes as per waste regulations</li> <li>• Maintain plant and equipment to avoid leaks</li> <li>• Maintenance of construction vehicles should be carried out in the contractor's yard (off the site)</li> <li>• Provide oil interceptors along the drains leading from car park and potentially oil risk areas.</li> </ul>	Contractor	Contractor	c)Inspection/ observation	960,000
<b>Road safety</b>	<ul style="list-style-type: none"> <li>• Enforce speed limits for construction vehicles, especially along roads leading to the site</li> </ul>	Contractor	Proponent, Traffic & roads Dept/trans porters	c)Inspection/ observation	400,000

	<ul style="list-style-type: none"> <li>• Provide billboards at the site/entrance to notify motorists about the development</li> </ul>				
<b>Public health, occupational health and safety</b>	<ul style="list-style-type: none"> <li>• Train staff/workers on occupational health and safety</li> <li>• Provide full protective gear &amp; workmen's compensation cover in addition to the right tools and operational instructions &amp; manuals during construction</li> <li>• Adopt sound waste management system to ensure proper solid waste disposal and collection facilities</li> <li>• Adopt sound housekeeping practices.</li> <li>• Sensitize residents on environmental management</li> <li>• Design of sewerage system should be as provided in the plans and should be constructed to approved size and design, standard and of approved materials</li> <li>• Engage the services of qualified personnel and/or ensure training</li> <li>• Ensure use of standard construction materials and to the specifications. Avoid undesirable,</li> </ul>	Contractor, supervising Foreman	Proponent where relevant	(o)Observation	3,600,000

	<p>substandard, hazardous or unauthorized materials during construction &amp; maintenance.</p> <ul style="list-style-type: none"> <li>• Sensitized staff on social/health issues such as drugs</li> <li>• Ensure machinery and equipment servicing and maintenance as per schedules &amp; legal requirements Post strategically the Factories and Other Places of Work Act Abstract &amp; provide material safety data sheets</li> <li>• Post clear warning signs e.g. ‘No unauthorized use of machines’, ensure there are guards on moving parts etc.</li> <li>• Provide fully equipped First Aid kits &amp; train staff on its use</li> <li>• Ensure adherence with the legal requirements-Factories Act.</li> <li>• Sensitize residents on environmental management</li> <li>• Ensure Nairobi City County certifies and issues occupation certificates.</li> </ul>				
<b>Vegetation</b>	<ul style="list-style-type: none"> <li>• Avoid unnecessary removal of vegetation especially along plot boundaries</li> </ul>	Contractor Contractor	Proponent	(o)Observation  (o)Observation	670,000

	<ul style="list-style-type: none"> <li>• Landscaping and planting vegetation in all available areas</li> </ul>				
<b>Fire safety and preparedness</b>	<ul style="list-style-type: none"> <li>• Install firefighting equipment as provided elsewhere in the report.</li> <li>• Conduct training on firefighting, evacuation and emergency response</li> <li>• Sensitize the residents on fire risks i.e. conduct regular fire drills</li> <li>• Adapt effective emergency response plan</li> <li>• Maintain/service firefighting machinery regularly</li> <li>• Provide emergency numbers at strategic points.</li> </ul>	contractor	Proponent	(o)Observation	720,000
<b>Security and Social impacts</b>	<ul style="list-style-type: none"> <li>• Provide security guards, CCTV cameras and other security apparatus during the entire project cycle. Construction work timings shall only in line with the NEMA licensing conditions</li> </ul>	Contractor	Proponent	(o) Observation	700,000
<b>Water Quality</b>	<ul style="list-style-type: none"> <li>• The design of the entire sewerage system should consider the estimate discharges from individual sources and the cumulative discharge of the entire project even during peak volumes</li> </ul>	Proponent/contractor or	Proponent	Data Collection	300,000 per year

	<ul style="list-style-type: none"> <li>• Provide for adequate drainage system</li> <li>• Ensure effluents are discharged responsibly to the sewerage system</li> <li>• Install an oil water interceptor to trap oils that may be present in wastewater</li> <li>• Apply and obtain an Effluent Discharge License (EDL) for effluent released into the environment</li> <li>• Monitor quality of wastewater to ensure compliance with the Environmental Management &amp; Coordination (Water Quality) Regulations, 2006 and other relevant Laws.</li> </ul>				
<b>Waste Management</b>	<ul style="list-style-type: none"> <li>• During construction phase, designate an area for temporarily holding waste materials</li> <li>• All wastes should be disposed of in accordance with the Environmental Management &amp; Coordination (Waste Management) Regulations, 2006 and other relevant Laws</li> <li>• Segregation of wastes at the source for ease of handling and disposal</li> </ul>	Proponent	Proponent	Records	200,000 per year

	<ul style="list-style-type: none"> <li>• Contract a NEMA licensed waste transporter to transport solid waste from the proposed site during construction and occupation phases</li> <li>• Sell recyclable waste to recyclers</li> <li>• Provide bins for temporarily holding waste before collection by licensed transporters during occupation phase.</li> </ul>				
<b>Traffic Management</b>	<ul style="list-style-type: none"> <li>• Conduct a traffic Impact Assessment and generate a traffic management plan</li> <li>• The Traffic management plan should be followed throughout the project cycle</li> </ul>	Traffic Engineer	Proponent	Records	500,000
<b>Power sources</b>	<ul style="list-style-type: none"> <li>• Power supply requirements shall be calculated and shared with KPLC as is the requirement</li> <li>• A dedicated transformer for the entire project shall be a consideration</li> <li>• Alternative power sources (solar) shall also be installed for lighting and heating</li> </ul>				

**Table: Occupational Health and Safety EMP for the proposed project during construction and operational phase**

<b>KEY ISSUES</b>	<b>MITIGATION MEASURE</b>	<b>Responsibility</b>	<b>TIME FRAME</b>	<b>COST KSH.</b>
<b>Registration of the premises</b>	Register the premises under the Occupational Health and Safety Act Cap 514, of the Laws of Kenya.	Proponent	One-off	5,000
<b>General register</b>	Sec 62 (1) of the Keep a general register of all workers within the facility as stipulated in Occupational Health and Safety Act.	Proponent, contractor	Construction	500
<b>Incidents and accidents</b>	Report any incidents and accidents using prescribed forms obtainable from the Occupational Health and Safety Office	Site Safety Officer	Continuous	1000/month
	Conduct regular safety education and training.	Site Safety Officer	Quarterly	10,000
	Prepare a contingency plan for emergency response before the start of the project.	Site Safety Officer	One-off	10,000
<b>Insurance</b>	Insure the premises as per statutory requirements (third party and workman's compensation)	Proponent and all occupants	Annually	-

<b>KEY ISSUES</b>	<b>MITIGATION MEASURE</b>	<b>Responsibility</b>	<b>TIME FRAME</b>	<b>COST KSH.</b>
<b>Safety healthy environment (SHE) policy</b>	Develop, document and display prominently an appropriate Safety and Healthy Environment policy.	Site Safety Officer	One-off	5.000
<b>Sanitary conveniences</b>	Provide suitable, efficient, clean, well-lit and adequate sanitary amenities at the site taking care of gender division	Contractor, proponent and all occupants	One-off	100,000
<b>Machinery/equipment safety</b>	Ensure that machinery, equipment, PPE, appliances and tools to be used comply with the prescribed safety and health standards and be appropriately installed, maintained and safeguarded.	Contractor, proponent and all occupants	One-off	-
<b>Storage of materials</b>	Ensure that materials are stored or stacked in such manner as to ensure their stability and prevent any fall or collapse.	Contractor, proponent and all occupants	Continuous	-
<b>Safe of access in the buildings</b>	All floors, steps, stairs and lift of the premises must be of sound construction and be properly maintained	Contractor, proponent and all occupants	Continuous	-
<b>Emergency preparedness and</b>	Design suitable documented emergency preparedness and evacuation procedures for emergencies	Site Safety Officer	One-off	1,000

<b>KEY ISSUES</b>	<b>MITIGATION MEASURE</b>	<b>Responsibility</b>	<b>TIME FRAME</b>	<b>COST KSH.</b>
<b>evacuation procedures</b>				
<b>First Aid</b>	On site a stocked first aid box which is easily available and accessible	Site Safety Officer	One-off	10,000
<b>Fire protection</b>	Regularly inspect and service fire-fighting equipment by a reputable service provider and maintain inspection records.	Site Safety Officer	Every 3 months	5,000
	Prominently display signs such as “NO SMOKING” at the site especially in parts where inflammable materials are stored.	Site Safety Officer	One-off	1,000
<b>Ventilation</b>	Provide adequate space within the premises to allow for adequate natural ventilation through circulation of fresh air.	Contractor, occupants	One-off	-
<b>Lighting</b>	Provide adequate artificial or natural lighting in all parts of the premises where persons are working or passing.	Contractor, occupants	One-off	-
<b>Electrical safety</b>	Do not overload circuits.	Proponent and Contractor	Continuous	-

<b>KEY ISSUES</b>	<b>MITIGATION MEASURE</b>	<b>Responsibility</b>	<b>TIME FRAME</b>	<b>COST KSH.</b>
	Clearly mark distribution board switches to indicate respective circuits and pumps.	Proponent and Contractor	One-off	-
	Ensure that no live electrical wires are exposed.	Proponent and Contractor	Continuous	-
	Earth all electrical equipment	Proponent and Contractor	One-off	10,000
<b>Diseases</b>	Provide complete refuse collection and handling service.	Proponent and Contractor	Continuous	10,000
<b>Security</b>	Fence the site and employ security personnel operating 24 hours. Install security alarms and/or surveillance systems.	Proponent and Contractor	Continuous	50,000

## **8.4 Monitoring, Auditing Auxiliary Information**

### **8.4.1 Monitoring**

Monitoring to be undertaken will be both active and reactive.

**8.4.1.1 Active monitoring:** Monitoring of the achievements of specific plans of the EMP, performance criteria and fulfillment of objectives.

- Systematic inspection of workplace; Surveillance and monitoring of the work environment, including the organization of work and activities involved
- Monitoring of workers. health; and Monitoring of compliance with laws, regulations and other requirements
- 

**8.4.1.2 Reactive monitoring:** Work related injuries, ill health (including record keeping and monitoring of sickness/absence), disease and accidents.

- ✓ Losses such as damage to property
- ✓ Deficient safety and health performance including OHSMS failures
- ✓ Worker's rehabilitation and health restoration programmes.

### **8.4.2 Monitoring parameters**

Monitoring will involve measuring, observing, recording and evaluation of physical, socioeconomic and ecological variables within the project area and the neighborhood. This may include the following: -

- Water quality monitoring; Solid waste disposal monitoring; and
- Hydro-geological impact monitoring.

### **8.4.3 Environmental Auditing**

While the construction of the project may be considered to be a one-off event needing no further audits, routine one-intention annual environmental audit should be carried out as provided for in the EMCA 2003. The audit will serve to confirm the efficacy and adequacy of the proposed Environmental Management Plans. The audit should include the following.

- Water analysis, Waste generation, management and disposal,

- Views and comments from neighbors and progress in implementation of Environmental Management Plan

## **CHAPTER NINE: OCCUPATIONAL HEALTH & SAFETY AND MANAGEMENT PLAN**

### **9.1 Project Employee Responsibilities**

**a) Project Manager** - must lead project team by setting an example for safety awareness as well as developing, communicating and supervising the safety program. The project manager must enforce and set the tone for all safety related issues during and prior to the planning of each project phase. They must provide leadership and show commitment to a safe and healthy environment. Responsibilities shall include reviewing inspection reports, safety meeting reports and addressing health and safety issues on the jobsite.

**b) Site Agent** - must lead, oversee and manage all site work, including safety. The superintendent must ensure that safety procedures are applied in an effective manner and that all employees are conforming to established rules and regulations. Duties include establishing a pre-job assessment prior to the start of the project, ensuring site foremen comply with safety regulations, conducting safety orientations for all new employees, reviewing all incident & corrective action reports, pre-task plans and enforcing disciplinary action when necessary. The site agent will also work with the site safety representative overseeing regular site inspections, developing a site-specific emergency plan and implementing weekly toolbox topics with subcontractors.

**c) Project Engineer** - Responsibilities include collecting all subcontractor safety programs, material safety data sheets (MSDS) and ensuring all site foreman have access to site plans.

**d) Site Safety Representative** - will act as the designated safety manager and will inspect the job site weekly, conducting safety inspections. Responsibilities include providing education and training opportunities to all employees, conducting safety audits, discussing & providing weekly toolbox topics, developing an emergency action plan and procedures, reviewing all safety programs and safety data sheets

(SDS), scheduling Pre-Task planning meetings & overseeing implementation, issuing violation notices, issuing corrective action reports.

## **9.2 Project Safety Orientation**

Each employee working on the site are required to complete the Employee Safety Orientation. This must be complete within one week of any employee beginning work on site.

## **9.3 Job site Inspections**

- a. Site Safety Representative will conduct weekly site inspections, and review all safety documents (pre-task plan, crane plan, etc.).
- b. Contractors shall perform daily safety inspections of their work area and equipment per OSHA, 2007 requirements.
- c. After inspecting a job site/work area, the site safety representative and superintendent will identify and evaluate all potential hazards for:
  - a. Possibility for severe injury.
  - b. Probability of accident occurrence.
- d. This site safety representative will also consider the skill and knowledge level demonstrated by exposed workers.
- e) This site safety representative shall then take the following actions:
  - Discuss all hazards with the necessary parties
  - Explain appropriate recommendations and precautions
  - Assist with any necessary training (i.e. provide appropriate Tool Box Talks), in accordance with the level of hazard
  - Issue citations & corrective actions
  - Records shall be maintained for all recommendations, precautions, and training for each hazard identified
  - All incidents, regardless of severity, will be discussed at the next project safety meeting, with an emphasis on eliminating future occurrences.

#### **9.4 Emergency Procedures, Investigation, and Reporting**

- Contractors/employees shall report all work-related injuries, illnesses, first aid cases, near misses, property damage, and environmental incidents such as a spill or release of hazardous materials, regardless of severity, immediately to the Project Superintendent and Safety Manager
- The contractor shall investigate all incidents and forward copies of the incident report to the Safety Manager within 4 hours of the incident. An incident report must be provided for: near misses, first aid, recordable injuries, third party property damage or personal injury, and builders risk claims.
- Corrective actions will be implemented, and any worker compensation or liability claims shall be reported to project manager
- Follow-up information on personal injuries (doctor's reports, insurance or worker's compensation reports etc.), shall be forwarded to the Safety Manager within a reasonable time frame.

#### **9.5 Emergency Signals and Procedures**

1. **Serious Emergency** - A single long blast from an air horn shall be given by the Project Superintendent in the event of a serious emergency on the site. These include serious or life-threatening injury, severe weather or other impending natural disaster, or other emergencies not requiring immediate evacuation of the site. Please discontinue working and report to your foreman. Foremen shall report to the Project Superintendent for further instructions. Two quick blasts from an air horn shall signal all clear.

2. **Evacuation** - Three or more long blasts from an air horn shall be given by the Project Superintendent in the event that total evacuation of the site is necessary. Immediately discontinue working and evacuate to a safe location (designated by project superintendent). Foremen shall account for all workers in their crew and shall report to the Project Superintendent. The Superintendent shall instruct the

foremen according to circumstances to remain at the gathering location or retreat to a safer distance. Two quick blasts from an air horn shall signal the all clear.

## **9.6 Fire Prevention Program**

1. There should be a program committed to minimizing the threat of fire to employees, visitors, and property. It is the responsibility of the contractor to have their own Fire Prevention Program (FPP) and to instruct and train all employees in fire prevention and fire response.

2. When Cutting, Welding, and Open Flame Work are performed, the contractor shall at minimum ensure the following:

- All cutting and welding equipment is inspected and operated by competent, trained personnel
- No cutting or welding shall take place on metal walls, ceilings, or roofs built of combustible sandwich-type panel construction or having combustible covering
- A fire extinguisher shall be located within 10' of all cutting, welding, or other hot work
- Proper PPE must be utilized.

3. All combustible materials must be properly secured and stored outdoors

4. Smoking is prohibited at site projects.

5. The contractor must establish and maintain a means of proper egress, and all exits must be marked by a readily visible sign.

6. Fire Extinguishers must comply with the following:

- readily available every 3,000sf.
- Require quarterly inspection tag. Any defective device must be removed from service immediately
- Shall be located & labeled so it can be readily seen and accessible along normal paths of travel. In multi-story buildings, at least one extinguisher must be adjacent to a stairway.

## **9.7 Hazard Communication Program**

### **1. Hazard Determination**

- a. SDS supplied by the contractors and manufacturers shall be utilized in identifying hazardous materials.
- b. Subcontractors must submit all appropriate MSDS documentation to project manager's office prior to beginning work on project site.

### **2. Labeling**

- a. All containers on the jobsite shall be properly labeled by the contractor responsible.
- b. All labels shall clearly indicate:
  - Identity
  - Hazard
  - Precautionary Statement
  - Name and address of responsible party.

### **3. Safety Data Sheets (SDS)**

- a. SDS for all hazardous chemicals to which employees may be exposed will be kept at the corporate office and the jobsite field office.
- b. SDS will be available for review to all workers and employees.
- c. Notification of new or revised MSDS shall be posted.

### **4. Employee Information**

- a. All known hazardous substances present on the site and location of SDS shall be disclosed to the workers in the mandatory Project Safety Orientation.
- b. When workers are required to perform work in areas known to contain hazardous materials, it is the subcontractor's responsibility to identify:
  - ✓ Specific chemical hazards.
  - ✓ Protection/safety measures the employee is required to take to lessen risks.
  - ✓ Potential hazard reduction measures

- ✓ The main contractor will work with the subcontractor to the greatest extent feasible to limit exposure to the hazard(s).

## **5. Training**

- a. Employers must provide employees with effective information and training on hazardous chemicals in their work area, and whenever a new hazardous chemical is introduced
- b. Employees are required to wear and have appropriate training on PPE associated with each hazardous chemical being used.

## **9.8 General Safety**

### **9.8.1 Personal Protective Equipment (PPE)**

- All personal protective equipment shall be provided by contractors prior to the start of job
- Personal protective equipment including hard hats, safety glasses, work boots and high visibility shirts must be worn 100% of the time
- Proper work attire
- Fall protection is required for all traders when working at heights of 6' or more
- Protective gloves or clothing shall be worn when required to protect against a hazard
- A face shield or safety goggles are required when cutting, grinding, welding or power washing
- Hearing protection is required when working in areas where noise levels exceed 85 decibels, or normal conversation cannot be conducted, or when the area is posted as a noise hazard
- Dust masks or respirators shall be worn in all dusty environments. Pulmonary testing, fit tests and written respiratory programs are required for respirator use
- All personal protective equipment must be inspected daily as per OSHA, 2007 standards.

### **9.8.2 Moving Equipment**

- All operating equipment shall be equipped with rollover guards per OSHA 2007 standards
- Operating equipment shall be equipped with an audible notification, strobes and/or  
beacons per manufacturer's requirements
- A spotter is required whenever a vehicle has a restricted view while operating on site
- Properly set-up barricades or traffic control zones when operating equipment near public roadways. When construction activities are at a peak level, the use of a spotter/traffic controller is permitted to help direct and control traffic
- Contractor/Sub-contractors is required to conduct daily inspections of all equipment
- Employees assigned to traffic control duties must wear high visibility clothing per OSHA 2007 standards.

### **9.8.3 Excavating/ Site Utilities**

1. The competent person must inspect the excavation
  - Daily before work activities commences
  - After a heavy rainfall
  - At depths greater than 4" for oxygen deficiencies or hazardous atmospheres
  - For failures of protective systems, equipment and adjacent structures.
2. Miss Dig must be contacted prior to starting any excavating.
3. When working in a trench 4 feet or more in depth, proper sloping, shoring, or other cave in protection methods shall be utilized.
4. Ladders shall be provided at least every 25 feet for access to trenches exceeding 4 feet in depth.
5. Material and spoil piles shall be kept a minimum of 2 feet away from the edge of a trench.

6. All open holes, trenches, and excavations shall be barricaded and clearly marked to alert the public and other workers in the area.
7. Excavations and trenches may be confined spaces where air monitoring could be required.
8. All vehicles hauling soil from site must pull into site and turn around.

#### **9.8.4 Crane & Rigging Safety**

- Must be included in a Pre-Task plan
- All operators shall be certified and cards submitted to project supervision before start of work
- All cranes are to be inspected on a daily basis
- All cranes must have proof of annual inspection
- Outriggers must be manufactured and be fully extended and on stable ground.
- The swing radius of all cranes must be properly barricaded
- Contractor must submit a copy of the crane plan (operation, swing radius, etc.) to superintendent prior to the start of the project.

#### **9.8.5 Fall Protection**

1. Fall protection systems are required when exposed to heights of 6' or more. Systems include:
  - a) Guardrails
  - b) Safety nets
  - c) Personal fall arrest systems. All systems must be inspected, constructed and installed per OSHA, 2007 requirements.
2. When conducting roofing work, contractors are required to submit a pre-task analysis.
3. All holes/ floor openings greater than 2" in depth or diameter are required to be properly barricaded/covered or secured, and clearly marked with high visibility paint as a "hole". All hole/openings that are barricaded and covered shall be securely/mechanically fixed in place.
4. Contractors are required to maintain all fall protection devices.

5. If an employer can demonstrate conventional fall protection methods are infeasible or present a greater hazard, a fall protection plan may be implemented. The fall protection plan must comply with OSHA standards and include the following:

- a) Site specific requirements/unique circumstances
- b) Prepared by a qualified person.
- c) Supervised by a competent person.
- d) Explain why conventional methods are infeasible.
- e) Discuss the safety measures that will be taken to reduce or eliminate the fall hazard of the workers.
- f) Describe all controlled access zones
- g) Require training for all employees.

#### **9.8.6 Electrical**

- Cords and tools must be inspected on a daily basis. If the insulation or casing of the cord is damaged, or the ground prong is missing, the cord will be cut by project supervision
- All cords must be 3 prong heavy duty cords and be protected from indoor/outdoor traffic
- Portable generators must be provided with ground fault circuit interrupters
- Temporary lighting must be protected with safety guards
- Stairwells, corridors & work areas shall be properly illuminated with either temporary or permanent lighting.

#### **9.8.7 Scaffolding Safety**

- All scaffolds must be erected and inspected daily by a competent person.
- Each work level of the scaffold system shall be full planked and overhang the end supports by a minimum of 6 inches and a maximum of 12 inches. Planking which does not meet this requirement must be cleated

- The scaffold system must have a ladder provided for access. Climbing the bracing is not acceptable unless the system has a built-in ladder for that purpose
- Scaffolding height must never exceed 4 times their minimum base dimension. If this is exceeded, the scaffold must be tied into the structure
- All working and walking levels must be fully planked and not overloaded
- Planks must be scaffolding grade lumber. Cracks shall not penetrate more than 12 inches.
- Riding wheeled scaffolding is prohibited
- The footing or anchorage for scaffolds must be sound, rigid and capable of carrying the maximum intended load without settling or displacement.

### **9.8.8 Ladder Safety**

- Only type 1A ladders with a heavy-duty rating are required
- No painted or aluminum ladders are allowed on site
- All ladders must extend a minimum of three (3) feet above the landing and be secured. If the ladder cannot be secured, it must be held at the bottom by another worker
- Keep ladder bases clear from debris, hoses, wire, materials, etc
- Use the “four and one” rule when positioning a ladder – one foot of base for every four feet of height
- Step ladders must be fully extended and locked into place. Placement shall be on stable surfaces
- Workers shall not straddle or stand on the top two rungs of a ladder and shall work facing the ladder.

### **9.8.9 Aerial Work Platforms**

- Must be inspected daily
- Operated by trained and authorized personnel. Employees must have operator’s certification readily available

- All employees must wear a body harness and be tied off inside the basket when elevated at all times.
- Lifts should only be operated in accordance with the manufacturer's manual.

### **9.8.10 Housekeeping**

- Contractor/Subcontractors must properly dispose of all waste materials on a daily basis
- Contractor/Subcontractors must properly store and secure all work material and equipment
- Site clean-up is required on a daily basis
- Stairways and passageways must be kept clear of debris.

## **9.9 Site Specific Safety Requirements**

### **9.9.1 Site Work**

- Employees must wear proper PPE
- Contractor/Subcontractors must maintain a clear path through the jobsite
- Storing of materials and goods will be located in a way as to prevent site congestion. Concrete
- All exposed rebar will be capped, or covered to protect against impalement or injury
- Employees operating equipment such as vibrators pump nozzles, and/ or buggies will wear appropriate clothing and PPE, such as boots, eye protection and hearing protection. Long sleeve shirts will be worn to protect against the exposure of concrete
- Concrete contractor must appropriately barricade working area during concrete forming and after concrete has been poured
- Material used for formwork must be removed and properly disposed of. Subcontractor will remove all debris and conduct a clean-up of the work area daily.

### **9.9.2 Steel Erection**

- a) Subcontractor must conduct a pre-task analysis with the superintendent before all overhead hoisting activities take place
- b) The area of erection must be securely barricaded. If necessary, a controlled access zone may be permitted
- c) All steel erectors must wear appropriate PPE, including fall protection at heights greater than 6 feet and a face mask when welding
- d) Contractor must provide the following when using a crane:
  - ✓ Crane operator certification
  - ✓ Crane plan, including staging area, swing radius and required barricades.

### **9.9.2 Block Masonry**

- (i) Mason contractor must provide, if applicable, wall bracing plan prior to start of work.
- (ii) Competent person (foreman) must conduct daily inspections of scaffold equipment
- (iii) Employees working within restricted fall zone must be trained and certified to work in restricted fall zone area
- (iv) Masonry block walls at heights of 8 feet or greater, not tied into the structure, must be adequately braced
- (v) Restricted fall zone areas must be established prior to the construction of the wall, and will be restricted to employees who are actively engaged in constructing the wall.

### **9.9.3 Truss & Deck Framing**

- All walkways and working surfaces must be clear of debris to prevent tripping hazards
- Employees are required to wear appropriate PPE, including fall protection at heights greater than 6 feet
- Contractors must establish a controlled access zone to prevent other contractors from entering work area

- Trusses/Joists must be adequately braced to prevent falling or tipping
- Contractor must barricade crane swing radius when loading and setting trusses in place.

#### **9.9.4 Window Installation**

- All window openings require a guardrail if the window sill measures a height below 39” and a width greater than 18”
- When installing windows on the upper floors, the area below (ground level) must be properly barricaded
- Employees are required to wear a personal fall arrest system when installing windows on the upper floors.
- If using any lifting devices (rough terrain, aerial), employees must: A. Wear a personal fall arrest system B. Have operator’s license to use equipment. C. Inspect equipment daily.

#### **9.9.5 Roofing**

- Employees are required to use a method of fall protection. Slide guards are no longer permissible
- Employees are restricted from throwing material from roof. Contractor must set up a drop zone, which requires a barricade and a spotter
- Employees working on roofs must wear appropriate footwear that provides good traction
- Working surfaces must be free of tripping hazards (tools, cords, etc.) and must be clean to prevent material from falling below
- A written pre-task analysis is required and must be submitted to superintendent prior to start of work
- Employees must have proper and safe access to roofing surface. The use of any temporary ladder must be constructed and properly secured to prevent movement
- Employees should refrain from working on the roof during inclement weather conditions.

### **9.9.6 Drywall**

- Daily cleanup is required
- A clear path must be maintained
- Proper storing methods are required
- Employees must wear proper PPE at all times.

### **9.9.7 Paint Primer**

- (i) Contractor must submit all required MSDS
- (ii) Employees must wear appropriate work attire and PPE, including face masks/ respirators when spraying paint. A written respiratory program is required as well
- (iii) Employees must use ladders/ lifts to reach difficult areas
- (iv) While painting/ priming, contractor must make sure work area is properly ventilated
- (v) Contractor is permitted to set up a restricted work zone when spraying paint
- (vi) Properly store all paint material, and dispose of empty paint buckets daily.

### **9.10 Sexual Harassment**

Discrimination against any employee or applicant on the basis of the person's sex is strictly prohibited. Sexual harassment is a violation of state law and will not be tolerated. Any unwelcome sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature constitute sexual harassment when:

- a) It is stated or implied that submission to such conduct is a term or condition of a person's employment; or
- b) Submission to or the rejection of such conduct by a person is used as a basis for any employment decision affecting such person, such as, but not limited to, pay increases, work assignments, promotions, performance evaluation, etc. or.

c) Such conduct has either the purpose or effect of interfering with a person's work performance or creating an intimidating, hostile or offensive work environment.

Any employee or applicant who feels that he or she has been subjected to sexual harassment should report any incidents of sexual harassment to his or her supervisor, or any member of management, without fear of reprisal. The totality of the circumstances, the nature of the alleged harassment and the context in which the alleged incidents occurred should be investigated in determining whether alleged conduct constitutes sexual harassment. Every reasonable effort will be made to maintain confidentiality. Sexual harassment case shall be reported to police for further investigation and prosecution.

## **CHAPTER TEN: DECOMMISSIONING**

### **10.1 Introduction**

Decommissioning normally takes place during the final phase of a project life cycle. Environmental planning is therefore necessary before any decommissioning activities should be allowed to commence. Decommissioning of one or all components of this project will therefore have some effect on the environmental status quo of the project site, either in a positive or in a negative way.

### **10.2 Purpose and objectives of decommissioning**

The generally accepted purpose of decommissioning is the release of valuable assets such as machinery and sites for alternative use, recycling and reuse of materials and the restoration of environmental amenity. The basic objective is to achieve an endpoint that is sensible in technical, social and financial terms and that properly protects workers, the public and the environment.

### **10.3 Decommissioning and site restoration activities**

The decommissioning exercise will involve dismantling of site facilities, stabilizing all disturbed areas and transportation of materials out of site for disposal or re-use in similar projects elsewhere. The following should be undertaken to restore the environment.

- a) Remove all underground facilities from the site
- b) The site should be well landscaped by flattening the mounds of soil and
- c) Planting indigenous trees and flowers
- d) All the equipment should be removed from the site
- e) Fence and signpost unsafe areas until natural stability occurs
- f) Backfill surface openings if practical

### **10.4 Disposal of materials from the construction site**

Materials from the site will be basically remains from demolition/decommissioning activities and include demolished stones, electrical cables, metal scraps and salvaged equipment among others. These materials can be reused, exchanged, recycled or sold to interested individuals. Scrap materials can often be reused or refurbished. The Table below gives a summary of various activities associated with decommissioning process.

**Table. EMP for Decommissioning**

Expected Negative Impacts	Recommended Measures	Responsible Party	Time Frame	Cost (KShs)
<b>Construction Machinery/Structure &amp; Wastes</b>				
<b>Scraps material and other debris</b>	Use of an integrated solid waste management system i.e. through a hierarchy of options. Wastes generated as a result of facility decommissioning activities will be characterized in compliance with standard waste management procedures. The contractor will select disposal locations and the County based on the properties of the particular waste generated.	Project manager & Contractor	During Decommissioning	2,800,000
	All buildings, machinery, equipment, structures and partitions that will not be used for other purposes should be removed and reused or rather sold/given to scrap material dealers.	Project manager & Contractor	During Decommissioning	-

	Where recycling/reuse of the machinery, equipment, structures and other waste materials is not possible, the materials should be taken to approved dumpsites.	Project manager & Contractor	During Decommissioning	-
<b>Rehabilitation of project site</b>				
<b>Vegetation disturbance,</b>	Implement an appropriate re-vegetation programme to restore the site to its original status	Project manager & Contractor	During Decommissioning	3,000,000
<b>Land deformation; soil erosion, drainage problems</b>	<p>-During the vegetation period, appropriate surface water runoff controls will be taken to prevent surface erosion.</p> <p>-Monitoring and inspection of the area for indications of erosion will be conducted and appropriate measures taken to control any occurrences.</p> <p>-Fencing and signs restricting access will be posted to minimize disturbance to new-</p>	Project manager & Contractor	During Decommissioning	

vegetated areas.

**Social- Economic impacts**

<b>-Loss of income</b>	The safety of the workers should	Project manager &	During	1,700,000
<b>-Loss of housing</b>	surpass all	Contractor	Decommissioning	
<b>Facilities</b>	other objectives in the decommissioning project. -Adapt a project – completion policy; identifying key issues to be considered. -Compensate and recommend the workers to help in seeking opportunities elsewhere.			

## **CHAPTER ELEVEN: CONCLUSION AND RECOMMENDATIONS**

### **11.1 Introduction**

This Environmental and Social Impact Assessment (ESIA) Study Report has been prepared for the proposed high-rise residential apartment development on Plot L.R. No. Nairobi/Block 15/717 along Gitanga Close off Gitanga Road, Kilimani Area, Dagoretti North Sub-County, Nairobi County, by the proponent Moon Valley For Investment Limited.

The assessment was conducted in full compliance with the Environmental Management and Coordination Act (EMCA) Cap 387 (as amended 2015). The project, classified as a High-Risk Project under the Second Schedule of EMCA, has undergone a systematic, transparent, and stakeholder-inclusive evaluation covering project description, baseline conditions, impact prediction, alternatives analysis, public consultation, and the Environmental and Social Management Plan (ESMP).

This concluding chapter synthesises the key findings of the entire ESIA process, presents an overall determination on the environmental and social acceptability of the project, and outlines clear, actionable recommendations to guide sustainable implementation. It also acknowledges the proponent's fulfilment of key commitments made during public consultation, including the removal of the previously proposed cafeteria/restaurant on the ground floor.

### **11.2 Summary of Key ESIA Findings**

The proposed development involves the construction of a 15-storey residential apartment block delivering 232 residential units (98 studios, 104 one-bedroom, and 30 two-bedroom apartments). Supporting infrastructure includes:

- Three basement levels providing 90 dedicated parking spaces (allocated at the ratio of 1 per 2-bedroom, 0.3 per 1-bedroom, and 0.25 per studio unit).
- Ground-floor resident amenities (lounge area, resting and waiting areas, washrooms, and dedicated movie room for social interaction and entertainment).
- 15th-floor gym and eat-out area.
- Rooftop recreational facilities (swimming pool, changing rooms, and children's play area).

Design optimisation through stakeholder engagement:

- Ground coverage 65% (below the 75% regulatory maximum in Kilimani).
- Plot ratio optimised to 1038 m<sup>2</sup> (against 1500 m<sup>2</sup> allowable).
- Building height reduced from an initial 16 floors to 15 floors.
- Total units reduced from 246 to 232, with a corresponding reduction in studio apartments.
- The originally proposed cafeteria/restaurant on the ground floor has been completely removed following resident concerns and county review, ensuring the development remains purely residential.

Baseline conditions (Chapter 3) confirm the site is in a rapidly densifying middle-to-upper income residential neighbourhood with existing connections to NCWSC water and sewer, Kenya Power, and county roads. Key sensitivities include traffic on narrow Gitanga Close, utility capacity, air/noise quality, green cover, and community concerns over neighbourhood character.

Potential impacts (Chapter 4) are moderate to high during construction (dust, noise, waste, traffic) and operation (utility pressure, stormwater, visual/privacy effects) but are fully mitigable through the ESMP. Positive impacts include addressing Nairobi's housing deficit, job creation, economic benefits, and improved resident amenities.

The analysis of alternatives (Chapter 6) confirmed the revised design as the most viable and sustainable option. Public consultation (Chapter 7) was robust and iterative, with three public barazas held on 23rd February 28th February, and 14th March 2026. All resident concerns (parking, height, density, studios, traffic, infrastructure, security, emergency access, and the removal of any commercial element such as a cafeteria) were directly addressed through design revisions.

Importantly, the proponent has fulfilled its commitment made during the public meetings by sharing the documents requested by residents. These include the full minutes of the three stakeholder meetings, the geotechnical report, the Traffic Impact Assessment (TIA) report, and the complete ESIA Study Report. This action demonstrates transparency, good faith, and adherence to the principles of meaningful stakeholder engagement.

The Environmental and Social Management Plan (ESMP – Chapter 6) provides a detailed, costed framework with assigned responsibilities, timelines, monitoring indicators, and reporting requirements for all project phases.

### **11.3 Overall Conclusion**

1. The proposed residential apartment development on Plot L.R. No. Nairobi/Block 15/717 is environmentally and socially acceptable and should be permitted to proceed, subject to full implementation of the ESMP and the conditions of the NEMA Environmental Impact Assessment Licence.
2. The project makes a responsible and timely contribution to Kenya’s housing agenda by delivering 232 modern, amenity-rich units in a strategically located urban neighbourhood while optimising scarce land through vertical development. The iterative design revisions — including the complete removal of the cafeteria/restaurant to maintain a purely residential character — informed by extensive public participation, have significantly reduced potential adverse impacts and enhanced compatibility with Kilimani’s low-to-medium density residential character. The sharing of all requested documents (minutes, geotechnical report, TIA, and the ESIA itself) further strengthens the proponent’s credibility and demonstrates a genuine commitment to transparency and community partnership.
3. No fatal flaws, insurmountable environmental constraints, or unmanageable social risks were identified. With the proposed mitigation measures, strict regulatory compliance, and ongoing monitoring, the net effect of the project will be positive — delivering housing, economic benefits, and improved living standards without compromising the environment or neighbourhood livability.

### **11.4 Recommendations**

The following recommendations are directed to the proponent, NEMA, Nairobi City County Government, and other relevant agencies to ensure successful and sustainable project delivery:

#### **11.4.1 To the Proponent**

1. Full ESMP Implementation: Appoint a qualified Environmental and Social Officer (or engage an independent consultant) to oversee daily compliance.

Allocate the necessary budget for all mitigation, monitoring, and reporting activities.

2. Adherence to Approved Design: Maintain the final optimised parameters (232 units, 90 parking spaces, 65% ground coverage, 15 floors, resident-only amenities with no cafeteria or restaurant, and purely residential character) without any deviations unless subjected to fresh approvals and public consultation.
3. Utility Capacity Confirmation: Secure written confirmation from Nairobi City Water and Sewerage Company (NCWSC) and Kenya Power on infrastructure capacity prior to construction commencement.
4. Traffic and Safety: Fully implement the recommendations of the Traffic Impact Assessment, including safe access points, off-peak material delivery, and utilisation of the 6 m setback.
5. Continued Stakeholder Engagement: Maintain the established WhatsApp group with residents, the Area Chief, and institutional neighbours (e.g., British High Commission representatives). Continue sharing all relevant documents and monitoring reports.
6. Monitoring and Reporting: Submit quarterly environmental and social monitoring reports to NEMA and the Area Chief during construction, and annual reports during the first five years of operation.
7. Grievance Redress: Fully operationalise the project-specific grievance mechanism and ensure prompt resolution of any complaints.
8. Documentation Sharing: Continue the practice of transparency by promptly providing any additional information requested by residents or regulatory authorities.

### **11.5 Final Statement**

The proponent, Moon Valley For Investment Limited, is fully committed to implementing this ESIA Study Report, the ESMP, and all recommendations outlined above. The project represents a model of responsible urban development that balances housing needs with environmental protection and community interests.

It is therefore recommended that the National Environment Management Authority approve the project and issue the Environmental Impact Assessment Licence, subject to the conditions contained in this report and the ESMP.

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