KISIP

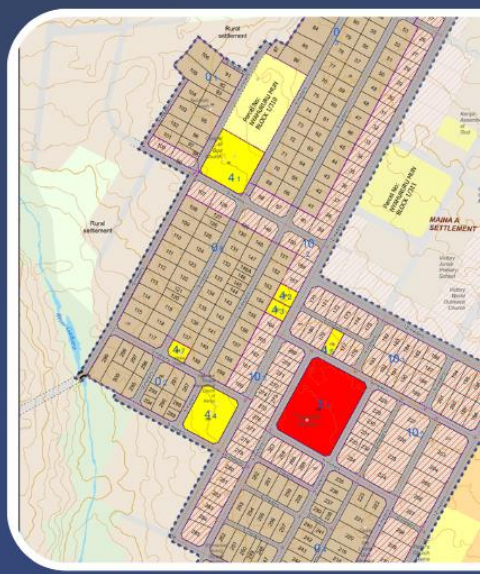
Ministry of Lands, Public Works, Housing and Urban Development

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

LOCAL PHYSICAL AND LAND USE DEVELOPMENT PLAN REPORT

MAINA B SETTLEMENT

(2025-2035)



SEPTEMBER, 2025

THE WORLD BANK

County Government of Laikipia

e&G SPATIAL CONSULTANTS LTD

Physical/Spatial Planners | Land Surveyors | Environmental Auditors | GIS Experts

Maina B Final Draft Plan Validation and Adoption (In the Photo: Community Members, CPCT, Area MCA, and the Consultant

CERTIFICATION

This Plan has been prepared and published as per requirements of the Physical Planning and Land Use Act, 2019

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Laikipia County Assembly

Departmental Reference No.:……*NYA/C2/2025/02*……

Approved Local Physical and Land Use Development Plan No.: …*02*……

FOREWORD

The 21st century has witnessed rapid urbanization at the global and local scale. According to a World Bank report (2016), over 26 percent of Kenya's population resided in urban areas. In 2015, Kenya joined other nations in adopting the 17 Sustainable Development Goals (SDGs), a global development framework spearheaded by the United Nations in partnership with member states. Specifically, SDG 11 aims at "making cities and human settlements inclusive, safe, resilient, and sustainable" by promoting access to adequate, safe, and affordable housing, basic services, and slum upgrading.

Although the advantages of urbanization and well-planned human settlements are widely recognized, rapid and uncoordinated urban growth in developing countries often presents myriad challenges. These include heightened risks of social instability, deteriorating infrastructure, water and sanitation crises, and possible disease outbreaks. Further, these issues are compounded by the continued rural-to-urban migration. The growing urban population has led to increasing demand for housing, secure tenure, and essential services. However, housing supply has consistently fallen short of this demand, resulting in the proliferation of informal settlements.

The Kenya Informal Settlement Improvement Project Phase 2 (KISIP2) was conceptualized with one of its key objectives being to facilitate the conferment/formalization of secure land tenure for selected informal settlements. This would be achieved through coordinated planning and surveying efforts. The informal settlements identified for intervention were selected from counties participating in the KISIP2 program. In this context, Maina B Informal Settlement, located in Laikipia County, was selected for intervention. The Maina B plan responds directly to these urbanization pressures by providing a locally grounded, forward-looking spatial framework that guides sustainable development, infrastructure provision, and secure tenure.

This Local Physical and Land Use Development Plan provides a framework for sustainable development, optimal use of space, environmental conservation, orderly development and safeguarding national security as provided in the constitution of Kenya 2010, Physical and Land Use Planning Act, 2019, National Land Policy, among other policies. The preparation of Maina B settlement plan was anchored on the community vision ***"To transform Maina B from an informal settlement to an estate."*** This largely informed the plan proposals, which are in line with the best planning practices.

The planning approach employed in line with Article 269 (1) (d) of the Constitution of Kenya 2010 was consultative, participatory, and collaborative. Stakeholders engaged varied from the county government departments, property owners, the community, non-state actors, professionals, and the business community etc. Public participation was aimed at enhancing public awareness, promoting accountability, and ownership.

Successful implementation of this plan relies on the active commitment of all relevant actors, including the local community, county departments, non-governmental organizations, development partners, and national government, etc, who are urged to align their programs, budgets, and activities with the plan's objectives and vision. Implementation should be done in line with the implementation matrix, which is part of this plan. Coordinated action, resource mobilization, and sustained commitment will be essential to achieving inclusive, sustainable development for Maina B settlement.

.....

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The successful completion of the planning process and this LPLUDP would not have been possible without the invaluable support, participation, and contributions of individuals and institutions. Therefore, we would like to express our sincere gratitude to the following:

- The Public – The Residents and Property owners of Maina B settlement for voluntarily participating in various stages of the plan preparation process.
- The vibrant youth of Maina B: For being honest and reliable field assistants in physical mapping and collaborative generation of household socio-economic data.
- SEC and GRC leadership and members: They played a vital watchdog role in project processes, including community mobilization and sensitization. The GRC provided community-based alternative dispute resolution mechanisms, promoting local settlement of disputes and avoiding lengthy, costly court litigation. This approach enhanced timely conflict resolution and resource efficiency.
- Area Member of County Assembly, local political leadership and administration: For contributing to the drafting of Maina B LPLUDP and attending the stakeholders' meetings.

The County Government of Laikipia KISIP2 team: Facilitation of ease access to data, keen project process supervision, attending stakeholders' meetings, contribution in drafting of settlements' plans and coordination of citizen participation.

Special mention:

- H.E. Joshua Wakahora Irungu, EGH. – Governor, Laikipia County Government
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- Fiona Wachira-Environmental officer
- Diana Wangari-Social Development Officer

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Special mention:

- Mr. George Arwa – KISIP2 Project Coordinator
- Ms. Celestine Wanjala – KISIP2 Sub Component Head| Liaison officer
- Mr. Victor Sule- KISIP2 Liaison officer
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The consultant is immensely grateful to the various stakeholders and all individuals involved in property boundary verification, data collection, visioning, knowledge sharing, proposal development, and demonstrating commitment to the project's successful completion.

Signed:

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Plan. Esther M. Githinji

Director

E&G SPATIAL CONSULTANTS LIMITED

EXECUTIVE SUMMARY

Project Highlights: The Second Kenya Informal Settlements Improvement Project (KISIP2) represents a significant scaling-up of the earlier KISIP1 initiative. While KISIP1 was limited to 15 municipalities in 14 counties, KISIP2 extends its reach to all 47 counties in Kenya. This expansion reflects the National Government's commitment, with the support of development partners such as the World Bank, to address the persistent challenges of informal settlements through coordinated partnerships with county governments. Participation by counties was voluntary, formalized through participatory agreements that outlined collaborative responsibilities, thereby ensuring locally grounded interventions.

The design of KISIP2 draws directly on lessons learned from KISIP1, particularly the need for a more adaptive, inclusive, and context-specific approach to planning in informal settlements. As a result, KISIP2 places enhanced emphasis on physical and land use planning alongside settlement upgrading interventions. These priorities align with the National Land Policy (2009), which identifies informal settlements as areas emerging in the absence of tenure security and planning controls, typically characterized by inadequate infrastructure, insecure livelihoods, and social vulnerability.

Consistent with the policy's directive under Section 211, KISIP2 intervenes in informal settlements by facilitating tenure regularization through planning and surveying services on suitable public land. This policy alignment is operationalized through KISIP2's Project Development Objective: to improve access to basic services and tenure security in participating settlements while strengthening institutional capacity for slum upgrading. This objective is realized through four components: Component 1 (Integrated Settlement Upgrading), which supports upgrading settlements through tenure regularization and infrastructure improvement; Component 2 (Socio-Economic Inclusion Planning), which promotes the inclusion of beneficiaries in government programs; Component 3 (Institutional Capacity Development), which builds institutional and policy capacities at national and county levels for slum upgrading; and Component 4 (Program Management and Coordination), which ensures efficient project management by supporting the National and County Project Coordination Teams (NPCT and CPCTs). Notably Component 1 on integrated settlement upgrading and Component 2 on socio-economic inclusion, are directly informed by planning activities.

The Consultancy: E&G Spatial Consultants Ltd was contracted to provide *Consultancy Services in Undertaking Physical Planning, Cadastral Survey, and Detailed Topographical Survey of Eleven (11) Selected Informal Settlements in Embu and Laikipia Counties, phase IIC– Cluster 1*. The firm is experienced in carrying out similar assignments, as exhibited by its successful completion of similar assignments in several other informal settlements spread across the country.

The main objective of this consultancy is to facilitate the conferment/formalization of secure land tenure for the selected informal settlements within KISIP2's participating counties through Planning and Surveying. The participating county governments

proposed selecting settlements to KISIP for consideration. The proposed informal settlements were then subjected to qualification and eligibility parameters as per the KISIP Project's Operations Manual and the Project Appraisal Document (PAD&POM). This planning report is limited to one of the eleven settlements under this consultancy, namely, ***Maina B.***

Project Scope: Maina B settlement is located on the outskirts of Nyahururu Town, within Igwamiti Ward, Laikipia West Constituency, Laikipia West Subcounty, southwest of Laikipia County. The identified perimeter boundary covers approximately 29.13 ha. The settlement lies between latitudes 0°03'17.66"N and 0°03'51.94"N and longitudes 36°21'05.03"E and 36°21'28.19"E. It is a growing residential settlement positioned at the urban fringe of Nyahururu Town.

Maina B is part of the larger "Kwa Maina" Settlement, also locally known as *"Gishagi kia Maina"* which loosely translates to Maina Village. Due to contractual restrictions on the maximum allowable acreage size per settlement, Maina (excluding Ukweli and the abutting institutions) was subdivided into Maina A & B

Project Methodology: To deliver this consultancy, the following key activities were carried out:

i. **Stakeholders' identification and mobilization**- This was one of the preliminary and project foundational activities, which was very key to ensuring the success of the project. It involved identifying all the stakeholders that were to be involved in the project, as well as mobilizing them on the project ToRs, expected outputs/deliverables and respective project timelines; project approaches, methodology and underpinnings; and their duties & responsibilities. The stakeholders identified and mobilized included the consultant's team, the National and County Project Coordination teams (NPCT, CPCT), relevant national and county departments, SEC and GRC members, and the larger community, local political and administrative leaders, relevant county officials, and government agencies. This was essential to ensure transparency and promote active participation throughout the planning and surveying process.

ii. **Social and environmental screening**- Similarly, this was another undertaking that was foundational to this project. The screening aimed at (a)establishing settlements' viability regarding participation in the project and (b)identifying potential adverse environmental and social impacts of the project and proposals emanating from this Plan to mitigate them. In addition, due diligence was conducted on the settlement to verify the correctness of its contractual scope and ownership status, ensuring it's situated on uncontested public land.

iii. **Identification of settlement perimeter boundaries and preparation of digital basemaps**- This activity involved demarcation of the project area boundary, guided by the scope provided in the ToRs. It also involved ground picking of existing property/parcel boundaries and physical features of the settlement that were pertinent in the land tenure regularization processes, such as beneficiary parcel/structure boundary rights, roads, streets, spot heights,

etc., to facilitate subsequent decision making. This culminated in the generation of a digital basemap that created an interplay between the physical characteristics of the settlement and subsequent spatial analyses.

iv. **Socio-economic surveys**- This activity involved enumeration of all settlement inhabitants (structure owners and tenants), households, as well as a detailed analysis of the settlement thematic issues, including physical and environmental aspects, population and demography, transport and infrastructure capacities, land use and land tenure profiles, settlements economy, housing and social infrastructure provisions, among others. Key to this activity was the generation of the list of beneficiaries (LOB), which is an important output in this consultancy.

v. **Preparation of the Local Physical and Land Use Development Plan**- This deliverable is the essence for preparation of this report, and the basis upon which the land tenure rights were established, suitable land uses were determined. Further, development control ordinances, plan implementation guidelines, as well as catalyst projects of the settlement have been discussed in detail in this plan. The socio-economic findings and the basemap prepared in the preceding stages, were key inputs in plan preparation. Central to the delivery of this output were stakeholders' inputs, and especially the participatory planning exercises with the Maina B community.

vi. **ESMP/RAP preparation-** This activity will succeed the preceding stage of preparation of the Local Physical and Land Use Development Plan. This task will outline the positive impacts that should be enhanced, as well as the negative impacts and risks arising from this tenure regularization exercise which should be mitigated, to ensure that the beneficiaries of this settlement are left in a better position than they were before the project.

vii. **Cadastral surveying-** as one of the ultimate tasks of the project this activity involved the implementation of the plan prepared under stage V above. This involved demarcation of the boundaries of the resultant plots/parcels as per the approved plan layout. This activity resulted in approved survey plans, signed and sealed RIMs, which are key input into the subsequent stage of registration of rights.

viii. **Registration of Rights (Preparation of Leases)** – This will be the epitome of the tenure regularization exercise, an activity that will constitute the preparation of leases for all the beneficiaries identified and registered in the list of beneficiaries. This activity will be carried out by KISIP, in collaboration with the Departments of Land Administration and Land Registration of the National Government. The consultant will submit to KISIP the approved outputs of this consultancy, which include the Adopted list of Beneficiaries, Approved Local Physical and Land use Development Plans, Approved Survey Plans, Amended, signed and sealed RIMS complete with area lists.

Settlement Highlights: The KISIP2 project intervention in Maina B settlement was undertaken in an already developed set-up (urban area). Despite the inhabitants of the settlement lacking proof of ownership, significant developments of permanent structures were witnessed. Parcel ownership claims were based on informally 'defined' boundary demarcations (mostly defined by structures and live fences). Absence of

planning guidelines attributed to uncontrolled developments which resulted in an organically structured settlement.

It was established that there was some level of acceptance and normalization of the informal land ownership/rights due to the absence of a formal land regime. Various forms of claims to land were displayed, including demarcations using fences, informal sale-agreements (drafted between self-individuals, with correspondences with the local chief's endorsement). Despite the lack of tenure security, individuals were still conducting land transactions, albeit very informally. This scenario portrays self-help modes adopted in the informal settlement to bridge the gap where formal systems are non-existent. A significant number of the dwellers had different types of ownership documents for the parcels of land they laid claim to including allotment letters and sale agreements. To ensure validity, the consultant used complementary means of property identification, including door-to-door enumeration, acknowledgement between neighbours, use of local administration, and community leadership.

Planning Approach: To introduce spatial organization within the area, the preparation of the Local Physical and Land Use Development Plan (LPLUDP) became essential. The plan integrates multi-sectoral proposals, establishes guidelines for physical development and land use, and outlines strategies for access creation and realignment. By incorporating these elements, the LPLUDP serves as a critical tool for guiding new developments, redevelopment projects, and land tenure regularization efforts, while establishing a structured spatial layout that supports systematic urban management and growth coordination. The subsequent cadastral surveying, which was executed as per the approved LPLUDP layout, enabled formal tenure rights registration, which will fulfil the tenure regularization objective of this project sub-component. The other proposals accompanying the plan, especially on infrastructure, will be subject to the plan implementation by the county government, or considered under the KISIP2 infrastructure upgrading under subcomponent 1.2.

An **adaptive planning approach** was applied in Maina B to minimize impacts since the settlement had developed significantly on public land. Adaptive planning is a flexible, context-sensitive planning method that modifies standard planning regulations to suit the unique conditions of informal settlements, thereby minimizing resident displacement and enabling in situ upgrading. This was in line with the project's guidelines on zero or minimum impacts (where necessary). Therefore, this approach minimized disruptions and displacements of the already vulnerable community as much as possible.

An **integrated and participatory approach** was employed throughout the planning exercise. Relevant stakeholders were engaged from the national government, county government, local community, and local area administration. The engagements were enhanced through direct participation and targeted consultations on key matters concerning the plan preparation. The stakeholders' engagements were done at the various stages, including the consultant's introduction meeting, project launch, environmental and social screening, basemap validation, socio-economic survey, community visioning and participatory planning, draft plans presentation (to county and community), and finally adoption of the final plan for approval. At all these

stages, the stakeholders' inputs, in addition to the consultant's professional input, served as the foundation for the final plan in this report.

Visioning and Community Proposals

During the community participatory stage, the community developed a vision and proposed several key considerations to be included in the plan. The vision was ***"To transform Maina B from an informal settlement to an estate"***

This vision was anchored on the following proposals which were aimed at ensuring that the LPLUDP would reflect the needs and aspirations of the community. These included:

	Community Proposals	**Consideration in the plan**
1.	An upgraded and improved access network with line utilities	Addressed
2.	Establishment of a sewerage reticulation system	Addressed
3.	Improved solid waste management	Addressed
4.	Develop the market area	Addressed
5.	Enhance disaster preparedness	Addressed

Plan Alternatives: The preparation of the LPLUDP was primarily based on findings from a socio-economic survey, which were submitted as a separate deliverable under the consultancy. These findings informed community priorities, demand, supply, and projected needs for preplanning. Two plan alternatives were considered during the process. The first alternative, referred to as "Nil intervention," proposed maintaining the settlement's status quo. This option would involve issuing a block title without making significant changes. The other alternative was an adaptive planning option inspired by innovative approaches learned from KISIP1. This adaptive option prioritized flexibility by adopting planning proposals that aligned with the existing development layout rather than adhering strictly to conventional planning standards. This approach aimed to minimize negative impacts while addressing the complexities of planning in an already developed informal settlement.

The adaptive option introduced defined land uses, retained access patterns consistent with the existing settlement layout and introduced access to landlocked parcels, with footpaths measuring 3 metres and accesses measuring 6 - 12 meters. This option impacted 103 structures, including houses, canopies and structures under construction. During the presentation of the first draft plan, the community expressed a preference for the adaptive option due to the wider access, improved accessibility and connectivity and the symmetrical layout. However, they had another opportunity to validate the plan during the second draft plan presentation before its final adoption. The draft final LPLUDP was prepared based on comments from the community members and the key stakeholders, including the National Project Coordination Team (NPCT) and the County Project Coordination Team (CPCT).

The proposed plan successfully established key land uses, including residential, recreational, public purpose, transportation, and mixed-use zones, and ensured access to all parcels, thereby significantly improving connectivity within the settlement. Access networks varied in width, ranging from 6 metres to 12 metres. The resultant parcel sizes determined the tenure options, with the minimum parcel size for individual registration set at 100 square meters with all parcels meeting this threshold.

Developed through a collaborative process that synthesized stakeholder input, the LPLUDP fulfils its primary goal of harmonizing diverse perspectives into actionable guidelines. The draft plan was subjected to a 60-day mandatory period, where it was made available for public inspection and stakeholder comments. This planning report endeavours to actualize the LPLUDP layout and establish guidelines for implementing its proposals to achieve an organized settlement. The proposed plan is therefore a precursor to the implementation of the tenure phase and the various proposed infrastructure projects thereafter.

This plan facilitates tenure regularization by analysing the settlement's sectoral/thematic challenges, proposing a spatial development framework, and advising on applicable titling options. The subsequent implementation of the LPLUDP through cadastral surveying will result in formalization of the settlement's beneficiaries' tenure rights. It is anticipated that settlement redevelopment and transformation will be catalysed through tenure regularization.

Report structure

This report is organized into eight chapters with the contents of each briefly described below:

Chapter 1 introduces the KISIP 2 project and covers subjects including an overview of the KISIP II project. The Chapter also gives the basis for the preparation of the plan, its purpose, and the project undertakings.

Chapter 2 reviews the planning context; the history of the settlement, and the laws anchoring physical and land use planning. It also presents the planning regulatory framework and case studies relevant to this exercise.

Chapter 3 documents the plan preparation process. It describes stakeholder mobilization and participatory workshops, technical surveys (environmental, social, infrastructural), and data collection techniques (GIS mapping, beneficiary enumeration).

Chapter 4 presents the settlements' situational analysis. It covers physical attributes (topography, land cover, drainage), socio-economic profiles (population, livelihoods, tenure status), infrastructure inventory (roads, water, sanitation, energy), and environmental conditions (vegetation, erosion). The analysis identifies strengths, vulnerabilities, and critical gaps that inform subsequent planning decisions.

Chapter 5 outlines the plan options considered and the detailed proposals for the preferred option to address the settlement's challenges, ranging from incremental upgrades to transformative redevelopment. Each alternative is evaluated against

criteria such as the community's vision, availability of land for development, social/community impact, environmental sustainability, and technical feasibility.

Chapter 6 defines the development control guidelines for the plan proposals that will guide future development. It specifies land-use zones, density limits, building-line setbacks, access requirements, and permissible heights. It also includes detailed guidelines for public spaces, landscaping, infrastructure corridors, and environmental protection measures to ensure orderly, safe, and resilient growth.

Chapter 7 presents the strategic actions for regularization which cover infrastructure servicing, incremental housing improvements, capacity building, and funding mechanisms to support vulnerable households.

Chapter 8 outlines the implementation framework that translates plan proposals into a time-bound action plan It presents a matrix assigning responsibilities to implementing agencies, sets target dates, and estimates costs and resource requirements. Monitoring indicators and reporting frameworks are defined to track progress, evaluate outcomes, and adapt strategies as needed.

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List of Acronyms

ADRM	Alternative Dispute Resolution Mechanisms
CBO	Community-Based Organisation
7Rs	Rethink, Refuse, Reduce, Repurpose, Reuse, Recycle, Rot/Recover
CDC	Centres for Disease Control
CPCT	County Project Coordination Team
CIDP	County Integrated Development Plan
CoG	Council of Governors
ECDE	Early Childhood Development Education
EMCA	Environmental Management and Coordination Act
EIA	Environmental Impact Assessment
ESMP	Environmental Social Management Plan
ELCA	Environmental Land Court Act
EMCA	Environmental Management and Coordination Act
ESMF	Environmental and Social Management Framework
GIS	Geographic Information System
GRC	Grievance Redress Committee
ICT	Information and Communication Technology
ID	Identification Card
IDA	International Development Association
KGs	Kilograms
KISIP	Kenya Informal Settlements Improvement Project
KRA PIN	Kenya Revenue Authority Personal Identification Number
LIS	Land Information System
LoBs	List of Beneficiaries
LPLUDP	Local physical and Land use Development Plan
MTPs	Medium-Term Plans
NEMA	National Environment Management Plan
NGO	Non-Governmental Organizations
NLC	National Lands Commission
NPCT	National Project Coordination Team
NYAHUWASCO	Nyahururu Water and Sanitation Company
OP	Operational Policies
PAP	Project Affected Person
PAD&POM	Project's Operations Manual and the Project Appraisal Document
PDO	Project Development Objective
PDP	Part Development Plan
PIDs	Preliminary Index Diagrams
PLUPA	Physical and Land Use Planning Act
PLWDs	People Living with Disabilities
RAP	Resettlement Action Plan
RIM	Registry Index Map
SEC	Settlement Executive Committee
SDGs	Sustainable Development Goals
SMP	Social Management Plan
SOK	Survey of Kenya
SWM	Solid Waste Management System
TOR	Terms of Reference
UACA	Urban Areas and Cities Act
UN	United Nations
WB	World Bank
WC	Water Closet
WRA	Water Resource Authority

Definition of Key Terms

Development: Carrying out any works on land or making any material change in the use of any structures on the land.

Local Physical and Land Use Development Plan: A plan for the area or part thereof of a city, municipality, town, or urban centre, and includes a plan regarding any trading or market centre.

Informal settlements: Residential areas where structures have been built without formal planning or adherence to legal regulations, often lacking adequate infrastructure and services.

Existing use: The continued use of a building or land for a purpose consistent with its original use before the current planning process began in the area.

Tenure Regularization: A legal and administrative process aimed at formalizing and legalizing the possession or ownership of land, particularly in areas where land rights are informal or unclear.

Participatory Planning: An inclusive approach to urban and community planning that actively involves residents, stakeholders, and marginalized groups in the decision-making process. It aims to ensure that planning reflects the needs, aspirations, and priorities of the community while fostering collaboration and ownership.

Urban renewal: The process of slum clearance and physical redevelopment that addresses a wide range of urban challenges, including unsanitary, inadequate, or outdated housing, poor transportation, sanitation, and other services.

Urban Regeneration: A comprehensive, area-based and multi-agent collaborative planning process that improves the physical, environmental and socioeconomic conditions of an urban area and links the generated benefits to the wider urban fabric of the city.

Environmental Safeguards: Policies, regulations, and practices designed to protect the natural environment and mitigate the negative impacts of human activities.

Disaster Risk Management: Systematic application of policies, strategies, and practices aimed at preventing the creation of new disaster risks, reducing existing risks, and managing residual risks. Its ultimate goal is to strengthen resilience and minimize the adverse impacts of hazards on communities, infrastructure, and ecosystems.

Land-Use Integration: Coordinated planning and management of land resources to achieve sustainable and multifunctional use while addressing environmental, social, and economic priorities. This approach emphasizes interdisciplinary collaboration and stakeholder engagement to ensure that land allocation and utilization meet diverse needs, including conservation, development, and community well-being.

Sustainable Development: Development that meets present needs without compromising the ability of future generations to meet theirs, balancing social equity, economic growth, and environmental sensitivity.

A building line: A limit beyond which a house must not extend to a street.

Setback: The distance between the building and the property boundary.

Development control: Managing and regulating land use and development activities to ensure they align with spatial plans, policies, and standards set by planning authorities, thereby promoting purposeful land utilization for public welfare.

Zoning: A method used in urban planning to regulate land use by dividing areas into specific zones, each with designated rules and restrictions. These zones determine how land can be used, such as for residential, commercial, recreational, or mixed-use purposes, and may also regulate building size, density, placement, and appearance.

Environmental and Social Management Plan: A structured document that outlines strategies to manage and mitigate environmental and social risks associated with a specific project or activity. It serves as a tool to ensure compliance with environmental and social standards while minimizing adverse impacts on communities and ecosystems.

1. INTRODUCTION

1.1 Kenya Informal Settlements Improvement Project (2) Background

Informal settlements accommodate a significant proportion of urban populations in Kenya. However, there is no universal planning approach that can be applied at scale to their upgrading. Conventional planning frameworks designed for greenfield developments or new sites are largely inapplicable to informal settlements due to their complex socio-spatial dynamics. Consequently, current approaches rely on case-by-case strategies tailored to the unique characteristics of each settlement while incorporating best practices from previous interventions.

The Second Phase of the Kenya Informal Settlements Improvement Project (KISIP 2), under which this consultancy was commissioned, is an initiative of the Government of Kenya with support from development partners, including the International Development Agency (IDA). This phase builds on the successes and lessons learned from KISIP 1, which was implemented in 14 counties. The positive impacts of KISIP 1 underscored the need for scaling up project activities to all 47 counties.

A key outcome of KISIP 1 was the development of an adaptive planning approach, which has since been institutionalized in informal settlement upgrading. This approach introduced flexible planning interventions that minimized project-induced displacements while ensuring essential infrastructure improvements. The adaptive approach allowed planning proposals to accommodate existing settlement dynamics, including parcel sizes, road widths, and service provision, rather than rigidly adhering to conventional urban planning standards. For instance, in cases where conventional road sizes could not be achieved, realignments were made to retain narrower roads, complemented by traffic management strategies such as one-way traffic flow or pedestrianization. However, where settlement conditions permitted, conventional standards were applied.

Given the unique characteristics of each informal settlement, a one-size-fits-all planning model is impractical. The flexibility of the adaptive approach aligns with the primary objective of KISIP 2—to enhance tenure security and improve access to basic services in urban informal settlements. By responding to existing settlement conditions, this approach minimizes displacements, ensuring that upgrading interventions do not threaten the livelihoods of residents. In this specific project, the adaptive approach was instrumental in the preparation of the Local Physical and Land Use Development Plan (LPLUDP).

The implementation of KISIP 2 aligns with Kenya's constitutional provisions on the right to property and the requirement for land use planning. Furthermore, it supports Vision 2030's social pillar, which addresses rapid urbanization by promoting sustainable urban development. Since informal settlements often serve as the initial point of entry for rural migrants, upgrading initiatives such as KISIP 2 contribute directly to national development goals.

Beyond physical upgrading, KISIP 2 integrates socio-economic inclusion by linking vulnerable groups—including women, the elderly, orphans, and persons with disabilities—to government programs aimed at reducing poverty and vulnerability. Additionally, the project facilitates youth access to skills development and employment opportunities. Socio-economic planning is integrated into infrastructure projects to ensure that improvements in basic services are complemented by broader social benefits.

KISIP 2 also prioritizes resilience-building, addressing vulnerabilities related to natural hazards, crime, and violence prevention, while promoting gender-sensitive interventions across its activities. These project undertakings are structured within four interdependent components, as outlined in the matrix below.

Table 1-1: KISIP2 project components

Component	Description
1. Component 1: Integrated Settlement Upgrading	
Subcomponent 1.1: Tenure regularization	Coordinates regularization of tenure for people living on uncontested public land through planning and surveying.
Sub-component 1.2: Infrastructure Upgrading	Coordinates investments in essential infrastructure, such as roads, drainage, water, and sanitation services.
2. Component 2: Socio-Economic Inclusion Planning	Supports community development plans to enhance social and economic inclusion through community capacity building and awareness creation for the various project interventions Strengthens community development by promoting social and economic inclusion through capacity building, awareness creation, and livelihood support programs.
3. Component 3: Institutional Capacity Development for Slum Upgrading	Supports policy development, institutional strengthening and capacity building at national and county levels to enhance understanding and implementation of slum upgrading processes.
4. Component 4: Program management and coordination	Provides oversight and coordination for project implementation at both national and county levels through the National Project Coordination Team (NPCT) and County Project Coordination Teams (CPCTs)

This consultancy was undertaken under Component 1: Integrated Settlement Upgrading, specifically Subcomponent 1.1: Tenure Regularization. As highlighted in the introduction, the components of KISIP 2 were refined and enhanced based on lessons learned from KISIP 1. Notably, the integration of Component 1 resulted from previous experiences in KISIP 1, where tenure regularization and infrastructure upgrading were initially implemented as independent, parallel components. Their coordination under a single component in KISIP 2 was aimed at maximizing project impact by leveraging synergies in implementation at the settlement level.

The preparation of the Local Physical and Land Use Development Plan (LPLUDP), which is one of the primary objectives of this consultancy, was therefore critical in

enhancing tenure security in Maina B. Additionally, the LPLUDP serves as a blueprint for guiding post-tenure regularization interventions, particularly infrastructure development and service provision. This underscores the interdependent nature of KISIP 2's components, where tenure security, infrastructure improvements, and socio-economic development are mutually reinforcing in achieving sustainable informal settlement upgrading.

1.2 Objectives of the Project

To achieve the overall development objective of KISIP 2, as outlined in the preceding section, this consultancy primarily focused on facilitating the formalization of secure land tenure for Maina B settlement in Laikipia County through planning and surveying activities.

The tenure regularization process involved a series of key activities, culminating in the preparation of this Local Physical and Land Use Development Plan (LPLUDP), with some remaining tasks to be completed after the plan's approval.

Specific Objectives

The specific objectives that guided this assignment and the plan preparation process were:

a) Desk study/literature review – this involved reviewing relevant policies (e.g. the World Bank Operational Policies, the slum upgrading policy, the national land policy, The National Urban Development Policy etc), legal frameworks (e.g. The Physical and Land Use Planning Act, Land Registration Act, Survey Act etc), and past studies to inform the planning process. The legal and policy frameworks were discussed under section 2.3 of this report). These legal statutes and policies informed the planning process as well as the final plan.
b) Community mobilization and stakeholder engagement – this involved active engagements with the local community and relevant stakeholders during all the project meetings and activities Active engagement with the community and stakeholders ensured that the plan was locally grounded to the prevailing challenges within the settlement. Similarly, active participation increased sense of ownership of the plan thereby facilitating effective implementation.
c) Environmental and social screening –potential environmental and social risks associated with the project were identified. Findings from the screening informed the physical and environmental proposals in the final plan.
d) Due diligence – assessing land tenure history, ownership claims, and legal considerations. This ensured that the plan was prepared and implemented in land that met the project criteria (uncontested public land).
e) Boundary verification and base map preparation – identifying, verifying, and confirming settlement perimeter boundaries and generating base maps. The boundary informed the geographical scope of the planning area while the basemap formed the spatial basis for analysis and plan preparation.
f) Socio-economic surveys and physical mapping – this involved collecting data on settlement demographics, livelihoods, infrastructure, spatial organization

etc. The socioeconomic data formed the basis of the situational analysis with findings informing the final plan.

g) Generation of a List of Beneficiaries (LOBs) – Generating the LoB involved identifying eligible beneficiaries for tenure regularization. The beneficiaries were identified with the help of the SEC and the GRC as well as the general community. They were enumerated and key details such as name, Id No., KRA PIN, phone number etc. The LoB was subjected to two community verification exercises. The final list will be authenticated by the SEC, County officials and submitted to the National Coordinator. So far, 384 parcels have been enumerated, generating a total of 409 beneficiaries.
h) Preparation of the Local Physical and Land Use Development Plan (LPDLUDP) – This involved preparation of a structured land use and spatial framework for Maina B. The plan preparation process has been detailed in chapter 3 of this report.
i) Preparation of an Environmental and Social Management Plan (ESMP) and/or a Resettlement Action Plan (RAP) – The ESMP was triggered by the preparation of the plan and was aimed addressing environmental and social risks arising from the implementation of the plan
j) Cadastral surveying and survey plan preparation – this involved plot-level surveys and preparing official cadastral maps based on the prepared and approved plan under task (h) above.
k) Topographical survey for engineering designs – provided detailed topographical data for infrastructure planning and design.
l) Development of a Land Information System (LIS) – establishing a digital database for land administration and management.
m) Issuance of title documents – facilitating the issuance of titles to individuals or groups in accordance with the approved survey plan.

A detailed discussion on the execution of these objectives and activities, as well as the remaining tasks required for project completion, is provided in Chapter 3.

1.3 Plan Vision

A vision represents long-term aspirations and desired future state. The visioning exercise presented an opportunity to the Maina B community to re-imagine their settlement. During the participatory planning process, community members and stakeholders shared diverse perspectives on their aspirations for the future of the settlement. These inputs were synthesized into a unified vision, which served as the guiding framework in the preparation of the Local Physical and Land Use Development Plan (LPLUDP).

The agreed-upon vision for Maina B settlement was:

"To transform Maina B from an informal settlement to an estate"

This vision reflected the community's collective aspirations and informed the spatial and development strategies proposed in this plan.

1.4 Plan Preparation

As established in the preceding sections, tenure regularization under KISIP2 is achieved through a combination of planning and surveying activities. The preparation of a settlement plan is explicitly identified as a key activity under this consultancy (Section 1.2). This plan served as a critical milestone in the broader tenure regularization process by setting the foundation for subsequent activities, including cadastral surveying, topographical surveys for infrastructure development under Subcomponent 1.2, as well as providing a spatial framework for issuance of title deeds.

Legal and Institutional Framework

This plan is anchored in the Physical and Land Use Planning Act of 2019, which defines it as a plan for a city, municipality, town, urban centre, or trading/market centre. The Act stipulates the preparation, approval, and implementation procedures that have been adhered to in this plan. The Act also brings to focus the role of the County Governments as the primary planning authorities responsible for development control.

As a KISIP2 initiative, this plan represents a collaboration between the project and the County Government, reinforcing the county's capacity for informal settlement upgrading. It provides a structured framework for spatial order and tenure security enhancement, thereby supporting the overall project objectives.

Key Planning Objectives

This plan aimed to:

i. Define desired land use patterns of Maina B informal settlement.
ii. Improve accessibility and transport networks through rationalized road alignments.
iii. Facilitate infrastructure upgrading, including drainage, sanitation, and other essential services.
iv. Provide a legal and spatial framework for tenure security and property rights.
v. Support socio-economic integration by creating spaces for public amenities and economic activities.

The details of the planning approach and implementation strategies are discussed in subsequent sections of this report.

1.5 Planning Period

The planning horizon for this settlement development plan is 10 years, with a scheduled review period of 5 years. This timeframe allows for phased implementation of proposed interventions while providing flexibility for adjustments based on emerging needs, demographic changes, and infrastructural developments.

During this period, all development applications within the settlement will be guided by the provisions and regulations stipulated in this plan. The County Government, as the planning authority, will oversee development control to ensure compliance with the designated land use framework, infrastructure provisions, and tenure regularization objectives. The review at the midpoint (5 years) will assess progress, identify challenges, and integrate necessary modifications to align with evolving urban dynamics and policy shifts.

1.6 Purpose of this Planning Report

This planning report provides a structured framework for implementing the Local Physical and Land Use Development Plan (LPLUDP) and detailing the guidelines and policy framework for its execution. It serves as a reference for the County Government of Laikipia, landowners, developers, and other stakeholders, offering an interpretive framework for the LPLUDP's proposals and localized development standards.

Additionally, this report documents the activities that informed the plan preparation process, including an analysis of planning options and the rationale for selecting the most suitable approach as elaborated in chapters 3 to 5. Aligned with the tenure regularization objective, the report provides guidance on applicable titling options, including individual, joint and/or group titling, ensuring clarity on land ownership structures within the settlement.

1.7 Project Undertakings

The Consultant has adhered to the following operational principles to ensure effective community engagement and project implementation:

i. Participatory community and stakeholder engagement: The Consultant has actively involved the community in all project activities, ensuring inclusivity and ownership of project outcomes. Engagement will continue throughout the project cycle.

ii. Transparency and access to information: All relevant project information has been disclosed to the community to promote transparency and informed participation.

iii. Voluntary participation: Participation in the project has been entirely voluntary, with all project activities fully funded by KISIP2. Community members were sensitized to this principle to ensure their informed engagement. in total 6 technical and 6 community meetings were held as discussed ih section 3.2 of this report.

iv. Safeguarding vulnerable groups: Special attention was given to vulnerable groups, including minorities, widows, persons with disabilities, and orphans. These groups were represented in the Settlement Executive Committee (SEC) and advised on rights protection measures, such as the use of trustees for underage beneficiaries. 3% of the residents were disabled while (49%) parcels were registered under women.

v. Alternative Dispute Resolution Mechanisms (ADRM): Disputes related to the project were referred to the Grievance Redress Committee (GRC), promoting community-led conflict resolution without direct Consultant involvement. If unresolved, the issues were to be forwarded to CPCT and NPCT. However, all disputes were solved by GRC.

vi. Community-led decision-making: The planning process was community-driven, with residents leading discussions on re-planning impacts and negotiating the most beneficial outcomes for the settlement.

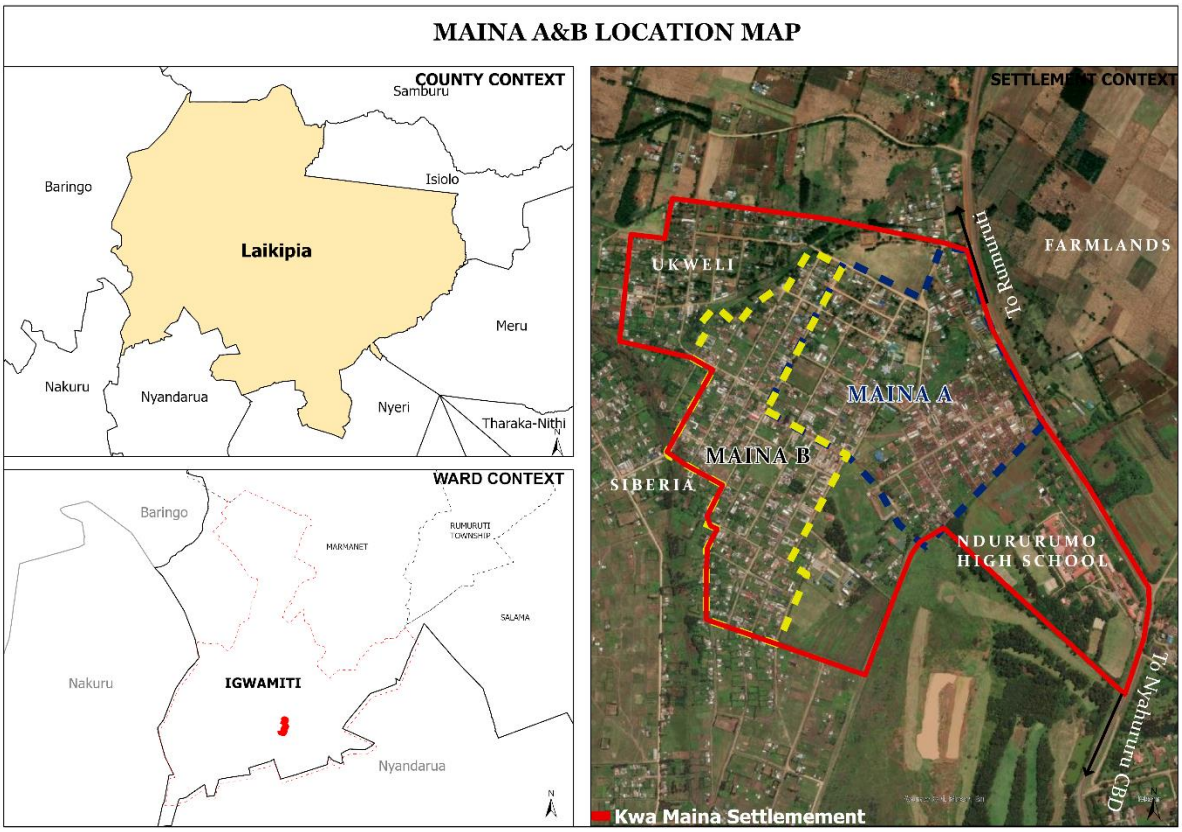
Figure 1-1: Project Undertakings

2. PLANNING CONTEXT

2.1 Project location and Scope

Maina B settlement is located on the outskirts of Nyahururu Town, within Igwamiti Ward, Laikipia West Constituency, Laikipia West Subcounty, southwest of Laikipia County. The identified perimeter boundary covers approximately 29.13 ha. The settlement lies between latitudes 0°03'17.66"N and 0°03'51.94"N and longitudes 36°21'05.03"E and 36°21'28.19"E. It is a growing residential settlement positioned at the urban fringe of Nyahururu Town.

Maina B is part of the larger "Kwa Maina" Settlement, also locally known as *"Gishagi kia Maina"* which loosely translates to Maina Village. Due to contractual restrictions on the maximum allowable acreage size per settlement, Maina (excluding Ukweli and the abutting institutions) was subdivided into Maina A & B as illustrated in Map 2-1 below.



Map 2-1: Maina settlement location map

2.2 History of Maina Settlement

The origins of Maina Settlement date back to the 1960s when the government allocated land to ex-servicemen of the King's African Rifles. Most of these servicemen belonged to the Maina clan, giving rise to the settlement's initial name, "Kwa Maina." The first residents settled in what became known as Maina Village or Maina Estate, where they received plots of varying sizes.

The adjacent area, Ukweli A, emerged in 1992 following a long-awaited land allocation by President Daniel Arap Moi. This marked the fulfilment of a promise made nearly a decade earlier, bringing a sense of relief and validation to the community. The plots, distributed through a lottery system, varied in size—some measuring 50ft by 100ft, while others were 100ft by 100ft. To participate, residents were required to pay a registration fee of Ksh 100. The name "Ukweli," meaning "truth" in Swahili, was adopted by the community as a testament to the realization of President Moi's 1983 promise, which many had previously dismissed as political rhetoric.

For nearly nine years, former Laikipia MP Godfrey Gitahi Kariuki persistently lobbied for the land allocation, reassuring residents that they would eventually receive their plots. Despite his efforts, scepticism remained widespread. However, when the lottery finally took place in 1992, the community's doubts turned into joy and relief. The issuance of allotment letters formalized the allocations under a prepared Part Development Plan (PDP). Recognizing the precarity of allotment letters, residents have since actively pursued title deeds through both political lobbying and self-organized efforts. At one point, some residents contributed Ksh 500 each to facilitate the process, but these efforts were unsuccessful. Consequently, the current tenure regularization initiative comes at an opportune time, addressing long-standing concerns about land tenure security. This enthusiasm is evident in the high enumeration coverage of structure owners and strong community participation in engagement meetings.

Over time, as the population grew, many landowners subdivided their plots—either to pass them on to their children or to sell for various reasons. This practice has significantly shaped the settlement's current development pattern, contributing to its ongoing expansion.

2.3 Previous planning efforts

Development in the settlement has been historically shaped by two key planning documents. First, the 1993 development plan prepared by the former local authority (Ref: NYA/C2/93/22) provided a formal spatial framework for the area and served as the basis for issuing letters of allotment, which many residents still hold. Second, the broader Nyahururu Town-wide Development Plan (Ref: C2/77/5), approved in 1978, identified Maina as one of the designated residential zones within the town's urban structure. Despite the absence of a current municipal or updated town-wide plan, the 1993 plan continues to inform local land use patterns. Residents have generally adhered to its spatial guidelines, resulting in a level of consistency in property development that reflects the original planning intentions, albeit within a context of evolving urban pressures and limited formal enforcement mechanisms.

2.4 Policy, Legal, and Institutional Framework

The physical and land use planning process was shaped by various legislations. This section outlines the relevant laws, policies, and regulatory frameworks reviewed, which formed the basis for developing the proposed plan. The key components of this consultancy—physical planning and land surveying—were governed by national legal,

policy, and institutional frameworks. These regulations were analyzed in the context of their application to complex urban environments, such as informal settlements, with consideration for both present and future planning needs.

The existing policy and regulatory frameworks played a crucial role in guiding negotiations with the community on potential and desirable project outcomes. For example, the Physical and Land Use Planning Act (2019) and its regulations mandate a minimum road width of 9 meters. However, in cases where this standard could not be met, the community was informed about the legal requirements and the need for an adaptive approach. Engaging the community at every stage proved invaluable in shaping the settlement plan and associated project activities, aligning with the constitutional principle of public participation.

A detailed review and analysis of the policy, legal, and institutional frameworks essential for implementing the project activities was provided in Annex 4 of the project inception report, which was submitted as the first deliverable. Emphasis was put on relevant planning policies and legal documents, and their application to this assignment.

The matrix in Table 2-1 below presents a detailed summary of the policy and legal underpinnings that were instrumental in the realization of the project activities.

Table 2-1: Relevant Policies and Legislations

No	Policy	Provision	Relevance to the assignment
KISIP 2 Foundational Documents			
1.	Project Appraisal Document (PAD)	Designed and prepared by the World Bank in 2019, the introductory document for the KISIP2 project.	▪ Sets out the general project development objective (PDO), ▪ Provided the Project's design and assesses its viability through a multi-sectoral analysis. ▪ Established the four KISIP2 project components that operationalize this consultancy.
2.	Project Operational Manual	Operationalizes the PAD	▪ Provided the project implementation framework. ▪ Outlined the overall settlement selection criteria.
WB Operational Policies			
3.	World Bank Operational Policies	Designed and prepared by the World Bank.	Outlined the project safeguards to be factored in the undertaking of the project.
International Policy			
4.	Sustainable Development Goals (SDGs), 2015	Global framework consisting of 17 goals drawn from a shared common universal vision of progress towards a safe, just, and sustainable space for all human beings to thrive. Goal 5 aims at gender equality, 17 on partnership and 11 aims to make cities and human settlements more inclusive, safe, resilient, and sustainable. Specifically, targets 11.1 and 11.3 focus on ensuring universal access to adequate, safe, and affordable housing and essential services while upgrading slums by 2030.	KISIP2 significantly contributes towards the realization of Goals 5, 11, and 17 in its implementation.

No	Policy	Provision	Relevance to the assignment
5.	Agenda 2063	This is Africa's blueprint and Master Plan for transforming Africa into a global powerhouse for the future. It was an initiative by the African Union that sought to have Africa realize her full potential in development, culture and peace to establish flourishing, inclusive and prosperous societies. Aspiration 1 sought to ensure that the continent transforms and prospers on inclusive growth and sustainable livelihoods, transforming cities and towns into hubs of economic activities with modern infrastructure and access to affordable housing and services, structurally transformed economies to create shared growth, decent jobs and economic opportunities for all and modern agricultural practices for increased production, productivity and value addition to contribute to farmers and national prosperity and Africa's collective food security.	KISIP2 main focus is to improve the livelihoods of people living and working in informal settlements through regularization of land tenure, thus aligning with the collective vision of Agenda 2063.
National Policy Documents			
6.	Kenya National Spatial Plan 2015-2045	Kenya's long-term plan, covering a period of thirty years (30) from 2015-2045, defines the general trend and direction of spatial development for the country.	The plans made under the KISIP2 were aligned with the policy objectives and strategies in the Kenya National Spatial Plan 2015-2045
7.	Kenya Vision 2030	The country's development blueprint covering the period 2008 to 2030. Its main aim is to create "a globally competitive and prosperous country with a high quality of life by 2030" through transforming Kenya into a newly industrializing, "middle-income country providing a high-quality life to all its citizens and build a just and cohesive society with social equity in a clean and secure environment". The Vision is being implemented through successive five-year Medium-Term Plans (MTPs) of which we are in the Third phase (MTPIII).	The conceptualization of KISIP2 is envisioned under the Medium-Term Plan III.
8.	National Urban Development Policy, 2016	Framework for the management of urbanization and urban development to ensure cities, towns, and metropolitan areas play a critical role in national socio-economic development.	KISIP2 under Component 1 seeks to not only enhance tenure regularization but also upgrade infrastructure in informal settlements.
9.	National Land Policy, 2009	Formulated to provide an overall framework and define the key measures that were required to address the critical issues, among others, "land administration, access to land, land use planning, unplanned proliferation of informal urban settlements, and security of tenure for all Kenyans.	The policy recognizes the need for tenure security for all Kenyans, including residents of informal settlements.
10.	National Land Use Policy, 2017	Formulated from the recommendation of the National Land Policy of 2009 as a key principle to address land use planning issues.	Promotes informal settlement programmes as a strategy to create an effective physical planning system.

No	Policy	Provision	Relevance to the assignment
11.	National Slum Upgrading and Prevention Policy, 2016	Formulated to produce a policy whose goal is to guide the country towards upgrading existing and preventing the emergence of new slums in a coordinated and systematic manner.	Advocates for the integration of the existing slums and informal settlements into the formal system whilst enabling them to enjoy reasonable basic amenities. This was realized through planning and survey of these informal settlements.
12.	National Environment Policy, 2013	reviewed and formulated to meet the aspirations of the emerging issues in the management of the environment for posterity, after the promulgation of the Constitution of Kenya 2010.	Ensures that people live in safe, healthy, and dignified conditions with relatively easy access to amenities.
National Legislations			
13.	Constitution of Kenya, 2010	Article 40 stipulates that everybody has the right to own property either individually or in association with others, without any discrimination. Article 42 states that every person has a right to a clean and healthy environment. Article 61 (2) classifies land into three categories (public, community, and private). Article 66 mandates the state to regulate the use of land, but it is not limited to land use planning. Article 60(1) states. That land shall be held, used, and managed in a manner that is equitable, efficient, productive, and sustainable. Art.69 (d)provides for public participation in environmental protection. Article 53(2) states that a child's best interests are of paramount importance in every matter concerning the child.	It is the basis for all legislation in the country. It provides for the right to own property and enshrines the role of the State in controlling the use of land through land use planning. Enshrines rights for everybody to own property without discrimination. The project took cognizance of all the environmental aspects. Issuance of property ownership documents was the ultimate goal of this KISIP2 project.
14.	Physical and Land Use Planning Act, 2019 (PLUPA, 2019)	It is the main statute that provides the legal basis for physical and land use planning, development control, and enforcement, and for the preparation of different physical development plans. The Act stipulates the planning, preparation, and approval processes.	It is the planning principal law in Kenya. Provides for the LPLUDP preparation and approval processes. The Act was pivotal in provision of the processes and procedures for preparation, and approval of the Maina B Plan.
15.	County Government Act, 2012 [Revised Edition 2020]	The Act provides objectives for County planning. Section 8 enshrines the role of the County Assembly in approving County development plans. It also recognizes citizen participation under Part VIII as a critical component in land use planning.	Defines the County units' roles as the planning authorities under devolution. The county will be responsible for the approval and implementation of the approved final plans Counties had CPCTs for project supervision at the county level. As partners in this project, the counties will be obligated to implement Environmental and Social Management Plans (ESMPs)/Resettlement Action Plans (RAPs) which were triggered by the preparation of the final LPLUDP.

No	Policy	Provision	Relevance to the assignment
16.	Land Act, 2012 [Revised Edition 2019]	It gives effect to Art. 68 of the Constitution to revise, consolidate, and rationalize land laws to provide for the sustainable administration and management of land and land-based resources. Section 5 identifies the forms of tenure, while Section 5(2) of the Act provides for "equal recognition and enforcement of land rights arising under all tenure systems and non-discrimination in ownership of, and access to land under all tenure systems".	Provided the procedures for the conversion of public land to private land.
17.	Land Registration Act, 2012 [Revised Edition 2020]	The Act consolidates and rationalizes the registration of titles to land. Section 15 of the Act states that the authority responsible for the survey of land shall prepare and thereafter maintain a map/ series of maps that will be known as cadastral maps for every registration unit. It also requires that the parcel boundaries on such maps are georeferenced and surveyed to such standards as to ensure compatibility with other documents. Section 6 of the Land Act was amended to further add powers and functions of the Cabinet Secretary in land management such as coordinating the development and implementation of a National Land Information System in collaboration with the NLC.	This is the main law that was applied on the registration of titles under this project which were based on the final plan and final LoB.
18.	Land [Amendment] Laws, 2016	The amendments aim to provide for sustainable and productive management of land resources and streamline any identified inconsistencies with the Constitution.	Has streamlined various clauses in the principle land laws, which were adopted accordingly under this project.
19.	Survey Act, 1961 [Revised Edition 2020]	The Act guides land survey works and processes in Kenya.	This is the principal law that will guide all the surveying activities in this project, from geodetic control survey, parcel beaconing, authentication of survey plans, amendment of RIMs, and generation of area lists.
20.	Environmental Management and Coordination (EMCA) Act Cap 1999 [Revised Edition 2019]	The Act provides for the establishment of an appropriate legal and institutional framework for the management of the environment. It seeks to integrate environmental concerns into national policies, plans, programmes, and projects. It legislates Environmental Impact Assessments and audits as tools to determine whether a programme, activity or project will have adverse impacts on the environment.	This was applied together with Environmental and Social Management Framework (ESMF) during the environmental screening and assessment of the plan proposals in relation to environmental impacts and mitigation measures.
21.	Environment and Land Court Act (ELCA), 2011 [Revised Edition 2016]	The Act gives effect to Art. 162(2) of the Constitution and establishes the Environment and Land Court to hear and determine disputes relating to among others, land use planning, title, tenure, and boundaries.	KISIP2 has developed a robust four-tiered grievance mechanism - at the community, county, and national and resolution through courts of law. In the event any case escalates; after exhausting all the available local avenues, the complainant(s) shall be entitled to lodge their complaints with the ELC for determination of issues in contestation as a last resort.

No	Policy	Provision	Relevance to the assignment
			Within Maina B, all grievances have been handled at the community level.
22.	National Lands Commission Act, 2012 [Revised Edition 2016]	National Lands Commission (NLC) has major functions including management of public land on behalf of the County and National governments and advising the national government on a comprehensive programme for title registration. Section 5 (2)(a) notes that on behalf of, and with the consent of the National and County governments, alienate public land that would result in conferring land rights to private individuals (beneficiaries). Additionally, the Commission is mandated to encourage the application of traditional dispute resolution mechanisms in land conflicts.	Creates the NLC that is mandated to manage public land on behalf of the National and County Governments Under this project, NLC will reserve the parcels that have been earmarked for public use.
23.	Urban Areas and Cities Act (UACA),2011 [Revised Edition 2019]	It enacts Article 184 of the Constitution, which legislates classification, governance, and management of urban areas and cities; criteria for establishing urban areas, and the principle of governance and participation of residents. The act calls for the institutionalization of active participation in urban areas and cities. Section 37 of this Act stipulates that a city or urban area integrated development plan shall be aligned with the development plans and strategies of the County governments. Every city and municipality established under this Act shall operate within the framework of integrated development planning.	Classifies urban areas. The participating informal settlements for upgrading under this project were selected from urban setups in line with the project's settlement criteria on the required proximity of the settlements to the nearest urban area.
24.	Matrimonial Property Act, 2013	This Act provides for the rights and responsibilities of spouses concerning matrimonial property and for connected purposes. Section 4 states that, despite any other law, a married woman has the same rights as a married man.	Safeguards married spouses' equal rights to property ownership. There was continuous sensitization for the beneficiaries to embrace joint ownership.
County Specific Regulations			
25.	Laikipia County Spatial Plan (2023-2033)	The County Spatial Plan provides a framework for land use management in the County. The CSP has outlined one of the strategic interventions to be on provision for regularization of land tenure in informal settlements.	This corresponded KISIP's objective of tenure regularisation in the selected informal settlements. Therefore, the project augmented the County's effort in addressing informal settlements.
26.	Laikipia County Water Management Master Plan (2021 – 2031)	The plan will provide the blueprint that will guide water resource development and supply	KISIP2 will provide comprehensive infrastructure upgrading in the settlements, including improved water supply. It will be key in planning for the settlements especially in ensuring that the residents will have access to clean and safe water.
27.	Laikipia County Climate Change Action Plan (2023-2027)	The Plan aims at ensuring that the County is capable of providing quality, sustainable, and affordable services while taking climatic risks into consideration. It also advocates for community participation, ensuring that climate actions are implemented in a way	The Project interventions were aimed at reducing vulnerability in poor urban settlements to disaster and climate risks and to catalyze economic growth, improving the livelihoods of the most vulnerable.

No	Policy	Provision	Relevance to the assignment
		that is inclusive and that benefits are distributed fairly.	The Project also advocated for community involvement in all the project processes.
28.	The Laikipia County Service Youth Act, 2020	It enacts Articles 55 of the Constitution that provides for the establishment of the Laikipia Youth Service and for matters connected therewith and incidental thereto.	KISIP2 enhances socio-economic inclusion and prioritized the youth through involving them in the project activities such as data collection and during other community engagements. As a result, this will contribute to their skills enhancement and creating employment opportunities.

2.5 Planning Regulatory Framework

2.5.1 Physical and Land Use Planning Handbook 2025

The preparation of the Physical Planning Handbook is in fulfilment of Article 66 (1) of the Constitution of Kenya 2010, which provides for the regulation of the use of land. The handbook, therefore, provides guidelines and standards for land use planning and development control that are applicable countrywide. It is in its final stages of enactment as it has been adequately subjected to public participation and review by various experts. Consequently, it covers various types of physical plans, including national spatial plans, regional plans, and local physical development plans, as outlined in Part III of the Physical and Land Use Planning Act (2019). Additionally, it necessitates that the preparation of plans requires a structured framework that defines guidelines, methodologies, standards, and key planning considerations. It also specifies standard requirements for different land uses and densities.

Although an adaptive planning approach was employed in the preparation of the plan, the handbook, together with best planning practices, largely informed the designation of various land uses and the preparation of development control guidelines, which are detailed in Chapter 6. These guidelines/standards included building lines, setbacks, densities, access, parking, among others. Therefore, the ultimate goal is to ensure land use compatibility, suitability in siting buildings, regulating developments, hence promoting sustainable development and ensuring compliance with the existing policy and legislative frameworks.

2.5.2 National Building Code, 2024

Alongside the physical planning handbook, the National Building Code of 2024[1] sets out the building regulations/standards governing construction. Part II of the code necessitates compliance with the physical planning standards on sitting and spacing of buildings. This includes site space, access to the subject plot, sanitary facilities, spacing between structures, building lines and setbacks. In informal settlements, structures don't conform with established minimum standards for housing as structures are often built using non-permanent materials such as polythene, timber, mud, and iron sheets.

[1] https://www.nca.go.ke:81/media/National_Building_Code_2024.pdf

Part XXI section 363 (1) provides that a building shall be designed, constructed and equipped in a manner that in the event of a fire the occupants therein are protected. Further, the design and construction should minimize the spread and intensity of fire within the building, and the spread to other buildings. Additionally, sufficient stability is retained to ensure that the building does not endanger another building. Informal settlements often experience disasters, especially fires, and as building materials usually comprise of timber, iron sheets, among others; the fires tend to spread quickly, affecting a large area.

Issuance of land rights through tenure regularization will thus promote construction of permanent structures or semi-permanent that are safer. Additionally, the proposed Local Physical and Land Use Development encompassed regulations on development that will be enforced by the respective County government to ensure conformity with the building code/regulations.

2.5.3 World Bank OP 4.12 on Involuntary Resettlement

The Bank's operational policy served as the foundation for the development of KISIP2's Resettlement Policy Framework (RPF), which was designed to implement preventive measures against any involuntary displacement or negative impacts resulting from the plan's proposals. In this context, various planning options were explored, and the 'adaptive' approach was considered as the preferred alternative due to its minimal impact and limited generation of Project Affected Persons (PAPs).

2.6 Governance and Institutional Framework

This section outlines the roles, responsibilities, and coordination mechanisms among various stakeholders involved in the implementation of the Kenya Informal Settlement Improvement Project (KISIP). Further, it highlights the governance structure and partnerships essential for project execution. Figure 2-1 illustrates the various actors, namely: the national and county governments, and non-state actors.

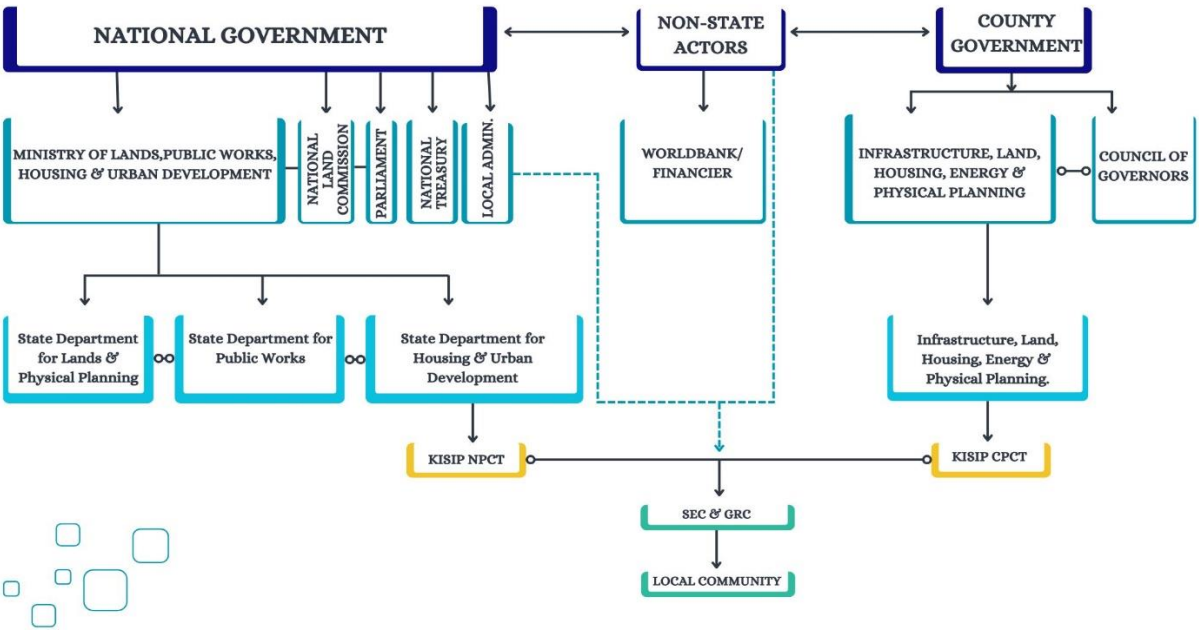


Figure 2-1: Institutional framework

2.6.1 National Government

This comprises the Ministry of Lands, Public Works, Housing and Urban Development; National Land Commission (NLC), KISIP NPCT, and the local leadership. The Ministry of Lands, Public Works, Housing, and Urban Development comprises three state departments, namely, Lands and Physical Planning, Public Works, Housing, and Urban Development.

Specific to the KISIP project, the State Department of Lands and Physical Planning was key in the following tasks:

i. Unbundling of the Physical and Land Use Planning Act (PLUPA 2019) whenever needed
ii. Authentication and approval of the settlement survey plan
iii. Produce and maintain Registry index maps of the property boundaries in support of land registration
iv. Processing and issuance of ownership documents (land rights)
v. Custodian and maintenance of land information system (LIS)

Whereas the state Department of Housing and Urban Development oversaw the planning and implementation of the project, the state Department of Public Works will provide technical expertise on infrastructure development and quality control.

Specific to this project the National Land Commission (NLC) served the following tasks;

a. Review and issuance of comments on the draft plan and the list of beneficiaries
b. In collaboration with the county government of Tana river Manage the resultant public spaces within the settlement

The local administration (chief/assistant chief) disseminated information to locals through 'Barazas', ensured local mobilization during the plan preparation process, will ensure public participation and act as a watchdog in the implementation of the plan on behalf of the community.

Specific to this assignment, national government has played and will continue to play critical roles as detailed in the table below.

No	Category	Actor	Role of the Actor
1:	Ministry of Lands, Public Works, Housing and Urban Development	KISIP NPCT	• Developed frameworks and guidelines for the project, • Has provided technical expertise to county governments, including capacity building, tracking progress, impact, and challenges in project implementation. • Has ensured community participation in decision-making. • Will take lead role in processing and issuance of title deeds;
		National Director General of Physical Planning	• Undertake capacity building and technical support to the county on planning matters • Assisted KISIP in supervisory roles

			• Unbundling of PLUPA if and where need be
		Director of Surveys	• Authentication and Approval of the settlement survey plan • Produce and maintain plans of the property boundaries in support of land registration; • Amending the Registry Index Maps and preparation of area lists;
		Land Registrar (Department of Land administration and Land registration)	• Processing and issuance of ownership documents of the surveyed and verified plots within the settlement; • Custody and maintenance of Land information system of the cadastre - responsible for recording
		National Land Commission (NLC)	• The constitution mandates the National Land Commission to monitor and undertake oversight roles over land use planning in the country. This would include the planning area • In liaison with the county government of Tana river, manage resultant public subplots on behalf of the County government.
	Ministry of internal security	National Government Administration (chief & assistant chief	• Maintained law and order during the project cycle • ensured local mobilization during the plan preparation process • Will ensure public participation and act as a watchdog in the implementation of the plan on behalf of the community

County Government

Under the PAD, county governments act as the primary implementing agencies for the project, forming County Project Coordination Teams (CPCTs) that replicate the national project structure in composition. The CPCT was led by a Coordinator and staffed with specialists in finance, procurement, monitoring and evaluation, engineering, planning, and safeguards. These teams handled daily project coordination, infrastructure procurement, and implementation (with technical support from the National Project Coordination Team). Consequently, they ensured compliance with safeguards, monitoring, and reporting requirements. The pre-implementation phase focused on building county capacity in procurement, financial management, and safeguards to ensure effective project execution. This enhanced framework ensured structured coordination while empowering the county to meet project objectives in line with World Bank guidelines.

The specific roles for CPCT under KISIP2 include:

i. Delineation of settlements – The CPCT guided in the delineation of settlement boundaries participating in the KISIP2 project in Laikipia, and in this regard, Maina B settlement.

ii. Facilitate entry to the settlement-The CPCT introduced the consultant to the Maina B community for familiarization before project launch.
iii. Community mobilization and sensitization- The CPCT supported in mobilization in collaboration with the chief, and other local leaders.
iv. Participate in all activities- planning and surveying. The CPCT participated in all project activities, hence ensuring the accuracy of the work through consultant supervision.
v. Plan approval and Validation of the List of Beneficiary
vi. Implementation of ESMP/RAP- The CPCT will participate in the implementation of an ESMP for Maina B, as there are PAPs generated as a result of access creation/alignment.
vii. Dispute resolution-The CPCT intervened in settling contestations among the community members, GRC, and SEC on the established settlement boundary, hence paving the way for socio-economic survey, planning, and other subsequent activities.

The CECM in charge Infrastructure, Lands, Physical Planning, Housing, Energy & Urban Development was responsible for the adoption of the settlement LPLUDP, issuance of the notice of intention to plan and notice of completion, presentation of the community adopted plan to the entire county executive committee and forwarding the proposed plan for approval by the county assembly. The Department of Infrastructure, Lands, Housing, Energy & Physical Planning reviews and implements the approved LPLUDPs. It will also communicate the decisions of the county government on development applications, issuance of development permissions, among other applications. Consequently, it will collaborate with other departments within the County Government of Laikipia to implement the approved plan, update the GIS database, enforce environmental regulations, supervise and advise on applications for environmental impact assessments (EIA) and environmental audits as provided in section 58 of EMCA,1999 (Amendment, 2015).

Non-State Actors

Non-state actors collaboratively work with state actors in putting efforts towards the project implementation. The key non-state actors in the KISIP project include the World Bank and the community.

The World Bank plays a key role in funding, technical support, policy guidance, environmental safeguards, and monitoring within KISIP. Its involvement ensures that the project is effectively executed, sustainable, and aligned with global best practices in informal settlement upgrading.

The Grievance Redress Committee (GRC) and Settlement Executive Committee (SEC) formed the community leadership for Maina B settlement. The committees comprised elected members who include: youth, women, elders, and persons with disabilities. The GRC was responsible for handling complaints and resolving conflicts that arose among community members. This ensured project-affected persons (PAPs) and other stakeholders had a structured platform to voice their concerns. Additionally, resolving issues that did not require the attention of the

authorities minimized project delays and related costs, as authorities follow procedures in resolving such issues. The **SEC** served as the primary link between KISIP NPCT, CPCT, the consultant, and the local community. It ensured that the community members were actively involved in decision-making and project implementation. Though the GRC and SEC were key, the local community members voluntarily participated in making proposals/developing visions, and overseeing the plan implementation. Roles of the various non-state actors are as detailed in the table below.

Table 2-2: Roles of the various state actors

No	Category	Actor	Role of the Actor
1	The financier	World Bank	Funding, technical support, policy guidance, environmental safeguards, and monitoring within KISIP Ensures that the project is effectively executed, sustainable, and aligned with global best practices in informal settlement upgrading
2	The settlement Community	SEC	Representation of the community in the project leadership Acted as the link between the community, the consultant and the client Took lead role in community mobilization and sensitization on the project milestones
		GRC	Assisted in solving dispute that arose during the project period
		The people/residents of the settlements	Participated in voluntary services and planning Will take overseer role to ensure implementation of the plan takes care of their proposals and addresses their plan vision Monitor developments within their neighbourhood; Comment on public notices on proposed developments;

3. PLAN PREPARATION PROCESS

3.1 Overview

The preparation of this Plan was guided by the practical realities of planning in informal settlements, acknowledging that settlement upgrading is often a post-development intervention rather than a proactive planning process (See

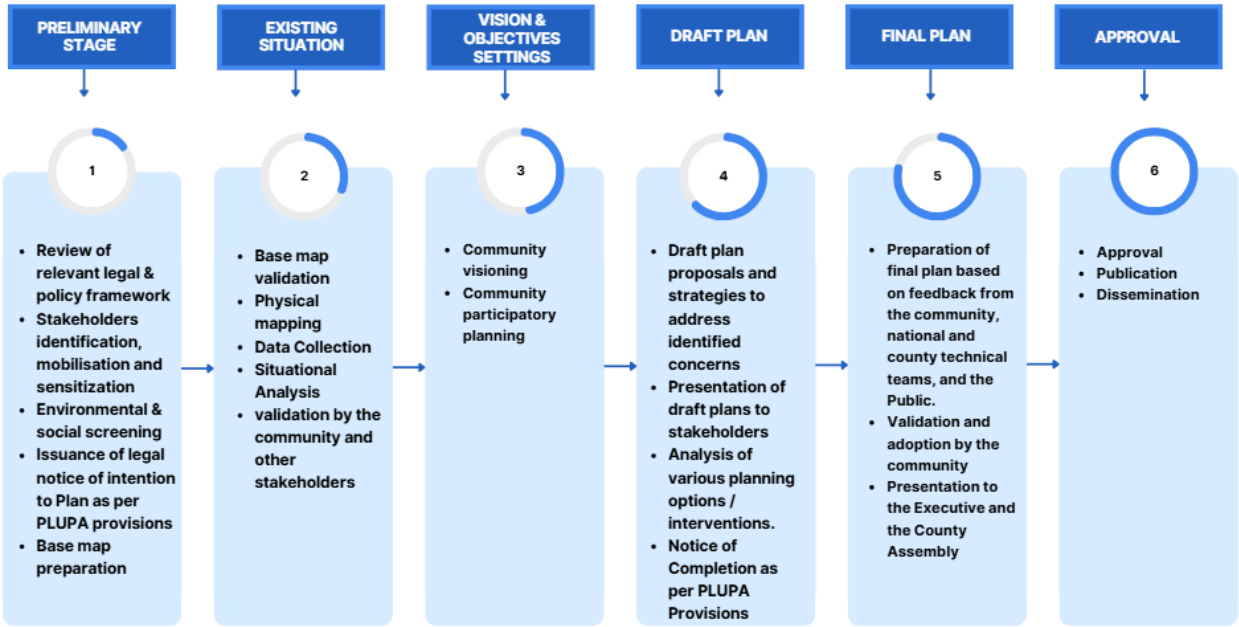


Figure *3-1*). This poses significant challenges in applying conventional planning standards, such as:

- Standard road widths and plot sizes
- Compliance with plot coverage regulations
- Conventional land-use zoning
- Provision of adequate public facilities and open spaces

Given these constraints, the plan prioritizes spatial orderliness while adopting a flexible approach to minimize displacement and disruption to residents. Rather than imposing rigid planning frameworks, the approach aligns with the adaptive planning model, ensuring that upgrades enhance accessibility, tenure security, and service provision while minimizing the number of negative impacts. The discussion on planning alternatives (section 5) elaborates on how this balance was achieved. This

has been discussed further in chapter 5, which delves into the plan alternatives and how they have been achieved.

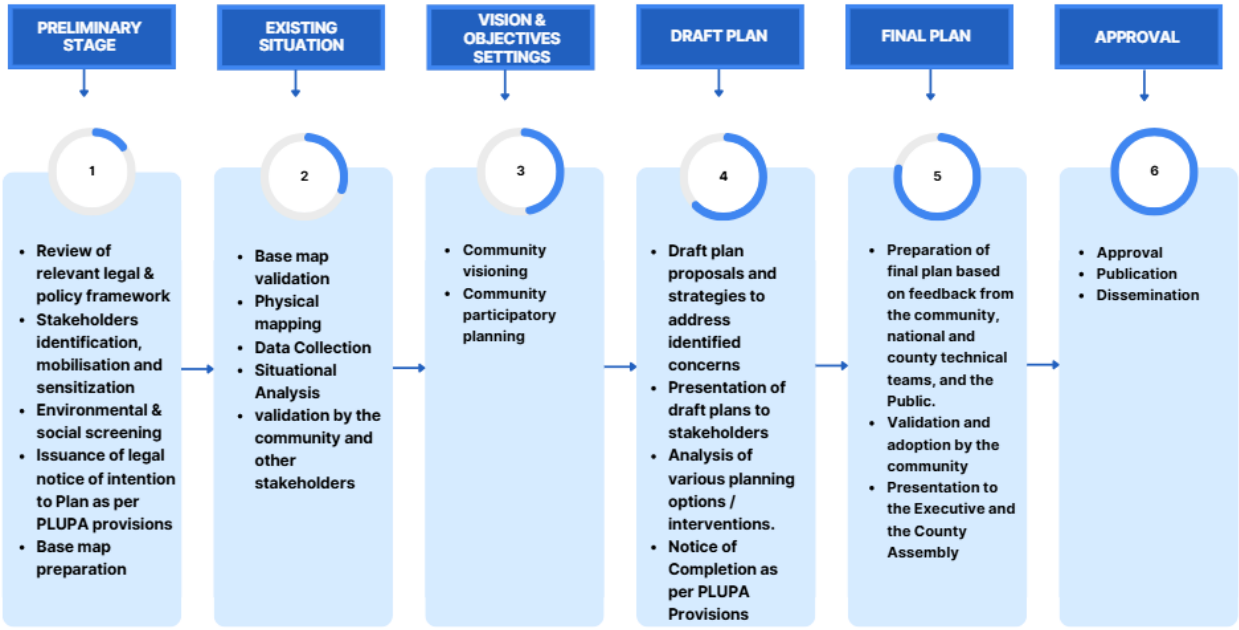


Figure 3-1: Summary of the Plan Preparation process

The methodology adopted for this plan is detailed in the subsequent sections.

3.2 Stakeholder identification and analysis

Stakeholder engagement was deemed critical in ensuring project acceptance and success. At the project's inception, key stakeholders—including individuals, groups, and institutions—were identified to assess their potential influence on the planning process. The stakeholder analysis exercise informed the selection of appropriate consultation methods for each group throughout the project lifecycle. A detailed stakeholder identification and analysis report has been submitted separately as part of this consultancy.

A summary of the targeted stakeholders is presented in Table 3-1 below.

Table 3-1: Key stakeholders

Category	Name of Stakeholder	Role in the project
	Primary Stakeholders	
Community members	Structure owners	• They are the primary beneficiaries of the project in the provision of tenure security. The structure owners played a crucial role in parcel boundary picking, as the settlement lacked formalized boundaries. Therefore, this informed the basemap, plan preparations, and generation of the list of beneficiaries, which was key in the titling process. Consequently, they provided insights (vision and relevant proposals) during the plan preparation stage.
	Tenants	• Indirect beneficiaries who will benefit from the settlement planning and upgrading. • Tenants were key in determining the various long term social and physical

		infrastructural requirements in the settlement.
	SEC members	• The SEC played a critical role in linking the Consultant to the community. • The membership of SEC was representative of the various interest groups within the settlement which included youth, PLWDs, women etc.
	GRC members	• Addressing conflicts/grievances arising from the project related activities within the settlement. This sought to curb the high costs and time spent in conflict resolution, which would result in project delay.
Social institutions and facilities	• Worship centres • Maina dispensary	• Offering their facilities as venues for various project activities e.g. PCMA Church in Maina B hosted the introduction, launch, socioeconomic presentations and plan presentation meetings. It also served as the meeting point for enumerators, supervisors and SEC members during the socioeconomic survey exercise. • Worship centres were used to advertise the details of the socioeconomic exercise and the various planning activities.
Secondary Stakeholders		
Local leadership (Elected representatives and administrators)	Chief, MCA, Women representative, ACC	• Ex-officio members of the SEC • Local administration gave support to the GRC in some dispute cases • The MCA will champion the approval of the final settlement LPDLUPs and accompanying reports at the County Assembly. • Provided political goodwill and ownership of the project • Assisted in the mobilization and sensitization of the project to the community through assuring the locals on the administration's support of the project
Government Agencies		
Ministry of Lands, Public Works, Housing and Urban Development	National KISIP Coordinating Team	• Supervised the Consultant and the project implementation
Laikipia County Government	County KISIP Coordinating Team • County Executive Committee member • County coordinator • (Sub) County planners	• Steered and coordinated the project at the County Level • Acted as a link between the KISIP 2 National Team, the Consultant, and the respective communities. • Linked the Consultant to relevant County departments. • Participated in project activities such as perimeter boundaries verification, beneficiary enumeration, physical mapping,

		confirmation of the final list of beneficiaries, planning, and surveying. • Participated in resolving escalated disputes within the settlements

3.3 Stakeholder Mobilization and Sensitization

Stakeholders are individuals, groups, or organizations that have an interest in or are affected by the planning process and its outcomes. They include parcel owners, tenants, businesses, community groups, government agencies, and other organizations. The stakeholder engagement is crucial throughout the project to ensure that community needs and priorities are prioritized. For this exercise, stakeholder engagement began with the project launch meeting on 4th December 2024 at PCMA Church. The meeting introduced and laid the groundwork for the draft plan preparation by presenting the project's scope, objectives, and processes. This included outlining the socioeconomic survey, physical mapping, and participatory planning sessions that formed the plans development.

The second stakeholder engagement in the plan preparation involved validation of socioeconomic findings, visioning, and a community participatory planning session, which was held on 19th February 2025. During this session, community members articulated their aspirations for the settlement, which, alongside professional input from the consultant team, guided the plan's formulation.

The third stakeholder engagement involved presentation of the draft plans to the community and technical teams (CPCT, NPCT). Various plan alternatives were prepared based on the key community proposals, expert opinion, and planning standards. The plan alternatives were presented to the technical team on 24th March 2025 and to the community on 25th March 2025. The community preferred the adaptive alternative which introduced a structured access and harmonized land use structure.

The fourth stakeholder engagement involved presentation of the draft final plans to the community and technical teams (CPCT, NPCT, executive, and MCAs) for comments. Before the community engagement, the draft plans were presented to the technical team (CPCT and NPCT), who appreciated the consultant's efforts, on 17th June 2025. The technical team urged the consultant to provide details of the structures impacted, a list of PAPs generated, and a tentative budget for the facilitation of the PAPs to inform the county on budget allocations.

The plan was further validated by the community on 23rd June 2025 after incorporating their comments, more so, reassigning land uses. Further, the draft final plan was presented to the executive and the MCAs on 19th June 2025. The major emerging issue from the presentations was the number of PAPs generated and the budget estimate for their facilitation. This served as the foundation for this planning process and the report presented here.

3.4 Environmental and Social screening

The Environmental and social screening conducted in Maina B provided a crucial first look at the potential impacts of formalizing land tenure. This assessment aimed to ensure that the regularization process would proceed without harming the environment or community. The screening process specifically examined key environmental factors, such as natural resources, infrastructure and services, climate resilience, land degradation, waste management. It also considered social aspects like livelihoods, cultural heritage, social cohesion, access to services, gender equity, and the needs of vulnerable groups. The screening confirmed the absence of environmentally fragile areas within the settlement and ultimately its suitability for the project. A more detailed screening will be conducted to evaluate the environmental and social implications of the adopted plan. Any adverse project effects will be addressed through an Environmental and Social Management Plan (ESMP).

3.5 Due Diligence

The validation of the project scope involved assessing the alignment between the terms of reference under this consultancy and the actual conditions on the ground. The process began with establishing the tenure and ownership status of the land where the settlement is located, followed by confirming the physical boundaries. This approach was guided by the project's requirement that tenure regularization interventions apply only to settlements situated on uncontested public land.

The validation exercise for Maina followed these key steps:

i. Engagement with the County Government of Laikipia – Officials from the county provided preliminary information on the settlement's scope including physical boundary extents.
ii. Community consultations – Meetings were held with residents to gather relevant information, including disclosures on existing proprietorships and historical perspectives on the settlement's emergence.
iii. Review of planning and survey documents – Relevant documents, such as survey plans, Registry Index Maps (RIMs), Parcel Identification Documents (PIDs), and Physical Development Plans, were obtained and interrogated to inform the validation process. As part of the due diligence process, the Consultant reviewed existing development plans for the settlement, including:
    - A 1993 development plan prepared by The Local Government with the departmental reference number NYA/C2/93/22.
    - The Nyahururu town-wide development plan (C2/77/5), prepared by The Local Government and approved in 1978.

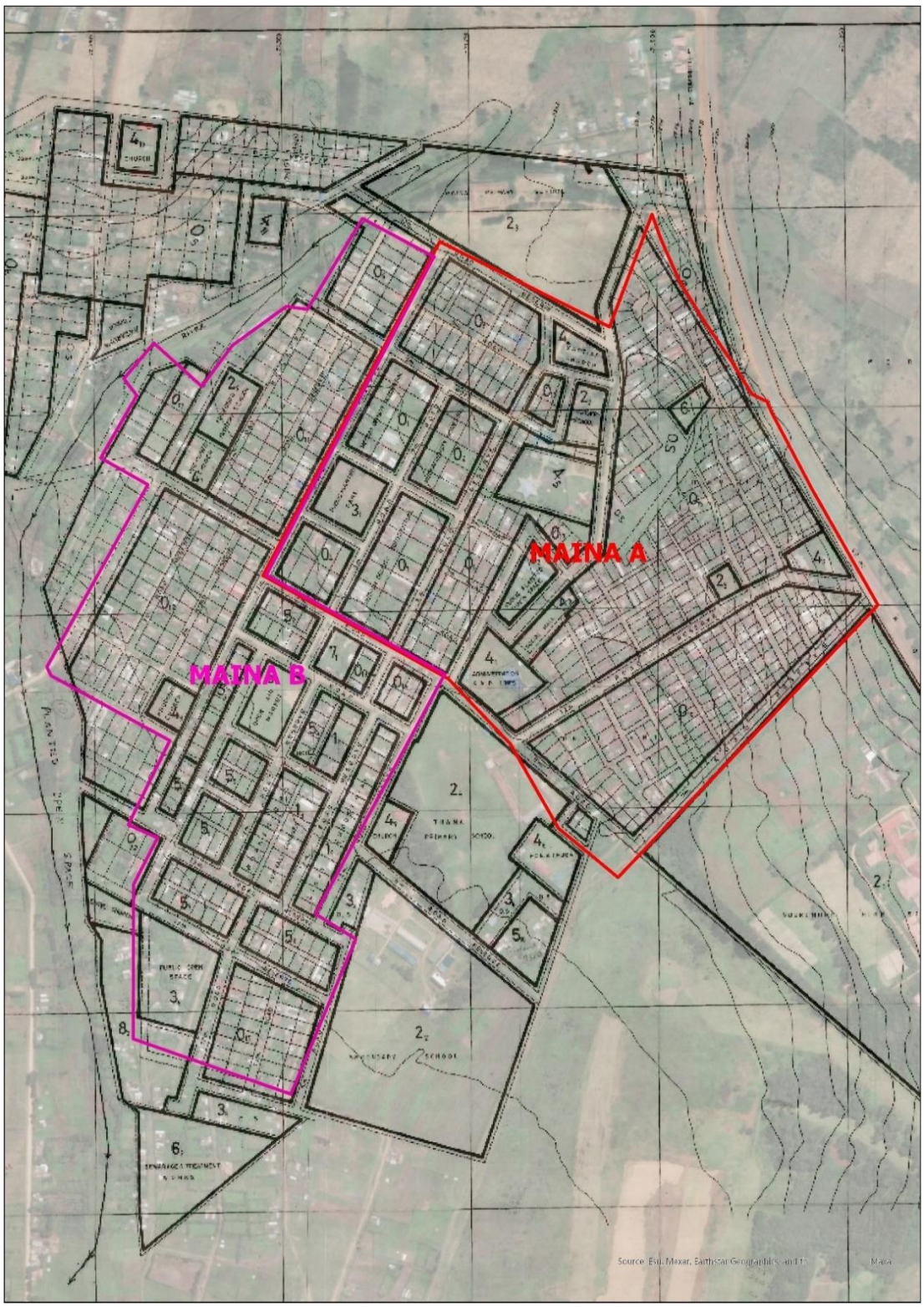
    It was established that these plans were used for issuing the letters of allotment held by the residents of the settlement. The residents have by and large settled and developed their properties in accordance with these existing plans. As a result, the KISIP2 project was expected to facilitate the formal regularization of tenure security for the residents. Since these plans had existing provisions for access and spatially legible parcel layouts, the planning process was straightforward, with potential for large-scale formalization and minimal disruption to existing structures.

Map 3-1 provides a visual representation of the overlays with historical development plans, superimposed on satellite imagery, highlighting the alignment between existing structures and previous planning efforts.

iv. Drone mapping – Aerial mapping was conducted to capture the settlement's existing development status. The outputs facilitated physical boundary verification and delimitation, with the maps superimposed on existing survey and planning data for analysis.

v. Assessment of land registration documents – Efforts to obtain legal ownership records, such as titles and leases, have so far revealed that some sections within the initial planning area had been surveyed and owners issued with ownership documents. These sections have been hived off from the planning area. This assessment, part of due diligence, is an ongoing effort that the consultant will undertake until completion of the project.

vi. Field verification of the project scope – This was undertaken collaboratively with the KISIP National and County teams, alongside community members, to confirm the settlement's physical extents and validate the findings.



Map 3-1: Project boundary with settlement-based PDP of 1993

3.6 Basemap Preparation and Adoption

The basemap constitutes a fundamental component of the planning process, serving as the primary spatial reference document throughout project implementation. As outlined in Deliverable 2 of this consultancy, the preparation involved developing a detailed representation of the settlement's physical characteristics through comprehensive field verification. This process incorporated active participation from

residents and SEC/GRC members in identifying and validating structural features and parcel boundaries on the ground.

Drone mapping was conducted to capture the settlement's existing development status with the outputs facilitating physical boundary verification and delimitation. The collected spatial data underwent rigorous processing to establish accurate parcel configurations, which subsequently formed the foundational layer for drafting the settlement's LPLUDP. The resulting basemap not only reflected current on-ground realities but also served as a dynamic document that would be periodically updated to accommodate future modifications during subsequent project phases. This methodology ensured both technical accuracy and community validation of the spatial data underpinning the planning exercise.

Map 3-2: Maina B basemap

3.7 Socioeconomic Survey and Situational Analysis

The primary objective of the socioeconomic survey was to collect household and demographic data, as well as information on economic activities, social dynamics, access to public and utility services, community priorities for upgrading, and financial status. This data was essential for informing the situational analysis report as well as various planning interventions aimed at improving living conditions in Maina B.

Prior to the socioeconomic survey, a physical mapping exercise was conducted, involving the numbering of all structures in the settlement based on the basemap-generated identifiers. This process was crucial in assigning spatial identities to structures and facilitating the administration of questionnaires during the survey. The findings from this exercise were compiled into a socioeconomic survey report, which served as a key input in the preparation of this planning report. Findings from the socioeconomic survey were presented and validated by the community on 19th February 2025 as shown in Plate 3-1 below.

Plate 3-1: Presentation of the socioeconomic survey findings

Some of the comments raised by the community members during the presentation are highlighted below. Minutes of the meeting are annexed to this report.

Key Concerns Raised by the Community

i. Residents mentioned that the full potential of the spring had not been realised and suggested that with proper utilisation and protection, it had the potential to serve as the primary water source thereby reducing reliance on NYAHUWASCO.

ii. The community members agreed that their current solid waste management methods were not sustainable, raising the need for an improved management system.

iii. There were suggestions to improve security by providing a police station as well as the installation of security lights.

iv. Based on the consultant's emphasis on the need to improve and provide access across the settlement, the community members agreed to observe the standard and recommended road sizes.

3.8 Community Visioning and Participatory Planning

Community visioning is a participatory planning process that allows residents to articulate their aspirations and dreams for the future of their community, while participatory planning is an approach that responds to people's spatial needs by recognizing their lived experience of place. In this case, the community members are given a chance to present proposals to address the key challenges that they are facing. Participatory planning was a key approach in the plan preparation, where the local community of Maina B was actively involved, among other essential stakeholders, to strengthen grassroots planning, foster ownership of outcomes, and facilitate implementation.

Community visioning sessions provided residents with a platform to articulate their aspirations for the future of Maina B as illustrated in Plate 3-2. This stage followed the socioeconomic survey and coincided with the presentation of survey findings to the community.

Plate 3-2: Highlights from the community visioning process

The vision statements expressed by the community were synthesized into a comprehensive vision statement: ***To transform Maina B from an informal settlement to an estate"***

Participatory planning was a key approach in this project, emphasizing direct engagement with residents and other stakeholders to strengthen local-level planning processes, enhance ownership of project outcomes, and facilitate implementation. Residents were given an opportunity to spatially represent their envisioned settlement through hand-drawn plans. These sketches were later digitized, incorporating professional input to refine various planning proposals. Every step of the methodology was carried out in collaboration with the community, fostering a strong sense of ownership in both the project and the plan-making process.

Through the visioning and participatory planning exercises, residents conceptualized their ideal future settlement and proposed various planning interventions that would realize their vision. The project planner led the session, calling upon residents to describe their ideal settlement. The following were the proposed planning interventions from the community members:

- An upgraded and improved access network with line utilities

- Establishment of a sewerage reticulation system
- Improved solid waste management
- Develop the market area
- Enhance disaster preparedness

The residents concurred that they needed to start dream proportionally to their current state. These community-driven proposals, combined with professional and expert input from the consultant and other stakeholders, formed the foundation of the planning process and the report herein.

3.9 Verification of the List of Beneficiaries

Following the socioeconomic survey conducted in January 2025, a preliminary list of beneficiaries (LOB) was generated, identifying structure owners within the settlement. This list underwent an initial verification exercise in February 2025 to confirm and update beneficiary details. The final verification exercise was conducted in June 2025 during the presentation of the final LPLUDP. During this process, project identification cards were issued to beneficiaries. These cards contained the beneficiary's name, photo, National ID number, and parcel ID details. However, it is important to note that these identification cards do not serve as proof of land ownership, and the community was informed as much.

The LPLUDP laid the foundation for linking the LoB to the parcels by facilitating the planning and consequent survey of the resultant parcels. As indicated previously, the main objective of KISIP2's component 1.1 was tenure regularisation and issuance of ownership documents. The LoB will be annexed to the survey plan to facilitate the processing and issuance of ownership documents.

3.10 Preparation of the Local Physical and Land use plan

The culmination of the preceding activities was the preparation of Final LPLUDP, as discussed in this report. The socioeconomic survey exercise provided baseline data that informed the planning proposals and the generation of the List of Beneficiaries. The settlement basemap served as the primary reference upon which plan proposals were spatially laid and contextualized. During the community visioning and participatory planning exercises, residents articulated their aspirations for the settlement, shaping the proposed land use framework. Particular emphasis was placed on improving accessibility, with residents identifying areas where road networks needed enhancement.

Building on these community inputs, the Consultant incorporated additional planning considerations, including existing development layouts, the feasibility of proposals in relation to available space, neighbourhood contextual analysis (assessing the potential for existing nearby facilities to serve the settlement), and the number of affected persons (PAPs) generated by the planning process.

Two planning options, Nil intervention and Adaptive option, were developed and analysed independently and comparatively against key project elements. Each option

was assigned a score based on various planning criteria. Following community presentations, the second adaptive plan was selected as the preferred option, with adjustments made to specific road sizes and land uses based on community feedback.

A detailed analysis of these plan options is provided in Chapter 5 of this report.

3.11 Plan Presentations

3.11.1 Presentation of the Draft Plan to the Technical Team

The draft plan was presented to the technical team, comprising the NCPCT and CPCT, on 24th March 2025. The meeting served to gather technical feedback and alignment ahead of the planned community presentation and to report on project progress. The technical team commended the consultant for the high quality of work delivered. The meeting further provided an opportunity to discuss and address several emerging issues

First, the influence of existing Part Development Plans (PDPs) in the project area was noted, as these previous planning efforts had shaped the planning process and informed the structure of the current plan. Secondly, the consultant reported that, as part of the ongoing due diligence, several parcels within Maina were discovered to have already been issued with title deeds. The county team acknowledged this situation and recommended that these titled parcels be excluded from the project area. The consultant noted that the due diligence process would be carried out until the project's completion.

Additionally, the team highlighted the large number of impacts identified in the draft plan. The consultant clarified that while this figure appeared high, a detailed analysis and ground-truthing exercise would be undertaken to confirm the actual extent of the impacts, most of which were expected to be partial (involving canopies, fences, toilets, or small sections of structures). Finally, the NCPCT reiterated that Laikipia County would be responsible for providing a budget for addressing PAP-related matters, based on the final ESMP to be prepared by the consultant, affirming that the county was obligated to manage and facilitate the PAPs as part of its mandate.

3.11.2 Draft Plan presentation to the community

Upon finalizing the draft plan, incorporating inputs from the community participatory planning exercise and aligning with the most applicable planning standards given the settlement's conditions, the two plan options (discussed in Chapter 5)—were presented to the community for review. During this session, residents assessed the plan options, including their associated impacts, and provided feedback based on their envisioned settlement outcomes (see Plate 3-3). Community members were then given the opportunity to select the preferred alternative, which would be further refined to align with both current and future settlement needs. Following deliberations and feedback on both options, the decision was subjected to a community vote. The Adaptive Plan was unanimously selected, with agreed-upon modifications to address specific concerns raised by residents.

Plate 3-3: Highlights from the draft plan presentation

Some of the key issues discussed with regards to the plan are summarized under Table 3-2 . Detailed minutes of the meeting are attached to this report under Annex 2.

Table 3-2: Highlights of the issues discussed in regard to the plan

CONCERNS/COMMENTS	RESPONSE
A community member sought clarification on whether the titled parcel would be planned	The project won't cover sections with existing titles.
A resident inquired if parcel 359 would remain as it was, or the access road beside it would be extended	The consultant remarked that the project aims at minimizing PAPs, and thus the reason for not having an increased width of the road size
A community member wanted to know if Parcel 169 which is currently been used as a sawmill, could be assigned a different purpose apart from its light industrial designation?	The owner of the parcel corrected that it was individually owned and that he wanted it to be registered for residential use
A community member inquired if the proposed market could be divided into two to host a commercial and light industrial zone	The community agreed for the space to continue being a market
A resident wanted to know if the parcels demarcated for residential use but are close to roads could be converted to mixed use	The consultant explained that the parcels demarcated as residential were served by 6m roads. To convert to mixed use, would necessitate expanding the roads from 6m to 12m. However, the consultant highlighted that the parcels along the 12M road that had been designated as residential would be converted to mixed use

3.11.3 Community Adoption and Validation

The final draft plan, having incorporated comments from the community and the technical teams, was presented to the community for their validation and adoption. The primary objective of this exercise was for the community to confirm that the plan option that would be forwarded for approval was the preferred option that was deemed as the best fit for intervention in Maina B. Some of the key issues regarding the final draft plan are summarized in the table below.

Table 3-3: Comments raised during the plan adoption meeting

	Comment	Response
1	A member noted that in the previous meeting they had proposed parcel 97 to be a bus park. However, that was not captured in the final plan and instead the parcel was said to have a title deed.	The consultant responded that due diligence was done and confirmed that the parcel already had a title deed thus no proposal could be made on it.
2	A member enquired why one of the roads was indicated as 9m on the plan yet on ground the road was 12m.	The consultant noted the road for further confirmation of its width on ground during beaconing exercise by the surveyor.
3	A member enquired on what would be done about the discrepancy of road widths between what was indicated on map, 9m and 12m on ground.	The consultant reaffirmed that the mapping data had been accurately picked on the ground during the preliminary stages of the project.
4	A member enquired to be informed of those whose structures would be impacted.	The consultant replied that those to be negatively affected by the project shall be contacted and informed of the proceedings on facilitation.

Plate 3-4: Highlights from the community plan adoption

3.11.4 Presentation of the Final Plan to the Executive and the County Assembly

As part of the approval process, the final draft LPLUD was presented to the Governor, the County Executive Committee Members (CECMs), Members of the County Assembly (committee in charge of lands and physical planning) and the KISIP NPCT&

CPCT teams on 19th June 2025. The presentation highlighted the project and planning process, highlights of the settlement, the proposed draft plan and the way forward. Comments raised during this presentation are highlighted in the table below.

Questions/Comments	Response
One of the CECMS noted that issues of solid waste management were cross-cutting across the settlements. She recommended the consideration of environmental management in the county budget and community sensitization to segregate a space for solid waste collection/recycling or a sanitary landfill to avoid indiscriminate dumping. She mentioned that the proposed Maina recreational area, which is waterlogged, needs environmental conservation measures, including the planting of trees and other greening measures. Similarly, she noted that the settlement portrays an urban character; therefore, it needs appropriate landscaping and greening measures to enhance aesthetics.	Reports accompanying plans had detailed strategies for the plan proposals, including strategies for handling solid waste
One of the CECMs noted that wide access roads can be multi-purpose, i.e., utilized as parking spaces, water reticulation, etc., and in return act as a source of revenue. He suggested incorporation of NMTs to support children's activities, e.g., skating and socialization in general.	This was addressed in the detailed plan reports
Another CECM noted that recreational spaces help in curbing mental health issues by serving as relaxation areas. He inquired if Maina Dispensary was adequate to serve the population. He also recommended designating more spaces for public purposes, subject to space availability to help decongest the facilities. Finally, County revenue is largely collected in counties with improved urban areas.	Reports accompanying plans have detailed strategies for the plan proposals. For example, the abutting parcel (136) to Miana Dispensary has been considered as part of the health facility in the proposed plan. The county could obtain land for expansion or designation of other land uses. The CECM in charge of lands and physical planning clarified that KISIP aims to regularize tenure; therefore, existing land would not accommodate more land use proposals.
The CECM in charge of lands and physical planning noted that upon plan approval, the county would control/manage land subdivisions. He mentioned that from the next financial year, the county departments would not get budget allocation without approved plans.	
The governor recommended appropriate greening measures and landscaping with consideration of indigenous trees.	This was addressed in the detailed report
One of the CECMs congratulated the team for ensuring land ownership issues were solved through tenure regularization, which is a long-term investment. He requested the consultant to	The consultant that project guidelines required every impact to be documented and addressed in the ESMP.

Questions/Comments	Response
examine the number of impacts, as not all the encroachers legally qualified for facilitation.	
Another CECM noted that some minor issues needed to be addressed (in collaboration with the executive) in the plan before submitting it to the assembly. He recommended that upon submission to the executive, the plan should not be modified as it has been subjected to public participation. In addition, he implored the assembly to approve the plan, then thereafter focus on facilitation of PAPs, i.e., reaching out to respective individuals during infrastructure upgrading and other major development. He added that valuation needed to be done in time to avoid future unexpected facilitation expenses. Finally, he suggested proximity analysis to inform upcoming developments, e.g., adequacy of police station.	The Consultant affirmed that the plan will be forwarded to the County as adopted by the community. Further, the due process for enumerating PAPs and valuing impacts would be followed.
A CECM Challenged the county to isolate genuine public land that would serve the public, e.g., Maina, which largely lacked recreational spaces. He recommended centralization of administrative units to serve a larger scope and provision of adequate recreational spaces in a highly populated area.	

3.12 Notice of Completion

Following the completion of the draft plan preparation and presentation to the community, a notice of completion was published on 7th April 2024 in two national dailies (The Standard and Taifa Leo) and the Kenya Gazette in line with the Physical and Land Use Planning Act, 2019 (See Annex 1). This enabled the public to inspect the plan and offer comments before the final approval and adoption. No comments were received from the public within the notice period.

3.13 Plan Approval

The final draft LPLDUP has been adopted by the community and presented to the CECMs and County Assembly Committee in charge of Lands and Physical Planning. Upon implementation of the comments gathered during these presentations, the final LPLUDP will be submitted to the CECM who will forward it to the county assembly for approval in accordance with Section 49 of the Physical and Land Use Planning Act, 2019.

3.14 Environmental and Social Management Plan/Resettlement Action Plan Preparation

In accordance with World Bank OP 4.12 and the Resettlement Policy Framework, the preparation of a Resettlement Action Plan (RAP) / Environmental Social Management Plan (ESMP) is a key requirement of this consultancy. The need for the ESMP was triggered following the preparation of the LPLUDP, which led to the identification of

impacts and affected persons (PAPs), particularly due to proposed road realignments and widening, and proposed public facilities. These impacts were assessed on the ground to determine the type, nature and their magnitudes. Upon the conclusion of ground truthing process, further discussions will be held with the county to assess their capacity for implementing the ESMP. Therefore, the RAP/ESMP report will be developed based on this final plan, detailed assessment of the impacts, and the county government's consent.

The primary objective of the RAP/ESMP is to address and mitigate the negative impacts resulting from the physical planning process, including potential displacements or partial impacts on developed structures. While RAPs have traditionally been used as a tool for mitigating negative impacts from projects of this nature, SMPs are now increasingly prioritized as community-driven approaches to address adverse project impacts. Table 3-1 below outlines some of the negative impacts identified by the plan proposals:

Table 3-4: Negative impacts generated from the plan

No	Potential Impact	Causes	Mitigation Options	Mitigation Instrument
1.	Partial loss of Land	– Road widening, Road realignment – Continued informal land transactions over the years – Haphazard informal developments over time	Title to the resultant parcels after regularization.	Social Management Plan
2.	Beneficiaries receive land which is viable but too small for land registration for titling purposes.		– Amalgamation of parcels – Consultations with PAPs for agreement on block title – Allocation of appropriate land use if amalgamation is not feasible (e.g., low-scale commercial use, single dwelling residential use, recreational, etc.)	Social Management Plan
3.	Total impact on land size – land taken over by public utility or remaining is not viable for residential and/or commercial purposes.	– Reduced through road realignment – Proposals by the community to have land for public facilities during planning phase	– Alternative land for PAPs of comparable value; County to initiate acquisition processes post-tenure exercise	RAP
4.	**Loss of structures** (Complete/Partial loss of residential/ commercial buildings, toilets/soak pits/septic tanks, temporal/permanent fences etc.)	– Road widening – Roads realignment	– SMP to document agreed mitigation measure with the community – For total losses, application of RPF provisions – Facilitate repair costs – Provide adequate notice period for the affected to	SMP/RAP

No	Potential Impact	Causes	Mitigation Options	Mitigation Instrument
			make necessary adjustments	
5.	**Loss of livelihoods** Loss of temporary business premises-vibandas, loss of rental income	– Road widening – Roads realignment	– Provide adequate notice period – Facilitate movement and repair costs	SMP

3.15 Cadastral Surveying

Section 12(7) of the Land Act 2012 stipulates that public land cannot be allocated unless it has been properly planned, surveyed, and development guidelines have been established. This planning process has established the necessary settlement development guidelines. Approval of this development plan will facilitate the cadastral surveying exercise, which will formally define parcel boundaries in accordance with the approved development plan. The boundaries of the resulting parcels will be determined through georeferenced positioning and beacon placement. Beneficiaries will be required to sign beacon certificates, confirming the demarcation of their parcel boundaries.

According to Section 32 of the Survey Act, land is not considered to have been surveyed until the survey plan has been authenticated by the Director of Surveys. In alignment with the Land Registration Act, the cadastral map will serve as the basis for amending the Registry Index Map, enabling the registration of title documents. The authentication of the survey plans will be carried out in compliance with the Survey Act and its regulations, leading to the creation of a new or amended Registry Index Map for the settlement, along with the corresponding area list.

3.16 Land Information System

The Land Information System (LIS) is a GIS-based information system designed to capture, store, manage, manipulate, and visualize spatially geo-referenced cadastral data. Since this plan is GIS-based, once approved, it will be integrated into the LIS database. The main purpose of the LIS will be facilitating easy access, querying, and visualization of data to support efficient decision-making, particularly in relation to development applications. The creation of the LIS is a continuous process throughout the project cycle.

Furthermore, the LIS for this project will be populated with the data collected in accordance with the data dictionary provided by the Client. This data includes the name, acreage and population dynamics of the settlement, land parcel details such as boundaries, sizes, and locations, ownership information like names and identification numbers, and physical and social infrastructure. This will create a readily accessible database, which can be referenced by other project components, including infrastructure planning, without the need for additional field visits. The LIS is among the final deliverables of this project and will include the parcel numbers issued by the Director of Survey upon approval of the survey plan.

4. SITUATIONAL ANALYSIS

4.1 Overview

This chapter presents a comprehensive analysis of the existing conditions in Maina B settlement, based on data collected through field surveys, spatial mapping, and stakeholder consultations. The findings are presented using textual descriptions and spatial visualizations, ensuring a clear representation of key physical, socio-economic, and environmental aspects of the settlement. A detailed socioeconomic survey and physical mapping report was submitted as a separate deliverable in this project.

The situational analysis served as a foundation for evidence-based planning, linking the identified challenges and opportunities to the broader objectives of the settlement's tenure regularization, infrastructure development, and land use planning. The analysis also considered policy and legal frameworks, ensuring alignment with national and county-level planning guidelines.

4.2 Physical and Environmental Characteristics

This section examines the physical and environmental characteristics of the settlement, focusing on aspects that influence land use and development decisions. The analysis highlights the suitability of the settlement's location and the implications these dynamics have on planning decisions.

Error! Reference source not found. illustrates key environmental features within the settlement. As highlighted earlier, the lack of a proper solid waste management system led to indiscriminate dumping, evidenced by the widespread presence of open, undesignated dumping spots across the settlement. These sites posed significant health risks, serving as breeding grounds for disease vectors and contributing to environmental pollution. Additionally, they compromised the settlement's aesthetics and overall quality of life, underscoring the urgent need for effective waste management solutions.

Another key feature illustrated on the map is the wetland and flooding area adjacent to River Gathara. Protecting riparian reserves and prohibiting development in the flood zones is key ensuring long term sustainability. The map also shows the widespread use of pit latrines within the settlement which could potentially cause a public health crisis due to the use of shallow wells in some sections of the settlement.

The findings underscored the need for integrated planning and sustainable development practices to address the settlement's environmental challenges. Implementing a structured waste management system was critical to reduce indiscriminate dumping, improve environmental quality, and mitigate health risks. Promoting safer sanitation practices was equally important to protect water sources like River Gathara and ensure access to clean water for residents. Furthermore, preserving wetlands and flooding zones was essential to maintain their natural water management functions and prevent

flooding. Strict enforcement of the zoning regulations proposed in this plan will help prevent encroachment and protect these areas, ensuring they continue to serve their vital ecological roles. By balancing development needs with environmental conservation, the settlement will enhance its resilience, improve the quality of life for its residents, and create a more sustainable future.

Map 4-1: Environmental issues map

4.2.1 Climate and Climate Variability

Since climate data is not collected at the settlement level, all references to climate conditions were based on the available county and regional datasets. The settlement is a small unit and does not have localized climatic records. It experienced relief-type rainfall with an annual average of 1,000–1,200 mm (CGL, 2023). The area has a bimodal rainfall pattern: long rains occur between March and May, while short rains are experienced from October to December. The remaining months are relatively dry, with temperatures ranging between 9.8°C and 24.4°C. The settlement falls within the Upper Midland 3–4 agro-ecological zone, which receives comparatively higher rainfall than other parts of the county.

The settlement is located within Kenya's highland ecological zone, specifically the upper midland and lower highland zones. Given its topographical and ecological context, the area was vulnerable to flooding, especially due to the absence of adequate stormwater drainage infrastructure. Runoff from upstream areas during periods of heavy rainfall increases this risk and can carry solid and liquid waste that has been improperly disposed, leading to significant public health hazards.

The proposed development plan was intended to support climate adaptation by providing a structured framework for infrastructure investment. Key interventions included the installation of stormwater and sewerage drainage systems, as well as greening initiatives within Maina B village. These measures were meant to mitigate the impacts of flooding and pollution, thereby enhancing community resilience to climate-related risks.

4.2.2 Vegetation

The natural environment with the settlement was highly modified hence the vegetation comprises a variety of planted trees, grass, and shrubs. However, there was limited vegetation in the area known as Maina Village, where greenery is primarily confined to the access paths and hedges. In contrast, the section referred to as Ukweli A featured more abundant presence of vegetation, with greenery found along access roads and within residential properties (refer to map 4-1 above). Notably, there was no designated forest within the settlement itself, although the neighbouring Nyahururu Forest provides a nearby natural resource. This variation in vegetation density highlighted the differing environmental conditions and land use practices across the settlement, suggesting a need for enhanced green space management to improve ecological balance and community well-being. From GIS-based unsupervised classification analysis, about 32.6% of the settlement was covered by vegetation.

Planning proposals made in Chapter 7 of this report include strategies towards urban greening through controlled afforestation, tree planting along road reserves, and the creation of green corridors. These interventions aim to restore native flora, enhance environmental quality, and protect ecologically sensitive areas from further encroachment.

Plate 4-1: Vegetation in Maina B

4.2.3 Topography, Slope and Drainage

Topography refers to the measurement of elevation, while slope describes the percentage change in elevation over a given distance. These factors are critical in land use planning and determining areas suitable for development.

As illustrated in Map 4-2 the area in which the settlement is located is relatively flat, with an altitude ranging from 2361 meters above sea level at the highest point, along the eastern edge of the settlement to 2355 meters above sea level at the lowest (a.s.l). The area slopes towards the western side of the settlement with an average slope of 3%. However, the there is a relatively steep slope of about 56% towards the river. This leaves the sections adjacent to the river prone to flooding. The identification of these flood-prone zones was essential in guiding the road network layout to ensure efficient stormwater management within the settlement. Proper consideration of topography and slope facilitated sustainable land use and infrastructure development.

The settlement drains from the east to the west, but due to the lack of proper drainage facilities as well as blocked existing drainage systems along the main road, runoff occurs haphazardly throughout the area. This situation led to hazardous conditions, particularly when runoff flows into residential areas, posing risks to public health and safety. Additionally, the inadequate drainage exacerbated pollution, as contaminants were carried through the runoff into surrounding environments, further compromising local water quality and ecosystem health. The settlement has a natural drainage system comprising of river Gathara, located at the western edge of the project area. The river is a source of domestic water for the residents.

The drainage issues were addressed by proposing an elaborate well-designed drainage infrastructure to manage surface water runoff effectively and prevent flooding in residential areas. Additionally, to safeguard vital community resources such as the river,

strategies for protecting natural waterways from encroachment and contamination were proposed. These included establishing buffer zones, allocating conservation land uses and prohibiting the use of pit latrines to minimize underground water contamination. By implementing these measures, the plan will mitigate health risks, enhance environmental quality, and create a more resilient and sustainable living environment for the residents.

Map 4-2: Topography map

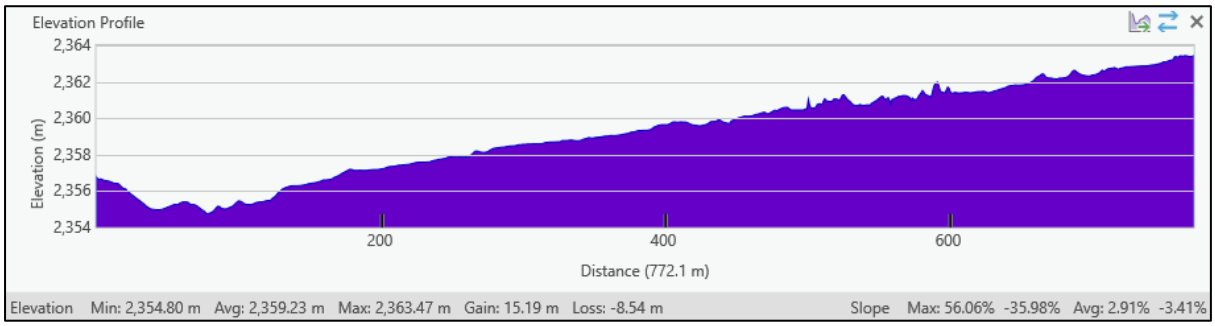


Figure 4-1: Elevation profile

4.2.4 Soils

The characteristics of soils exert a considerable influence on human activities including the way settlements are occupied. Consequently, the determination of the type of soils the settlement is situated on was a necessary step in the assessment of the viability of land use proposals. This typically informed planning elements such as zoning, infrastructure networks, and utility reticulation proposals.

The settlement was characterized by a diverse range of soil types, primarily consisting of Nitisols, along with Cambisols, Acrisols, and Luvisols. These soils are classified as eutric and include diagnostic features such as nito-chromic and chromic phases, with some areas exhibiting lithic, pisoferric, or petroferric characteristics. The soils are well-drained and extremely deep, displaying a dusky red to dark reddish-brown color. The settlement is underlain by basic and ultra-basic igneous rocks, including basalts and nepheline phonolites, as well as older basic tuffs which provide a solid base for urban development. This rich lithology also contributes to the nutrient content of the soil, making it particularly suitable for agricultural practices. In addition the soil properties are suitable for urban development, however, due to high water table within Nyahururu and its environs mega developments will require additional reinforcement with pillars.

Plate 4-2: Soil types in Maina B

4.2.5 Air Quality

The air quality in the settlement was significantly compromised by the presence of openly dumped waste. This improper disposal of refuse not only created unsightly conditions but also contributed to the release of harmful pollutants into the atmosphere. Decomposed organic materials emit unpleasant odours and can generate toxic gases, which pose health

risks to residents. Additionally, the accumulation of waste attracts pests and vermin, further exacerbating the potential for disease transmission. This situation called for the implementation of proper solid and liquid waste management practices which have been elaborated in Chapter 6 of this report.

4.2.6 Disaster Risk and Environmental Hazards

This section examines the settlement's vulnerabilities that may affect residents and property development. Table 4-1 highlights the major disaster occurrences as ranked by respondents:

1. Fire was identified as the most significant disaster, with 65% of respondents ranking it first. The risk of fire was exacerbated by the construction materials used as well as the density of development. This underscored the importance of opening up access to all areas of the settlements to improve response times to fire incidents.
2. Flooding was the dominant concern under the second rank, reported by 50.9% of the respondents. This was attributed to the relatively flat terrain of the settlement and the surrounding high areas that drain water into the settlement during the rainy season. The residents also mentioned that River Gathara breaks its banks during the rainy season leading to flooding in the nearby residences. This underscored the need to provide an elaborate storm water management system as well as protecting the riparian area from development encroachment.
3. Conflicts were mentioned as the highest disaster under the third rank. These conflicts varied from political, family as well as land-based conflicts. To this extent, providing security of tenure is expected to provide clear ownership rights and avoiding future land related conflicts.

These findings underscored the need for targeted interventions to address the settlement's vulnerabilities, including strategies for public health improvement, and risk management.

Table 4-1: Disasters occurrence

Type of Disaster	Rank 1	Rank 2	Rank 3
Conflicts	7.1%	21%	38.4%
Disease outbreaks	1.8%	6.7%	**10.2%**
Drought	12.1%	5.4%	13.4%
Fires	**65.6%**	16.1%	15.3%
Flooding	13.4%	**50.9%**	22.7%

Disaster management

Disaster management relates to how occurring disasters are handled. Such measures include preparedness, mitigation (prevention from occurring) and response (when or if it happens). From the environmental screening assessment, the settlement faced a great challenge in terms of responding to any occurrence due to its poor accessibility and connectivity network. This is in addition to deficiencies in early warning systems to enable the community to prepare for and respond to impending disasters. As a starting point however, the project has been keen to promote community involvement which has included raising awareness vital for improving environmental and planning outcomes.

Relevant and to highlight the significance of the project, Doberstain and Stager, 2012, indicate that securing land tenure and improving housing design can significantly benefit residents in the reconstruction process after a disaster. The planning interventions under this project are geared towards building the preparedness and adaptive capacity of the settlement through proposal of measures including opening up of the settlement's access networks to enhance motorability and therefore readiness to respond to any incidents that would occur in the settlement.

4.2.7 Key Environmental Challenges

The following were the main environmental challenges observed in this settlement that triggered mitigation measures in the plan:

- Absence of liquid and sewerage waste management systems – liquid waste/wastewater pollution emerged as a major issue. This was because this settlement does not have adequate infrastructure for the management of sewerage and other liquid wastes, thereby causing pollution in the settlement. The plan proposes the development of sewerage infrastructure such as sewerage trunk lines. For the short term, standard septic tanks/bio-digesters whose development should be closely regulated by the County Government were recommended. This would be supported by affordable exhaustion services. In addition, the incomplete sewerage system project started in Maina A should be fast tracked as well as expanded to serve Maina B
- Absence of storm water management infrastructure – flooding came out strongly as an environmental problem whenever it rains. It was therefore necessary to provide strategies that would lead to the development and proper maintenance of storm water management infrastructure in the settlement. The existing storm water management system was not efficient covering only parts of the settlement as well as frequently becoming blocked from indiscriminate solid waste disposal within the drainage system.
- Absence of solid waste management systems – the settlement did not have an established solid waste management system. As such, a versatile solid waste management system has been recommended. This is in line with the best practice models currently available. Such systems include those making provisions for waste storage, transportation, aggregation, re-use and recycling and disposal. This has been accompanied by appropriate policies that guide solid waste management as well as for public sensitization and support for waste reduction endeavors.
- Absence of green spaces and other recreational areas – the settlement did not have any recreational facility, be it green spaces or grey spaces yet this is necessary for the community's wellbeing. The plan provided for green spaces and other recreational areas to improve the environment and quality of life in the settlement. Potential interventions include well-designed greening of road reserves and installing of recreational infrastructure such as seats as well as creation of artificial wetlands/water points in areas such as where the runoff currently stagnates.
- Inadequate household toilets and lack of public toilets in the settlement – the use of pit latrines is not sustainable in the long term as it exposes the residents to public health risks owing to ground water contamination and exposure to pathogens during the rainy season.

- Use of firewood and charcoal is prevalent across the settlement which posed potential risks to long term environmental sustainability due to destruction of trees and forests. In addition, exposure to carbon dioxide poses various health risks to users.

4.3 Population and Demographic Characteristics

Given the project's development objective - *"to improve access to basic services and tenure security of residents in participating settlements…",* understanding the population profile was critical for assessing the potential scale and impact of the project.

As outlined in the Project Appraisal Document (PAD) and the Project Operational Manual (POM), the success of KISIP2 is measured by the number of people benefiting from enhanced tenure security, either directly or indirectly. Population data served as a foundational reference for planning and informed decision-making throughout the project cycle. Therefore, a thorough analysis of the settlement's population was essential for designing effective and targeted planning interventions.

4.3.1 Population Size and Projection

The population data presented in this section was derived from the socio-economic enumeration, which captured all household members residing in the settlement, at the time of the survey. Temporary visitors were excluded from the count. While the project primarily targets structure owners as direct beneficiaries, tenants are also recognized as part of the community and indirect beneficiaries. Therefore, a comprehensive analysis of the settlement's total population was essential for determining planning requirements and ensuring inclusive development.

The socio-economic enumeration conducted in the settlement established a population of 974 persons, and an average household size was 2.4 persons per household comprising structure owners who reside within the settlement, tenants, and occupiers or caretakers. The gender distribution revealed a slight male majority at 54%, with females accounting for 46%. While structure owners are the primary direct beneficiaries of tenure regularization, tenants are also recognized as part of the community and are considered indirect beneficiaries.

The project integrates gender equity principles in alignment with SDG 5, which advocates for equal property ownership rights. Efforts to ensure joint registration between spouses and facilitate women's land tenure security was a priority throughout the process. Gender-inclusive land governance is further reinforced by Kenya's National Land Policy, which promotes equitable access to land and property rights.

Planning for informal settlements requires both present and future population considerations. Population projection was a critical tool for anticipating future demographic trends and their implications for planning. Projection involved extrapolating the current population into the future based on existing demographic trends. For this analysis, the assumption was that all current factors influencing population growth in the settlement would remain constant. The intercensal growth rate applied was 2.9 % per annum, as per the Kenya National Bureau of Statistics (KNBS)

2019 data. As illustrated in Table 4-2, the population was expected to grow from 974 in 2025 to approximately 1123 by 2030 and 1296 by 2035. The population figures were essential in estimating future water demand, solid and liquid waste management generation, housing demands and demand for social services.

Table 4-2: Population projection

Current population (2025)	Intercensal growth rate	5 years projection (2030)	10 years projection (2034)
974	2.9%	1123	1296

Additionally, the security of tenure has the potential to accelerate population growth. Secure land tenure can attract investments, encourage permanent settlement, and reduce outmigration, creating a more stable and potentially denser population. Planning efforts have considered both current and anticipated population growth, alongside the impacts of tenure regularization, to ensure sustainable and adaptable proposals. Accounting for these projections during community participatory planning enabled the design of resilient interventions that address the evolving needs of the settlement and ensure long-term viability. This forward-looking approach was crucial for KISIP's tenure regularization and infrastructure development initiatives to effectively accommodate future pressures.

4.3.2 Population Structure and Composition

The population pyramid presented in Figure 4-2 revealed a predominantly youthful population, with a significant proportion of residents aged 0–17 years. This indicated a high dependency ratio, which underscored the need for planning interventions that prioritize educational infrastructure, healthcare services for children, and recreational spaces to cater to the younger demographic. The considerable representation of individuals within the 18–45 age cohorts highlighted the settlement's potential for a robust labour force, which necessitated integrating livelihood programs, skills development, and job creation opportunities within the planning framework. The smaller proportion of residents aged 65 years and above pointed to a limited but essential need for elderly-friendly infrastructure and social support systems, such as accessible healthcare and community centres.

The low numbers observed in the 0-9 age cohort suggested a declining fertility rate, which could signal an impending demographic crisis characterized by a top-heavy population pyramid. In such a scenario, the proportion of elderly individuals would significantly outweigh that of younger generations, leading to a shrinking workforce and potential labour shortages. This imbalance could strain social systems, including healthcare, pensions, and economic productivity, as fewer working-age individuals would be available to support an aging population. While the specific reasons for the low fertility rate were not explicitly captured in the questionnaire, many residents attributed this trend to a combination of reduced economic opportunities, widespread poverty, and rising levels of drug and substance abuse. These factors created an environment where young people felt economically insecure and socially disempowered, discouraging family formation and child-rearing.

To address these challenges, it was crucial to implement targeted measures aimed at improving the socioeconomic conditions of the youth population across the settlement. Economic empowerment initiatives, such as job creation programs, vocational training, and entrepreneurship support will provide young people with the skills and opportunities needed to secure stable livelihoods. Additionally, addressing the root causes of poverty and substance abuse through comprehensive healthcare services, mental health support, and community-based rehabilitation programs will create a more conducive environment for family growth. Education reforms, including access to quality schooling and digital literacy programs, can further equip the youth with the tools needed to thrive in a modern economy. By fostering a supportive ecosystem that prioritizes the well-being and economic potential of young people, the settlement can work towards reversing the declining fertility trend and building a more balanced and sustainable demographic structure for the future.

Gender balance across most cohorts further suggested that planning efforts should include gender-sensitive approaches to ensure equity in resource allocation and access to services. These demographic trends were particularly relevant to KISIP2's tenure regularization and planning objectives, as they highlighted the settlement's growing demand for essential services, infrastructure, and opportunities. Addressing these needs through tenure security and guided urban development will mitigate informal growth patterns, enhance livelihoods, and promote a sustainable, inclusive settlement. The data also informed spatial planning decisions, such as allocating land for public utilities and facilities, to align with the community's demographic dynamics.

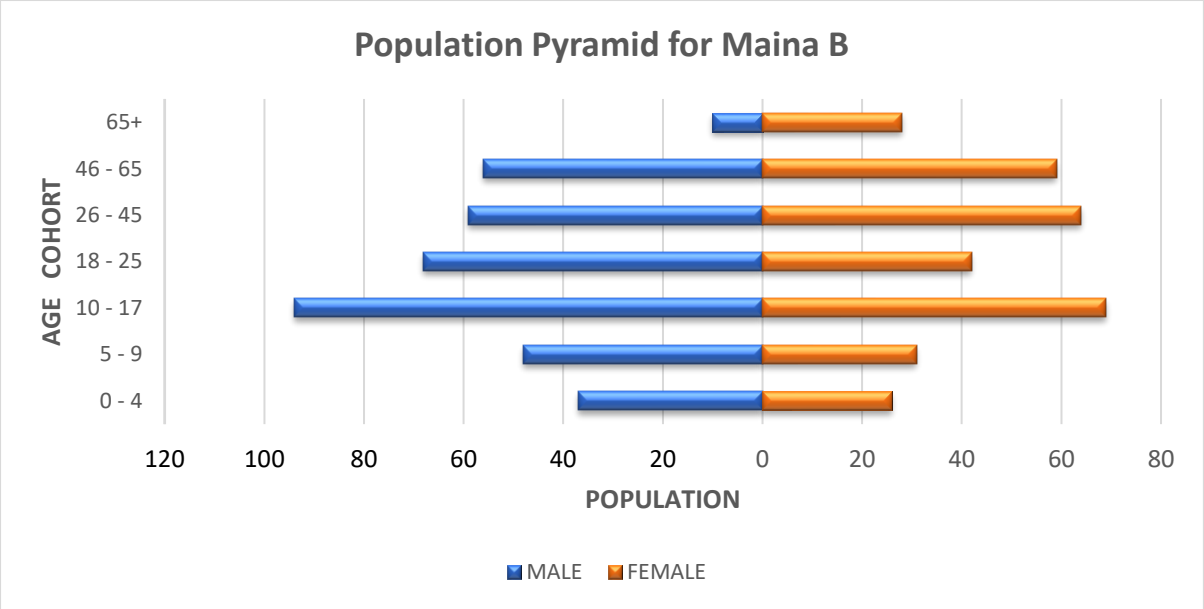


Figure 4-2: Population structure

4.4 Local Economy

4.4.1 Occupation Types

Employment patterns in Maina B were diverse. A significant proportion of respondents (26.9%) worked as casual labourers, while 14.5% were self-employed. Formal employment was low, with only 3.4% of residents in salaried positions—1.4% working for the national government, 0.77% for the county government and 0.3% in private

employment. Notably, unemployment was a major challenge, with 36.6% of respondents reporting that they were not engaged in any form of employment.

Unlike typical urban settlements, a considerable share of the respondents (18.6%) derived income from livestock keeping and farming, highlighting the persistence of rural economic activities within the settlement. In addition, there existed a communal farming area within the settlement.

Among the self-employed, most operated small-scale businesses, including retail shops, kiosks, grocery stalls, cyber cafés, and eateries, predominantly along the tarmac road that connects Maina A and B to the main highway. While self-employment provides flexibility, these businesses tend to be low-productivity and largely informal, limiting economic stability and upward mobility. Given the high proportion of casual labourers, unemployed individuals, and informal economic activities, the settlement's economy remains vulnerable.

From a policy perspective, these dynamics aligned with the objectives of Kenya's Bottom-Up Economic Transformation Agenda (BETA), which seeks to uplift informal workers and micro-entrepreneurs through structured support and financial inclusion. The National Urban Development Policy (NUDP) further advocates for integrating informal economies into urban planning to promote sustainable livelihoods. Within the KISIP2 framework, improving tenure security can incentivize business expansion and encourage small-scale investments, fostering economic resilience.

The plan has integrated livelihood improvement strategies, particularly in supporting microenterprises and expanding employment opportunities. This has been achieved through designating commercial and mixed-use areas as well as enhancing connectivity and accessibility.

4.4.2 Places of Work

A moderate proportion of the respondents (45.7%) operated within the settlement, while 54.3% worked outside the settlement with about 13% working in Maina A while the rest commuted to adjacent towns such as Nyahururu and Rumuruti. These movement patterns highlighted the critical role of both internal and external economic linkages.

Addressing these constraints has been addressed by prioritizing strategic road improvements to enhance both internal and external accessibility. Well-planned mixed-use corridors and designated business zones are expected to strengthen the settlement's economic base by supporting local entrepreneurship while facilitating efficient connections to larger economic centres.

4.5 Settlement Land Tenure, Structure and Housing

Land tenure refers to the ways in which individuals or groups gain access to and exercise rights over land. As outlined in the Constitution of Kenya (2010), land tenure is categorized into three types:

i. Private Land: Owned by individuals or entities with formal legal rights.
ii. Communal Land: Held by communities under customary arrangements.

iii. Public Land: Owned and managed by the state for public use.

In informal settlements, land tenure operates differently. Despite the absence of formal legal rights, structure owners are considered the de facto landlords. While they lack legal ownership of the land itself, they are recognized by the community as property owners, providing housing to residents. This informal land administration system is characterized by boundaries that are either based on the extents of the structures or on draft subdivision plans (such as Part Development Plans, or PDPs) that were never fully realized.

These informal boundaries, though not legally recognized, are often accepted and respected within the community. This acceptance contributes to a normalized and flexible system of ownership that governs land use and housing in informal settlements. Understanding this dynamic was crucial for designing interventions that respect existing community structures while working toward formalizing tenure and improving living conditions.

The National Land Policy (2009) recognizes such informal systems and calls for the progressive integration of informal tenure arrangements into formal legal frameworks. The Physical and Land Use Planning Act (2019) provides a legal framework for the adjudication and regularization of informal settlements, emphasizing participatory processes in settlement planning. KISIP2's tenure regularization efforts align with these policies by integrating community perspectives into planning interventions.

From a planning perspective, formalization of tenure in Maina B has direct implications for spatial reorganization and infrastructure provision. Secure tenure is a prerequisite for investments in settlement infrastructure, such as roads, drainage systems, and utilities, ensuring that landowners and tenants can access public services.

4.5.1 Settlement Land Tenure

In informal settlements like Maina B, perceived property rights are often based on informal land demarcations. These boundaries are typically defined by either the space occupied by structures, or the plot sizes themselves. However, it is important to note that all land in Maina B is technically public land owned by the Laikipia County Government. As a result, the term "structure owners" is used throughout this report to describe individuals who claim ownership based on the structures they occupy, rather than legal ownership of the land itself.

This KISIP2 project aimed to enhance land tenure security for residents and structure owners in Maina B. By formalizing land rights and providing legal recognition, the project sought to address the challenges associated with informal tenure arrangements. This section details the current land tenure dynamics within the settlement, as revealed by the socio-economic survey.

The recognition of structure owners as key stakeholders in the upgrading process was in line with the National Urban Development Policy (NUDP, 2016), which promotes inclusive urban land governance by acknowledging informal land rights while fostering structured regularization processes. Additionally, the Community Land Act (2016) provides a framework for recognizing communal land claims, which may be relevant if tenure security interventions incorporate collective landholding models.

From a spatial planning perspective, securing tenure provided a foundation for structured land-use planning, zoning, and infrastructure upgrading. It enabled planners to design hierarchical road networks, allocate spaces for social amenities, and improve settlement layouts without the risk of forced evictions disrupting planning efforts. The proposed plan integrates a layout plan that aligns with existing land use regulations while maintaining flexibility for incremental housing improvements and economic activities within the settlement.

4.5.2 Settlement Structure

The structure of an informal settlement refers to the spatial distribution and physical layout of buildings and key infrastructural elements. Informal settlements often exhibit diverse layouts, depending on their origins and evolution over time. Some settlements develop organically, while others display a degree of organization, suggesting initial planning attempts. In cases where semi-structured layouts exist, they often indicate the presence of Part Development Plans (PDPs), allotment letters, or survey plans, even if many of these plans were never formally approved. It is important to note that initial layouts may have been altered over time due to informal transactions and further subdivisions.

Maina B exhibited an organized layout, as illustrated in Map 4-3. The parcels and access networks follow a structured, grid-like system, which could be attributed to previous development plans for the area.

Maina A settlement, Thama Primary School and Nahururu Munyaka Secondary School are the main structuring elements on the eastern side of the settlement. On the other hand, the schools, including Maina schools which structure the settlement on the northern side provide essential educational services to the community. The western and southern side are structured by the settlement extension, a part of Maina settlement that is not part of the project area as well as River Gathara and Siberia settlement. There exists a road in the northern side of the settlement that connects Maina B to the Nyahururu–Rumuruti Road (C77). This road connects the settlement to key urban areas such as Nyahururu and Rumuruti. Internally, a main road connects the settlement to Maina A settlement. This road hosts scattered commercial activities. The primary functional characteristic of Maina B is residential, with a mix of commercial uses.

Map 4-3: Settlement morphology

From a policy perspective, the integration of these structural realities into the planning framework aligned with national and county urban development policies, particularly the National Urban Development Policy (NUDP) and the Kenya Informal Settlements Improvement Programme (KISIP). Upgrading initiatives accounted for the need to formalize tenure while balancing spatial reorganization with community preferences and

socio-economic stability. Furthermore, the presence of environmentally sensitive areas, such as the spring and the wetland necessitated land use planning strategies that prevent encroachment while accommodating the settlement's expansion needs.

4.5.3 Existing Land Use Patterns

The settlement was predominantly characterized by residential land use, which occupied approximately 69% of the total area. Mixed-use developments accounted for 1.6%, while access roads and public-purpose institutions covered 24.2% and 4.2%, respectively. Undeveloped parcels made up roughly 0.6% of the land, reflecting an underutilization of space. This underutilization was largely attributed to the irregular and unplanned layout of constructions across the settlement. Additionally, agricultural activities occupied 0.2% of the land, primarily consisting of small-scale farming in some of the undeveloped parcels.

Mixed land uses were predominantly a combination of residential and commercial activities, where parcels often featured commercial facilities at the front and residential structures at the back. This arrangement explained the relatively low coverage of dedicated commercial land uses, despite the existence of a commercial strip in the area. Furthermore, the settlement included one parcel of land that was previously designated for public purposes in the prior Physical Development Plan (PDP). This parcel was still recognized by the community as public land. During the presentation of the socioeconomic survey findings, community members acknowledged the underutilization of the parcel and proposed the formalization of the parcel as a market to align with current needs. Detailed information on this parcel is highlighted in Table 4-3 below.

This analysis underscored the need for strategic planning to optimize land use, address underutilized spaces, and align land use patterns with the evolving needs of the community. By doing so, the settlement can enhance its functionality, promote economic activities, and improve the overall quality of life for its residents.

Table 4-3: Proposed social facilities in the 1993 PDP

Parcel No.	Proposed Use (PDP)	Current Use	Area	Proposed use in participatory planning session
268	Market	Undeveloped	0.7 ha	Market

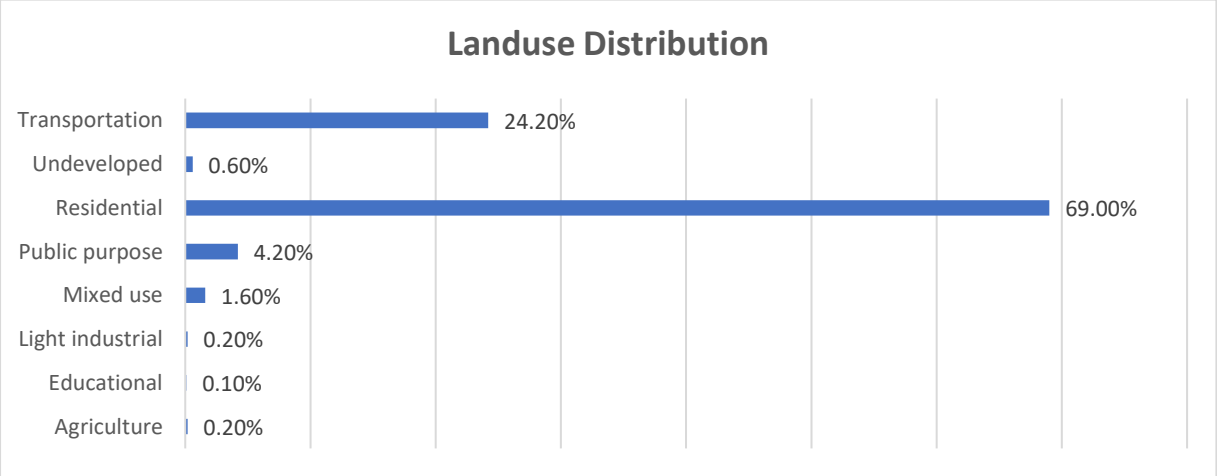
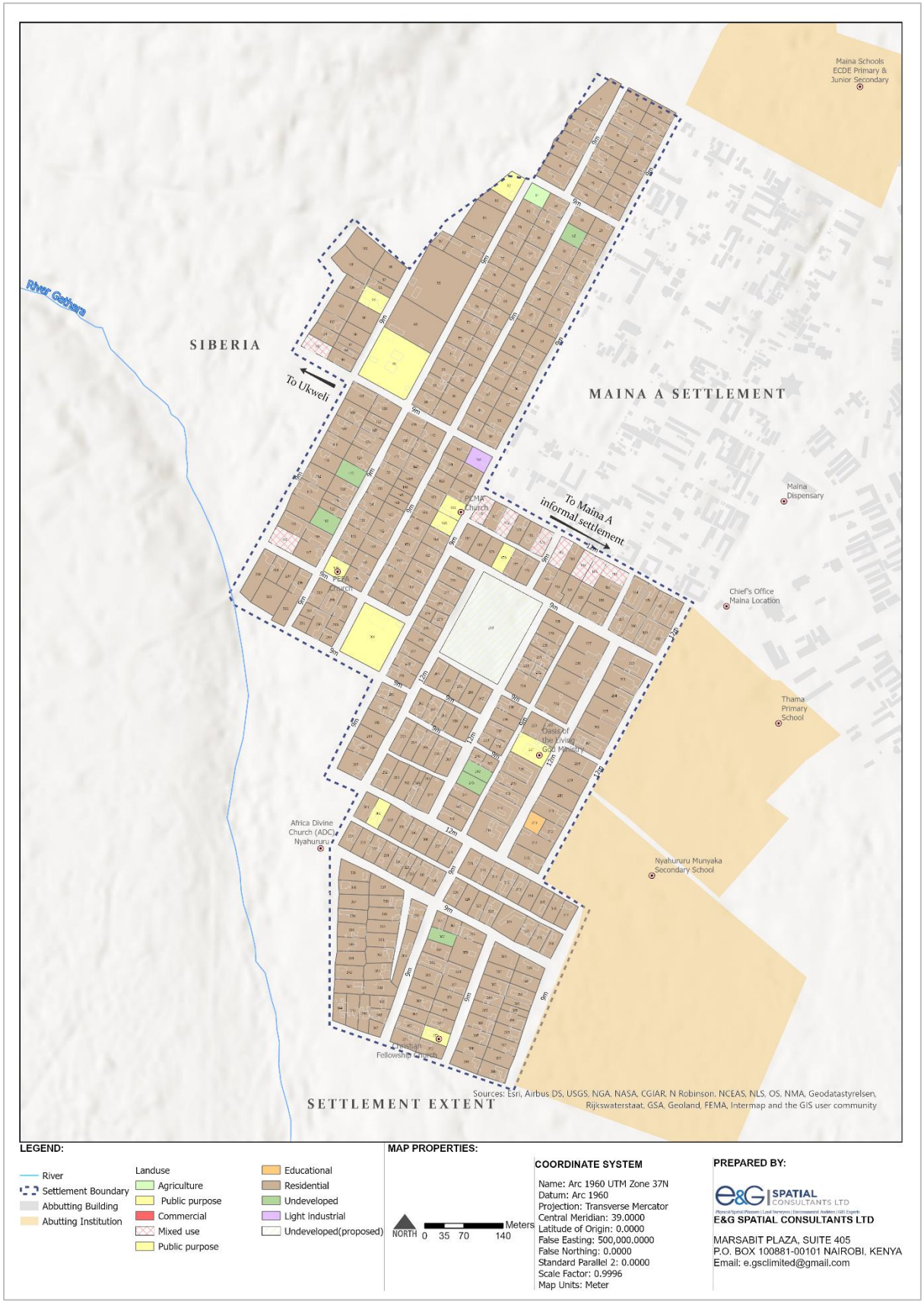


Figure 4-3: Land use distribution



Map 4-4: Existing land use map

Policy-wise, the findings aligned with national urban development frameworks, including the Kenya Informal Settlements Improvement Programme (KISIP) and the Physical and Land Use Planning Act (2019), which emphasize the need for tenure regularization and integrated land use planning. Addressing the underutilization of land through structured

densification strategies, such as promoting mixed-use development along major corridors were proposed to optimize land use efficiency while accommodating the settlement's evolving spatial demands.

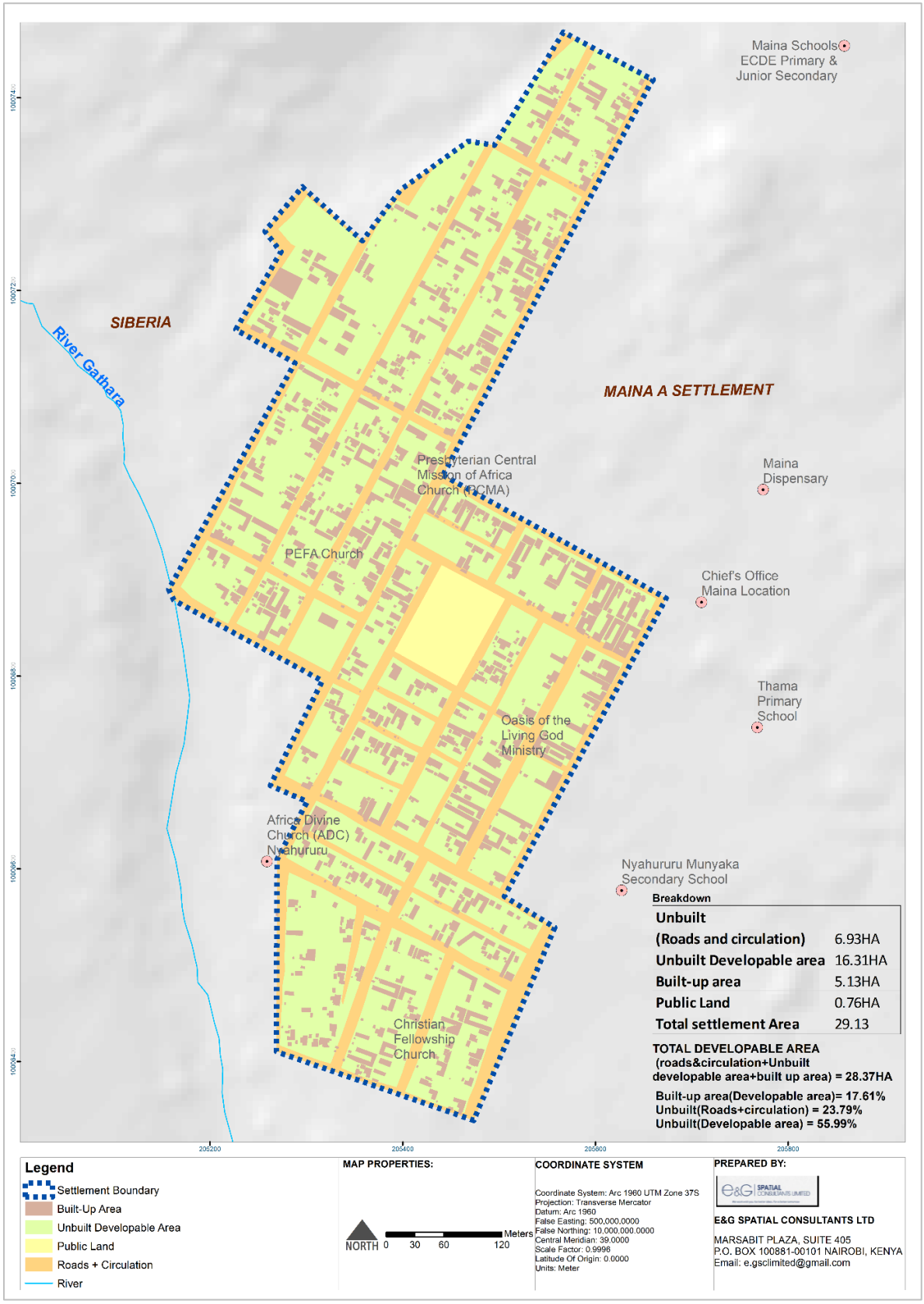
4.5.4 Built vs Unbuilt Up areas

As Map 4-5 below shows, the settlement's built-up developable area only covered 17.61% of the total settlement area, while unbuilt spaces (access roads) occupied 23.8% and open spaces and government institutions occupying 2.6% of the of the total area. The total undeveloped – developable area was 56%. This underutilization was consistent with the land use structure and it underscored the potential for better spatial planning and optimization of land resources through redevelopment initiatives.

Policy linkages to tenure regularization efforts under KISIP2 were particularly relevant here. Secure tenure is expected to incentivize investments in higher-quality housing and commercial structures, potentially increasing land use efficiency. Additionally, alignment with the Physical and Land Use Planning Act (2019) will support efforts to integrate informal areas into formal planning frameworks, ensuring that future development adheres to sustainable urban growth principles.

A key consideration recommended in the plan was land readjustment or guided redevelopment, which will introduce more structured layouts while maintaining the settlement's social fabric. This approach was anchored on participatory engagement with residents and cognizant of the existing structure. It ensured that redevelopment would reflect local needs and would not result in displacement.

Further, the presence of large tracts of unbuilt land provided a strategic approach to public space planning. For instance, the available land facilitated the formalisation of the market area. Therefore, the plan enhanced the overall liveability of the settlement while ensuring that land was used efficiently to support economic and social development.



Map 4-5: Structure use and development status

4.5.5 Parcel Sizes

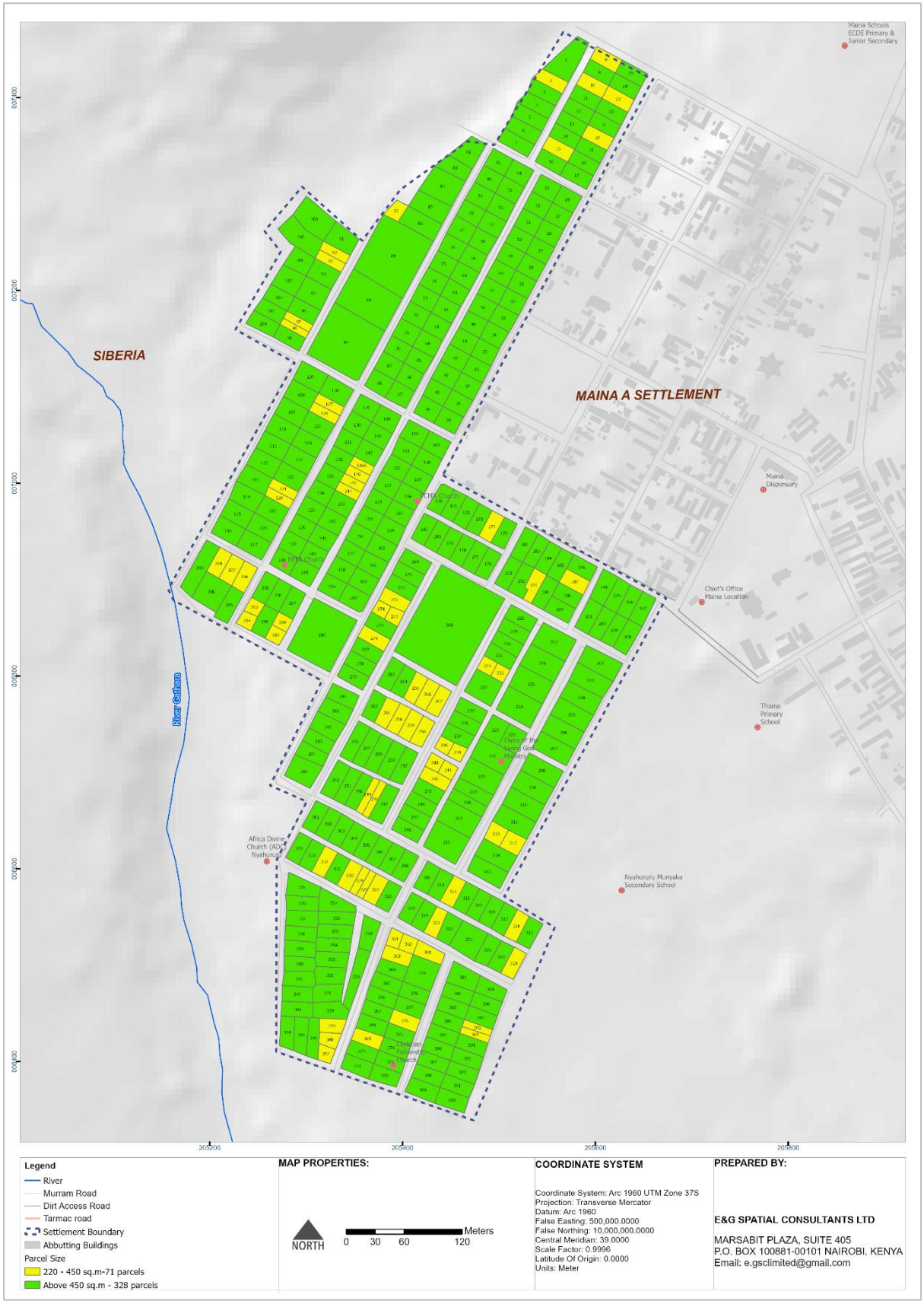
Property rights in informal settlements are generally based on informal boundary demarcations, either by structure extent or plot size. However, unlike typical informal settlements which have smaller sized plots, 82% of parcels in Maina B were above 450

sq.m while 18% of the parcels ranged between 220-450 sq.m. with the smallest parcel measuring 220 sq.m. This characteristic allowed for planning interventions that could integrate open spaces, access roads, and service infrastructure without significant land fragmentation.

The plan provides a framework for ensuring that land use regulations balance development needs with sustainability principles. Guidelines discouraging beacon-to-beacon construction align with broader urban resilience goals, emphasizing the importance of incorporating green spaces and ensuring accessibility for future infrastructure expansion.

In the context of KISIP2's tenure regularization initiative, the relatively large plot sizes facilitated a smoother transition into formal land ownership, as parcel delineation was less likely to be contested compared to settlements with highly subdivided plots. However, this formalization has been accompanied by planning controls that prevent speculative subdivisions, which could undermine spatial organization and strain infrastructure.

In addition, strategic planning interventions have focused on integrating zoning controls that promote mixed land uses while maintaining adequate public space allocation. Additionally, coordinated engagement with county government authorities will be necessary to implement the development control guidelines proposed in this plan. Successful implementation will reflect both local socio-economic conditions and national planning principles under the Physical and Land Use Planning Act (2019).



Map 4-6: Parcel sizes

4.5.6 Housing Typologies and structure Types

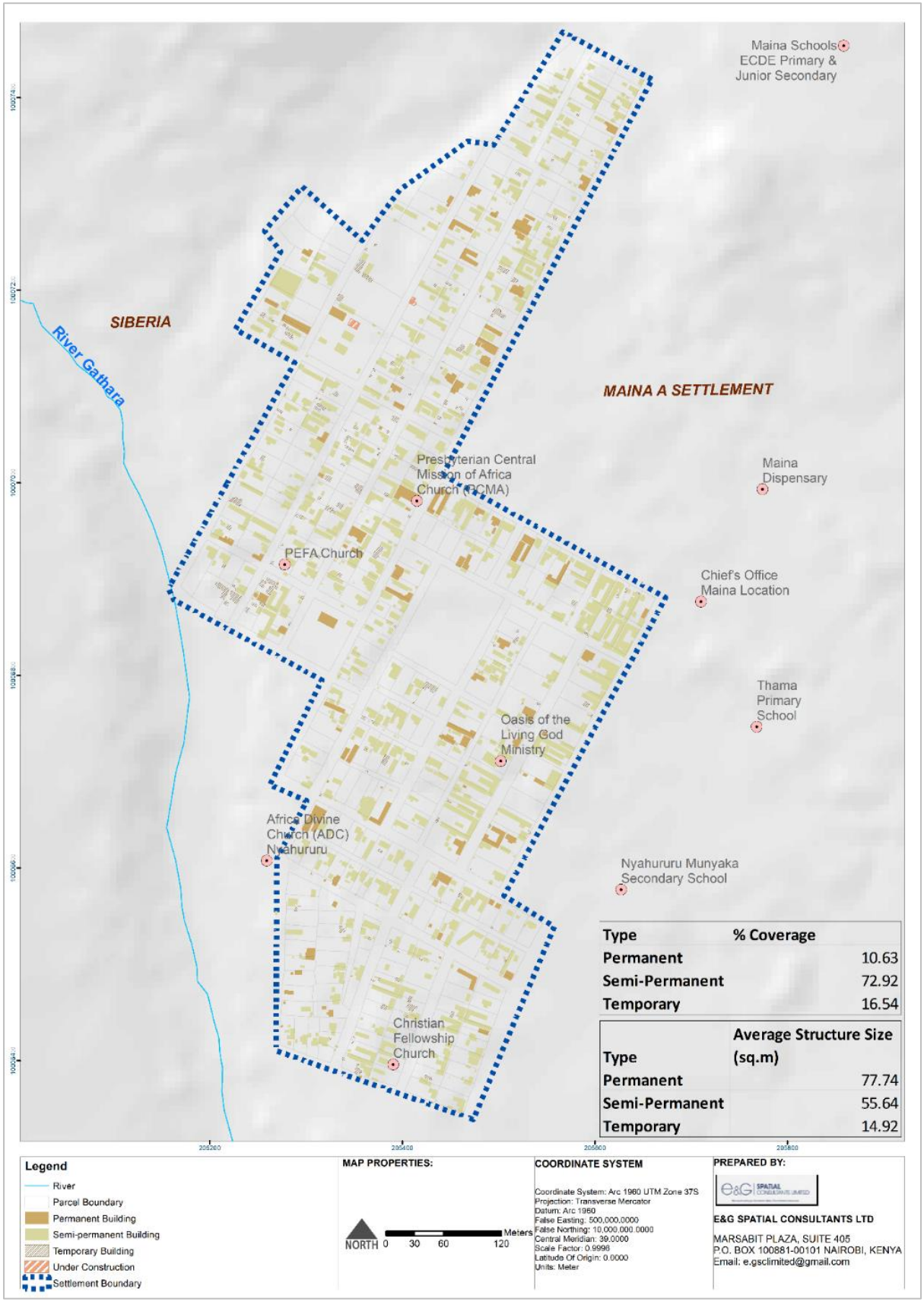
As illustrated in Map 4-7, the settlement was predominantly composed of semi-permanent structures, which accounted for 72.9% of all buildings. These were followed

by temporary structures at 16.5%, and permanent structures, which made up only 10.6% of the total housing stock. Permanent structures were significantly larger, averaging 77.4 square meters in size, while semi-permanent and temporary structures were smaller, averaging 55.64 square meters and 14.92 square meters, respectively. The larger size of permanent structures indicated that they were designed for long-term use and reflected a higher level of investment by residents.

The significant proportion of permanent and semi-permanent structures suggested that many residents view Maina B as a long-term settlement, reinforcing the need for a tenure security framework that encourages housing investments. As KISIP2 advances tenure regularization, planning interventions aimed to minimize displacement while ensuring that formalized plots provided adequate access, drainage, and public amenities. The placement of infrastructure such as roads was sensitive to existing housing typologies to reduce disruption. Given that row housing often features shared spaces, realigning roads required strategic design solutions —such as pedestrian pathways or service lanes —to maintain access while minimizing the need for demolition.

The variation in structure sizes and the predominance of semi-permanent housing indicated a gradual shift toward permanence. Therefore, the proposed zoning guidelines accommodate this transition by establishing a framework for incremental housing improvements, while also controlling densification. The regulations guide the use of materials to promote resilience against environmental hazards, particularly given the prevalent use of wood. The reliance on shared facilities highlighted the need for targeted service improvements, especially in sanitation and water supply. Planning for communal infrastructure considered existing living patterns to improve service efficiency without disrupting social structures. The clustering of housing typologies informed localized interventions, such as determining optimal locations for road networks.

To promote sustainable development, housing upgrades will be integrated with secure tenure and coordinated improvements across the settlement. This approach will balance individual housing needs with broader community goals, fostering a resilient and inclusive living environment. By addressing housing quality, tenure security, and infrastructure development in a holistic manner, the settlement can create a foundation for long-term growth and improved quality of life for both current and future generations.



Map 4-7: Structure types and sizes

4.6 Infrastructure and Utility Services

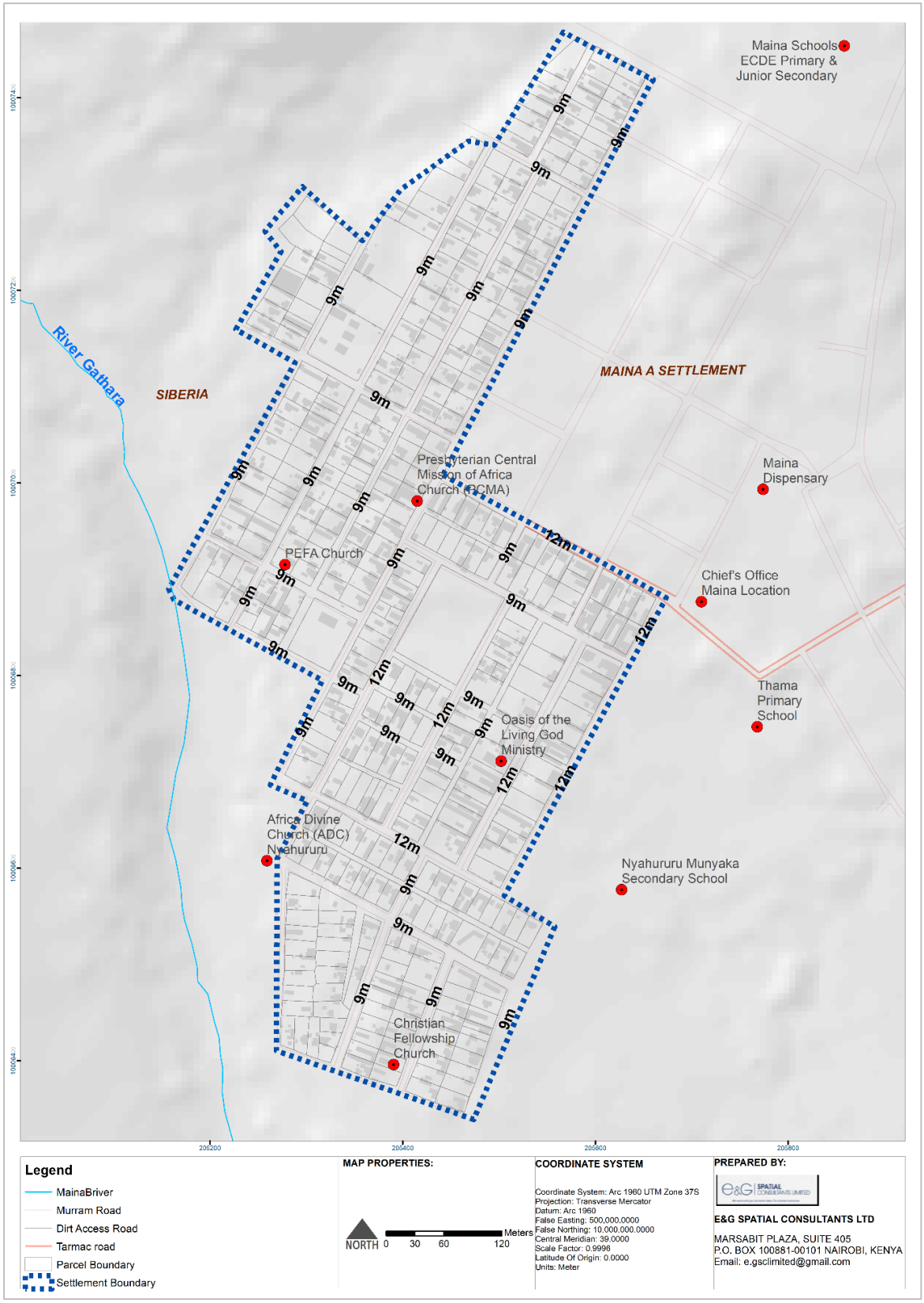
4.6.1 Transportation

The settlement is connected to external urban areas via the Nyahururu–Rumuruti Road (C67), which provides access to key towns such as Nyahururu, Rumuruti, and Nanyuki. Internally, the settlement featured a well-defined transport network with roads of varying widths, accommodating both vehicular and pedestrian movement. The settlement exhibited a hierarchical network with roads ranging from 9M to 12M. However, a few encroachments were observed, primarily consisting of small temporary and semi-temporary structures used for commercial purposes, and fences. The road surfaces varied significantly. The two main roads connecting the settlement to Maina A and to the Nyahururu–Rumuruti Road were bitumen-surfaced, while the rest were a mix of earth and murram. The earth surfaced roads are particularly challenging to navigate during the rainy season, making road surfacing a priority in the implementation/infrastructure phases of the project.

The proposed settlement upgrade has realigned and improved the road network to enhance connectivity. Based on experience from similar projects, realigning access roads can significantly impact overall infrastructure. However, this process is often complicated by encroachments and irregular construction on adjacent properties. As access roads are public goods, opening up access is essential, with potential challenges addressed through an Environmental and Social Management Plan (ESMP). Nevertheless, the impacts in Maina B were minimal, as most developments have followed the initial development plan.

The predominance of walking and public transport further highlighted the need for strategic mobility enhancements. Given the high proportion of residents who walk to various destinations within and outside the settlement, integrating pedestrian-friendly infrastructure, including dedicated walkways and bicycle lanes along primary roads was proposed to enhance safety and connectivity.

Existing land use patterns, particularly the mix of residential and commercial activities, called for transport planning that strengthens economic linkages by enhancing connectivity between commercial areas and residential zones through structured access roads. This required a hierarchical road network that differentiated between primary, secondary, and tertiary roads to optimize circulation with minimal disruption to existing structures. By integrating these mobility enhancements, the settlement will improve transport efficiency while supporting broader urban upgrading efforts.



Map 4-8: Settlement transport network

4.6.2 Water Supply

A study by the UN indicated that each person uses a minimum of 0.025 m³ of water per day. As illustrated in Table 4-4 future water demand in the settlement was projected to increase from 24.35 m³ per day in 2025 to 32.4 m³ per day by 2035, necessitating phased

upgrades in infrastructure capacity to align with population growth and planned sewer system introduction.

Table 4-4: Water demand up to 2035

Year	2025	2030	2035
Population	**974**	**1123**	**1296**
Daily Water Demand (m^3)	24.35	28	32.4
Monthly Water Demand (m^3)	730.5	842	972
Annual Water Demand (m^3)	8766	10107	11664

According to the socioeconomic survey, 86.6% of the respondents relied on piped water inside their compounds for their domestic water needs. The water was supplied by Nyahururu Water and Sanitation Company Ltd (NYAHUWASCO), which residents described as stable and sufficient. Other sources include rivers/stream (4.1%) from a naturally occurring spring within Maina A settlement and Gathara River, piped water community tap (2.8%), rainwater harvesting (2.8%) and piped water in the house (2.1%). These diverse sources highlighted the community's reliance on both formal and informal water systems to meet their daily needs.

While none of the respondents indicated using shallow wells, it was established during the environmental screening that there existed shallow wells across the settlement. However, most of the residents did not use them for domestic water supply due to groundwater contamination. Moving forward, it is imperative that the use of shallow wells is prohibited to avoid public health risks. In addition, the spring in Maina A was exposed to contamination from sewer seepage due to the broken sewer systems as well as the prevalent use of pit latrines within Maina A settlement.

Given the settlement's reliance on multiple sources, an integrated water supply approach was proposed in this plan. This includes rainwater harvesting at both household and community levels and exploring shallow wells for non-potable uses, provided they meet minimum water quality standards. Ensuring safe drinking water requires complementary investments in treatment facilities and household-level purification, alongside community sensitization on water safety and hygiene practices. The proposed regulatory measures enforce service-level standards for alternative supply sources, including mobile vendors, to guarantee quality control. Sustainable water supply solutions will also depend on strengthening governance structures, particularly local water management committees, to enhance service reliability, address maintenance challenges, and ensure equitable access. This structured approach to water provision will not only improve habitability but also support long-term planning objectives, ensuring the settlement remains resilient and sustainable.

In addition, addressing these challenges will require a multi-pronged approach, including repairing and upgrading the sewer system, promoting safer sanitation alternatives, and implementing measures to protect the spring from further contamination. Ensuring access to clean and reliable water sources is essential for safeguarding public health and improving the overall quality of life in the settlement.

4.6.3 Storm Water Drainage

The settlement drained from the east to the west, directing water flow towards the western edge of the settlement. The lack of proper drainage facilities leads to haphazard runoff in the settlement. This has historically created hazardous conditions, particularly when runoff flows into residential areas or overflows from the adjacent river into the flood plain and people's properties. Furthermore, the inadequate drainage exacerbate pollution, as contaminants can be carried through runoff into River Gathara and surrounding environments. Improper waste disposal further complicated the situation, as residents often released liquid waste directly onto the roads, creating unsanitary conditions and environmental hazards. This practice not only poses health risks but also contributes to additional road maintenance challenges.

As part of the planned road realignment, a comprehensive drainage system incorporating lined drains, culverts, and stormwater retention areas has been integrated to manage immediate runoff while enhancing long-term resilience to extreme weather events. Given the relatively flat terrain, engineered drainage solutions will be complemented with nature-based approaches such as bio-swales, constructed wetlands, and permeable surfaces to enhance infiltration and reduce surface runoff. Encroachment of developments on natural drainage paths and wetlands will be controlled through land use regulations and zoning enforcement.

Community engagement in drainage system maintenance is critical to prevent blockages, with sensitization on proper waste disposal necessary to reduce clogging of drainage channels. Additionally, stormwater harvesting has been recommended as part of a broader water management strategy, with captured runoff potentially reused for non-potable purposes such as irrigation or groundwater recharge. Addressing stormwater drainage as part of the settlement upgrade not only mitigates flood risks but also enhances overall liveability, health, and environmental sustainability. Effective implementation will require careful consideration of hydrological factors, sustained community involvement, and enforcement mechanisms to maintain long-term functionality.

4.6.4 Sanitation and Hygiene

The sanitation conditions in the settlement highlighted both accessibility and sustainability concerns. While most residents had access to toilets and bathrooms, reliance on pit latrines and septic tanks presented long-term challenges, particularly in areas with limited space, poor drainage and reliance on underground water sources. Given the prevalence of on-site sanitation, transitioning to more sustainable options such as shared ablution blocks or decentralized wastewater treatment systems (DEWATS) is recommended. This entails raised latrines or lined pit systems in areas with high groundwater tables to reduce contamination risks. In the long term, assessing the feasibility of connecting the entire settlement to the existing sewer network will be essential. Effective faecal sludge management is also critical, requiring planned collection and treatment mechanisms to address space constraints through regular desludging, vacuum trucks, or localized treatment solutions.

Public health risks associated with inadequate sanitation require community sensitization on hygiene practices, handwashing stations, and wastewater management awareness programs, alongside coordinated drainage and sanitation improvements to prevent wastewater accumulation and groundwater contamination. The anticipated water reticulation system upgrade has factored the increased water demand for improved sanitation, while stormwater drainage planning aligns with sanitation infrastructure to prevent cross-contamination. Sustainable sanitation solutions such as eco-san toilets, which convert waste into fertilizer, or biogas digesters could provide alternative models in space-constrained areas, while standardized septic tanks with desludging access could enhance long-term viability. While access to sanitation facilities is relatively high, ensuring the sustainability of existing systems requires effective implementation of the plan recommendations to align sanitation upgrading with water supply. Similarly, drainage improvements are expected to enhance public health outcomes while remaining spatially and economically feasible.

4.6.5 Liquid Waste Management

The disposal of liquid waste in Maina B primarily occurred through pit latrines and direct discharge onto adjacent pathways, a consequence of the settlement's lack of defined drainage facilities. This unregulated disposal exacerbated sanitation risks, particularly given that 80% of the water consumed per person per day is converted into wastewater. Based on the projected water demand (refer to Table 4-4), wastewater generation was expected to rise from 19.5 m^3 per day in 2025 to 25.9 m^3 per day by 2035 (see Table 4-5). Addressing this challenge required a structured approach that integrates decentralized wastewater treatment solutions, such as constructed wetlands or DEWATS, alongside shared soak pits and infiltration trenches to prevent indiscriminate discharge.

Household-level interventions, including simple greywater filtration systems like gravel filters or reed beds, have been recommended to further reduce environmental contamination while supporting non-potable reuse, such as irrigation for kitchen gardens. Additionally, the planned stormwater drainage network incorporates designated wastewater disposal points to minimize surface water pollution, while zoning regulations restrict direct discharge onto pathways and encourage proper drainage connections. Public sensitization on the risks of improper greywater disposal, coupled with enforcement of sanitation and environmental health guidelines, will be crucial in maintaining a clean and sustainable living environment. A multi-tiered strategy that aligns wastewater management with settlement upgrading efforts is recommended as essential in mitigating health risks and improving overall sanitation conditions.

Table 4-5: Wastewater projection

Year	2025	2030	2035
Population	**974**	**1123**	**1296**
Daily Wastewater (m^3)	19.5	22.4	25.9
Monthly Wastewater (m^3)	585	672	777.6
Annual Wastewater (m^3)	7020	8064	9331

4.6.6 Solid Waste Management

Effective solid waste management is critical for maintaining a clean and habitable settlement while ensuring environmental sustainability. Given that waste disposal requires dedicated land and infrastructure, integrating structured waste management strategies into the settlement upgrading plan will be necessary to prevent unregulated dumping and associated public health risks.

Waste Generation and Projections

Solid waste generation in Maina B occurred primarily at the household level. However, the absence of a structured waste disposal mechanism has resulted in widespread burning as the predominant disposal method. According to a World Bank study on global trends in solid waste management, per capita waste generation averages 0.74 kilograms per day, ranging from 0.11 to 4.54 kilograms[2] depending on socio-economic and urbanization factors. The National Sustainable Waste Management Policy for Kenya estimates that urban residents generate approximately 0.5 kilograms of waste per person daily[3].

Given that Maina B lies within an urban area, the policy's projections were used to estimate future waste volumes, as shown in Table 4-6.

Table 4-6: Solid waste generation projection

Year	**Daily waste generation per person 0.5Kgs**	**2025**	**2030**	**2035**
Population		**974**	**1123**	**1296**
Projected Daily Solid Waste Generated (Kgs)		487	561.5	648
Projected Monthly Solid Waste Generated (Kgs)		14610	16845	19440
Projected annual Solid Waste Generated (Kgs)		175320	202140	233280

Type of Waste Generated

The composition of waste in the settlement was largely plastic (54.5%) and paper (27.2%), primarily from packaging materials despite the nationwide ban on plastic bags. Organic waste generated from kitchens constituted 17.9% and is often repurposed as livestock feed, reducing its perceived burden. However, the absence of structured waste segregation, recycling, or reduction mechanisms meant that the settlement followed a linear waste disposal model, where materials were discarded without reuse or recovery. As the population increases, this approach will become increasingly unsustainable.

The settlement upgrading plan proposes a structured waste management strategy incorporating the 7R's framework (Rethink, Refuse, Reduce, Reuse, Repair, Recycle, and Recover) to transition from a linear waste model to a circular and sustainable approach. Community sensitization on waste segregation, composting, and recycling will be necessary to shift behaviours toward sustainable waste management. The establishment

[2] https://datatopics.worldbank.org/what-a-waste/trends_in_solid_waste_management.html
[3] https://www.environment.go.ke/wp-content/uploads/2023/03/SWM_Policy_2021_final_copy.pdf

of designated waste collection points will facilitate organized waste disposal and reduce indiscriminate dumping. A decentralized waste management approach, supporting community-led initiatives in waste recovery and recycling while engaging local authorities, will offer a practical alternative where government intervention is limited. Encouraging waste recovery and recycling will also create economic opportunities while reducing environmental risks. Policy and infrastructure integration will be essential to ensure that waste management aligns with stormwater drainage, sanitation, and broader settlement planning, fostering a cohesive urban upgrading strategy.

By embedding these waste management strategies within the broader urban planning framework, Maina B can transition toward a more sustainable system that enhances public health, environmental quality, and long-term urban liveability.

4.6.7 Energy

Energy is a fundamental driver of development, facilitating investment, innovation, and the establishment of industries that generate employment, promote inclusive growth and contribute to economic prosperity. Reliable energy supply ensures that essential services function efficiently, supporting broader urban and economic development.

The settlement was connected to the national electricity grid, providing residents with access to power. The existing power supply infrastructure was largely installed along the existing access ways. However, as the settlement undergoes road realignment and formalization, the positioning of electricity poles will require adjustments to align with the planned road network. This rerouting process will be essential to ensure that electricity infrastructure does not obstruct mobility or future development initiatives.

Despite electricity connectivity, cooking energy in Maina B remained predominantly reliant on traditional biomass fuels, with 94.4% of households using firewood and charcoal. These energy sources contribute to deforestation and environmental degradation, exacerbating climate change risks. Additionally, indoor air pollution from charcoal and firewood use poses severe health hazards, particularly due to carbon monoxide exposure in enclosed spaces, increasing the risk of respiratory diseases.

The integration of renewable energy solutions, improved electricity infrastructure, and clean cooking technologies has been prioritized in the settlement's development framework. While the expansion of grid electricity will enhance lighting and economic activities, investment in off-grid solar solutions could provide cost-effective alternatives for households unable to afford grid connections. Additionally, policies promoting the transition from biomass fuels to sustainable energy sources will be essential for reducing environmental degradation and improving public health.

Planning for energy supply within the settlement considered long-term sustainability, affordability, and resilience. Promoting cleaner cooking alternatives, such as liquefied petroleum gas (LPG) or improved cookstoves, could reduce environmental and health risks while enhancing energy efficiency. Exploring options such as solar energy integration, improved street lighting, and smart grid solutions could further strengthen energy access while reducing reliance on centralized power sources. Coordination with the relevant electricity utility providers will be necessary to facilitate the relocation of

infrastructure and ensure seamless service provision during the upgrading process. By embedding energy planning within the broader settlement development strategy, Maina B can support both immediate infrastructure needs and long-term sustainability objectives.

4.7 Social Infrastructure

Social infrastructure comprises facilities that provide essential services to the community, including education, healthcare, religious institutions, and security services. The assessment evaluates the availability, accessibility, and adequacy of these facilities concerning planning standards. Map 4-9 to Map 4-11 illustrate the distribution of these facilities within and around the settlement. The analysis indicated that most facilities were within an accessible radius, ensuring reasonable service provision to residents.

4.7.1 Education Facilities

The settlement was served by Maina Schools and Thama Primary School, both located in close proximity to the settlement. According to the physical planning handbook, a nursery school should be available for every population of 2,500 people. Given the settlement's population of 974 people, the existing educational facilities were deemed sufficient to meet the demand of the primary school students. The physical handbook also indicates a maximum walking distance of 500M for pre-primary students, a standard met by the current infrastructure. For secondary education, two schools are located nearby: Ndururumo High School and Nyahururu Munyaka Secondary School.

Planning considerations should be made, subject to the availability of space, to explore options for improving the learning environments of existing educational facilities.

4.7.2 Health Facilities

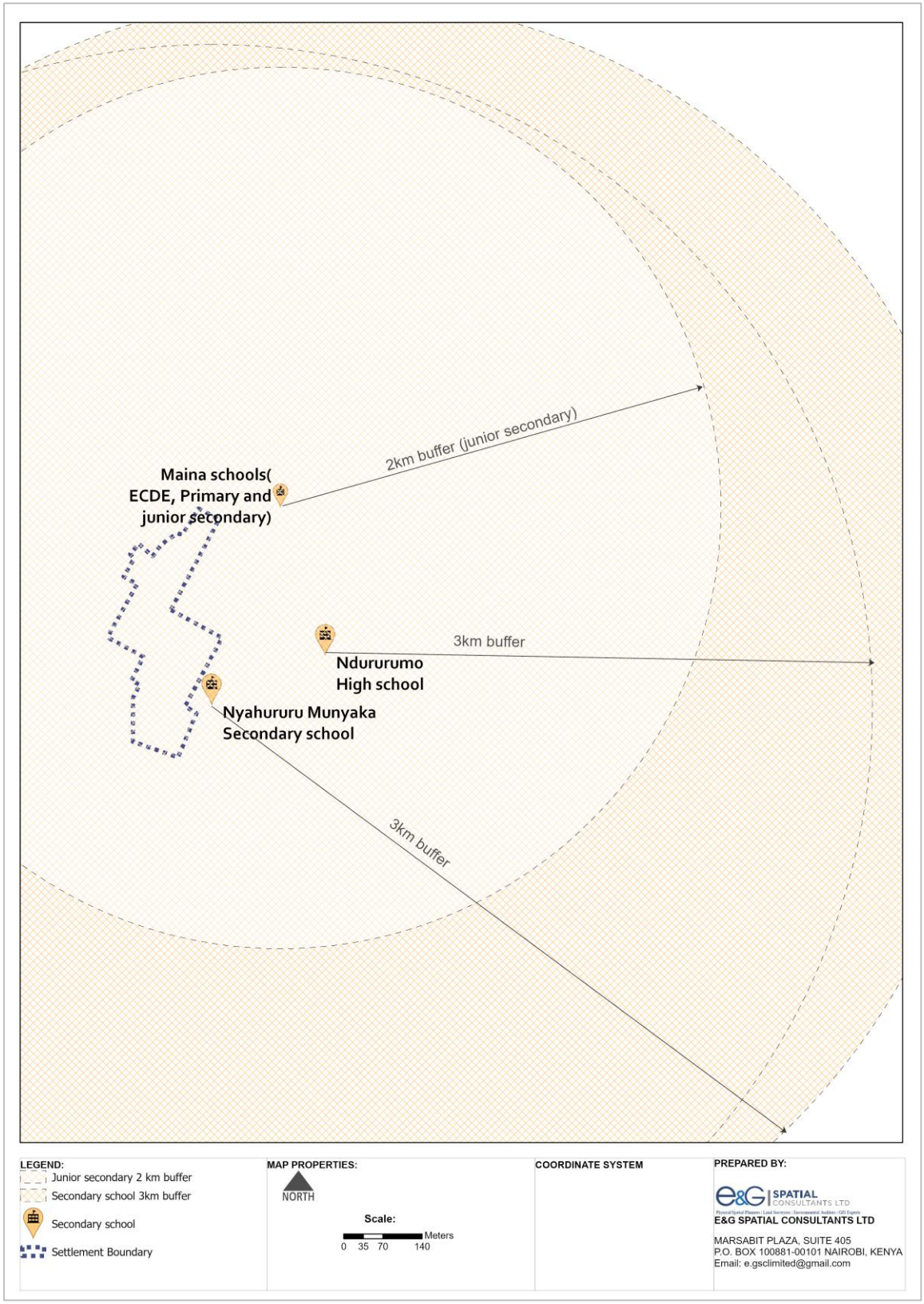
The majority of residents (97.6%) in the settlement sought medical services from public facilities. Maina Dispensary, located in Maina A is the primary public health facility serving 60.2% of the residents. Nyahururu County Referral Hospital, located approximately 3 km from the settlement, served 36.9% of residents. Additionally, there was a private health facility within the settlement.

In general, 55% of respondents reported a positive perception of the medical facilities they use, describing them as "good." This indicated a reasonable level of satisfaction with the available health services, though there is room for improvement in terms of capacity and quality.

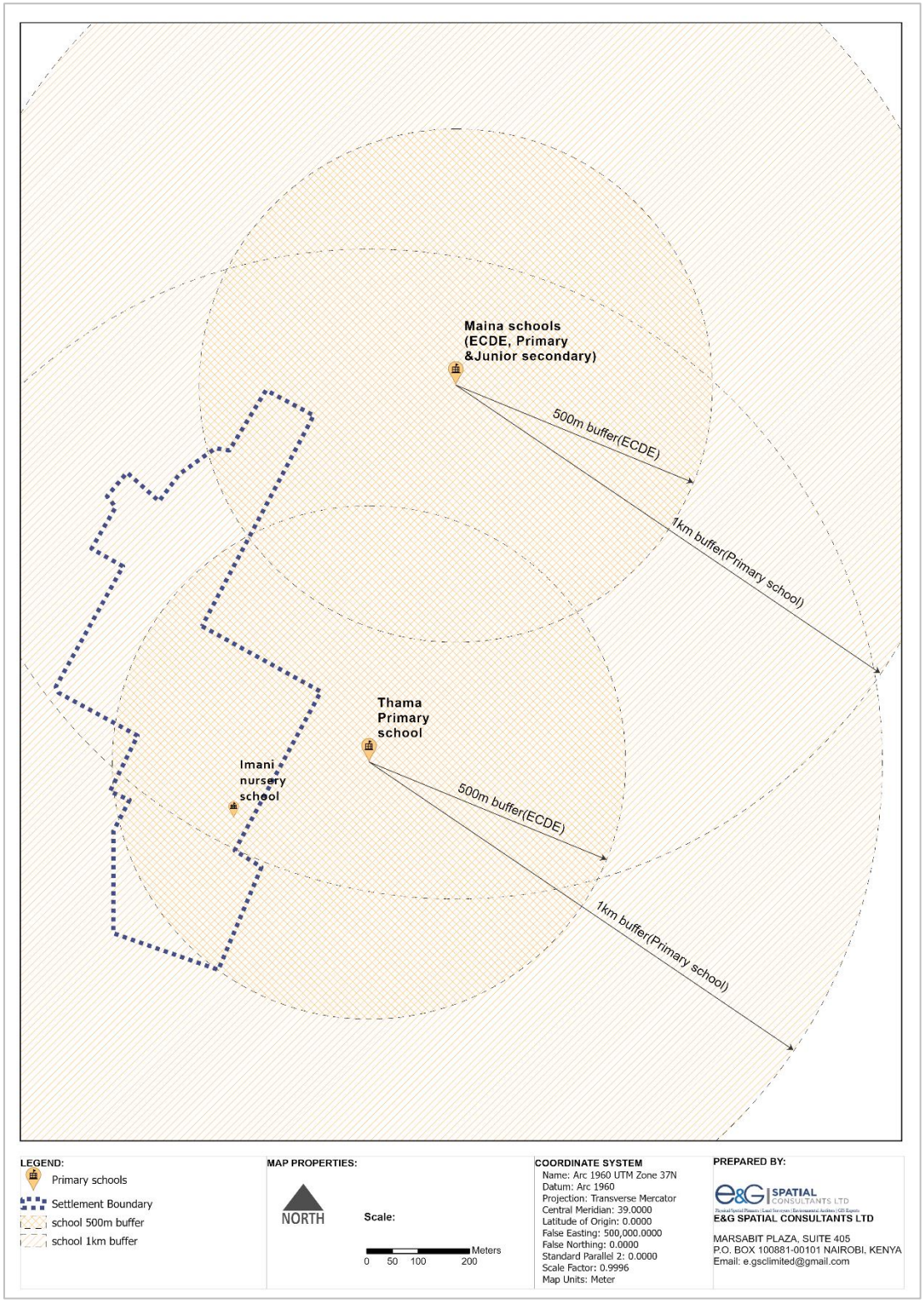
Based on community proposals in Maina B settlement, the plan recommends the extension of the dispensary into parcels 136 (0.47 ha). Increased space allocation (from 0.38 ha to 0.85 ha) will be relevant to the county government in the event they want to expand the current capacity which is currently insufficient. In addition, the plan recommendations on improving water supply and sanitation are expected to increase the status of public health within the settlement and thereby reducing the number of sanitation related ailments. Finally, the expanded water supply system will serve the dispensary, potentially improving the service delivery.

4.7.3 Religious and Security Facilities

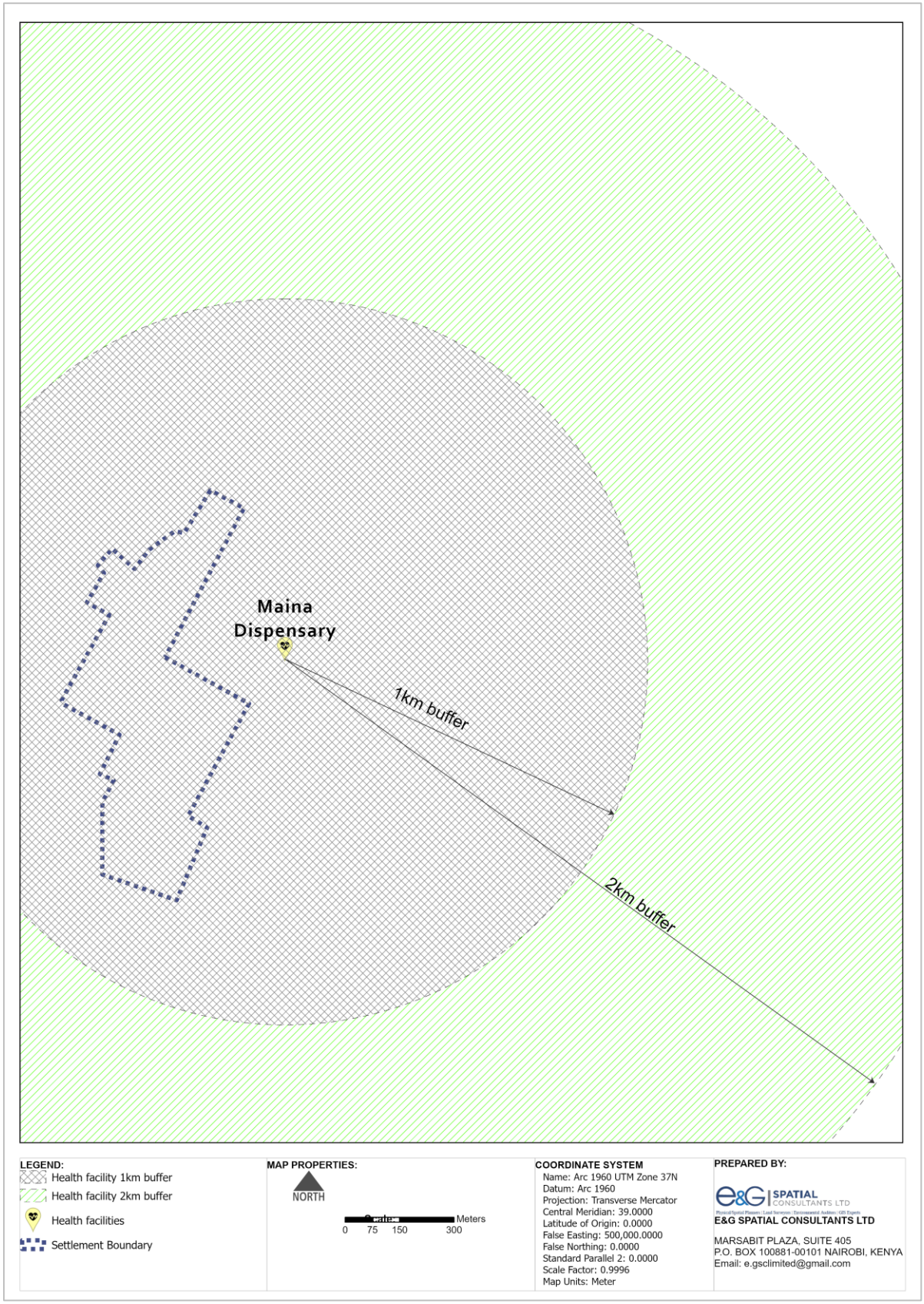
The settlement was home to various worship centres, including Christian churches such as PCMA church, The Happy Church, PEFA church, Christian Fellowship Church, and others. The settlement was served by Maina Police Post, which is located in Maina A. This police facility serves the settlement as well, contributing to the community's safety and security. In addition, the office of the area chief is located in Maina A.



Map 4-9: Proximity to secondary schools



Map 4-10: Proximity to primary schools



Map 4-11: Proximity to the dispensary

4.8 Summary of Emerging Issues

The matrix below presents a summary of the key emerging issues arising from the situational analysis.

No.	Section/Settlement element	Key issues	Planning implications
1.	Population & Demographic characteristics	• Other factors held constant; the settlement population was expected to keep increasing • About 7.2% of the population did not have formal education and the transition to tertiary education was low. • The population was youth dominated translating to a potential labour source. However, the low numbers in the 0-9 years pointed to a potential labour crisis in the future	• Current Population size, structure and its projections and dynamics informed the justifications for planning proposals. • Gender split was factored to ensure planning proposals were inclusive and gender sensitive in serving all the residents. • The youths were engaged in socio-economic survey data collection, cadastral survey, assessment of PAPs etc. • The planning interventions have addressed the growing youthful population by ensuring inclusive opportunities and infrastructure while fostering youth participation in the ongoing project. • The planning interventions as well as other socially oriented programs will be implemented to boost the fertility rate.
2.	Settlement economy	• Majority of the residents were low-income earners. • The economy was largely informal. • The dominant self-employment was of low productivity thus low incomes • High levels of unemployment. • Farming and livestock keeping were a major source of income.	• Strategic planning interventions that will improve economic opportunities in the settlement.
3.	Settlement structure	• The settlement's layout was well structured and based on a previous PDP. • Development was organic and haphazard.	• It required minimal reorganization and planning. • Safeguards measures will play a significant role
4.	Housing	• Majority of the structures were non-storey.	• Vertical densification of the settlement in the long term shall be explored, in consideration of the location of the settlement against the prevalent factors of urbanization
		• Most of the structures were semi-permanent.	• It is expected that with security of tenure and planning of the settlement, there will be developmental transformation. • Semi-permanent structures indicated minimum disruptions arising from the planning interventions

5.	Transportation	• The settlement was largely motorable. • Nil NMT facilities despite internal accesses being mainly foot-paths • There was hierarchy within the transportation network with scattered encroachments • Most of the access roads had earth surface which makes it non-motorable in the rainy seasons	• Opening up motorable access ways was given key consideration in areas where movement was constricted • Consideration of NMT infrastructure integration in the settlement access networks • Realignment of the access roads, an activity that had some impact on adjacent structures. • All parcels needed to have access to be titled.
6.	Infrastructure and utility services	• Poor solid waste management • Reliance on use of the pit latrines was not sustainable. • Usage of septic tanks had some downsides due to lack of motorable accesses that can accommodate vacuum exhausters to remove septage when filled up. • No sewer system • Reliance on shallow wells, the spring and River Gathara for water. Use of pit latrines increases the risk of ground water contamination	• Propose better solid waste management mechanisms • Designate waste collection areas as a land use • Expand the current sewer system (from Maina A) to cover the whole settlement • Provide for an elaborate liquid waste management system and discourage the use of pit latrines and shallow wells.
7.	Social infrastructure	• Lack of recreational facilities • There existed land designated for public purpose in the previous PDP	• Options to get some space for recreational facilities were explored • Assigned use to the designated public facilities according to current needs
8.	Current Settlement tenure system	• The residents did not have any legal ownership documents	• The ultimate goal of the project was to confer land tenure rights to the beneficiaries
9.	Environment	• Whereas the GIS analysis pointed to a vegetation cover of about 37.4% of the settlement area, this was largely by naturally occurring plantae. • Uncoordinated solid and liquid waste management • Existing storm water drainage channels did not cover the entire settlement	• For greening and aesthetics improvement in the settlement, proposals on deliberate greening of the settlement with adaptive and diverse varieties of species have been made • Intervention to ensure storm water management is channelled accordingly by expanding the current system to the areas that are not covered

5. PLANNING APPROACHES, ALTERNATIVES AND SELECTED SETTLEMENT PLAN

5.1 Overview

This chapter outlines the planning approaches, principles, and the structuring elements that guided the plan-making process. It further presents the various plan proposals considered for the settlement, evaluates each alternative, and identifies the most suitable option for implementation, based on defined criteria. The selected proposal incorporates strategies to enhance land use, infrastructure, local economy, social services, and environmental management to promote sustainable settlement development. The various planning alternatives as well as the final plan presented in this section were based on the situational analysis discussed in chapter 4 above and through continuous stakeholder engagement throughout the whole process.

5.2 Planning Approaches

An evaluation of various planning approaches was undertaken to determine the most suitable strategy for the planning and upgrading of Maina B Settlement. This evaluation considered the existing settlement characteristics as discussed in chapter four of this report, including: settlement layout pattern, environmental characteristics, land tenure issues, infrastructure deficits, and the social and economic realities of the residents. The selected planning approach needed to ensure minimal displacement, integrate tenure regularization with infrastructure development, and maintain the existing social fabric while enhancing the overall quality of life for residents. The following approaches were considered.

5.2.1 Settlement upgrading

Settlement upgrading is defined as any intervention that improves the physical properties of a settlement that enhances the lives of its inhabitants. As a planning approach, settlement upgrading recognizes the critical role of informal settlements in providing shelter to urban populations who lack access to conventional housing and services.

Under KISIP2, the integrated settlement upgrading approach is being implemented where tenure security is addressed as a foundational component before infrastructure investments are made. Physical planning and tenure regularization are undertaken under sub-component 1.1, establishing clear legal ownership for residents, while sub-component 1.2 focuses on infrastructure development, ensuring that services proposed in the plan such as roads, drainage, water supply, and sanitation systems are provided once the land tenure is secured. This phased approach aligns with global best practices in upgrading informal settlements by prioritizing legal recognition before introducing

physical intervention. In addition, due to the organic and often unregulated nature of these developments which often do not align with formal planning standards, settlement upgrading under KISIP seeks to introduce innovative and context-specific interventions rather than impose conventional urban planning norms that may necessitate large-scale displacement.

5.2.2 Urban renewal

Urban renewal is a planning approach that seeks to comprehensively address issues of inadequate housing, poor infrastructure, inefficient land use, and urban decay. It is often implemented through large-scale redevelopment initiatives that involve the demolition of deteriorated structures, and the reorganization of land uses to create more functional urban environments. Historically, urban renewal efforts have been associated with slum clearance, relocation of residents, and redevelopment of urban cores to enhance land efficiency and infrastructure.

Although urban renewal has been successful in certain contexts, its application in Maina B was deemed unsuitable due to the high impact it would have on existing structures and the likely displacement of a significant proportion of residents. The settlement's social and economic dynamics necessitated a more inclusive and less disruptive approach that prioritized tenure security and infrastructure enhancement without causing widespread displacement.

5.2.3 Urban regeneration

Urban regeneration involves strategic investments in underdeveloped areas to stimulate economic growth, attract investment, and improve living standards. This approach focuses on revitalizing existing urban spaces by leveraging economic opportunities, upgrading infrastructure, and enhancing the physical and social environment. Regeneration initiatives typically involve a mix of public and private sector investments aimed at unlocking the potential of an area, improving accessibility, and fostering socio-economic development.

While urban regeneration offers a viable pathway for long-term settlement improvement, its application in Maina B was considered secondary to tenure regularization and infrastructure upgrading. Capital intensive economic development strategies will be essential in the later phases of the settlement’s transformation, once land tenure is formalized and infrastructural investments have been made.

5.2.4 Urban redevelopment

Urban redevelopment entails the demolition and reconstruction or substantial renovation of existing structures and infrastructure to create a more organized and functional urban environment. This approach is often used in high-density urban areas where land values are high, and redevelopment is necessary to optimize land use.

In the context of Maina B, complete urban redevelopment was not considered viable in the short term due to the potential displacement of residents and the disruption of existing social networks. Given that most households rely on informal livelihoods and have developed intricate social and economic linkages within the settlement, large-scale redevelopment would have created significant hardships for the affected communities.

Instead, an adaptive and incremental upgrading approach was preferred. Nevertheless, in the long run the adaptive approach will allow for the incremental redevelopment of the settlement. However, this is dependent on the implementation of the guidelines set out in this plan. In addition, issuance of ownership documents will improve access to financing and credit which could potentially trigger large scale (re)-development initiatives led by residents or private actors, tapping into available partnerships.

5.2.5 Adaptive approach

This approach acknowledges the existing morphology of the settlement and seeks to implement flexible planning standards that minimize displacement while ensuring improvements in land tenure and infrastructure. The adaptive approach was identified as the most suitable planning strategy for Maina B Settlement. Unlike conventional urban planning approaches that impose rigid layouts, the adaptive approach considers the organic growth of informal settlements and allows for modifications that enhance functionality without significantly altering the settlement's structure.

Unlike other informal settlements that lack a structured and formalized access structure, Maina B has a semi-formal layout owing to the existence of the 1993 PDP. While there have been minor encroachments into the initial access ways, the structure has largely remained as proposed in the PDP. However, there are no development control guidelines in place leading to haphazard development. By adopting flexible spatial planning techniques, the adaptive approach ensures that improvements in road networks, drainage systems, and public spaces are integrated into the settlement in a way that respects the existing built environment. This method is particularly relevant in settlements like Maina B, where conventional planning standards cannot be applied without causing displacement. For instance, in sections where adopting the 12M roads based on the 1993 PDP could lead to high impacts, the plan provided for 9M roads. The approach supports the goal of tenure security and infrastructure upgrading while maintaining the existing morphology

5.3 Planning Principles

The planning process for Maina B Settlement was guided by a set of principles aimed at ensuring sustainability, inclusivity, and effectiveness of the proposed interventions as illustrated in Figure 5-1. These principles informed both the physical planning process and the subsequent surveying and tenure regularization efforts, ensuring that land use decisions were made in a manner that maximized resource efficiency and community benefits. The following planning principles guided the preparation of this plan.

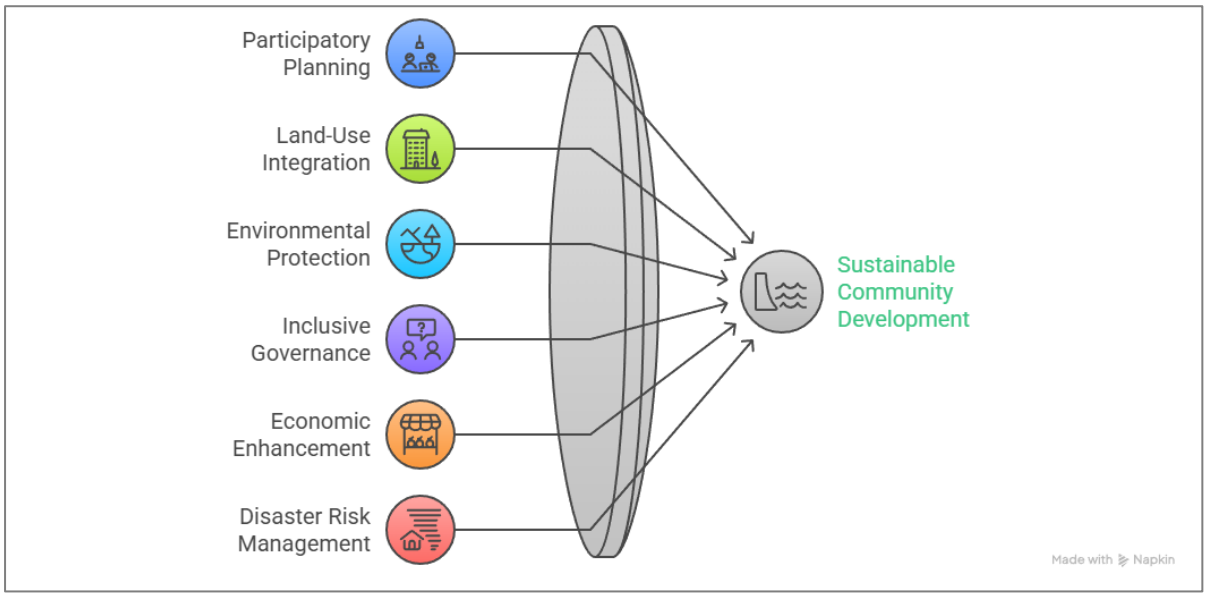


Figure 5-1: Planning principles

5.3.1 Public/Community participatory planning

Public participation is a fundamental requirement in urban planning and governance in Kenya, as enshrined in the Constitution of Kenya, 2010. Articles 10, 174 and 61 emphasize the importance of inclusivity and community involvement in decision-making, particularly in land-related matters. Similarly, PLUPA, the Land Act, the National Urban Development Policy and UACA echo the constitutional requirement of placing community participation in planning and decision making. The planning and surveying of Maina B Settlement directly impacted the residents, necessitating their active engagement in all stages of the process.

Community participation was embedded in the planning process to enhance representation, project ownership, and ensure that residents' voices were incorporated into the development framework. Before the initiation of the planning process, a notice of intention to plan was published in the Kenya Gazette, The Standard and Taifa Leo dailies. Similarly, a notice of completion was published in the same platforms inviting comments from the public on the draft plan. The consultant facilitated participatory sessions involving community members, residents, county government officials, KISIP national team, local leadership and other stakeholders to gather input on land use preferences, infrastructure needs, tenure considerations, and adjustment of settlement structure. These participatory sessions were held during the visioning stage, and the review of the initial draft plan and the final draft plan.

Besides the community members, the consultant also engaged the NPCT and CPCT before presenting the plans to the community. Upon adoption of the plan, the draft was presented to the committee in charge of lands and physical planning and the County Executive. This inclusive approach ensured that the final plan reflected local aspirations while aligning with planning regulations and development objectives.

5.3.2 Land-use integration and Sustainable Land Management

Efficient land management is a cornerstone of sustainable urban development. The planning exercise assessed existing land characteristics, demographic patterns, and

infrastructure requirements to develop a land use framework that optimizes resource use and promotes orderly growth. The plan considered the conservation of natural resources, particularly the spring and its surrounding wetland while facilitating tenure regularisation and issuance of ownership documents, settlement upgrading and infrastructure development.

Land use regulations have been established to promote integration, compatibility, efficiency and sustainability. The plan seeks to balance residential, commercial, and public spaces in a manner that enhances functionality while safeguarding environmental resources. For instance, the plan has proposed the establishment of commercial and mixed-use zones along the primary access roads taking advantage of the heavy human traffic along these corridors. Residential zones have been proposed away from the busy corridors to maintain a quiet living environment. Effective land management practices will also ensure that land tenure regularization aligns with spatial planning objectives, facilitating sustainable settlement growth. Case in point is regulating and limiting subdivisions of the land into uneconomical sizes.

5.3.3 Environmental Protection

Urban settlements are often associated with environmental challenges, including pollution, habitat degradation, and waste accumulation. The planning approach for Maina B incorporates environmental sustainability measures to mitigate these challenges and promote green development. Investments in green infrastructure, conservation initiatives, and sustainable land use planning have been prioritized to enhance environmental resilience.

Initiatives such as riparian zone management, waste management programs, and green space development have been integrated into the settlement upgrading process to ensure ecological sustainability. Collaborative efforts between the county government, community organizations, and conservation stakeholders will be key in implementing environmental protection strategies.

5.3.4 Inclusive and Collaborative Governance

Effective governance is crucial for the successful implementation of the settlement upgrading plan. The planning process incorporates both traditional and formal land governance systems to ensure a harmonized approach that respects local norms while aligning with statutory requirements. Engaging diverse stakeholders, including government agencies, community representatives, and civil society organizations, enhances transparency and accountability in decision-making.

The plan promotes partnerships between the county government and relevant national agencies to support the implementation of infrastructure and service improvements. For instance, proper solid waste management requires efforts from the county government, NGOs/CBOs and the local community. In addition, implementation of the plan will be straightforward as all the proposals have been made in collaboration with government authorities and the community members. By fostering inclusive governance structures, the planning framework ensures that settlement upgrading efforts are participatory, equitable, and sustainable.

5.3.5 Enhanced Economic Potential

The principle of enhancing economic potential focuses on fostering sustainable economic activities and creating opportunities that improve livelihoods while balancing urban expansion with the preservation of agricultural and rural economies. Maina B, situated in Nyahururu's periphery, requires a planning approach that integrates land-use strategies to protect to mitigate the adverse effects of unregulated urban sprawl.

The economic potential of Maina B can be harnessed by fostering an enabling business environment that attracts investment and stimulates entrepreneurship. This requires reducing bureaucratic hurdles, streamlining regulatory processes, and ensuring a stable and predictable policy framework. By simplifying business registration, securing property rights (that will be achieved in this project), and enforcing transparent taxation policies, the county government can create a conducive environment for small businesses and investors to thrive.

Infrastructure investment remains central to unlocking economic potential. Strategic improvements in transportation networks, energy supply, water infrastructure, and communication systems enhance connectivity, facilitate trade, and reduce transaction costs. An integrated approach to infrastructure development as proposed in this plan will ensure that economic activities are supported in a manner that promotes both local and regional trade.

Additionally, promoting research, technological innovation, and market diversification is key to fostering economic resilience. Encouraging agricultural value addition, enhancing market access for local producers, and facilitating technology adoption in key economic sectors contribute to job creation and poverty reduction. The current economic activities in Maina B rely on subsistence and informal practices, many of which are not sustainable. By aligning the settlement's development with this principle, the plan seeks to strengthen the local economy, formalize productive economic activities, and enhance long-term economic sustainability. This has been achieved by proposing a mixed-use zone to improve business opportunities. Upon plan approval and issuance of titles from this project, improved access to credit will enhance economic potential within the settlement

5.3.6 Disaster Risk Management and Resilience Planning

Disaster risk management is fundamental in ensuring the resilience and sustainability of human settlements. This principle emphasizes proactive identification, assessment, and mitigation of potential hazards to minimize the impact of disasters. A detailed analysis of risks in Maina B highlighted three primary concerns: fire, flooding and disease outbreaks. Addressing these risks required an integrated approach that combines risk assessment, early warning systems, and community engagement.

The principle emphasizes the establishment of emergency response mechanisms. This includes setting up disaster response teams, coordinating emergency communication channels, and enhancing community capacity to respond effectively to emergencies. Building local resilience through education, training, and community-led preparedness initiatives is one of the disaster management approaches that has been proposed in the plan. It is vital in ensuring that residents are equipped to handle disaster events. In

addition, opening up access network is expected to enhance emergency response by ensuring all sections of the settlement are accessible.

Addressing groundwater contamination and improving sanitation within the settlement is expected to reduce the risk of disease outbreaks. Similarly, increasing the space allocation for the dispensary and enhancing the capacity will enable the facility to handle any potential disease outbreaks.

Finally, a comprehensive risk assessment was essential in identifying vulnerabilities and determining the most appropriate interventions. This included mapping flood-prone areas, assessing water availability and quality, and evaluating soil stability to prevent erosion. The integration of climate-responsive land-use planning in the plan ensured that critical infrastructure was located away from high-risk zones while maintaining essential buffer areas to mitigate environmental threats.

5.3.7 Promotion of Connectivity and Sustainable Mobility

Connectivity and mobility are essential for economic growth, social inclusion, and environmental sustainability. The principle of sustainable mobility ensures that people and goods can move efficiently, safely, affordably, and with minimal environmental impact[4]. The transportation infrastructure in Maina B needs to be developed in a manner that enhances accessibility while minimizing congestion, displacement and pollution.

The plan has proposed an integrated transport system. This system considers various modes, including road networks, pedestrian pathways, and cycling lanes, to ensure inclusivity and efficiency. The adaptive plan has achieved conventional road sizes in most sections of the settlement, thereby facilitating the integration of NMT across the settlement. The well-planned transport infrastructure is expected to support economic activities by improving market access and reducing transaction costs for businesses and producers. Additionally, strategic transport planning has been aligned with land-use patterns to optimize connectivity between residential areas, commercial hubs, and social amenities. For instance, commercial and mixed-use activities have been proposed along the primary access roads.

Sustainable mobility also requires considerations for public transport, road safety measures, and environmental conservation. Reducing reliance on private motor vehicles through improved pedestrian and cycling infrastructure is expected to enhance urban sustainability while contributing to public health and reduced carbon emissions. As evidenced from the socioeconomic survey, walking is the main mode of transportation within the settlement. The plan exploits the existing situation to promote and support the use of NMT.

Therefore, the principle ensured that mobility systems in Maina B Settlement are not only functional but also environmentally sound and socially inclusive.

[4] Kim, J., Kim, T., Litman, T., JD, S., & Stoyanov, V. (2008). Connected and sustainable mobility. Connected and Sustainable Mobility. White paper. https://www.cisco.com/c/dam/en_us/about/ac79/docs/wp/ctd/connected_mobility.pdf

5.3.8 Develop a System of Public Facilities and Services

Equitable access to public facilities and services is a cornerstone of sustainable urban development. This principle emphasizes the need for all residents, regardless of their socio-economic status or physical ability, to access essential public services. Based on the socioeconomic survey, 6.9% of the respondents indicated they were living with some form of disability. Based on this, the plan seeks to ensure that public administration offices, education facilities, healthcare centres, law enforcement services, are strategically distributed and easily accessible.

The development of public facilities should prioritize inclusivity, ensuring that people with disabilities, women, children, and other vulnerable groups can access services without discrimination. The settlement plan envisioned the integration of well-designed public spaces, including recreational areas, and administrative centres, that foster social cohesion and enhance community well-being.

5.3.9 Equitable and Enhanced Utilities Provision

The principle of equitable utilities provision ensures that essential services such as clean water, sanitation, electricity, and waste management are fairly accessible to all residents. Reliable access to these services is fundamental to improving living conditions, promoting public health, and supporting economic activities. Infrastructure development for utility services has been strategically planned to reduce inequalities and address the needs of marginalized communities. This includes prioritizing underserved areas, implementing affordable service delivery models, and leveraging technology to improve efficiency.

While the majority of the respondents are connected to the national grid (90%), a considerable section uses solar energy (51.7%) for lighting. In addition, 94.9% of the respondents reported using firewood and charcoal. Therefore, investments in renewable energy sources, such as solar (which is already used for lighting), can also enhance sustainability while reducing dependency on non-renewable resources. However, community participation in utility management will be key to ensuring that services are tailored to local needs.

5.3.10 Ensure Gender equity and Social Inclusion

Gender equity and social inclusion are fundamental to the fair and just development of settlements. This principle recognizes that vulnerable and marginalized groups—such as women, children, widows, persons with disabilities, and elderly residents—must be protected from discrimination and exclusion. In Kenya, gender disparities in land ownership and access to resources remain significant challenges, and the KISIP2 project is committed to addressing these inequalities.

Maina B Settlement has identified vulnerable groups, including orphans, widows, and persons with disabilities, whose rights must be safeguarded throughout the planning and implementation processes. The plan ensured that land regularization, housing policies, and service provision incorporated the needs of these groups, allowing them full participation in decision-making processes and securing their right to tenure and social services. For instance, all groups were involved in the planning process and the

consultant continuously advocated for joint registrations of couples and families at large. In addition, the plan has recommended the designation of trade spaces for women and PWDs. Similarly, the proposed public facilities remain accessible to all people and part of the building regulations involve constructing PWD friendly facilities.

By embedding gender equity and social inclusion into the planning framework, the settlement's development fosters fairness, inclusivity, empowerment, and community resilience, ensuring that all residents benefit from urban transformation.

5.4 Plan Structuring Elements

Structuring elements refer to the foundational components or frameworks that guide the development and organization of urban spaces. These elements are essential in shaping the physical, social, and economic landscape of a settlement, ensuring that it functions efficiently and sustainably. This plan preparation was largely informed by the following spatial and non-spatial factors as presented in the settlement basemap refer to map 4-3.

5.4.1 Project area boundary

The settlement boundary was determined by the client, measuring about 29.3 Ha, as discussed under section 2.1 of this report. Thus, the planning interventions and proposals were confined within this boundary (see Map 3-2).

5.4.2 Existing settlement land uses and development layout

With the settlement already having taken shape, existing development layout was a key plan structuring element. With the project main objective being regularization of tenure, many of the present settlement features were adopted to minimize negative impacts that may cause displacements. However, all access roads were realigned to reasonable standards while ensuring formalized access for all parcels within the settlement.

The settlement is predominantly residential, with pockets of mixed use and public purpose. The settlement use, residential, was largely retained to serve the habitation function of the settlement. However, other complimentary and defined land uses have been proposed. These include mixed use and commercial based on the vision and the community proposals.

5.4.3 Settlement's Neighbourhood context

The settlement is bordered by two residential settlements, Maina A to the east and Siberia/Ukweli to the west. As highlighted earlier, Maina is the common and used term for the settlement. The split to Maina A & B was based on contractual requirements. These settlements have the same structure and layout, hosting residential units and scattered commercial services. The settlement is also abutted by various educational institutions, Maina schools, Thama Primary and Nyahururu Munyaka Secondary School. These institutions not only shape the settlement's layout but also provide essential services to the community. In addition, the settlement is connected to the Nyahururu-Rumuruti Road (C77) which connects the settlement to key urban areas such as Nyahururu and Rumuruti and separates the settlement from adjacent farmlands.

5.4.4 Existing mobility access networks

Internally, the settlement features a well-defined transport network with roads of varying widths, accommodating both vehicular and pedestrian movement. The settlement exhibits a hierarchical network with roads ranging from 9M to 12M. The proposed internal road network has been expanded but was largely guided by the existing access networks, ensuring continuity and minimal disruption to the current spatial organization.

5.4.5 Natural features

The settlement's topography and slope were critical in determination of the plan proposals on the line infrastructure laying as well as determination of the settlement's suitability for development/habitation. The settlement is generally flat with the slope falling gently towards the west. The only natural feature in the settlement is the abutting River Gathara.

5.5 Alternative Planning Scenarios

5.5.1 Overview

The plan preparation process for Maina A plan as discussed in chapter 3 was anchored on the project objectives discussed in section 1.2 of this report and approaches and principles discussed in section 5.2 and 5.3. The primary objective of this assignment was to facilitate the formalization of secure land tenure for Maina B informal settlement within the framework of KISIP2, through planning and surveying activities. Based on the approved plan and amended registry index map, ownership documents (certificates of lease) shall be processed for the beneficiaries. Additionally, the provisions of the World Bank Safeguard (O.P 4.12) on zero/minimal PAPs were considered, along with the opportunities and constraints presented by the settlement itself.

The existing development status of the settlement, including existing land use and road networks, were also significant considerations. The alternatives sought to complement the existing land uses with those that were missing like recreational, public purpose (community resource centre) and mixed use. The needs and aspirations of the community, as dictated through socio-economic survey, community participatory planning exercise, and various stakeholders' engagements, played a crucial role in shaping the alternatives. The proposals by the community included: having a settlement powered by innovation, prosperity and sustainability, renovation of the existing agro processing industry, designated marketplace and allocation of space for recreational activities

The plan alternatives discussed here under, were anchored on a number of approaches: adaptive planning approach, settlement upgrading approach, urban renewal and urban redevelopment, as well as urban regeneration. The adaptive approach was preferred during the plan preparation as it focused on utilizing flexible standards to minimize planning impacts and disruptions. By adjusting planning proposals to align with the existing development layout, the adaptive approach aimed to preserve the social fabric and reduce resettlement. Based on this approach, one adaptive planning option was

prepared. Settlement upgrading approach acknowledges the phases used in KISIP2 in improving the status of informal settlements, with this phase, geared towards tenure regularization. Thus, the prepared plan alternatives factored the possible titling options. Notably, besides nil alternative, which would result in one community title, the adaptive planning option prepared would allow all parcels to be individually registered. Urban regeneration approach aimed at revitalizing areas that are in decline, informed the delineation of various land use zones to foster economic development in Maina B. Cumulatively, 89.4% of the structures were temporary and semi-permanent, thus presenting an opportunity for redevelopment, upon issuance of titles.

The preparation of the two plan alternatives was guided by some principles, notably; sustainability, public/community participatory planning, climate resilience, inclusivity and equitability, adaptability, balance with nature, livability, and accessibility.

Sustainable planning informed thoughtful consideration of current land uses, optimizing available space, and anticipating future developments to accommodate growth without interfering with the ecosystem. This was informed by the proposals made by the community who were actively involved through all the stages of preparation of this plan. A key aspect of inclusivity and equitability is guaranteeing that all community members have equal access to essential services such as education, healthcare, transportation, and social amenities. This principle informed the location of proposals within the two adaptive planning alternatives. The principle of accessibility was applied through proposing access where it was non-existent and proposing widening and realignment of some existing roads to ease movement and traffic flow within the settlement.

The planning approaches and principles provided a structured framework to ensure that the plan for Maina B settlement was not only efficient and practical but also sustainable and inclusive. The plan aimed to enhance the quality of life for the residents, promote environmental stewardship, and support economic development in Maina B. The first alternative, Nil Intervention, involves retaining the status quo with no plan proposals and allowing the settlement to develop without any regularization guidelines. The other scenario, adaptive planning option proposes the introduction of some level of intervention suitable for the existing settlement situation, coupled with feasible proposals and guidelines for incremental redevelopment to desired levels. These alternatives aimed to deliver the primary objective of improving living and working conditions in informal settlements by providing security of tenure while ensuring minimal disruption to the existing community.

5.5.2 Alternative 1: Nil Intervention

This scenario assumes no planning intervention in the settlement, maintaining the status quo into the future. The Nil Intervention plan alternative principally allows for the settlement to remain as is, without any legislative or structural interventions. This option recognizes the existing layout and maintains the current socio-economic dynamics without imposing new planning guidelines. By retaining the status quo, this alternative seeks to honor the organic growth and development of the community, providing a sense of continuity and stability amidst the evolving urban landscape.

This alternative was presented to the community on 24th March 2025, highlighting its advantages and disadvantages. One of the primary advantages of the Nil Intervention approach is that it ensures that there is no demolition or resettlement of existing structures and residents. This helps preserve the social fabric of the community, maintaining vital social networks that have been established over time. Furthermore, the formal recognition and registration of community ownership foster a sense of empowerment among residents, reinforcing their rights to the land they inhabit.

However, this alternative is not without its hitches. As the settlement population grows, disputes may arise over community land boundaries, leading to potential conflicts. The continued spatial disorder and haphazard development might contribute to sustained urban decay, which could eventually render parts of the settlement uninhabitable. Additionally, there is a risk of encroachments beyond the defined boundaries, possibly into the River Gathara riparian reserve thus risking flooding.

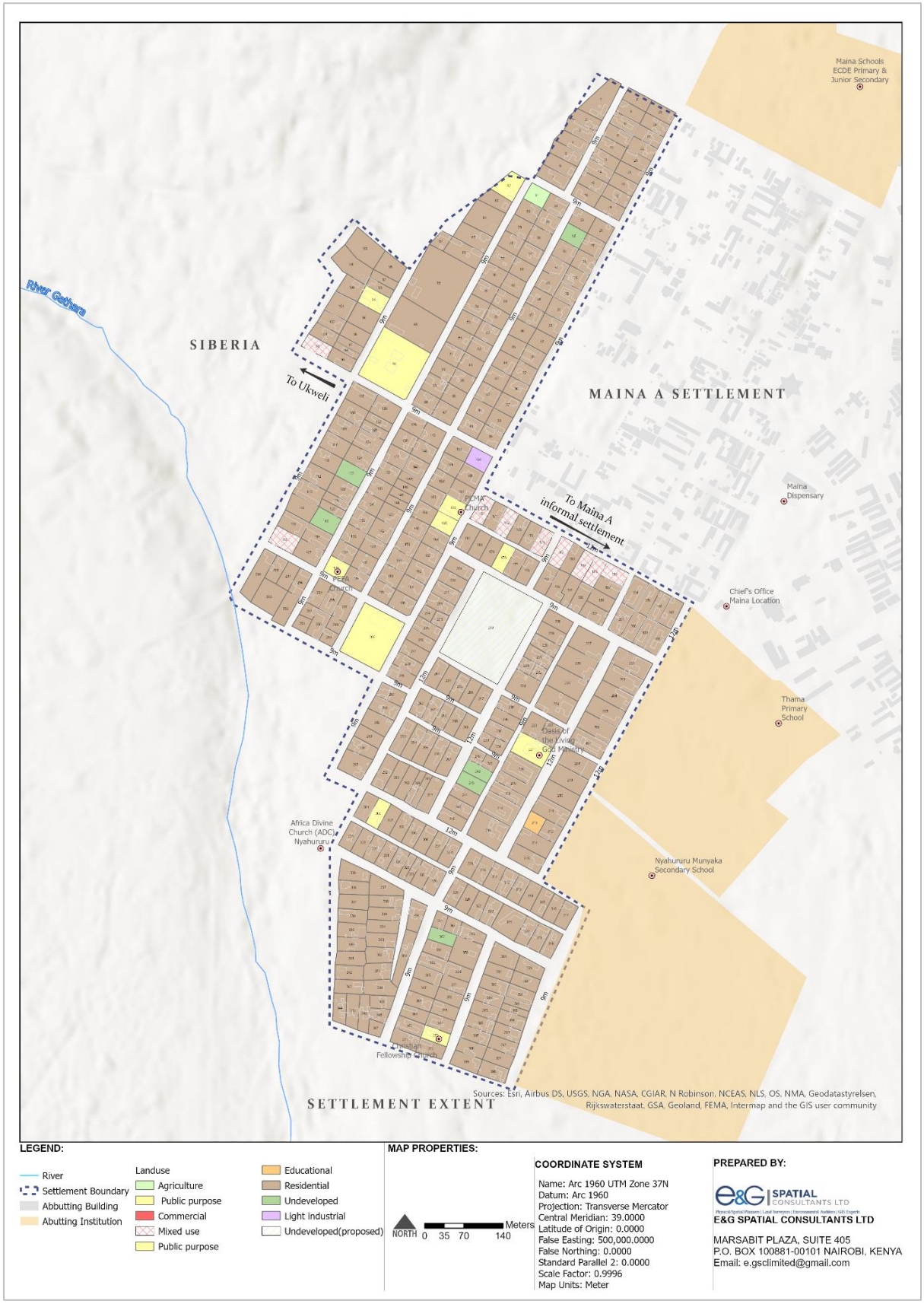
Additionally, the Nil Intervention scenario limits opportunities to allocate land for public amenities, unless residents are willing to relocate—an unlikely prospect under this approach. Infrastructure development, such as water, sewer, or electricity lines, would be extremely challenging, often requiring the displacement of existing structures. Without any upgrades or interventions, the quality of life and livelihood prospects for residents would largely remain stagnant, and the lack of proper waste management and policing could contribute to environmental decline and rising crime rates. Ultimately, these conditions may deter investment and development projects, further constraining economic growth and perpetuating existing inadequacies in infrastructure and community facilities within the settlement. Thus, the community turned down this alternative.

Land Use Budget for the Nil Intervention

The land use budget for the nil intervention maintains the status quo, as presented in Table 5-1 below. Residential remains the dominant land use, accounting for 69% of the settlement acreage. Transportation and public purpose had a significant coverage of 24.2% and 4.2% respectively. Religious institutions accounted for public purpose facilities. Mixed use (commercial cum residential) accounted for 1.6% while agricultural covered 0.2. Farming practices within the undeveloped parcels accounted for the agricultural land use. Map 5-1 below presents the spatial representation of the land uses.

Table 5-1: Land use budget for the nil intervention

Code	Colour code	Land use	Coverage
0		Residential	69%
2		Educational	0.1%
4		Public Purpose	4.2%
7		Transportation	24.2%
9		Agriculture	0.2%
10		Mixed Use	1.6%



Map 5-1: Nil Intervention option

5.5.3 Alternative 2: Adaptive Planning Scenario

In addition, during the community meeting held at the PCMA church on 24th March 2025, adaptive planning option was presented to the community for evaluation. This scenario

is a strategic approach that aims to ensure sustainable development while minimizing disruptions to the existing community structure and social fabric. This option fosters resilience by adapting to changing circumstances and integrating various land uses effectively. It emphasized on the importance of maintaining the current settlement's spatial layout while introducing necessary improvements to the infrastructure. Due to the previous planning efforts, this option proposed standard road sizes of between 9-12m—for the main access roads, and service lanes of 6m as well as connector paths of 3m.

The planning interventions in this model include road widening and realignment to enhance accessibility and connectivity within the settlement. Thus, this planning scenario has created a road hierarchy ranging from three 12m roads, four 9m road, and several 6m service lanes, as well as 3m foot paths. Thus, access to all parcels was enhanced.

Notably, the adaptive option did not interfere with any of the parcel sizes to an extent of lowering its acreage to below 100 sq.m. Therefore, based on this planning scenario, all beneficiaries qualify for individual title deeds, providing them with legal ownership and tenure security. The option has also proposed a community resource centre along the main entrance to the settlement, for ease of access and thus achieving the principle of equitability. A recreational site and conservation zone have also proposed to complement the dominant residential use and thus promote the principle of equitable and enhanced utilities provision discussed in section 5.3.9. In addition, mixed used strips have been proposed along the main access roads to support economic growth of the settlement.

However, some challenges remain. The inclusion of 3m-wide last mile footpaths, while providing connectivity, will prove too narrow for vehicle access, which does not fully address the community's desire for a fully accessible settlement. As a result, much of the unstructured layout characteristic of the existing settlement will persist. The road widening measures will result to the removal or modification of **103 structures** to facilitate new access routes. Finally, despite these interventions, the settlement layout will remain unchanged in the near future.

In summary, this adaptive alternative strikes a pragmatic balance—it safeguards community cohesion and basic accessibility, introduces valuable new uses, and guarantees land tenure, even as it falls short of complete transformation and the attainment of ideal planning benchmarks. Despite the identified challenges, the community ultimately preferred this alternative. The preference emerged from the recognition that the plan prioritizes connectivity and accessibility while minimizing the upheaval to established social networks and settlement patterns. The assurance of individual title deeds played a crucial role, offering residents a sense of permanence and future stability. Moreover, the introduction of an industrial and mixed-use development zones aligned with the community's desire for economic opportunities and integration, making the adaptive planning option the most attractive compromise between progress and preservation.

Land use budget for Adaptive scenario

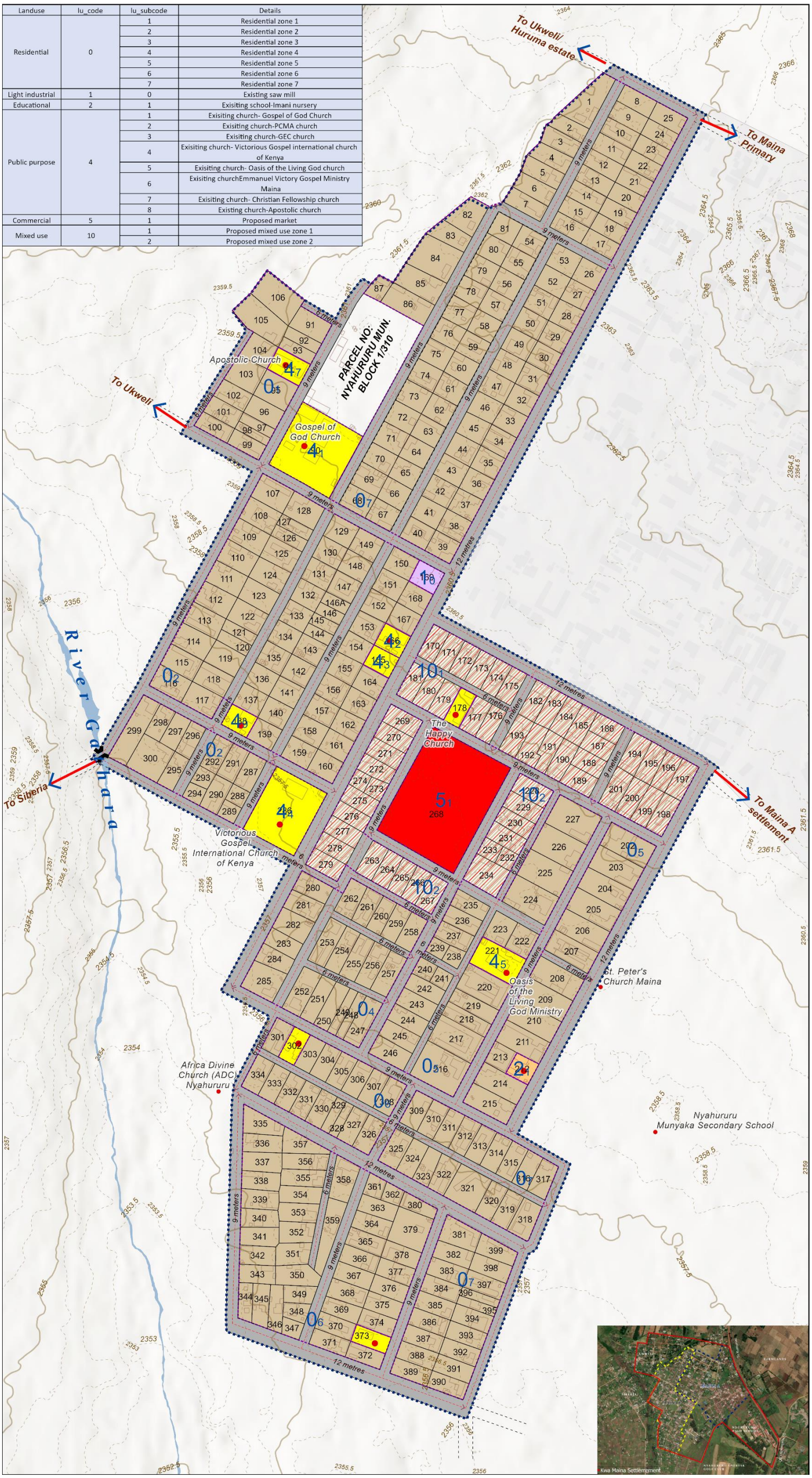
Map 5-2 presents the spatial representation of the proposed land uses. The major land uses introduced include structured mixed-use zones along the primary access roads, structured residential zones, and the proposed market/commercial zone. The proposed

access networks range from 6m service lanes to 12m primary access roads. Realignment and creation of access to parcels/structures lacking access have been considered to promote both accessibility and connectivity.

Table 5-2: Land use budget for the adaptive intervention

Code	Colour Code	Land use	Coverage
0		Residential	66.3%
1		Industrial	0.2%
2		Educational	0.1%
4		Public Purpose	3.1%
5		Commercial	2.52%
7		Transportation	25.4%
10		Mixed Use	2.38%

Landuse	lu_code	lu_subcode	Details
Residential	0	1	Residential zone 1
		2	Residential zone 2
		3	Residential zone 3
		4	Residential zone 4
		5	Residential zone 5
		6	Residential zone 6
		7	Residential zone 7
Light industrial	1	0	Existing saw mill
Educational	2	1	Exisiting school-Imani nursery
Public purpose	4	1	Exisiting church- Gospel of God Church
		2	Exisiting church-PCMA church
		3	Exisiting church-GEC church
		4	Exisiting church- Victorious Gospel international church of Kenya
		5	Exisiting church- Oasis of the Living God church
		6	Exisiting churchEmmanuel Victory Gospel Ministry Maina
		7	Exisiting church- Christian Fellowship church
		8	Existing church-Apostolic church
Commercial	5	1	Proposed market
Mixed use	10	1	Proposed mixed use zone 1
		2	Proposed mixed use zone 2



PROPOSED LOCAL PHYSICAL AND LAND USE DEVELOPMENT PLAN FOR MAINA B SETTLEMENT

Adaptive planning scenario

PROJECT TITLE: CONSULTANCY SERVICES FOR UNDERTAKING PHYSICAL PLANNING, CADASTRAL SURVEY AND DETAILED TOPOGRAPHICAL SURVEY OF 11 SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES , LOT VII (PHASE IIC) – CLUSTER 1

Legend

- Landmarks
- Major Contours (2.5m)
- Minor Contours (0.5m)
- Centre lines
- Road outline
- Culverts
- Landuse_zones
- Structures
- Parcel boundary
- Settlement Boundary
- River
- Abbutting Buildings

landuse

- Commercial
- Mixed use
- Public purpose
- Residential
- Light industrial
- Educational
- Transportation
- Abbutals

Code	Land Use Detail	Approx. Area [HA]

NORTH

Meters 0 35 70 140

CLIENT:

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING & URBAN DEVELOPMENT

STATE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

THE WORLD BANK

In Partnership With:

COUNTY GOVERNMENT OF LAIKIPIA

PREPARED BY:

e&G SPATIAL CONSULTANTS LIMITED

MARSABIT PLAZA, SUITE 405
P.O. BOX 100881-00101 NAIROBI, KENYA
Email: e.gsclimited@gmail.com

RECOMMENDED BY: COUNTY DIRECTOR OF PHYSICAL AND LAND USE PLANNING

SIGNATURE..... DATE.....

CERTIFIED BY: C.E.C.M IN CHARGE OF DEPARTMENT OF LAND, HOUSING, PHYSICAL PLANNING AND URBANIZATION

SIGNATURE..... DATE.....

APPROVED BY:

LAIKIPIA COUNTY ASSEMBLY

HANSARD NO..... DATE.....

DEPARTMENT REFERENCE No.....

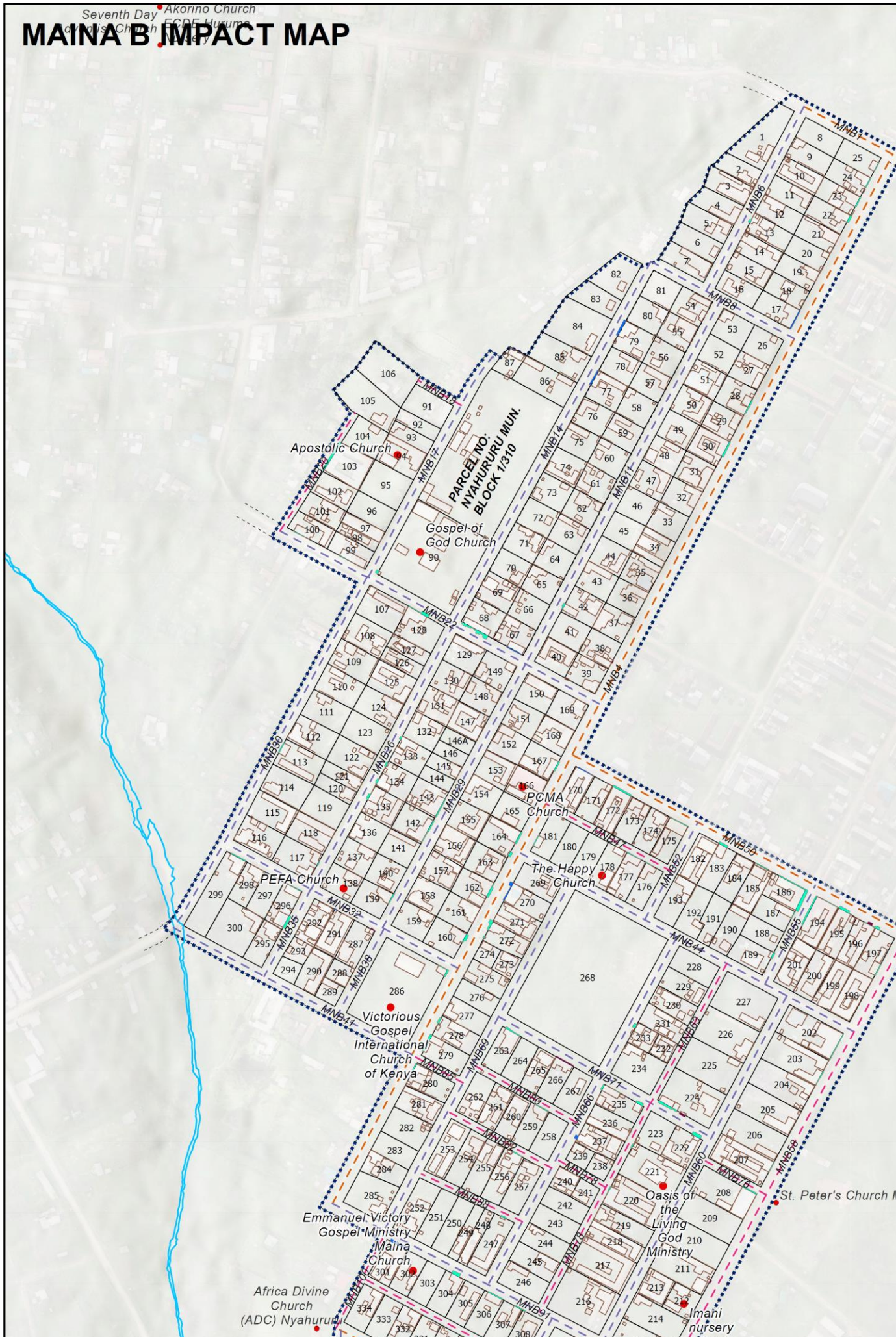
APPROVED LOCAL PHYSICAL AND LAND USE DEVELOPMENT PLAN No.

Map 5-2: Adaptive Planning Scenario 1

Impacts Analysis Adaptive Option

Impacts generated from the adaptive option were mostly a result of access realignment. A total of 103 impacts were generated, as presented in

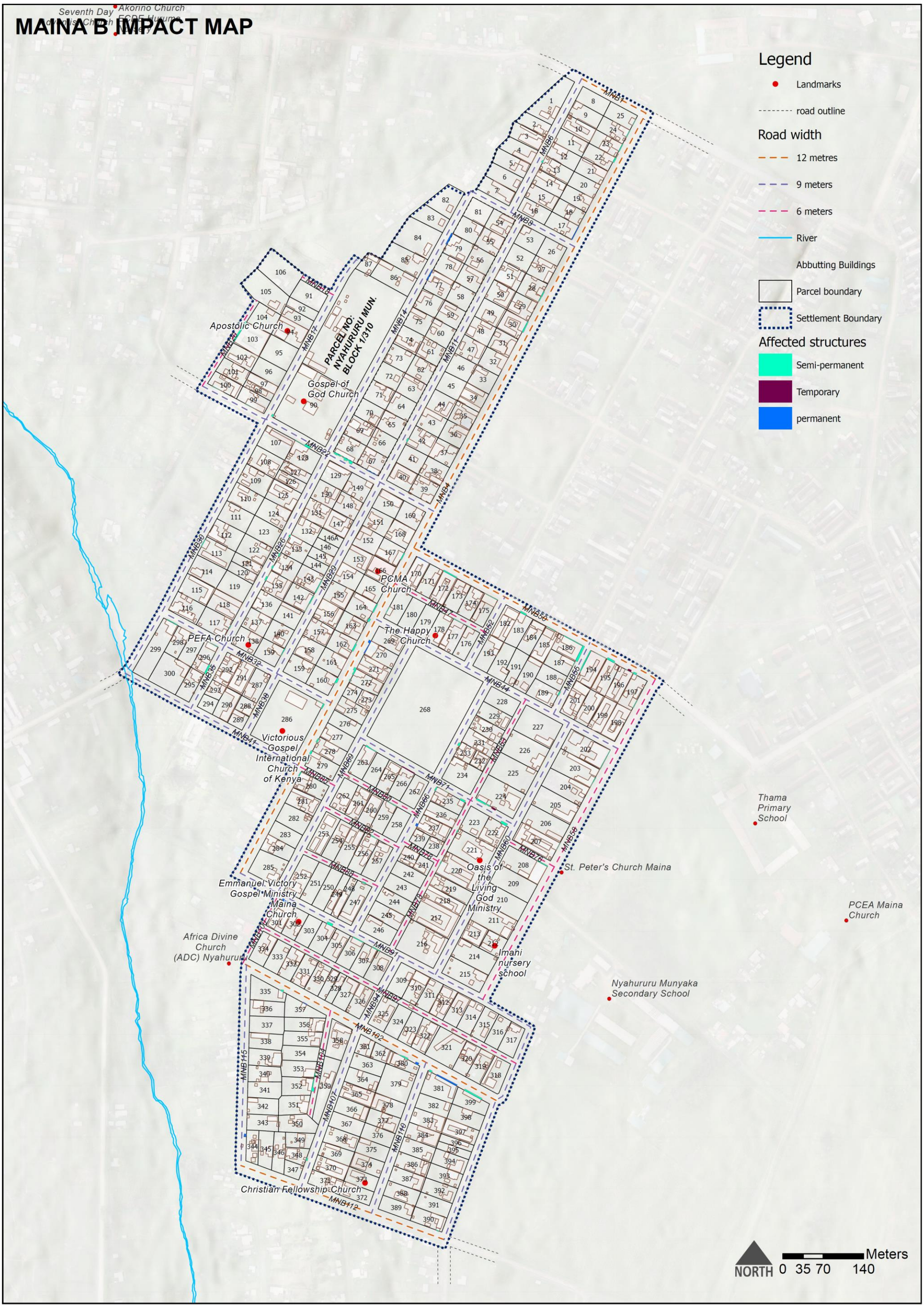
MAINA B IMPACT MAP



Map 5-3. Most impacts were on semi-permanent structures (82%), and permanent structures, accounting for 13%. Temporary structures were the least affected, accounting for 5%. However, within the project guidelines, the high number of impacts, more so the permanent ones, have cost implications facilitating the affected persons (PAPs). An analysis of the nature and range of impacts was undertaken against the final plan and has been discussed under section 5.9 of this report.

Table 5-3: Impacts generated from adaptive option

Number of Impacts Generated	Structures (No.)	Percentage
Semi-permanent	84	82%
Permanent	13	13%
Temporary	6	5%
Total	103	100%



Map 5-3: Impact analysis of the adaptive option 1

5.6 Evaluation of Plan Alternatives

5.6.1 Impact Analysis of the Plan Alternatives

	Sector	Nil Intervention Option	Adaptive Planning Scenario
1.	Security of Tenure	○ Some parcels will remain land locked ○ Settlement living conditions will not be improved ○ A community title will be issued	○ Best option in the long-term planning period ○ Tenure security will be achieved at the individual level ○ Reduced parcel sizes owing to space allocations towards roads creation and realignments and public utilities
2.	Development control Guidelines	○ Non-existent development control guidelines	○ Better option in the short and medium term planning period ○ Guidelines provided for short -and medium term planning period
3.	No. of PAPS generated	No PAPs generated	103 no. impacts- structures partially affected, largely from roads creation and realignments
4.	Transportation	○ The settlement retains its current transportation networks, that offer minimal accessibility and connectivity ○ Access cannot support both human and vehicular traffic	○ Settlement will be accessible ○ Accessibility, connectivity and symmetry of roads achieved ○ Access to all parcels achieved ○ Roads designation and symmetry ○ Connectivity within the settlement will be achieved
5.	Residential Options	Residential is the dominant land use	The settlement retains residential use with integration of other compatible land uses such as mixed use, public purpose and recreation.
6.	Education	○ The settlement will continue to rely on the abutting institutions	○ The settlement will continue to rely on the neighbouring institutions (Maina Schools, Thama Primary, Nyahururu Munyaka Secondary, Ndururumo High School) which are enough to meet the needs of the settlement.
7.	Commercial	Will rely on the available commercial areas	○ Integration of commercial spaces under mixed use zones to optimize space use. ○ The proposed market will serve the settlement and beyond
8.	Recreational	No dedicated recreational area	The recreational/conservation area in Maina A will serve Maina B.
9.	Public Utilities	Existing water points and the water reticulation system will be retained.	○ Existing water points and the water reticulation system will be retained. ○ The 9m+ roads will be able to accommodate ancillary services such powerlines, drainage facilities, sewer and water reticulation system ○ Proposed expansion of the sewer system in Maina A to cover Maina B as well
10.	Public Purpose	Existing public purpose facilities which include churches and the dispensary will be retained	Existing public purpose facilities which include churches will be retained The dispensary in Maina A will serve residents in Maina B
11.	Mixed-Use Developments	Scattered designated spaces for mixed use developments.	Integration of mixed use to optimize space use.

5.6.1 Evaluation of Alternatives

To determine the most suitable planning alternative for Maina, the two plan options were assessed based on an evaluation criterion in which the selected plan was considered the best fit. This criterion took cognizance of tenure security and living and working conditions of residents while adhering to World Bank Safeguard provisions on environmental and social screening and minimizing Project-

Affected Persons (PAPs). Additionally, the evaluation considered settlement opportunities and constraints, and in line with the community priorities as established from the socio-economic survey, participatory planning exercises, and other key stakeholder meetings. Other factors included compliance with planning standards and principles, and land registration requirements established by the Ministry of Lands and Physical Planning. Table 5-4 below presents the findings on the evaluation of various plan alternatives, which were attained or not. Each alternative was scored based on whether the criterion was met (score = 1) or not met (score = 0). The total score for each option was used to rank its suitability.

Table 5-4: Evaluation of alternatives

Evaluation Criteria		Planning Alternative	
		Nil Alternative	**Adaptive Option**
1.	Security of Tenure	1	1
2.	Improved Living and working conditions of residents	0	1
3.	World Bank Safeguard provisions (Zero/Minimal PAPS)	1	1
4.	Factoring Opportunities and Constraints of the settlement	0	1
5.	Community needs and aspirations (as dictated through socio-economic survey, community participatory planning exercise and through the various stakeholders' meetings	0	1
6.	Planning standards	0	1
7.	Requirements of land registration by the Ministry of Lands and Physical Planning	1	1
8.	Planning principles	0	1
TOTAL SCORE		**3**	**8**

Key	1- Achieved	0- Not achieved

5.6.2 Selection of Best Alternative

Following the community feedback and comprehensive analysis and ranking the two plan alternatives, the adaptive option was selected as the most suitable scenario for Maina B settlement. This suitable alternative integrates community priorities and safeguards while minimizing displacement and enhancing tenure security. The community preferred the adaptive option due to the wider roads, increased connectivity and the symmetrical layout/geometry. The best alternative was prepared by incorporating the community's key priorities/feedback and was presented for validation and final adoption by the technical team (CPCT & NPCT) and the community members.

5.7 Maina B Settlement Plan

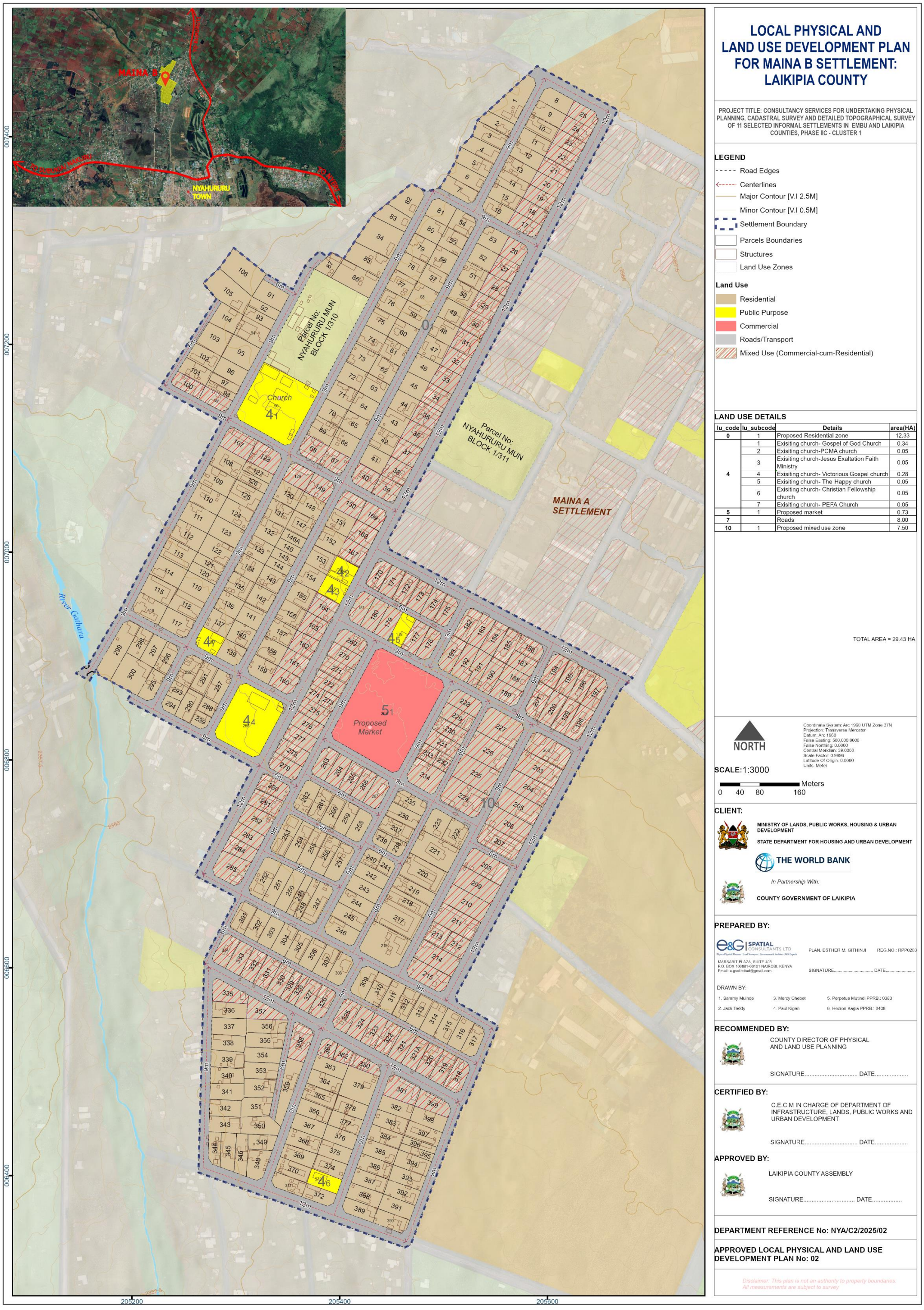
Land Use Budget

The preferred option has achieved various land uses as detailed in table 5-5 and map 5-5 below. Notably due to the plot development planning efforts and the small size of the settlement not all community aspirations could be achieved as all parcels have individuals laying claims on them. Further, to maintain the social ties within the settlement most of the existing land uses have largely been maintained, with a mixed use, conservation, recreational and transportation land uses introduced. This was aimed at opening up the settlement and expanding its economic base.

Table 5-5: Land use budget for the final plan

LU_Code	LU Subcode	Colour code	Detail	Area (Ha)
0	1		Proposed residential zone	12.33

4	1		Existing church-GGC	0.34
	2		Existing church-PCMA	0.05
	3		Existing church-JEFM	0.05
	4		Existing church-VGC	0.28
	5		Existing church-The happy church	0.05
	6		Existing church-CFC	0.05
	7		Existing church-PEFA church	0.05
			Proposed market	0.73
7			Proposed Roads	8.00
10	1		Proposed Mixed-use Zone 1	7.50
				29.43



Map 5-4: Final draft plan

5.7.1 Land use proposals

Land uses are anchored on land; therefore, making it a vital resource in land use planning. This section outlines how different land uses have been allocated in the preferred plan. The proposals are based on the structuring elements and planning principles discussed under section 5.3 of this chapter. The plan incorporated the community inputs obtained from the visioning and participatory planning. Additionally, inputs from other stakeholders, such as KISIP NPCT/CPCT, and professional experts informed the final plan layout.

The community's preferred land use option reflected a thoughtful approach to development, balancing residential needs with other essential land uses. The plan has allocated substantial acreage to residential (41.5%), ensuring that the majority of the land remains dedicated to housing. This decision not only caters to the current population's demand for homes but also supports future growth and stability within the settlement.

Additionally, the land use budget includes provisions for various complementary land uses such as mixed-use zones, public purpose and commercial which will foster social and economic development of the settlement. By integrating diverse functions like, recreational sites and public purpose facilities, the plan aims to create a vibrant, sustainable environment that enhances the quality of life for all residents.

Residential Land Use Development

Under the settlement's existing situation, residential is the dominant land use at 65.26%. However, under the preferred option, this has reduced to 41.5% due to adoption of some areas into mixed-use zones as well as the realignment of the access network.

Currently the settlement population density is 32 persons/ha. It is projected that the settlement will retain the low - medium density characteristic in the ten years planning horizon. Therefore, the existing and dominant row-housing typology is expected to be sustained with gradual vertical densification depending on availability of commensurate infrastructure services to support increased density. In addition, securing tenure and possible infrastructural improvements are expected to increase housing investments and open opportunities for construction of tenements. Therefore, allowing incremental vertical densification will be key in sustaining the expected increase in population.

Public Purpose Land Use

Public purpose land use refers to the utilization of land for the benefit of the general public, as opposed to private or individual use. This encompasses a broad range of activities and infrastructure that serve the needs of a community such as hospitals, worship centres, administrative offices etc. The existing public purpose land uses in Maina B — worship centres — were retained in the proposed plan, collectively accounting for 2.95% of the total area. The proposed public purpose facilities in Maina A will serve residents in Maina B. These facilities include the existing dispensary and the proposed extension, the proposed ICT and resource centre and the existing chief's office.

Public Utility Land Use

Public utility land use refers to land designated and used for essential services like water, sewage, electricity, and communication infrastructure. It was considered that the sub-surface utility lines that will be laid along the accessways will not be allocated a land use presentation per se, but their

integration will be detailed in the strategies. This will include strategies for laying powerlines, water and sewer reticulation.

Commercial Land Use

The settlement has some pockets of mixed-use areas that host commercial establishments representing 1.51%. Under the plan, parcel 268 was proposed to be a market accounting for 2.48% of the total area. The establishment of the market will fulfil the community's desire to have a dedicated commercial area.

Transportation Land Use

Transportation land use is mainly characterized by the road networks and other related supportive infrastructure/facilities. Roads are the main arteries that carry human/vehicular traffic as well as carriers of other crucial utility line infrastructure (water & sewer reticulation and drainage channels) that support liveability in human settlements.

At the point of the KISIP2 intervention, the settlement had a semi-structured access system. The available accesses had varying widths, accounting for about 25.9% of the settlement area. However, under the preferred plan option, there has been realignment of access roads and enhancement of connectivity. As a result, the transportation land use under the plan now occupies 27.18% of the settlement area with the achieved internal road sizes ranging 6 - 12m. However, opening up the access roads in some sections was largely inhibited by the already existing developments and the project's requirement to minimize negative impacts.

Generally, the plan has ensured accessibility to all resultant parcels and connectivity within the settlement. The summary of the established access networks under the plan are as follows;

Road width size (Meters)	Road Length (Kilometers)
12	2.03
9	4.99
6	1.35
	Total length = 8.37

These roads will also serve as corridors for utility infrastructure, guiding the design and laying of water lines, sewer lines, drainage channels, and other essential services.

Mixed Land Use

Mixed use is a set up where more than one land use type is blended together, either horizontally or vertically with the intention of optimizing the use of space. The settlement has got some level of mixed-use land uses basically being commercial-cum-residential. Currently this is represented by 1.5%. However, under this plan, mixed use zones have been proposed with a coverage of about 25.48%.

The designation of mixed use zones was guided by two considerations, i;e-

- Compatibility of uses – This is where mixed-use was planned at the structure level, plot level, and neighbourhood scale, ensuring that land use combinations enhance functionality without creating conflicts.

- Access conditions – here, mixed land use designation was determined on the sizes of the access ways fronting the proposed mixed-use areas. This is due to the expected human and vehicular traffic flow in such an environment.

Mixed-use zone was recommended to allow for flexibility in uptake of establishing commercial ventures as well as residential or any other compatible uses. This approach optimizes land use as well as supporting local economic development by enabling residents to run businesses within walkable distances from their homes which aligns with the objectives of this process.

Below is a typical illustration of vertical mixed-use developments.

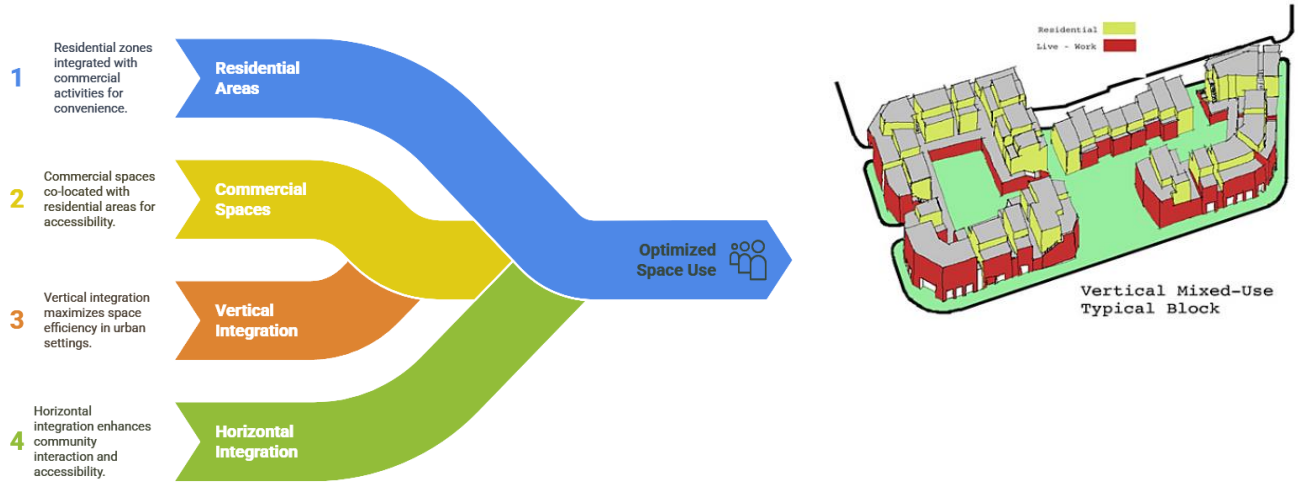


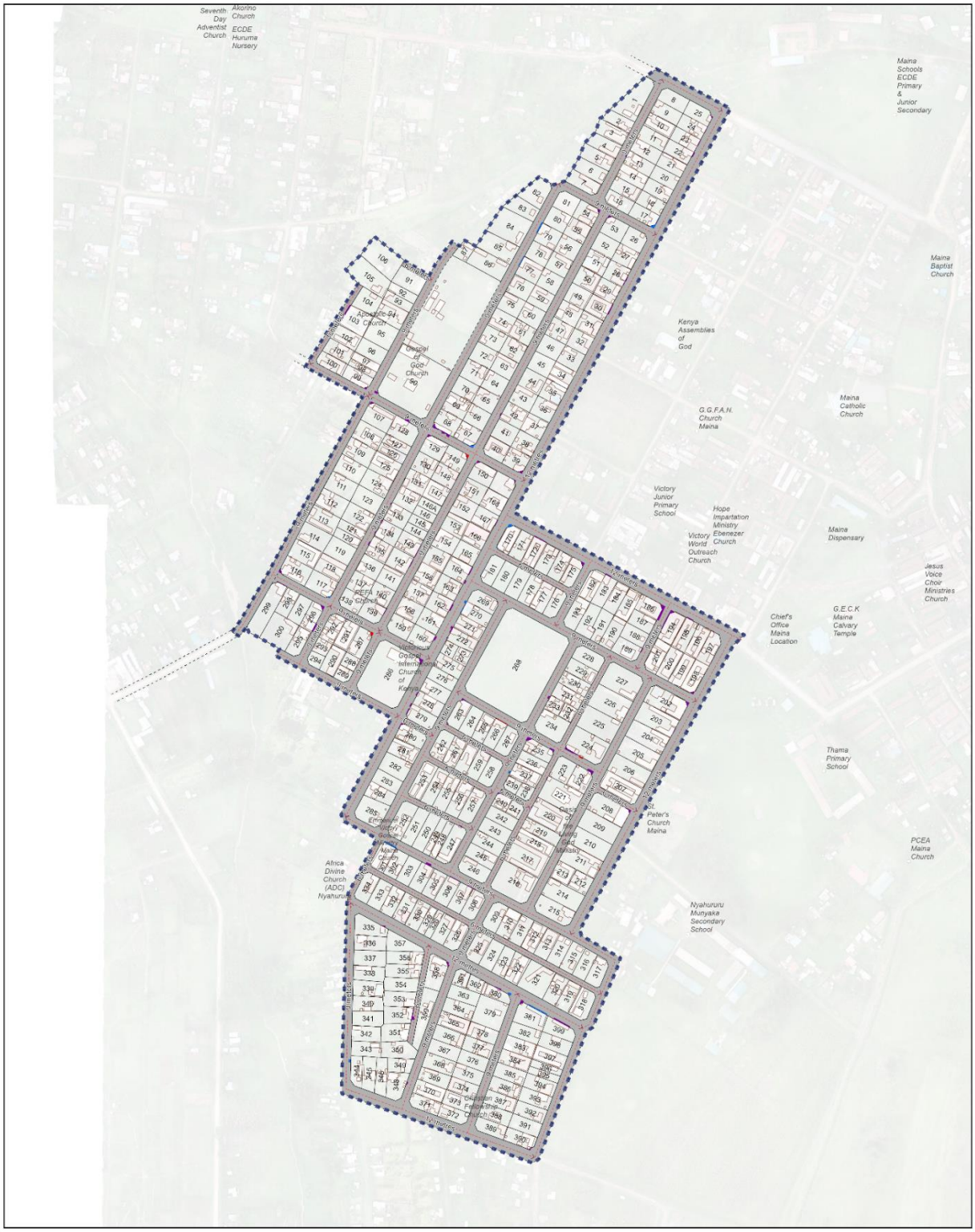
Figure 5-2: An illustration of mixed-use developments

5.7.2 Impacts Generated by the Preferred Alternative

Impacts generated from the preferred plan were attributed to access realignment. A total of 110 structures accounting for 91 PAPs were affected, as presented in Table 5-6 and Map 5-5. This was in line with the technical teams' inputs (KISIP NCPCT and CPCT), experts, and the community. Semi-permanent structures were the most impacted, accounting for 74.77% of the impacts. Temporary and permanent structures accounted for 9% and 14.41% respectively. Out of the 91 impacts, 69 comprised of housing units, 11 toilets, 12 eaves, with the rest being kitchens, stalls, stores, canopies etc. The impacts ranged from 1 sq.m to 60 sq.m. These figures demonstrate the effort that was made to minimize impacts during the planning process. The mitigation measures for these impacts will be addressed in the ESMP report.

Table 5-6: Impacts generated from preferred alternative

Impact Generated	Structures	Percentage
Semi-permanent structures	69	74.77%
Permanent structures	30	14.41%
Temporary structures	14	9.01%
Total	**113**	



Map 5-5: Impacts generated by the preferred alternative

6. DEVELOPMENT CONTROL GUIDELINES

6.1 Overview

The proposed guidelines were prepared based on the preferred plan option and were largely adjusted in line with the realities of the limitations in informal settlements. The plan is a legal document that must be adhered to for future developments within the settlement. For successful plan implementation, development control guidelines will inform the planning authority in approving new developments. Additionally, these guidelines will serve as a reference for individuals and other stakeholders, outlining the acceptable standards and requirements for compliance. In contrast to previous plans, which were either implemented in a fragmented manner or not at all, this plan was implemented immediately upon approval, starting with the surveying phase within the project timeline. Consequently, all other proposals within the plan will be governed by these guidelines and enforced by the County Government.

Under the Physical and Land Use Planning Act of 2019, along with its accompanying regulations, County Governments have the mandate to control development. Other applicable guides also guide in making planning decisions and granting approvals post tenure completion, tenure regularization project.

The plan focuses on an already established informal settlement, with key considerations varying from conventional standards. This aimed to minimize projected associated impacts. Therefore, the guidelines presented in this plan reflect a comprehensive integration of parameters specific to informal settlements.

6.2 Zoning Ordinance

Zoning is a planning tool applicable in guiding and controlling the development and growth of a planning area. This was applied in the plan through dividing the settlement into sections for purposes of setting clear development restrictions in those zones. This will enable the settlement to have some defined development layouts and structured settlement landscape. Zoning guidelines have been proposed to determine the use of buildings, location, size and development densities. The key zones under the plan included residential, mixed use, conservation/recreational and public purpose. Practically, with the settlement being already developed, the listed zones were proposed with consideration of the existing settlement layout and as per the community planning and visioning input. The zoning provisions will be realized gradually through incremental changes over time

In context of the plan having been prepared post development, some existing developments are not in conformity with the new zones. Therefore, it will be expected

that the existing occupant can continue with the existing use. However, if a new development application is made to the county, conformity with the new zone guidelines will be followed.

The plan will be subject for review after 5 years as per PLUPA provisions to assess the zones' applicability and necessary changes that would be key for the settlement development dynamics. All the permissible, restricted uses and prohibited uses shall be applicable accordingly.

The zones that have been achieved in this plan include:

6.2.1 Residential zone

Upon issuance of land rights, it is anticipated that the settlement's development status will improve gradually (enhanced spatial organization). Therefore, developers will be required to undertake detailed planning at the site level. This includes the preparation of site plans and building plans, which must be approved before implementation. The following are recommendations for redevelopment in the settlement:

- Medium (row houses, and a maximum of three (3) floors), to low-density comprising bungalows and semi-detached houses. Subject plots will be expected to be connected to the sewer.
- At least 9-12m access roads must serve medium-density residential blocks. The 3-6m accesses will be permissible for low-density residential. In cases where access is limited (below 9m), developers will be required to surrender half of the deficit size on each side of the road to achieve the recommended minimum road size (9m) for such developments.
- Provision of adequate parking within the plot to serve the intended dwelling(s), especially on medium-density developments.

Table 6-1 below presents the planning standards (planning handbook 2025) alongside the proposed standards.

Table 6-1: Proposed residential standards

Plot Sizes – *Residential Plots*						
Category	Minimum Plot Size (Ha) - Physical *Planning Handbook (2025)*	Recommended Minimum Plot Size (Ha) – *Adaptive Approach*	Proposed Ground Coverage (%)	Proposed Plot Ratio	Proposed no of floors	Proposed unit sizes Sq. m
High Density (apartments)	0.045	0.01	80	3.2	4-5	30-45
Medium Density	0.10	0.01	60	2	2-3	60
Low Density	0.2	0.01	40	0.5	1	75

6.2.1 Mixed Land Uses

Mixed-use developments have been designated along access roads ranging from 9-12m wide. Horizontal and vertical mixed uses are recommended in this plan for compatible land uses such as residential cum commercial. Whereas, in horizontal developments, commercial uses are recommended on the frontages and residential uses on the rear, for vertical developments, ground-level floors are recommended for

commercial and subsequent levels for residential. Other complementary/compatible land uses, such as restaurants, public uses, such as professional offices, will be permissible by the County Government upon formal application for development permission. Consideration of other laws or bylaws on the location of any other developments will be considered in the issuance of approvals. Incompatible land uses, such as heavy industry, will not be permissible. To ensure proper transition to and compatibility with adjacent developments, conditions will be issued on the proposed developments.

6.2.2 Transportation Networks

Transportation land use accounts for both the existing and proposed access networks in the settlement. This is denoted by land use code 7 in the development plan. Planning principles guiding transportation infrastructure include:

i. **Hierarchy**- An efficient transport system is a key requirement for any well-planned area. Town and transport planning have to take cognizance of hierarchy, creating spatial order and enhancing functionality. Hierarchy is guided by the required function of a street or road, and the movement needs of the users. Subsequent speed, carriageway widths, as well as other functions, are adapted to suit the way they work.

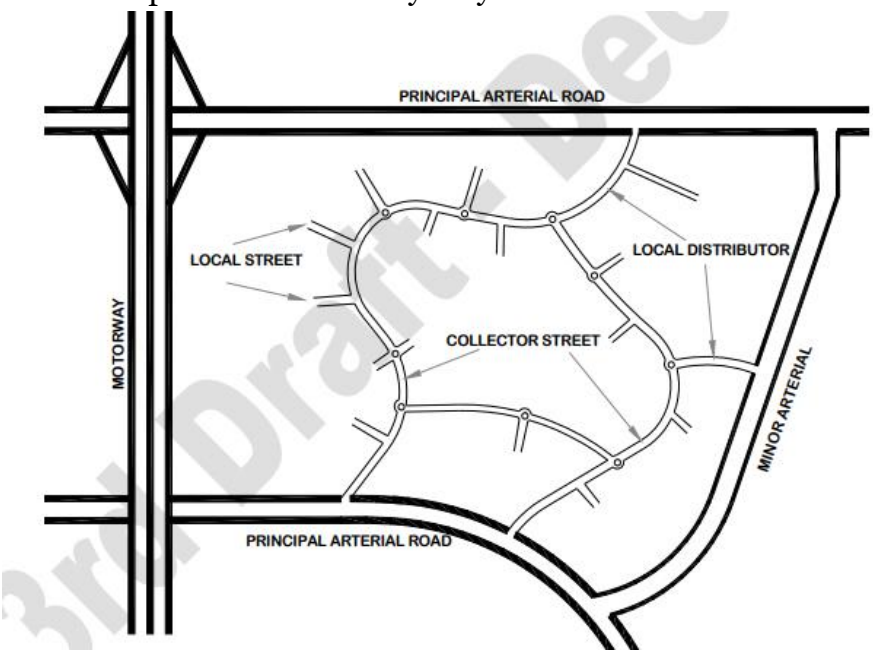


Figure 6-1: Example of typical urban road classification

ii. **Connectivity-** this is the density of connections in path or road networks, and the directness of links. A well-connected network has links, numerous intersections, and minimal dead ends (cul-de-sacs). As connectivity increases, travel demand increases, ease connecting destinations, creating a more accessible and resilient system. Connectivity applies both internally (streets within that area) and externally (connections with arterials and other neighborhoods).

iii. **Inclusivity**- Inclusive designing of roads or streets is an approach that aims at creating environments that are not only suitable for motorists but also provide

all necessary features that can cater to the needs of all road users, regardless of their age, gender, ability, or any other factor.

iv. **Relationship with other land uses**- emphasizes that transportation systems and land use are interdependent, shaping each other's efficiency and sustainability. Effective integration ensures transportation networks align with land use patterns, such as locating transit hubs near high-density areas to reduce car dependency. Poor coordination risks sprawl, traffic congestion, and inequitable access to services. By prioritizing mixed-use zoning and transit-oriented development, planners foster walkability, lower emissions, and create resilient, inclusive communities.

The main mode of transport in Maina B settlement is road, which are the main arteries that carry human/vehicular traffic as well as carriers of other crucial utility line infrastructure (water & sewer reticulation and drainage) that support livability in the settlement.

Access Roads Realignment: To accommodate the new settlement structure, the irregular existing accesses were aligned using best-fit lines, aiming to reduce impacts. The planning exercise established access networks ranging between 3 to 12 meters wide. The attained access sought to improve access and connectivity while accommodating utilities such as drainage channels, streetlights, power lines, water, and sewer reticulations. These accesses also serve as emergency evacuation whenever a disaster occurs. Generally, the plan ensured accessibility to all resultant parcels and connectivity within the settlement and abutting environments. Details on the use of each access (road/lane/footpath) are discussed as follows:

6M Accesses: The 6-meter access lanes, functioning as connectors, will support one-way traffic flow. These roads will be surfaced; either graded (short term), tarmacked, or Cabro paved. The 6-meter accesses used as service lanes within larger frontages will not necessarily be used for sanitation purposes.

9M-12M Access: These serve as the primary access into the settlement. The access encompasses the carriageway (two vehicles bypassing each other) and other infrastructure such as drainage, street lights, NMT, and shoulders. Upgrade of the accesses (those ungraded/untarmacked) will be undertaken in line with the design and engineering standards.

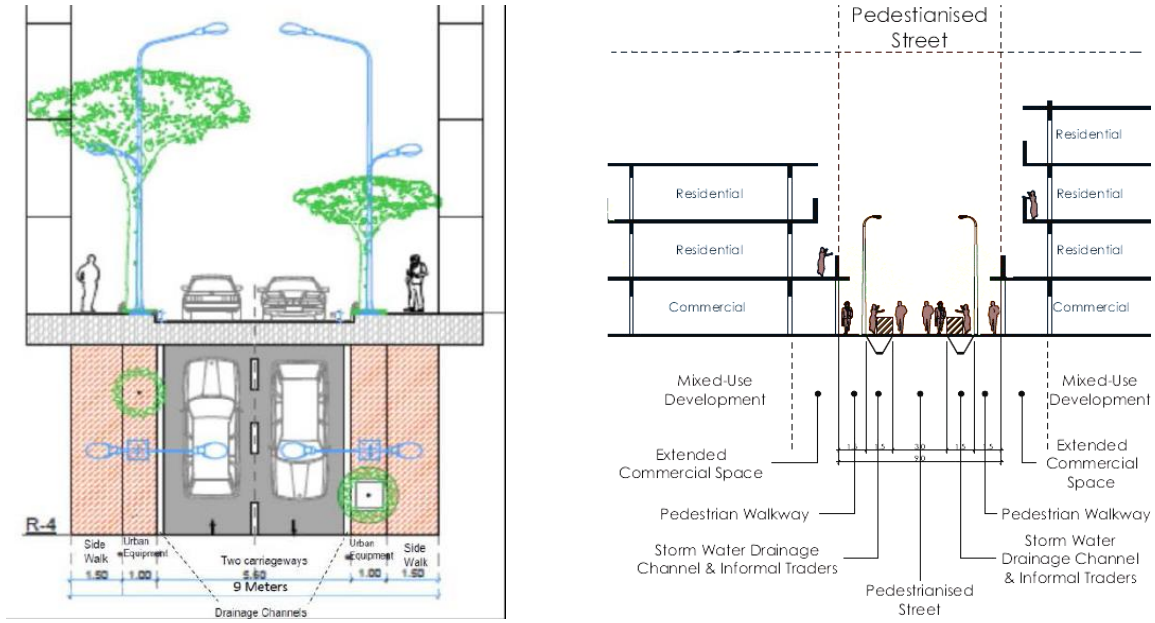


Figure 6-2: Cross-section on 9m access

NMT: Residents largely commute on foot; however, NMT is limited and in some sections, nonexistent. In areas where separating motorized and non-motorized traffic is not feasible, a shared street model will be adopted, allowing pedestrians and cyclists to coexist with occasional low-speed vehicular traffic (refer to Figure 6-3). The non-motorized transport (NMT) network and its supporting infrastructure will be integrated across all access routes where possible. Proposed provisions include 1–2-meter-wide pedestrian walkways or frontage zones on either side, or at least one side of the 9-12-meter roads, or along pedestrian footpaths. NMT corridors will be designed to be accessible and inclusive for all users. Bollards will be installed to prevent vehicles from encroaching onto pedestrian spaces.

Figure 6-3: Co-shared vehicle-pedestrian street
(Source: Street Design Manual for Urban Areas in Kenya, 2022)

Further, developments should relate positively with abutting streets through orienting active fronts to the street and avoiding blank facades along the street. This contributes to natural surveillance of street, consequently improving security. Additionally, the following measures will be factored for NMT infrastructure:

i. Streets will provide for barrier free flow of pedestrian movement. This will be clearly separated from the vehicular lane by use of double white line markings

ii. Placement of the elements of the street such as vegetation, furniture and structures should be aligned and well-coordinated to avoid creating visual clutter and physical barriers along the street
iii. Areas of pedestrian and vehicular movement along the street should be physically separated for safety and convenience of pedestrians
iv. New developments should take into consideration the pedestrian desire lines and hot spots to accommodate and enhance pedestrian movement in the settlement
v. The type, form and size of vegetation planted on the street should take into consideration the building and pavement structure and functions of the street on which they are located to avoid disrupting functions of the building or street itself.

Street Addressing (Address Code): Ensuring legibility and ease of navigation will be essential as the settlement redevelops. This will be achieved through the implementation of street names, codes, and signage, all aligned with the County Government's established guidelines for street naming and coding.

Streetscape Landscaping: The plan proposes greening of the streets (6m and above) through the planting of suitable vegetation (tree species and grass) to enhance the functionality of the street while enhancing its aesthetics. Additionally, vegetation will act as carbon sinks.

Truncations: Visual truncations are required for safety purposes, ensuring adequate sight lines are maintained when a vehicle enters or egresses from a property onto a roadway. These will be necessary to avoid black spots within the settlement. The physical and land use planning (development permission and control) (general) regulations, 2021, provide that where public roads intersect, a truncation of half the width of the lower hierarchy road shall be provided. The preferred plan has truncated all roads within the settlements and was implemented during the cadastral surveying exercise. Property boundary liners will also be truncated and have reduced heights to avoid obstruction. Figure 6-4 is a sample of a truncated plot and road.

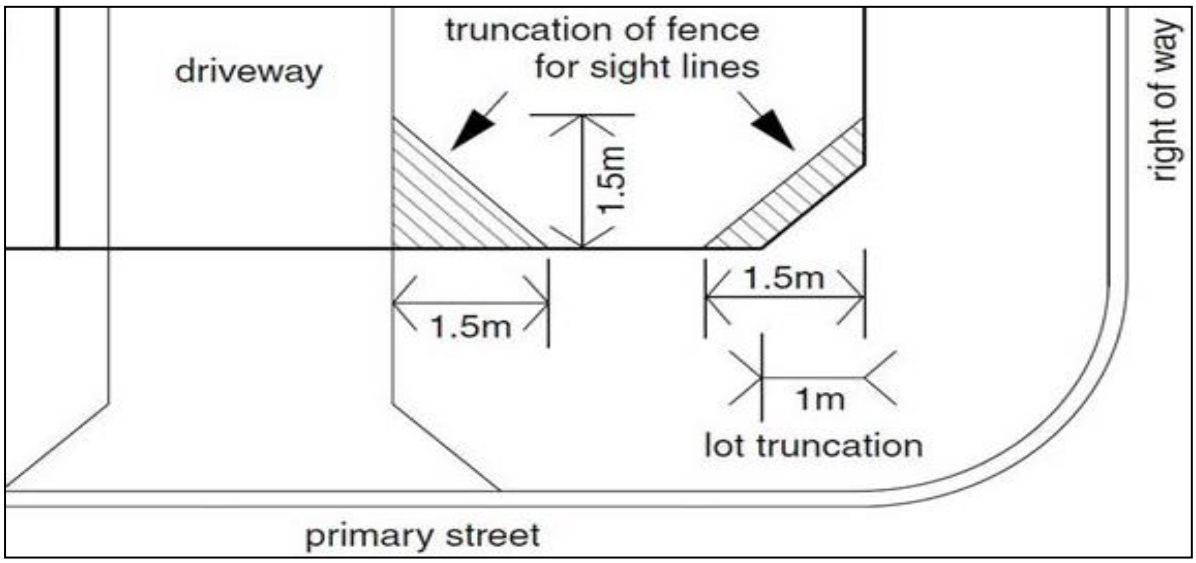


Figure 6-4: Illustrations showing truncations and reduced fence height

Roadside Drainages: Road reserves often accommodate various utilities, including drainage systems. The plan recommends the installation of underground drainage facilities with permeable covers such as precast slabs or metal grills to allow surface water infiltration (Plate 6-1). This approach enhances safety for road users, unlike open drains, which are unsafe, susceptible to debris accumulation, and waste dumping. Regular maintenance will be essential to prevent clogging. These drains can be positioned on either one or both sides of the roadway.

Plate 6-1: Covered Roadside Drains

Structure extension onto road reserves: Since the planning of Maina B settlement happened post-development, the LPLUDP provided access ranging between 6-12m. A significant degree of standard access roads was attained (above 9m); however, where it was not feasible, 6m accesses were provided. The County government is expected to adhere to and enforce the proposed road reserves. Recession of all encroachments will be done, and moving forward, no structural extensions will be permitted within the road reserves. *Figure 6-5* presents the various road capacities.

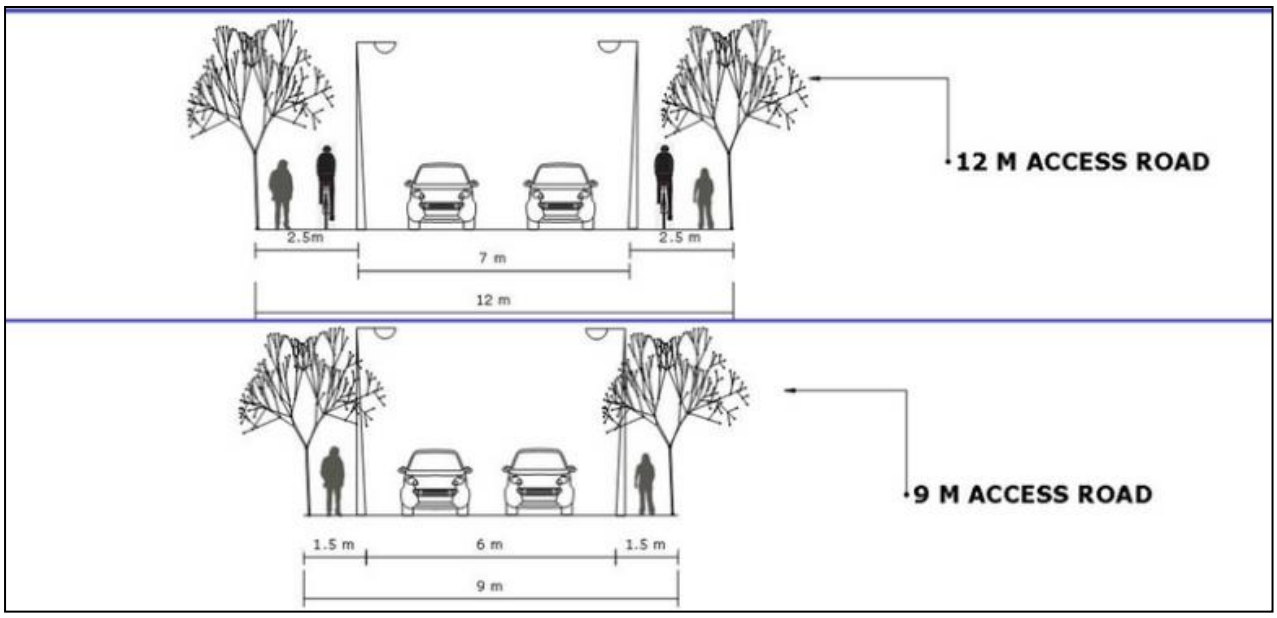


Figure 6-5: Road capacities

6.3 Infrastructure and Utility

These consist of essential infrastructure systems, including water supply lines, sewer networks, and stormwater drainage that enhance the settlement's livability. They are often aligned alongside transportation corridors. Guiding principles for infrastructure and public utilities will include:

i. Service delivery
ii. Accessibility
iii. Inclusivity

Developments along access roads will be restricted to avoid encroachment onto the reserves that accommodate utilities such as water and sewer reticulations, drainage facilities, streetlights, among others.

6.3.1 Stormwater Drainage

The 12M access road has an existing storm water drainage system. The plan proposes the integration of drainage facilities along the other access roads. This will include an underground installation to optimize space use while accommodating other essential aspects, such as walkways. Additionally, on narrow accesses, e.g., 6m lanes, drains are recommended on one side of the access.

Road Size (m)	*Physical Planning Handbook (2025) – Wayleave Size (M)*	*Proposed drainage size (m)*
3m	3 – 4.5	0.5- one-sided
6m		1- one-sided
9m		1.5- one/two-sided, depending on the topography and road orientation

6.3.2 Water supply

Maina B has an existing water supply network from NYAWASCO which covers part of the settlement. Water distribution in the remaining parts will be carried out through an underground reticulation, installed within the access (road reserve). This will be in line with the water service provider standards and engineering guidelines. Additionally, piped water connection at the plot level is recommended. This will be the initiative of plot owners to get the connections upon the establishment of the reticulation. Close coordination between the water utility provider (NYAWASCO) and the County Government will be essential to ensure water pipes are not installed in areas where they may need to be frequently relocated for civil works. This will help minimize disruptions to the water supply during such activities.

Considerations for water supply include:

i. Population size.
ii. Distance from intakes.
iii. Land ownership for wayleave.
iv. Quality of water (pollution levels).
v. Gradient of flow.
vi. Piping diameter.

Table 6-2: Water Connection Regulations

Occupancies	Unit	High-class Housing	Medium-class Housing	Low-class Housing
People with individual connections	l/m²/day	250	150	75
People without connections	l/m²/day	-	-	20

Source: Nairobi City County Development Control Policy, 2016

Developers who intend to supply water will be required to seek permission from WRA and NEMA before commencing. Consequently, the supply of water from boreholes, among other sources, will require permits by Laikipia County Government, subject to the approval by Nyahururu Municipality, WRA, and NYAWASCO, and in compliance with the guidelines for drinking water in the Water Quality Regulations, 2006.

Booster pumps

Where pressure on the main water distribution network is deemed inadequate to convey water to units on a high-rise development, a developer will be required to install a storage tank (preferably underground concrete tanks) and approved booster pump for water supply within the development. An access to such storage tank shall also be provided through a suitable material for regular cleaning.

6.3.3 Sewerage Network System

On-site sewage management

Part of the larger Maina settlement has an established sewer reticulation, which is functional. However, this system does not cover the entire settlement (Maina B is not covered at all) and is not sufficient to handle the increasing population. The County Government should make efforts to expand the sewerage network to cover the entire settlement and handle the increasing population. As part of the development approval application to the Laikipia County Government, applicants will be required to have the developments connected to the sewer. Where sewer connections are not feasible, details of the proposed on-site waste management will be mandatory. The plan recommends proper maintenance of the sewer system by the County Government of Laikipia, in partnership with the utility company in charge of sewerage (NYAWASCO).

Table 6-3: Standards for sanitation facilities

Fittings	Permeable Soils	Impermeable Soils
Sink waste, waste closets & servant quarters waste	Septic tank or soak pit or radial arms, or French drains.	Conservancy tank
Baths, lavatory basins, and showers	As indicated in 1, but with a separate wastewater storage tank.	As indicated above, a separate wastewater storage tank may be permitted with an overflow into the main system of disposal.

Source: National Building Regulations (2014)

Bio Digester

A biodigester is a waste treatment system that uses microorganisms to break down organic waste in an oxygen-free environment. Bio digesters will be approved as an onsite waste management strategy if they satisfy the following requirements:

i. Designed and certified by a registered Wastewater Engineer.

ii. Located away from a flood-prone area.
iii. Constructed of concrete, metal, polyethylene plastic, or other suitable material.
iv. Air-tight gas collection system with provisions for emergency fire.
v. A clear residual sludge disposal plan and standby mechanisms in case of failure.

The biodigesters are recommended in low-density developments.

Septic Tanks: Where approval is granted by Laikipia County Government for wastewater storage on a premise, such a tank will be required. This is to ensure the water storage tank attains a limited capacity of 3000 litres.

6.3.4 Electricity Supply Networks

As established from the socio-economic survey, there exists low-medium voltage within the settlement. The power lines networks are largely placed along the access routes. It is notable that if not well placed, electricity lines can cause great safety risks. Therefore, the following basic guidelines will be crucial in ensuring safety of the residents against power network hazards. Figure 22 presents a prototype illustration

Table 6-4: Overhead powerline cables standards

Voltage (kV)	Height (M)	Clearance from buildings (m)
Low voltage	4.5	2.0
11	5.5	2.7
33	6.1	2.9

Source: Extracted from Street Design Manual for Urban Areas in Kenya, 2022

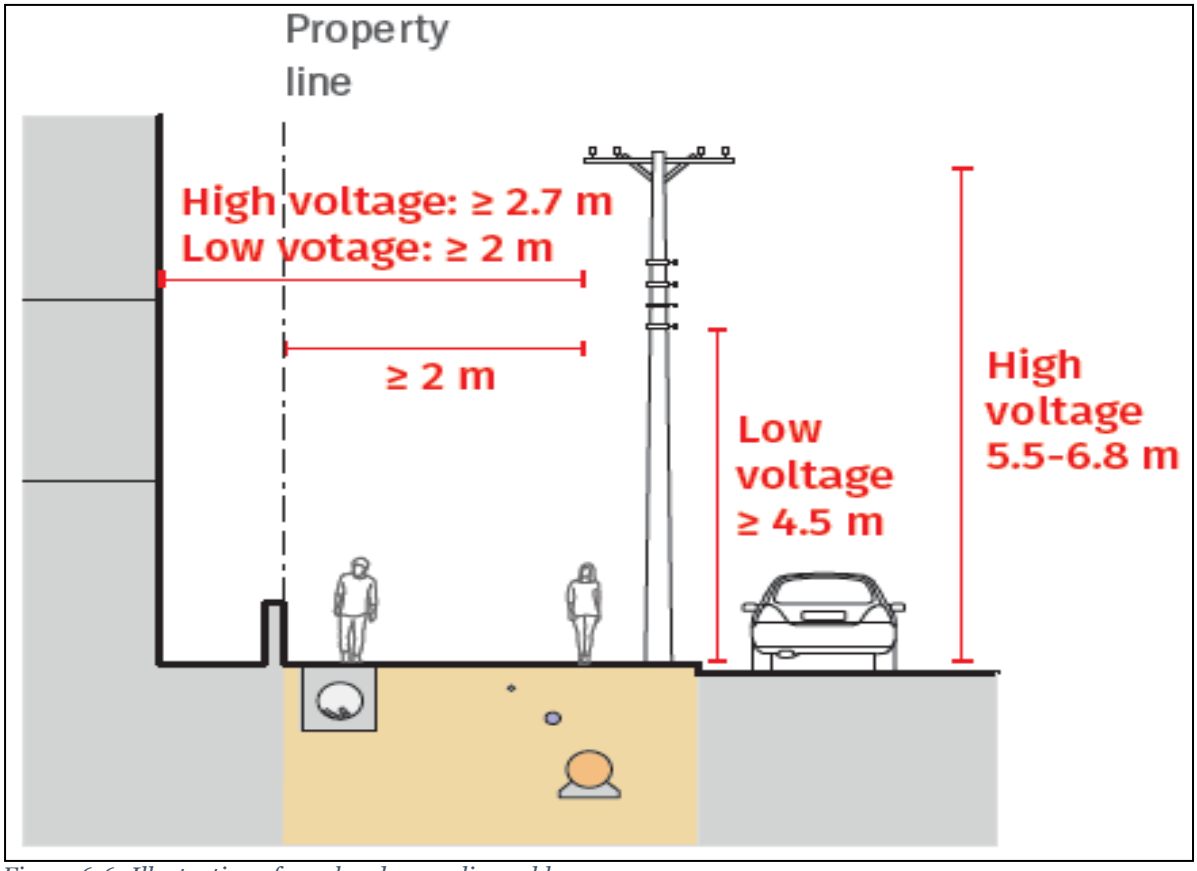


Figure 6-6: Illustration of overhead powerline cables
(Source: Street Design Manual for Urban Areas in Kenya, 2022)

6.3.5 Street Lighting

This plan aims to improve individual and overall settlement safety through the installation of streetlights along the primary access roads and the strategic designation of floodlights.

Table 6-5: Security lighting installation

Category	*Physical Planning Handbook (2025) – Coverage*	Coverage
High mast	-	• 20 meters high mast; 80 meters radius = 1 in 5 acres (1 in 2ha) • 30m high 150m radius= 1 in 17 acres • 40 meters high mast; 230 metres radius= 1 in 41 acres (1 in 16 ha)
Street lights		1 in every 30-40m

6.3.6 Solid Waste Management

Sorting of waste at the household level (organic and inorganic waste) is recommended. Consequently, solid waste collection points (receptacles) will be designated at strategic points, preferably along access roads. Additionally, all receptacles will require labels for ease of segregation of organic and inorganic waste. Youths will be sensitized to participate in clean-up activities to enhance hygiene. The plan recommends that the County Government of Laikipia take charge of collecting garbage, transporting, and disposing of/managing solid waste. Hazardous substance disposal, such as chemicals, oil, or mixtures, into ground/underground water sources or any other segments of the environment will be prohibited unless compliant with the provisions of Water Management Regulations, 2006.

Plate 6-2: Solid waste segregation

Kenya's waste strategy has a **7R** oriented strategy on waste management which include **R**educing, **R**ethinking, **R**efusing, **R**ecycling, **R**eusing, **R**epairing and **R**efilling waste. This will be sensitized to the locals to avoid the current the common practice of "take-discard" with no abandon.

6.4 Building Code

6.4.1 Plot Sizes, Coverage and Ratios

Whereas there are no legal provisions on the minimum or maximum land sizes, in best planning practices, an eighth of an acre (50 ft x 100 ft) is considered the ideal minimum parcel size for development. *Table 6-6* presents the plot sizes, ground coverage, and plot ratios permissible for development as provided in the planning handbook (2025) and the KISIP2 minimum acreage for titling.

Table 6-6: Minimum Land Sizes for various Densities

Development Density	Minimum Plot Size (ha)	Maximum Plot Coverage	Plot Ratio	Height (No. of Storey)
Low Density	0.2	30%	1:3	G+1
Medium Density	0.1	50%	1:3-1:6	G+4
Mixed Density	0.1-0.045	50-70%	1:3-1:8	Max: G+5 Min: G+3
Adaptive option (KISIP2 provision)	**0.01**	60%	1:6	Max: G+4

6.4.2 Building Setbacks

The Setbacks refer to the minimum required distances between a building (or any structure) and the property boundaries (front, rear, or sides). Setbacks aim to ensure privacy, fire safety, and adequate space for infrastructure installations such as drainage and water reticulation. However, setbacks are not uniform, i.e., from the frontage, rear, and other sides. The recommended minimum setbacks (physical planning handbook-2025) are presented in *Table 6-7* below. This promotes compliance with zoning regulations, balancing aesthetic and functional aspects.

Table 6-7:Building setbacks

	Low Density (m)	Medium Density (m)	High Density (m)
Front	6	6	3
Side	3	2	2
Rear	6	4	2

6.4.3 Building Lines

The building lines are defined as lines prescribed by the approving authority on either side of a road beyond which no building abutting the side shall traverse (Building Code,2024). Building lines enhance safety, provide room for road expansion, among other benefits. The code provides that:

a) Where roads range between 6m-18m in width, the building line shall be 6m.
b) For an existing road less than 6m wide. Where the width of an existing street in front of any new building is less than 6m, no part of such building shall be nearer to the centre line of the street than 3m.

This project is being carried out in an informal settlement, whereby the conventional standards cannot be fully applied due to the uneconomical nature of parcels. In this

case, therefore, the project has achieved footpaths/road widths ranging from 3-12m. Therefore, the plan proposes the following access frontages:

a. 3m wide, a building line of 1 m is observed.
b. 6- 9 m wide, a building line of 3m is observed.
c. 9-15m wide, a building line of 6m is observed.

6.5 Development Applications

Given that the plan has designated various land uses and defined the zoning regulations, it is anticipated that some beneficiaries and/or developers would make various development applications, i.e., change of use, extension of use, renewal of lease, subdivision, and amalgamation.

6.5.1 Extension and Change of User

Change of user refers to the process of legally altering the designated purpose of a piece of land from one category to another, such as converting agricultural land to residential or commercial use. Extension of use means additional use other than that registered on the land while maintaining the dominance of the existing registered user of the land. The extended user should be compatible with the existing user, including the character of the neighbourhood.

Extension and change of uses will necessitate compatibility with existing land uses. In cases where certificates of leases are about to expire, they will be renewed through the submission of applications. Submission of the application will be done on behalf of the client or developer by a registered and practicing planner (Physical Planners Registration Act/PLUPA 2019). Therefore, all these applications will require evaluation and vetting before approval or conditional approval by the County Government of Laikipia. Compliance with the recommendations of this plan will be vital. Developers will also be required to pay statutory fees for the processing of the applications, including clearance of land rates. Therefore, applications that will not meet the requirements will be disapproved or conform to the standards for consideration. Notices of the application and comments from any party, individual, or association will be vital in approval, as they can object to the application if they have substantial comments. Benefits accrued to the county government include revenue generation, while the residents will benefit from not encountering unforeseen challenges, e.g., buildings collapsing, which will result in massive losses.

6.5.2 Extension of Lease

The certificate of leases expires after 99 years as provided in the Land Registration Act 2012. Therefore, in cases where certificates of leases are about to expire, proprietors will be required to renew the leases by submitting applications through a registered planner. Upon the elapse of the lease term (failure to renew the lease), the land will revert to public, i.e., under the County Government of Laikipia.

6.5.3 Subdivision and Amalgamations

This plan does not advocate for subdivision in the future, considering the uneconomical nature of a significant number of parcels. However, relatively economical parcels will be permissible for subdivision, with the subplots having a

minimum of 450 square meters. Subdivision of parcels lower than 450 square meters is strictly prohibited. Amalgamation of contiguous plots will be encouraged to promote development on economically viable plots. Where applicable, the surrender of land for public use (e.g., access road) will necessitate the necessary processes for road excision. However, subdivisions will be restricted as the plan is deemed to serve the Maina B community for the next 5 to 10 years. Subdivisions or amalgamations shall be undertaken as per the provisions of the Third Schedule (7) to the Physical Planning and Land Use Act, 2019.

6.6 Tenure options

The plan proposes an adaptive planning alternative as the best option following the community's preference during the presentation of the draft plan. This plan is a precursor to the issuance of land rights in Maina, A settlement. Under this option, the current settlement structure has been retained (extensively elaborated in the preceding sections), with significant physical improvements that include creation/realignment of the access networks. In the context of tenure regularization in Maina B, section 9 of the Land Act 2012 provides for the conversion of land categories from one form to another. Therefore, the KISIP2 project aims to facilitate the conversion of this public land to private land under leasehold tenure to issue land rights to individual proprietors. Leasehold tenure: involves granting occupants the right to use the land for a specified period (99 years), while recognizing their right to transfer, sublease, or mortgage the land within the terms of the lease.

Table 6-8: Leasehold tenure pros and cons

Type	• Advantages	• Disadvantages
Certificate of Lease	• The proprietor can apply for extension or renewal of the lease before the lease term elapses. • Under special cases, the leaseholder can have 'Peppercorn' rent terms.	• Property owned within a registered specific time (99 years), hence necessitating renewal/extension fees. • Necessitates remitting of both land rates (county government) and land rent (national government). • Land reverts to the lessor failure to renew the lease within the required timeframe.

6.6.1 Individual Title

The parcels with registerable for individual titling under this project must attain a minimum of 100 square metres. Section 24 of the Land Registration Act 2012 provides that a person can be registered as a proprietor of a parcel of land and will be conferred the applicable interest (freehold or leasehold). Further, Section 91 states that two or more people can own land under joint tenancy. This will apply to spouse registration, family, or individuals with common interests. Under ***joint tenancy***, no tenant will be entitled to any separate share in the land. Dispositions on the subject parcel will only be made by all the joint tenants. On the death of a joint tenant, that tenant's interest shall vest in the surviving tenant(s) jointly.

Based on this plan (preferred alternative), the viable tenure option includes individual titles as all resultant parcels meet the minimum KISIP requirements (above 100m$^{2)}$.

Table 6-9:Viable forms of tenure for Maina B settlement

No	Titling Option	Form of Tenure	Number of parcels	Plot sizes (sq.m)	Remarks
1.	Individual	Private Ownership	360	100 and above	These will be registered to the respective individuals as per resultant parcels
		Public	1		Proposed Market
		Public	7		Churches
		Public	9		Unenumerated Parcels
2	Joint Tenancy (only applicable to couples)	Private Ownership	20		

7. STRATEGIC ACTIONS FOR REGULARIZATION

7.1 Immediate Strategic Actions

7.1.1 Verification of Structure Owners

The primary objective of the project is to facilitate tenure regularization for residents within the settlement. Following the physical mapping and socio-economic survey carried out in December 2024, a preliminary list of beneficiaries was generated. This list has undergone a preliminary and final verification process. During this final phase, verified beneficiaries were issued project identification cards containing their name, national ID number, and corresponding structure number.

Upon completion and submission of the final list of beneficiaries KISIP and NLC will undertake an independent verification to ascertain that the list submitted captures the correct details and the rightful beneficiaries of Maina B settlement.

7.1.2 Plan approval

Following the completion of the LPLUDP and its adoption by the community, it was submitted for approval by the County Government of Laikipia through its County Assembly as stipulated in the Physical and Land Use Planning Act, 2019.

7.1.3 Cadastral surveying

Section 12(7) of the Land Act 2012 requires that public land shall not be allocated unless it has been planned, surveyed and guidelines for its development prepared. Further, physical plans are subject to cadastral survey, therefore, upon approval of the Local Physical and Land use plan for Maina B, the plan shall be implemented through the cadastral surveying process. This exercise will be the immediate implementation activity of the approved plan through cadastral survey of the resultant plots. This will involve placement of beacons to demarcate the resultant parcels boundaries as well as the proposed roads within the settlement, after which, the beneficiaries will verify and sign beacon certificates.

After the cadastral survey, survey plans reflecting the surveyed parcels will be prepared and submitted to survey of Kenya for checking and authentication. This will pave way for preparation of RIMs which will form the basis for preparation of the settlement's title deeds.

7.1.4 Structures Affected by Plan and Project Affected Persons (PAPs)

The planning for Maina has taken place post development, therefore, despite the projects safeguard guidelines advocating for causing minimum or zero impacts, it was impossible to avoid creating PAPs. The impacts on structures were largely caused by

realignment of roads. In the attempt of opening up and enhancing connectivity within the settlement, 113 structures were affected partially and in different ranges as detailed in the table below.

Table 7-1: type of structures impacted

Impact Generated	Structures	Percentage
Semi-permanent structures	69	74.77%
Permanent structures	30	14.41%
Temporary structures	14	9.01%
Total	**113**	

The owners of the structures affected by the approved plan became the Project Affected Persons (PAPs). These will be subjected to a census survey by the SMP/RAP expert. Further details of the affected structures will be provided in the ESMP/ARAP report.

7.1.5 Valuation of Structures and Evaluation of Losses

A comprehensive evaluation of the affected structures will be undertaken including the usability of the structure, to assess the nature of losses that will be caused to the structure owner. For example, if the structure affected is rental, it will be evaluated on the expected rental income loss to the structure owner and if for commercial purposes the loss of income that will be incurred.

This ESMP/ARAP report will be prepared and handed over to the county Government of Laikipia for implementation as stipulated in the KISIP2 participatory agreement. The aim of an ESMP will be to address/mitigate against the negative impacts that emanate from the physical planning exercise, including such issues as possible displacements or partial impacts on developed structures. This output will be prepared in line with the World Bank Operational Policy OP 4.12 and the Resettlement Policy Framework, the preparation of an Environmental and Social Management Plan (ESMP) or Resettlement Action Plan (RAP) is a key requirement of this consultancy.

7.1.6 Facilitation of Project Affected Persons

Since the project is being undertaken on public land it is assumed that the county government is the legal owner of the land, thus compensation for land value is annulled. The developments on land are however, considered as assets that the current "claimants" have incurred cost in putting up, thus may require facilitation to relocate and or repair in case they have been impacted by the proposed plan.

Therefore, the valuation of affected structure will provide detailed amount the affected persons would require to be facilitated to relocate the affected structure or remove it altogether. This will include the cost of the materials for the reconstruction of the structure as well as labour cost and where applicable restitution of the income loss.

7.1.7 Recession of Affected Structures

This will be a strategic action towards opening up of the proposed access roads within the settlement. However, receding of structures cannot be undertaken before the affected persons are facilitated to recede them. Therefore, as an immediate action,

during the cadastral surveying exercise, beacons will be placed as per the approved settlement plan.

Thus, upon payment of the required facilitation as per the ESMP/ARAP recommendation, the PAPS will be given a period (as the implementing agency may wish) upon which they will be required to do all the recession as informed. However, the county government should strive to enforce implementation within the shortest period possible post facilitation to avoid future encumbrances during infrastructure provision as has been experienced in other settlements.

7.2 In-situ upgrading

As much as possible, the development plan has adopted the existing settlement structure to a larger extent while introducing improvements as discussed in detail in the preceding chapters. It will be expected that subsequent upgrading improvements will be undertaken gradually as the approved plan. It is expected that the implementation of the approved plan will cause slight to moderate alterations of the settlement structure in the short term, mainly through realignment and expansion of the access roads.

7.3 Incremental redevelopment

The current settlement development pattern will remain in the short term and for the purposes of security of tenure conferment in this project. The redevelopment of the settlement thereafter will be expected to take place gradually through graduated adjustments that are meant to achieve some level of intended standard provisions in the long term especially on areas that planning standards were not achieved. Therefore, in future applications for development permission, the County Government will enforce the necessary adjustments.

7.4 Environmental Protection Strategy

This strategy seeks to promote sustainable urban environmental management in Maina B informal settlement through integrated sanitation, green infrastructure, and land use controls, in alignment with the Constitution of Kenya (2010), the Physical and Land Use Planning Act (2019), the Environmental Management and Coordination Act (EMCA, 1999, revised 2015), and the National Urban Development Policy (NUDP, 2016).

In compliance with Article 42 of the Constitution, which guarantees every person the right to a clean and healthy environment, the plan proposes the replacement of pit latrines with improved on-site sanitation systems. Specifically, it recommends the phased installation of biodigesters as a sustainable solution to reduce contamination of underground water sources and support public health outcomes.

To address solid waste management, and in line with the EMCA (1999) and the National Solid Waste Management Strategy (2015), the plan outlines a structured approach that includes designated collection points, public awareness campaigns, and enforcement of anti-dumping regulations. These measures aim to ensure compliance with waste disposal standards and improve environmental hygiene in the settlement.

The plan promotes urban greening as a response to climate and ecological challenges. In accordance with the Physical and Land Use Planning (General Development Control) Regulations (2021), the plan proposes the planting of indigenous trees along 9- and 12- metre-wide road reserves, complemented by County Government-led incentives to encourage residents to plant trees within private and communal spaces. These measures contribute to the objectives of the Climate Change Act (2016) and the National Climate Change Action Plan (2018–2022) by enhancing urban microclimates and increasing vegetation cover.

To reduce reliance on environmentally harmful fuels such as firewood and charcoal, the plan promotes access to cleaner alternatives, particularly liquefied petroleum gas (LPG) and biogas. This aligns with the National Energy Policy (2018) and supports Kenya's commitment to the Sustainable Development Goals (SDG 7 and 13).

Expansion into flood prone areas is to be regulated in accordance with Section 42 of the EMCA and the Water Act (2016). These zones are to be integrated into a green infrastructure network, supporting flood mitigation, groundwater recharge, and urban biodiversity.

Lastly, the plan prioritizes climate-responsive infrastructure development, including road and stormwater drainage systems. Roads are to be aligned with natural drainage gradients, with integrated stormwater channels to improve flood resilience, consistent with the principles of sustainable urban drainage systems (SUDS) and in line with county infrastructure guidelines under the Urban Areas and Cities Act (2011).

7.5 Infrastructure Strategy

Infrastructure provision is key for ensuring a liveable settlement. This strategy focuses on improvement of the existing educational and health facilities as well as provision of line infrastructure and waste management.

The settlement has a public primary school within its boundary, however, it lacks provision for basic social facilities such as health facilities and play grounds. This plan proposes the following strategies into the future, as it is expected that the school going population will continue to increase;

1. Vertical densification of the existing classrooms within and the neighbouring primary schools (Thama primary & Maina Schools)
2. Employment of more teachers
3. Provision of improved sanitation facilities
4. Upgrade of the school playground

On matters health, the plan has put strategies towards improvement of Maina dispensary so as to ensure proper delivery of medical services. Such measures include renovation and expansion of the medical facility, equipping of the facility and employment of more staff among others.

Further, the plan proposes for integration of utility infrastructure network within designated utility/service corridors along the road reserves through the space sharing strategy to optimize land use.

Finally, the settlement plan recommends for onsite sanitation, whereby no development shall be approved without a proper onsite waste management plan. In this case bio digesters are preferred.

7.6 Transportation Improvement Strategy

The transportation network forms a primary structuring element Maina Informal Settlement Local Development Plan, underpinning both spatial organization and service delivery. The plan emphasizes a context-sensitive approach to road alignment, with adjustments made to minimize displacement and disruption during implementation, in line with the principles of inclusive upgrading as outlined in the National Urban Development Policy (NUDP, 2016) and the Kenya Informal Settlements Improvement Project (KISIP) guidelines.

During the settlement's redevelopment phase, the plan recommended the incremental widening of selected key access routes to enhance functionality. This is essential not only for improving internal connectivity but also because accessways serve multiple roles: they accommodate vehicular and pedestrian movement, host utility services (e.g., water, electricity, sewerage), and define the intensity and form of permissible land uses within adjacent parcels. The design and dimensioning of roads are therefore critical for enabling appropriate densification and future infrastructure provisioning, consistent with the Physical and Land Use Planning (General Development Control) Regulations (2021).

In support of climate-sensitive urban infrastructure, the plan proposes the use of permeable materials for roads and pavements. This measure aligns with the principles of sustainable urban drainage systems (SUDS) and the Climate Change Act (2016), aiming to improve rainwater infiltration, reduce surface runoff, and mitigate flood risks—challenges particularly acute in informal settlements with limited drainage infrastructure.

The transportation strategy is also informed by the provisions of the Urban Areas and Cities Act (2011), which mandates the development of integrated urban transport systems that are accessible, inclusive, and environmentally responsive. Accordingly, future road upgrades will be accompanied by pedestrian infrastructure, provision for non-motorized transport, and coordination with broader county-level transport and mobility planning frameworks.

Transportation networks formed the main structuring elements of the resultant plan. Whereas, alignments were done to minimize impacts generation, it is recommended that during redevelopment phase of the settlement, some level of incremental widening of key accesses. The importance of this will be that accessways are multi-purpose given beyond providing connectivity, they are also carriers of other auxiliary services and largely determine the extent of densification that can be done in an assigned land use zone area.

7.7 Housing Strategy

The housing strategy is premised on enabling a progressive transition from low-density, family-based housing units to medium-rise tenement-style developments, structured around secured tenure and guided densification. This transition is envisioned as a pathway toward improved shelter adequacy, enhanced land use efficiency, and increased economic opportunities for beneficiaries, consistent with the aims of the National Housing Policy (2004) and the Affordable Housing Programme under the Big Four Agenda.

Following tenure regularization, beneficiaries will be granted the right to individually or collectively redevelop their parcels based on the tenure typology applicable to each plot, as per the frameworks established under the Land Registration Act (2012) and the Community Land Act (2016), where relevant. The plan encourages flexible ownership arrangements such as joint ownership to facilitate group-based redevelopment models, which can enhance affordability and ensure scale in vertical housing delivery.

Section 5.8 of this report outlines recommended plot ratios and building densities to guide vertical expansion. These densities are calibrated to ensure spatial compatibility with infrastructure capacity and adjacent land uses. Redevelopment projects must incorporate onsite parking within parcel boundaries to reduce pressure on circulation spaces and protect pedestrian movement, in line with the Physical and Land Use Planning (General Development Control) Regulations (2021).

To enhance climate resilience, particularly in flood-prone zones, building regulations shall require flood-resistant construction techniques, including elevated floor levels and reinforced foundations. High-density development will be restricted in areas with poor drainage and low soil-bearing capacity, as identified through geotechnical analysis, to avoid amplifying environmental vulnerabilities. This approach aligns with the Climate Change Act (2016) and sustainable land use principles articulated in the National Spatial Plan (2015–2045).

Further, the zoning framework accommodates incremental housing development, allowing residents to improve their dwellings progressively in response to their financial capacity. Regulations permit the integration of home-based enterprises, maintaining the mixed-use character of the settlement and supporting household livelihoods. Building materials and construction standards are guided to support environmental resilience, especially considering Maina's vulnerability to fire hazards.

The overall strategy supports a phased, inclusive, and environmentally responsive housing transition that retains current residents while accommodating population growth within a planned and serviced urban environment

7.8 Livelihood Improvement Strategy

The livelihood improvement strategy is anchored in promoting inclusive and sustainable economic development, enhancing household resilience, and ensuring

that settlement upgrading delivers tangible socio-economic benefits. This approach is aligned with the National Slum Upgrading and Prevention Policy (2021), the National Urban Development Policy (2016), and the Gender Policy in Urban Development (2007), which emphasize gender equity in access to urban opportunities.

The plan delineates mixed-use zones where compatible economic activities can thrive alongside residential uses. Permitted activities include grocery retail, milk bars, tailoring, hairdressing and barber services, small-scale manufacturing, and food vending. These enterprises that are frequently run by women and youth and serve as critical sources of household income. Uses that conflict with residential well-being—such as bars, nightclubs, and noisy or environmentally harmful workshops—are restricted through zoning controls, consistent with the Physical and Land Use Planning Regulations (2021) and Public Health Act (Cap. 242).

To further stimulate local economic development, the strategy emphasizes the creation of structured corridors and designated business zones aligned with the upgraded road network and the mixed-use zones. These business strips will improve access to markets, increase visibility for local businesses, and link the settlement more efficiently to the broader urban economy.

Recognizing the gendered dynamics of informal economies, the strategy integrates gender-responsive livelihood initiatives, including:

i. Dedicated spaces for women-led enterprises, including trading stalls and shared workspaces within mixed-use zones, designed with safety, accessibility, and basic services in mind.
ii. Provision of childcare facilities in or near market zones to support women's uninterrupted participation in economic activities.
iii. Targeted vocational training programs for women and youth in trades such as tailoring, hospitality, agro-processing, ICT, and green jobs, implemented in partnership with NGOs and County Government programs. These programs can be established in the proposed resource centre in Maina A.
iv. Inclusive access to microfinance and cooperative savings schemes, with a focus on improving financial literacy and credit access for women-headed households, in line with the National Gender and Development Policy (2019).
v. Gender-sensitive design of public infrastructure, including lighting, sanitation, and safety measures, particularly in market and circulation areas, to ensure secure operating environments for women traders.

In addition, tenure regularization and spatial planning have been structured to support home-based enterprises, which are often the backbone of women's economic participation in informal settlements. Zoning regulations allow for incremental modifications to dwellings that enable small-scale production or services without undermining residential quality.

By integrating spatial, financial, and capacity-building interventions with a strong gender lens, the plan ensures that both women and men benefit equitably from livelihood improvements and economic upgrading. This inclusive approach aims to

reduce urban poverty, mitigate economic vulnerability, and promote gender-equitable urban transformation in Maina B.

8. PLAN IMPLEMENTATION FRAMEWORK

8.1 Overview

The implementation of this settlement's development plan is bestowed on Laikipia County Government as the planning authority. However, the successful implementation of the plan and its associated strategies is highly dependent on the goodwill and ability of the County Government, private agencies, government agencies and the settlement's residents to adapt and adhere to the development management strategies and standards. This includes coordination among institutions with sound legal frameworks and financial frameworks with resources to facilitate the implementation process.

This chapter highlights the objectives of implementing the plan, possible implementation opportunities and challenges. Additionally, it details out the actors required for the implementation of the plan and the roles each actor would play. The chapter finally gives an implementation matrix which details out what needs to be done, who needs to do it (actors) and suggests an implementation time frame of the proposed projects and programs

8.2 Implementation Objectives

i. To lay out clear measures for dissemination of plan information, capacity building, public participation and Monitoring & Evaluation.
ii. To establish an effective planning implementation system for the proposed projects and programs.
iii. To assign roles to the various stakeholders including the National and County government departments, CBOs, the community and other stakeholders in implementing the plan.

8.3 Implementation Opportunities

i. Goodwill from the key stakeholders (National Government, Laikipia County Government, local political and administrative leaders and the Maina community) who are in support of the objective of this project
ii. Issuance of tenure security will attract potential investors

8.4 Possible Implementation Challenges

i. The project has taken place post development. Therefore, the built-up nature of the settlement limits planning intervention. With specific reference to housing where the status quo with regards to small housing units will be maintained, the housing challenge cannot be fully mitigated under this project/in the short term.
ii. Limitation in the available resources and funding for the proposed capital-intensive projects

8.5 Projects Classification

8.5.1 Quick Wins

Quick wins are defined as projects/programmes to be achieved immediately, and in this case, after approval of this plan. These will act as catalyst with high visibility and impact using minimal resources to trigger the confidence/trust of the executive in the eyes of the citizens and stakeholders. They also require low up to zero funding. Some of the proposed projects considered as quick wins in this Plan include:

i. Implementation of the plan through cadastral surveying process and signing of beacon certificate
ii. Implementation of the ESMP and RAP
iii. Opening up of roads and accesses to properties
iv. Issuance of ownership documents (titles) to the beneficiaries
v. Setting of up plan implementation committees within the settlement.
vi. Training of staff on the details of the plan for decision making
vii. Sensitizing the public on the plans.
viii. Enhancing neighbourhood security through quick measures as stipulated in the implementation matrix.
ix. Formulation of waste collection schedules.
x. Provision of sizable waste receptacles within the settlement.
i. Youth, CBOs and NGOs to participate programmes and waste management activities.
ii. Preparation and maintenance of updated water, sanitation and energy demands and supply inventories.
xi. Establish a system of scrutinizing development applications for approval, supervision and enforcement of development. The LIS system will be very instrumental in development applications.

8.5.2 Continuous Projects

Continuous projects include those developments/actions that are routine and, therefore, require continuous implementation.

iii. Monitoring and evaluation of plan implementation progress.
iv. Sensitizing, creating awareness and public education to the community on matters of the plan and planning in general.
v. Scrutinizing of building applications.
vi. Daily sweeping, street cleaning and emptying of waste receptacles in the settlement
vii. Promote use of sustainable source of energy such as solar in the house holds.
viii. Development control within the settlement.
ix. Ensure approval of developments that conform to the proposed land use zones.

8.5.3 Short term projects

The short-term projects comprise of those that are to be implemented within to 1- 3 years. These projects are based on stated preference/importance from the situational analysis. In most cases, these projects act as catalysts paving way for other lengthy projects (mid-term and long term) to take effect. Short term projects will include issuance of security of tenure, planting of greeneries for aesthetics, siting of waste

receptacles at strategic places within the settlement and removal of structures off the access paths.

8.5.4 Midterm Projects

Medium term projects are those projects that are intended to be achieved between 3-5 years. They require more time, financial, human and material resources to implement, than short term plans. The five-year maximum period has been used as a reference which signifies the lifespan of a single term under county government jurisdiction (before any substantive management structure changes) according to the Constitution of Kenya (2010). Therefore, most of the projects phased under short and medium terms can be implemented within one tenure of a county government. Medium term projects will include improvement of infrastructure and utility services i.e. sanitation, water and drainage systems, paving of internal roads (use of Cabro), installation of flood and streetlights to boost security.

8.5.5 Long Term Projects

According to this plan, the long-term projects will last more than five years until the end of the planning period, which is up to the year 2035. These are largely construction and infrastructural projects that require heavy financial investments. Thus planning, budgeting, undertaking feasibility studies, laying out of design work and sourcing for funds require relatively lengthy time compared to other proposed projects. In this project, this will include the construction of the market

8.6 Mechanisms for Implementation

8.6.1 Creation of Awareness

Plan development and implementation require public awareness to foster adoption and acceptability of the plan. Therefore, creating awareness of the Maina B Settlement Plan will be a strategic measure to communicate, disseminate information, publicize the plan and make it accessible to the public for review and comments. So far, from the inception stage community mobilization has always been undertaken to foster awareness at all stages of this plan. The law requires that the CECM in charge of physical planning at the county government advertises the plan in local media before the preparation begins and upon its completion for comments.

The following measures were used during this process.

i. Publicize and facilitate access to public platforms or meeting places- from the inception stage community mobilization has been undertaken to foster awareness at all stages of this plan through posters, public announcements in the settlement, door-to-door mobilization by the SEC team, through SMS and direct phone calls as well as e-mails to the technical teams.
ii. Organize public meetings through “Barazas” and workshops for sharing information- several public Barazas were held with the community during plan adoption after numerous technical meetings with the county officials in relation to the best planning proposals for the settlement.
iii. Use of Media Coverage for publicizing the plan, through the CECM in charge of Physical planning, a notice of completion of the plan advert was placed in two

local dailies with national circulation and the Kenya Gazette, and a physical copy deposited at the chief's office.

iv. Enable the preparation of statements in response to publicly raised issues or queries- this will be done after the lapse of 60 days from the day the notice of completion of the plan is done.

v. The county government will communicate and create awareness to the public using popular social media platforms such as Facebook, X (Formerly known as Twitter), and Instagram among others- this will be done upon the final approval of the prepared plan.

8.6.2 Participatory Plan Implementation

This entails stakeholder involvement, in order to assist the key players involved in the plan implementation. It focuses on maintaining the stakeholder's involvement and organizing joint decision-making throughout the whole delivery process of policies and action plans, to ensure the successful delivery of the Maina B LPLUDP. This will be achieved through:

i. Popularising the plan
ii. Building collaboration with monitoring and evaluation process
iii. Ensuring accountability and transparency in resource mobilization for the proposed projects
iv. Developing partnerships for plan implementation.
v. Playing the public watchdog role
vi. Offering feedback on the various plan proposals

8.6.3 Capacity Building

Capacity building entails mounting, enhancing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and blossom in the fast-changing environments. Capacity building unwraps capacity obstacles that might inhibit plan implementation overtime and polishes them in enabling achievement of measurable and sustainable results from plan proposals.

Measures of approach

A. **Individual level:** sensitizing, creating awareness and public education to the community to educate them more about the importance of the plan and proposals therein. From the project inception phase to the adoption of the LPLUDP, the Consultant ensured that the process has been very transparent, consultative and participatory by all the stakeholders, and especially the affected community. For instance, five meetings were held within the community as well as other activities such as ground picking and the socioeconomic survey.

B. **Institutional level:** Training of Laikipia County staff on the use of the plan for decision making; and equipping the service departments with tools deemed necessary to implement the plan proposals. The Laikipia county CPCT and the department of lands was continuously engaged during the project period and were instrumental in providing technical guidance during the meetings –

approx. 6 technical meetings—and in providing technical support in all the community meetings held in Maina A settlement as detailed in the table below.

Table 8-1: Involvement of the county team in the community meetings

Community Meetings	Activities
Introduction to the community	- Introducing the project and the consultant to the community
Environmental and Social Screening	- County social development officer assisted community members in identifying key environmental and social challenges
Presentation of socio-economic findings, visioning, and participatory planning	- Assisting the community in visioning
Presentation of draft plans & preliminary verification of LoBs	- County planner assisted in unbundling the draft plans to the community and guided the plan selection session
Presentation, verification and adoption of final draft plans	- The CPCT assured the community assisted in validation and adoption of the final raft plans by the community

C. **Societal level:** Establishment of settlement upgrading planning committees and residential development committees/associations.

8.7 Development Control and Land Use Regulations

Development of local planning policies and the determination of individual planning applications are important, in the implementation of this plan. The plan gives broad zoning standards and guidelines that ought to be supported by the county bylaws. The following three key sectors are important in this undertaking:

A. Land Information System
B. Enforcement and execution sector – Sub County Planner
C. Policy sector – CECM

a. Land Information System

i. The LIS will store and manage digital land information of the settlement. It contains all the settlement's raw data with all fields as per the Client provided data dictionary. This will be important information in development control, sharing of settlement information with other project components and in facilitating efficient and accurate access to land information.

ii. By facilitating access to accurate land information, it empowers community members with clear insights into land ownership, usage, and development opportunities. Moreover, this system simplifies processes such as land applications and dispute resolutions, helping residents navigate bureaucratic hurdles with greater ease.

iii. The LIS also contains an updated physical address system in the settlement to enhance revenue collection.

b. Enforcement and execution sector

This sector should be in charge of the following aspects in the settlement:

i. Enforcement of planning standards and regulations

ii. Building database on information generated from sites and buildings inspection
iii. Site inspection
iv. Receiving and processing development applications
v. Ensuring adherence to the land use plans and any other regulations
vi. Inspecting buildings
vii. Coordinating land and development related dispute resolutions.

c. Policy sector

This sector will be in charge of the following aspects in the settlement:

i. Undertaking research and development in land use matters
ii. Undertaking internal monitoring and evaluation
iii. Formulating/updating settlement specific policies in land use planning
iv. Preparing and implementing action plans.
v. Coordinating the formulation of settlement specific land use laws and by-laws

8.8 Actors and their roles in Implementation of the Plan

This section enlists various actors and their roles in financial and technical inputs for successful implementation of proposed projects and programs entitled proposed in this plan. Specific actors and their respective roles include:

No	Category	Actor	Role of the Actor
1:	Ministry of Lands, Public Works, Housing and Urban Development	KISIP NPCT	• Take lead role in processing and issuance of title deeds; • Take a lead role in the plan implementation through cadastral survey and oversight on ESMP/RAP implementation
		National Director of Physical Planning	• Undertake capacity building and technical support to the county on planning matters
		Director of Surveys	• Authentication and Approval of the settlement survey plan • Produce and maintain plans of the property boundaries in support of land registration. • Amending the Registry Index Maps and preparation of area lists.
		Land Registrar (Department of Land administration and Land registration)	• Processing and issuance of ownership documents of the surveyed and verified plots within the settlement. • Custody and maintenance of Land information system of the cadastre - responsible for recording
		National Land Commission (NLC)	• The constitution mandates the National Land Commission to monitor and undertake oversight roles over land use planning in the country. This would include the planning area • In liaison with the county government of Laikipia, manage resultant public subplots on behalf of the County government.
2:	County Government of Laikipia	County KISIP Coordinating Team	• Implementation of the plan • Updating the plan on the GIS platform • Ensure timeframe provided in the planning framework is adhered to

		County Executive Committee Member	• Publication of notice completion of plan • Forwarding the plan for approval by the county assembly • Responsible of amending and review of the plan
		Chief Planner Lands & Physical Planning	• Ensuring adoption and implementation of the approved LPLUDPs by the County • Communicate the decisions of the county governments on development applications • Issuance of development permission and other development control permissions
		Sub county Planners	• Implementation of the resultant LPLUDPs • Vetting, verifying and approval of development application plans (building plans, subdivisions); site inspection to establish suitability of proposed development; development control. • Facilitation and coordination of citizen participation in the development of policies and plans; responds to relevant county chief officer (County Government Act, 2012 sec. 50).
		Sub County sector heads (environmental, transport, housing and urban development)	• Enforce sectoral regulations within the settlement. • Ensure protection of natural resources within the settlement • Provide an enabling environment for implementation of the proposed environmental projects • Supervise and advise on applications for environmental impact assessments and environmental audits as provided in EMCA, 1999;
3:	Area local leaders	Chief and Sub-chief, MCA	• Take lead watchdog role of implementation of the plan on behalf of the community • Ensure local mobilization for plan implementation. • Safeguarding public land and public facilities • Disseminate planning information to the locals through village Barazas;
4:	The Public	The people/residents of the settlements	• Take overseer role to ensure implementation of the plan takes care of their proposals and addresses their plan vision • Monitor developments within their neighbourhood. • Comment on public notices on proposed developments. • Participate in voluntary services and planning

8.9 Implementation Plan Matrix

The Implementation Matrix presented in the table below summarizes the identified planning problem, the set objectives and strategies towards achieving these objectives as well as the various projects that can be achieved upon realization of the objectives. It also gives the estimated costs and identifies the agencies and organizations that should be responsible for leading implementation.

1. Residential						
Problems	**Objectives**	**Strategy**	**Projects**	**Actors**	**Phasing**	**Timelines**
Settlement Informality	-To upgrade and improve the living conditions - To enhance livability in the settlement	-Enhancing security of tenure -Preparation of a development plan -Enforcement of planning standards	-Issuance of title deeds	KISIP NPCT Plot Owners Donors Laikipia County Government Community	Quick win/ Short term	0-3 years
			Improve infrastructure (sanitation, water and drainage connections)		Medium to long term	3-10 years
Low rise developments	-To improve the living conditions of the inhabitants	-Incremental housing redevelopment	-Building of new houses (Adopt better housing typologies). -Mixed use developments	-Plot Owners/Developers -Laikipia County Government	Long term	5-10 years
2. Transportation Sector						
Problem	**Objectives**	**Strategy**	**Projects**	**Actors**	**Phasing**	**Timelines**
Lack of designated roads of access within the settlement	To enhance mobility and circulation in the settlement Ensure all properties have access	-Provision of access roads	-Realignment and opening up of the accesses -Removal of structures encroaching into these accesses	– Local Community – Laikipia County Government	Short Term	0-3 years
Unpaved roads	To upgrade the road infrastructure	-Upgrading the roads	-Paving of the internal roads with Cabro -Tarmacking of abutting roads -Improve roadside drainage system -integration of NMT -Installation of street lighting	– Local Community – Laikipia County Government – KeRRA – KURA	Medium-long term	3-10 years
3. Economic Sector						
Problem	**Objectives**	**Strategy**	**Projects**	**Actors**	**Phasing**	**Timelines**
Overreliance on informal and subsistence economy	To improve the community livelihoods	Creation of employment and income generating opportunities	--Entrepreneurial and technical skills training -Encourage labour intensive community works. Mixed use developments	Investors/Business community Laikipia County Government Community groups	Short-long term	2-10 years

4. *Physical Infrastructure*						
Problem	**Objectives**	**Strategy**	**Projects**	**Actors**	**Phasing**	**Timelines**
Lack of a sewerage system	To enhance waste water disposal mechanisms	Encourage the use of sustainable onsite sanitation	-Installation of onsite sanitation mechanisms	Developers Community groups Laikipia County Government	Short - medium term	0-5 years
		Develop the trunk sewer system to cover the entire settlement	-Undertake feasibility study for incorporation into the Municipality trunk sewer system -Layout sewer network to plot levels	Laikipia County Government Nyahururu Municipal Board Community groups	Medium-long term	5 years and beyond
Poor solid waste management	To sustainably manage solid waste	Apply Reduce, Reuse and Recycle methods of waste management	-Siting of waste collection receptacles within the settlement -Using community groups for waste collection	-Community -Laikipia County government -Youth groups	Short - medium term	0-5 years
Social Infrastructure						
Problem	**Objectives**	**Strategy**	**Projects**	**Actors**	**Phasing**	**Timelines**
Insecurity	To curb insecurity in the settlement	-Illuminating the streets and other dark areas within the settlement -Neighbourhood policing	-Provision of streetlights -Installation of a flood light	-Financiers -Laikipia County Government -Community	Short-long	0-10 years
Lack of enough capacity in schools and health facilities within and close to the settlement	Continued reliance on the neighbouring facilities	Densification of the existing facilities	Vertical increase in the number of classrooms Increase in the number of sanitation facilities Upgrading of the playground Proper fencing of the school compound Expand the dispensary and improve capacity	-Laikipia County Government -Ministry of Education -Community -Private developer -NGO's and other Financiers	Medium-long	5-10 years
5. *Land use Management*						
Problem	**Objectives**	**Strategy**	**Projects**	**Actors**	**Phasing**	**Timelines**
Uncoordinated land use management	To have a sustainable land use plan	Application of Planning standards in future developments -Liveable neighbourhood concepts	Preparation and approval of the development plan Observation of building codes (building lines, plot ratios and coverages)	Laikipia County Government Community Donors	Medium-long term	5-10 years

		-Participatory planning				
6. Environmental						
Problem	**Objectives**	**Strategy**	**Projects**	**Actors**	**Phasing**	**Timelines**
Degradation	To conserve and protect the environment	-Restoration of the lost vegetation cover -Preparation of EIAs for proposed projects	-Planting of greeneries along the road reserves and the proposed green belt	Laikipia County Government -Community NGOs NEMA	Medium-long term	0-5years
7. Recreational						
Problem	**Objectives**	**Strategy**	**Projects**	**Actors**	**Phasing**	**Timelines**
Lack of designated recreational areas	To have recreational sites for the community	-Creating public recreation sites within the settlement	-Sharing of spaces with other social facilities such as schools and churches Using facilities in Maina B	Laikipia County - Government Community NLC	Short-Medium term	0-5 years

8.10Monitoring and Evaluation

Monitoring and Evaluation (M&E) is a project management tool to ensure that the developed Local Physical and Land use Development Plan realizes its objectives and the desired end state. M&E will provide unbroken response and views from the local community and stakeholders on the extent to which the plan is achieving its objectives and set goals. Table 8-2 below highlights the main objectives of expected to be realized with M&E tools:

Table 8-2: Monitoring and evaluation matrix

Monitoring	Evaluation
a) **The plan's objectives are understood and clearly spelled out by all the stakeholders**	a) Analyses plans achievements as well as inform why proposed results were not achieved
b) **Links activities, identified actors and their resources to plan's objectives**	b) Assesses specific causal contributions of activities to results
c) **Monitoring will help Interpret plan's objectives into performance indicators and set viable targets**	c) Scrutinizes the entire implementation process in totality
d) **Routinely collects data on these indicators, compares actual results with targets**	d) Explores and suggests actions for unplanned eventualities likely to affect the plan's results
e) **Reports progress to managers and alerts them to problems**	e) Delivers lessons, highlights substantial successes or program potential, and offers recommendations for improvement

In the context of Maina B Settlement Plan, the implementation of the plan should be monitored not only by the County government but also by national and sub national actors to ensure that deliverables are being achieved. Independent evaluations and audits should be carried out to ensure that the indicators will help the County to achieve the settlement's vision. In order to restructure the project activities, it will be necessary to carry out regular reviews after every 3 years. The project's progress should, at reasonable intervals, be reported to the various stakeholders. The urban planning monitoring framework is

essential as it will ensure effective implementation of plan within the plan period and ensure that the intended targets are achieved.

Table 8-3: Monitoring and Evaluation Framework for Maina B

Sector	Nature of Projects	Monitoring Institutions	Expected Outcomes	Indicators of success
Educational	• Densification and expansion of the neighbouring educational facilities	• Ministry of Education • County director of planning	• Ease access to primary, junior and senior secondary school for school going children within the settlement	• Improved literacy level within the settlement
Health	• Expansion and equipping of Maina dispensary	• Ministry of health • Department of Health Laikipia county • County director of planning	• Enhanced accessibility to health services	• Improved access to health services • Improved health conditions within Rumuruti municipality
Public Utilities	• Establishment of sewer reticulation.	• KISIP/County Government of Laikipia, • NYAHUWA SCO NEMA • Ministry of Public works	• Improved hygiene. • Prevention of surface and underground water contamination to support disease control.	• No of Kms of sewer reticulation installed • Effectiveness of sewer system
	• Designation of onsite solid waste collection points.		• Improved waste management/hygiene.	• Reduced levels of indiscriminate dumping
	• Augmentation of water supply to plot level		• Enhanced water access.	• Increased levels of access to water services
	• Installation of streetlights/floodlights.		• Improved security. • Boost local economy.	• Enhanced road safety • Advancement of the 24-Hour Economy
	• Completion of storm drains.		• Stormwater management (Flood control).	• Effectiveness of stormwater drainage system
Transport	• Upgrading the access roads (9m and 12m) to bitumen standards.	• KISIP/County Government of Laikipia, KURA • Ministry of Public works	• Enhanced accessibility/connectivity. • Economic boost-transportation of goods to and from the market.	• Ease of circulation • Improved transport quality services • Adequacy of road connectivity in the settlement

	• Grading/Cabro paving of footpaths/walk ways (3m footpaths and 6m roads)		• Enhanced accessibility/connectivity.	• Improved level of NMT
	• Greening measures (transport corridors-boulevards).		• Environmental sustainability. • Aesthetics enhancement.	• Number of landscaping features installed
Commercial	• Development of the proposed market to market stalls, toilets, daycare and ICT centre	• County Government of Laikipia	• Properly constructed market • Occupation and operation of the stalls • Operationalization of the ICT centre • Operationalization of the daycare	• Preference of use by community as opposed to facilities outside the settlement

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ANNEXES

Annex 1 - Statutory Notices

Notice of Intention to Plan

FORM PLUPA L_1 **(r.9)**

REPUBLIC OF KENYA
COUNTY GOVERNMENT OF LAIKIPIA
DEPARTMENT OF INFRASTRUCTURE, LAND& PHYSICAL PLANNING, ENERGY AND URBAN DEVELOPMENT

PUBLIC NOTICE

THE PHYSICAL AND LANDUSE PLANNING ACT (No. 13 of 2019)
NOTICE OF INTENTION TO PREPARE LOCAL PHYSICAL AND LAND USE DEVELOPMENT PLANS

Pursuant to the provisions of section (47) of the Physical and Land Use Planning Act, 2019, NOTICE is hereby given that the County Government of Laikipia in conjunction with the Ministry of Lands, Public Works, Housing and Urban Development intends to commence preparation of Local Physical and Land Use Development Plans **for Maina (Nyahururu), African Location (Rumuruti), Kanyoni and Kwa Mbuzi (Nanyuki), Umande and Sipili Settlements under the Second Kenya Informal Settlement Improvement project (KISIP2)**

The purpose of these plans is to facilitate the conferment/formalization of land tenure for the above-mentioned settlements within Laikipia County through Planning and Surveying.

The objectives of the plans are;

i To facilitate regularization of land tenure security within the selected settlements.
ii To provide a framework for provision of requisite infrastructure and services.
iii To provide basis for development control.

The planning exercise will involve review of relevant policies, regulations and institutional frameworks, community mobilization, sensitization and stakeholder engagement, basemaps preparation, undertaking socio-economic surveys and physical mapping of the settlements, undertake environmental and social impact assessment (screening), preparation of local physical and land use development plans for the respective informal settlements, prepare a social management plan and or a resettlement action plan (RAP), surveying of resultant plots and preparation of survey plans, preparation of detailed topographical survey for engineering designs and preparation of land information system (LIS). This will form the basis for preparation of the plans which aims at improving living conditions in Laikipia County through regularization of land tenure.

The plan preparation will be participatory and the County invites all Stakeholders to the planning process. Stakeholders who wish to make comments or suggestions on the same may do so in writing within 21 days of publication of this notice. Comments or views should be addressed to:

The County Executive Committee Member (CECM)-Infrastructure, Land & Physical Planning, Housing, Energy and Urban Development
County Government of Laikipia.
P.O Box 1271-10400, Nanyuki.

Dated this 26th day November 2024

Ekwam Nabos
The County Executive Committee Member
Infrastructure, Land, Housing and Urban Development,
County Government of Laikipia.

JAMHURI YA KENYA

SERIKALI GATUZI YA LAIKIPIA

MIDARA YA MIUNDO MBINU, ARDHI NA UPANGAJI WA MIJI, NISHATI NA MAENDELEO YA MIJI

SHERIA YA MPANGO WA MATUMIZI YA ARDHI, 2019

ILANI YA NIA YA KUPANGA

Maeneo ya Mradi: Vijiji vya Maina (Nyahururu), African Location (Rumuruti), Kanyoni na Kwa Mbuzi (Nanyuki), Vijiji vya Umande na Sipili

Ilani inatolewa kwa wakaazi wa Gatuzi la Laikipia na maeneo mengine, kwamba, kulingana na kifungu 47 cha sheria ya mipango ya matumizi ya ardhi, 2019, Serikali ya Gatuzi la Laikipia pamoja na Serikali ya Kitaifa, kupitia Wizara ya Ardhi, Mijengo ya Umma, Makazi, na Ustawi wa Miji, zinanuia kuandaa mipango ya muundo na matumizi ya ardhi ya maeneo yaliyotajwa hapo juu, ikiwa ni awamu ya pili ya mradi wa kitaifa wa kuboresha vitongoji visivyo rasmi (KISIP2).

Mradi huu unanuia kuhalalisha na kuimarisha huduma za kimsingi na usalama wa umiliki wa ardhi kwa wakaazi wa vitongoji vilivyochaguliwa katika Gatuzi la Laikipia kupitia upangaji na upimaji wa ardhi.

Malengo ya mipango hiyo ni;

i. Kuwezesha kuhalalisha umiliki wa ardhi ndani ya vitongoji vilivyochaguliwa.
ii. Kutoa mfumo wa ujenzi wa miundo msingi na utoaji wa huduma za kimsingi.
iii. Kuweka msingi wa udhibiti wa maendeleo.

Zoezi la kupanga litahusisha matumizi ya sera husika, kanuni na mifumo ya kitaasisi, uhamasishaji wa jamii, na ushirikishwaji wa wadau, utayarishaji wa ramani za msingi, kufanya utafiti wa kijamii na kiuchumi, uchoraji wa ramani ya makazi, kutathmini athari za kimazingira na kijamii (uhakiki), maandalizi ya mipango ya kimaendeleo ya matumizi ya ardhi ya maeneo husika kwa makazi yasiyo rasmi, kuandaa mpango wa usimamizi wa kijamii na/au mpango wa utekelezaji wa makazi mapya (RAP), upimaji wa matokeo, viwanja na utayarishaji wa mipango ya upimaji, maandalizi ya uchunguzi wa kina wa topografia kwa miundo ya kihandisi na utayarishaji wa mfumo wa kutaarifu mambo ya ardhi (LIMS). Huu utakuwa msingi wa maandalizi ya mipango ambayo inalenga kuboresha hali ya maisha katika gatuzi la Laikipia kwa kuhalalisha umiliki wa ardhi.

Maandalizi ya mipango hii yatakuwa shirikishi kwa hivyo wadau wote wanaalikwa. Maoni, maswali na/au mapendekezo yoyote kuhusu ilani hii yanaweza kuwasilishwa kwa maandishi **ndani ya siku ishirini na moja (21)** baada ya kuchapishwa kwa ilani hii kwa:

Waziri wa Miundo Mbinu, Ardhi na Upangaji wa Miji, Nishati na Maendeleo ya Miji
Gatuzi la Laikipia
P.O Box 1271, Nanyuki

Imetolewa: Novemba 26, 2024

Ekwam Nabos
Waziri wa Miundo Mbinu, Ardhi na Upangaji wa Miji, Nishati na Maendeleo ya Miji
Gatuzi la Laikipia

Notice of Completion

FORM PLUPA L -2 (r.10)

COUNTY GOVERNMENT OF LAIKIPIA

DEPARTMENT OF INFRASTRUCTURE, LAND & PHYSICAL PLANNING, HOUSING, ENERGY & URBAN DEVELOPMENT

P.O Box 1271-10400, NANYUKI

THE PHYSICAL AND LANDUSE PLANNING ACT (NO. 13 OF 2019)

NOTICE OF COMPLETION OF LOCAL PHYSICAL AND LAND USE DEVELOPMENT PLANS

TITLE OF PLANS	**LOCAL PHYSICAL AND LAND USE DEVELOPMENT PLANS FOR MAINA (NYAHURURU), AFRICAN LOCATION (RUMURUTI), SIPILI, KANYONI AND KWA MBUZI (NANYUKI)**

Pursuant to the provisions of section 49(1) of the Physical and Land Use Planning Act, 2019, NOTICE is hereby given that preparation of the above – mentioned Local Physical and Land Use Development Plans under the Second Kenya Informal Settlement Improvement project (KISIP2) were completed on 28th March 2025. The Plans relate to lands situated within **Maina (Nyahururu), African Location (Rumuruti), Sipili, Kanyoni and Kwa Mbuzi (Nanyuki)** in **Laikipia County.**

Copies of the plans have been deposited for public inspection free of charge at the office of the **County Executive Committee Member (CECM) Infrastructure Land & Physical Planning, Housing, Energy & Urban Development and the County Physical Planning offices in Nanyuki and Rumuruti.** The copies so deposited are available for inspection free of charge by all persons interested at the above-mentioned address between the hours of **8.00 am** and **5.00 pm** during official working days.

Any interested person (s), organizations or entities who wishes to make any representation in connection with or objection to the above plans may send the same in writing to be received by the **County Executive Committee Member (CECM) Infrastructure, Land & Physical Planning, Housing, Energy & Urban Development, Laikipia County, P.O Box 1271-10400 Nanyuki** within **sixty (60)** days from the date of publication of this notice and any such representation shall state the grounds on which they are made.

Dated the **28th March 2025.**

Ekwam Nabos
COUNTY EXECUTIVE COMMITTEE MEMBER
DEPARTMENT OF INFRASTRUCTURE, LAND & PHYSICAL PLANNING, HOUSING AND URBAN DEVELOPMENT
LAIKIPIA COUNTY

FORM PLUPA L-2 (r.10)

SERIKALI YA KAUNTI YA LAIKIPIA

IDARA YA MIUNDOMBINU, ARDHI NA MIPANGO YA FIZIKIA, MAKAZI, NISHATI NA MAENDELEO YA MIJI

S.L.P 1271-10400, NANYUKI

SHERIA YA MIPANGO YA FIZIKIA NA MATUMIZI YA ARDHI (NA. 13 YA 2019)

TAARIFA YA KUKAMILIKA KWA MPANGO WA MAENDELEO YA MATUMIZI YA ARDHI

KICHWA CHA MPANGO WA MAENDELEO:	MIPANGO YA KIENEO YA MATUMIZI YA ARDHI KATIKA VIJIJI VYA MAINA (NYAHURURU), AFRICAN LOCATION (RUMURUTI), SIPILI, KANYONI NA KWA MBUZI (NANYUKI)

Kwa mujibu wa masharti ya kifungu cha 49 (I) cha Sheria ya Mipango ya Matumizi ya Ardhi, 2019, TAARIFA inatolewa hapa kwamba maandalizi ya Mipango hizo hapo juu chini ya awamu ya pili ya mradi wa kuboresha vitongoji duni nchini Kenya (KISIP2) yalikamilishwa tarehe **28 Machi 2025**.

Nakala za mipango hizo kama zilivyoandaliwa zimewekwa kwa ukaguzi wa umma katika Ofisi za Mjumbe wa Kamati ya Utendaji ya Kaunti (CECM) wa Miundombinu, Ardhi na Mipango ya Fizikia, Makazi, Nishati na Maendeleo ya Miji pamoja na Ofisi ya Mipango ya Fizikia ya Kaunti katika Miji ya Nanyuki na Rumuruti, Kaunti ya Laikipia. Nakala hizi zinapatikana kwa ukaguzi bila malipo kwa watu wote wanaopenda kati ya saa 8:00 asubuhi – 5:00 jioni, katika siku za kazi rasmi.

Mtu yeyote, mashirika au taasisi zinazopenda kutoa maoni yoyote au pingamizi kuhusu mipango hii wanahimizwa kutuma maoni yao kwa maandishi kwa Mjumbe wa Kamati ya Utendaji ya Kaunti (CECM) ya Miundombinu, Ardhi na Mipango ya Fizikia, Makazi, Nishati na Maendeleo ya Miji, Kaunti ya Laikipia, S.L.P 1271-10400, Nanyuki ndani ya siku sitini (60) tangu tarehe ya kuchapishwa kwa tangazo hili. Pingamizi lolote linapaswa kueleza sababu za kupinga mpango husika.

Imetolewa tarehe 28 Machi 2025.

Ekwam Nabos

Mjumbe wa Kamati ya Utendaji ya Kaunti Idara ya Miundombinu, Ardhi na Mipango ya Fizikia, Makazi na Maendeleo ya Miji Kaunti ya Laikipi

Annex 2 – Minutes

Presentation of Draft Plans

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING, AND URBAN DEVELOPMENT
KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT (KISIP2)
PLANNING, CADASTRAL, AND TOPOGRAPHICAL SURVEY OF SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES- PHASE IIC – CLUSTER 1
Project by:
E&G Spatial Consultants Ltd

MINUTES OF THE PRESENTATION OF DRAFT PLANS HELD AT CATHOLIC CHURCH, IN MAINA B INFORMAL SETTLEMENT ON 30th MARCH 2025

AGENDA

1. Introduction and preliminary remarks
2. Summary of socio-economic findings
3. Vision and proposals
4. Presentation of draft plans
5. Plenary and comments
6. AOB
7. Closure and adjournment of the meeting

MIN: MNB /01/30/03/2025: INTRODUCTION AND PRELIMINARY REMARKS

Remarks by SEC CHAIR;

The meeting commenced at 2:10 p.m., and the SEC chair invited the pastor to lead a word of prayer. Afterward, he introduced the SEC/GRC members and thanked everyone for attending the meeting. He reiterated that the GRC handles disputes and encouraged anyone with issues regarding their parcels to approach the GRC chairman. He emphasized the day's agenda and urged everyone to provide their feedback.

Remarks by county planner

He started by recognizing the consultant, KISIP national, and the community at large, including the SEC/GRC. He then introduced the county team, which included a planner, environmentalist, and social officer. He encouraged everyone to listen in keenly and give their feedback.

Remarks by the KISIP national representative

He introduced the team, including the planner and the social officer. The planner then acknowledged the SEC/GRC, reiterating their key roles in the project, particularly in resolving disputes and ensuring they are properly recorded and minuted. He also emphasized that the main objective of KISIP is tenure regularization.

He thanked the community for their continued support of the project since its introduction and encouraged them to keep up the involvement.

Remarks by the MCA

She encouraged everyone to speak out and provide feedback and comments on plan, she encouraged those who still have disputes to solve them amicably, she noted of the contracted area noting that residents who are outside the boundary have been asking if they can include, therefore Maina B should be grateful for being included this time. And to stay away from politics if they want the success of the project. She noted that the project is funded by world bank and therefore no one will be asked for any money, and the national government is the unit mandated with issuance of titles.

Remarks by the chief officer

He acknowledged everyone in attendance, congratulating them for the valuable feedback they provided after the presentation. He recognized that Maina B should develop into an estate with all essential facilities, such as tarmacked roads, sewer lines, and proper drainage systems. To achieve this, he emphasized the need for an approved plan to be in place.

He thanked the community for their peaceful co-existence and the effective resolution of disputes, encouraging them to maintain this spirit and avoid political interference if they want the project to succeed. As the project nears completion, he reminded them that the main objective—obtaining ownership documents—must remain the focus.

He promised to attend the remaining meetings, ensuring that everyone would be proud of the project's outcome. He also extended greetings from the governor and CECM

Remarks by the consultant

She introduced the consulting team, including planners, sociologist, GIS person, and RAP expert. She thanked the community for their involvement throughout the project, also reiterating KISIP'S main agenda, which is tenure regularization. She encouraged those who still have disputes to make sure they solve them before the end of the project, to ease the process of preparing LOBS, the disputed parcels will be registered under the county government if they remain unsolved. the director then delved into explaining the previous phase of the project including; sec and GRC formation, introduction and project launch drone mapping and picking, preliminary environmental and social screening and socio-economic and physical mapping. Planning laws requires that a draft plan is to be gazetted and the community will be allowed to give comments and feedback on the proposed plan, she encouraged those that weren't registered during socio-economic should be left after the meeting for further directions.

MIN: MNB /02/26/03/2025: Closure and adjournment of the meeting

There being no any other business, the meeting was adjourned at 12pm.

Summary of The Settlement's Key Results and Findings from Socio-Economic Survey

Survey Metric	Key findings
Number of enumerated parcels	The consultant reported that parcels 385 were enumerated out of 397 parcels picked,
Demographic characteristics	• The general population is persons
Settlement structure	External structuring elements include; Siberia to the west, Maina A, Thama Primary & Munyaka Sec. to the east, Maina Schools to the north, settlement extension to the south, Internal structuring elements include; A tarmac road that connects, the settlement to the highway and to Maina A. The settlement exhibits structured parcel and access layout with the current development pattern influenced by a previous unapproved PDP of 1993
Transportation	The consultant emphasized the settlement has a well-structured and hierarchal access networks 12 & 9M roads Standard road sizes with minimal encroachments
Parcel sizes	• A map showing the various parcel sizes was presented to the community. • They were remined of the minimum size of a parcel which is allowed by kisip is 100sqm • It was noted that no parcel was below KISIP's minimum requirement
Social Infrastructure	• Residents were reminded of the social facilities they had proposed during the visioning and participatory planning. • Some of the social facilities included health and educational institutions
Summary of Emerging Issues	The emerging issues from the settlement were summarized and they were informed that: **On Economy** Majority of the residents are low-income earners depending on informal economy High levels of unemployment **On Settlement Structure** The settlement exhibits a well-structured layout. (largely based on the 1993 PDP) Settlement skyline is defined by non-storey developments **For Housing**

Survey Metric	Key findings
	Semi-permanent structures (of wooden walls) dominate the settlement - prone to fire disaster breakouts **Transportation** Generally, the settlement has a well-structured and hierarchical access network. (9-12M) No provisions for NMT Few cases of structures encroaching into the access ways **Infrastructure and Utility Service** Settlement is well connected to the power grid, piped water supply Lack of sewerage network in the settlement Sewerage network and manholes sited in the middle of some of the accesses **Social Infrastructure** The settlement is fairly served with a number of social facilities located within its boundaries Some of the initially designated sites for various public purposes are still retained **Environment** Lack of designated solid waste management sites Water clogging on the lower sides of the settlement- next to R. Gathara
Upgrading priorities	The community members were reminded of their upgrading priorities which included: • Health: 17.20 • Roads: 23.80% • Education: 5.20% • Employment: 7.20% • Security:32.80%

<u>MIN/MNB/ 03/30/03/2025:</u> COMMUNITY VISION PROPOSALS

The residents of the settlement were reminded of the community vision they had discussed at the last meeting

To transform Maina B from an informal settlement to an estate

They were also reminded of the proposals they had contributed during the community visioning and participatory planning, and were informed about which of those proposals had been incorporated into the draft plan's preparation. Following were the proposals;

- Upgrade & improve the access network & line utilities
- Sewerage reticulation system
- Solid waste management
- Develop the market area
- Disaster preparedness

<u>MIN: MNB/04/30/03/2025: PRESENTATION OF DRAFT LOCAL PHYSICAL LAND USE AND DEVELOPMENT PLANS</u>

Residents were given the opportunity to review the draft plans to confirm that their inputs were correctly captured.

She then proceeded to explain the different available options, which included the nil intervention option, and practical option. She also outlined the proposed land uses: commercial, residential, recreational, public, educational, and mixed-use.

She emphasized the importance of everyone carefully understanding the plans and actively contributing to the meeting, as the plan passed would become law once approved. This meant that no further changes could be made after approval, and the plan would apply to all community members. Additionally, she informed residents that the

final plan would consider the locally existing characteristics, resulting in a plan that may not fully adhere to all standard planning regulations.

- **NIL option;** retaining the status quo: No plan proposals and letting the settlement development continue without any regularization guidelines
- **practical option**- this option largely adopts the existing plan layout. It introduces some level of intervention that will suit the existing settlement situation considering the feasibility of applicable proposals with but with modalities/guidelines on how to incrementally redevelop the settlement to desired levels. It's a hybrid of adoptive and conventional standards, this option is presumed best fit thus will have the least impact. This option affected 103 structures, 84 semi-permanent, 13 permanent, 6 temporary. The extent of the impacts ranged from 105-33.75sqm.

Advantages of the Practical option

- The settlement will be more organized in a regular spatial pattern
- A clear road hierarchy will be achieved and allow for efficient accessibility and connectivity within the settlement
- Improved living conditions
- Optimal space utilization
- Allows for intensification and densification of development
- Best for futuristic development
- Vertical developments and horizontally aligned layouts would enhance economies of scale in utilities reticulation and space use
- Security of tenure secured at individual parcel level
- Integrated & sustainable development

Disadvantages

- PAPs
- Costly implementation
- Might require institutional realignment during implementation
- Full Implementation is not immediate- takes time

MIN: MNB/05/30/03/2025: PLENARY AND COMMENTS

The session was led by the KISIP planner who provided a summary of the impacts of the different options. He highlighted that the adaptive option had a minimal impact compared to the conventional one.

CONCERNS/COMMENTS	RESPONSE
A community sought clarification whether the titled parcel will be planned	The project wont plan where there's an already existing title
A resident inquired if parcel 359 would remain as it was or the access road beside it would be extended	The consultant remarked that the project aims at minimizing PAPs and thus the reason for not having an increased width of the road size
A community member wanted to know if Parcel 169 which is currently been used as a sawmill, can could be assigned a different purpose apart from its light industrial designation?	The owner of the parcel corrected that it was individually owned and that he wanted it to be registered for residential use
Can the proposed market be divided into two? Commercial and light industrial?	The community agreed for the space to continue been a market
A resident wanted to know if the parcels demarcated for residential use but are close to roads can be converted to mixed use	The consultant explained that the parcels demarcated as such are so served by 6m roads. To make this mixed use, this would necessitate expanding the roads from 6m to 12m.

MIN: MNB/06/26/03/2025: Closure and adjournment of the meeting

The SEC chairman closed the meeting with a vote of thanks. He expressed his appreciation to the consultant, as well as the county and national government. He also thanked the MCA for their continued support and the community for their support of the SEC/GRC committee. With no further business to discuss, the meeting was adjourned at 4.20pm.

Minutes confirmed by:

1. **Consultant**

Name…… ……Designation……
Signature: …….Date…….

2. **KISIP NPCT (Representative):**

Name…….. …… Designation ……
Signature: ……..Date…….

3. **County CPCT (Representative):**

Name…… …….Designation ……
Signature: ……..Date…….

4. **SEC Representative**

Name…… ……Designation……..
Signature: …….Date……

Attendance Lists

ATTENDANCE LIST

Ministry of Lands, Public Works, Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP 2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR EIGHT (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES PHASE IIC CLUSTER 1

Meeting/ Activity: Draft Plan Validation Date: 25/03/25

Venue: PCMA Church Settlement: MAINA B

No.	Name	Project Designation	Contact	Email address	Signature
1.	MWANGI GICHUKI	Chief officer	0724482375	mwangi.gichuki@gmail.com	
2.	IRENE WACUKA	M.C.A.	0712286677	" "	
3.	RICHARD MUCHIRI	PHYSICAL PLANNER-CGL	0723467806	muchiri@kisip.go.ke	
4.	FREDRICK GACHAGUA	PHYSICAL PLANNER	0700402929	gachagua@cdi.co.ke	
5.	FIONA WACHIRA	ENV. SAFEGUARDS OFFICER-CGL	0724073665	fiona.wangui7@gmail.com	
6.	VICTOR SUNE	KISIP - NPCT	0722327950	victor.sune@gmail.com	
7.	FELITA MWIANGI	LAND SURVEYOR - CGL	0727995882	mwiadi@gmail.com	
8.	Samuel Mburu	KISIP - NPCT	0724292612	[illegible]	
9.	Gertrude Mbogo	KISIP - NPCT	0722-458044	gertrudembogo@gmail.com	
10.	Mwindu Sammy	E&G - GIS Expert	0716242080	mwindu@[illegible]	

06/04

1

ATTENDANCE LIST

Ministry of Lands, Public Works, Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP 2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR EIGHT (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES PHASE IIC CLUSTER 1

Meeting/ Activity: Draft Plan validation Date: 25/03/25

Venue: Settlement: Maina B. SEC/GRC

No.	Name	Project Designation	Contact	Email address	Signature
1.	ANTONY KARANJA	SEC Chairman	0720910934		
2.	Joseph Mwai Ndula	GRC	0726699966		
3.	Rachel Wachira W	GRC	0723052593		
4.	Macharia Kamau	GRC	0722443665		
5.	Robert Kiunga Kuria	GRC Chair	0721328914	kiunga@mail.com	
6.	SUSAN WANJIKU KIMTUA	PWDs	0705132078		
7.	HANNAH WAMBUI KIMANI	WIDOWS	0715130010		
8.	Margaret Kibiru	SEC GRC	0701396275		
9.	JANE MBERE WACHIRA	YOUTH REP	0796352715		
10.	PETER MBUTHIA MUTUMA	YOUTH REP	0717165368		

1

No.	Name	Project Designation	Contact	Email address	Signature
11.	PURITY W. MWENDIA	SEC	0729600916		
12.	MARGARET WANGARI MUHORO	TENANT REP	0798406087		
13.	Samson Mwangi	GRC	0728205648		
14.	Mercy W. KINYUA	Sec.	0728445206		
15.					
16.					
17.					
18.					

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Ministry of Lands, Public Works Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP 2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR EIGHT (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES PHASE IIC CLUSTER 1

County: LAIKIPIA Settlement: MAINA 'B' Venue: P.C.M.A

Meeting/ Activity: PRESENTATION OF DRAFT PLANS Date: 25/3/2025

No.	Name	Sex: Male	Sex: Female	Project Designation	Phone No.	Signature
1.	John Mwangi Matheri	✓		Plot owner	0725359922	
2.	Peter Ndungu Kimani	✓		Plot owner	0723386758	
3.	Charles Thumbi Ngari	✓		Plot owner	0720056345	
4.	Samuel Wangari	✓		Plot owner	0715590177	
5.	Simon Njoki	✓		Plot owner	0745893173	
6.	Mary Wanjiku Kamau	✓		Plot owner	0723210789	
7.	Ann Wanjiku Kariuki		✓	Plot owner.	0720246996	
8.	Eric N. Kariuki	✓			0725326821	
9.	Joy Nyawira Kariuki		✓		0704408850	
	Sub -totals Male/female	09	02			

1

No.	Name	Sex: Male	Sex: Female	Project Designation	Phone No.	Signature
10.	Emily Muthoni		✓	Property owner	0749363748	
11.	Gladys Mwangi		✓	Plot owner	0700814581	
12.	Gospher Waithaka	✓		Plot owner	0714374555	
13.	John Ndungu Njugo	✓		Plot owner	0746668834	
14.	Teresa Wairimu		✓	Plot owner	0721461186	
15.	Margaret Muthoni		✓	Plot owner	0720017116	
16.	Monica Wanjiku		✓	Plot owner	0713665211	
17.	Alice Ndutu		✓	Plot owner	0741932059	
18.	Julia Nyamai Kamau		✓	Plot owner	0729150657	
19.	Joyce Nzenge		✓	Plot owner	0723339323	
20.	Simon Gichuki	✓			0703214679	
21.	Joseph G. Njaacha	✓		Plot owner	0727665023	
22.	Esther Kanyingi		✓	Plot owner	0726107219	
23.	Violet Ndota		✓	Plot owner	0743307178	
24.	Jane Njuba		✓	Plot owner	0723373059	
25.	Phillis W. Kamau		✓	Plot owner	0724748735	
26.	Asha Alisa Amina		✓	Plot owner	0711258054	
27.	Lydiah Wairimu Wangare		✓	Plot owner	0722817995	
28.	Paul Mbere Njeri	✓		Plot owner	0728342617	
29.	Samuel Kiswanjude	✓		Plot owner	0724210408	
30.	Lenda Vamoti	✓	✓	owner	0713877165	
	Sub Totals Male/Female	18	15			

2

No.	Name	Sex: Male	Sex: Female	Project Designation	Phone No.	Signature
31.	Mary Wacuka		✓	Plot owner	0722890934	
32.	Stephen N. Kanyugi	✓		Plot owner	0727963355	
33.	Joseph W. Kibuthia	✓			0712986715	
34.	Alice Njambi		✓	Plot owner	0720411265	
35.	Henry Gathuita Thuire	✓		Plot owner	0727279501	
36.	Zachary Mungai Gitenya	✓		Plot owner	0726 [illegible]	
37.	Monica Wambui		✓	Plot owner	0720277762	
38.	Eunice Wairimu Waithe		✓	Plot Eunice	0759290258	
39.	Solomon Kimani	✓		Plot owner	0725795116	
40.	Mercy N'ya Wera		✓	Plot owner	0723902140	
41.	Peter Muriuki			Plot owner	0721282665	
42.	Lydia Muthoni		✓	Plot owner	0715344091	
43.	John Waweru Ngugi	✓		Plot owner	0704469546	
44.	Fredrick Kanyiri Kibeta	✓		Plot owner	0725491623	
45.	Rosemary Wanjiru		✓	Plot owner	0711287396	
46.	Mary Wairimu Maina		✓	Plot owner	0714379289	
47.	Cyrus Mathari Kamau	✓		Plot owner	0723762173	
48.	Evans Nsorogo Rebo	✓		Plot owner	0790401189	
49.	Esther Wangare		✓	Plot owner	0726887996	
50.	Ann Wambui Gachau		✓	Plot owner	0713305422	
51.	Juguna Wanjiku	✓		Plot owner		
	Sub-Totals Male/Female	11	10			

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ATTENDANCE LIST

Ministry of Lands, Public Works Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP 2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR EIGHT (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES PHASE IIC CLUSTER 1

County: LAIKIPIA Settlement: MAINA 'B' Venue: PCMA

Meeting/ Activity: PRESENTATION OF DRAFT PLANS Date: 25/3/2025

No.	Name	Sex: Male	Sex: Female	Project Designation	Phone No.	Signature
1.	ANTHONY KARANJA	✓		SEC Chairman	0720910934	
2.	JANE MBERE WACHIRA		✓	SEC MEMBER	0796352715	
3.	SAMSON KAMAU KURIA	✓		PLOT OWNER	0725437617	
4.	LECHO MTOKI KAMAU		✓	PLOT OWNER	0711223341	
5.	MARGARET WAITHERA MAINA		✓	PLOT OWNER	0792908555	
6.	JOHNROBERT WAGARO KAMAU	✓		PLOT OWNER	0726589935	
7.	NAOMI KAMAU		✓	PLOT OWNER	0714339702	
8.	ESTHER W KINYUA		✓	PLOT OWNER	0710367946	
9.	DAVID MACHARIA	✓		PLOT OWNER	0721874442	
	Sub -totals Male/female	04	05	PLOT OWNER		

1

No.	Name	Sex Male	Sex Female	Project Designation	Phone No.	Signature
52.	GLADYS KARIUKI		✓	PLOT OWNER	0729934501	
53.	JANE MURIITHI		✓	PLOT OWNER	0710107719	
54.	Wachira KAGO	—	—		0726507805	Wachira
55.						
56.						
57.						

No.	Name	Sex Male	Sex Female	Project Designation	Phone No.	Signature
10.	NICASIO KAGWI KARAU	✓		PLOT OWNER	0729955115	
11.	[illegible]	✓		PLOT OWNER	0720175468	
12.	Daniel [illegible]	✓		PLOT OWNER	0728[illegible]	
13.	JOHN KOSKEI	✓		PLOT OWNER	0721905582	
14.	JAMES MAKUMI KOSKEI	✓		PLOT OWNER	0713306937	
15.	PETER MURIITHI	✓		PLOT OWNER	0708739844	
16.	PETER MBUGUA MAGU	✓		PLOT OWNER	0746393915	
17.	Francis Mwangi Njiru	—		PLOT OWNER	0726794178	
18.	JOSEPH KARIUKI WANJIRU	✓		PLOT OWNER	0726250681	
19.	TERESIA MWAURA NGIRI		✓	PLOT OWNER	0749406692	Mwaura
20.	PETER NDEGWA	✓		PLOT OWNER	0790363019	
21.	Monyere Mumbi Gichuru		✓	PLOT OWNER	0722150996	
22.	Francis Kavonja Njeri	✓		PLOT OWNER	0713321286	
23.	JOSEPH MWANGI KURIA	✓		PLOT OWNER	0742677115	
24.	WACEKA KARAU		✓	PLOT OWNER	0722397232	
25.	ALICE M. GITONGA		✓	PLOT OWNER	0723759687	
26.	Teresia Wanjiru Chege		✓	PLOT OWNER	0701805432	
27.	Mary Wacuthiga Kidotheka		✓	PLOT OWNER	0726[illegible]	
28.	WACHIRA WANJI	✓		PLOT OWNER	0718007760	
29.	Moses Kiam[illegible]	✓		PLOT OWNER	0726[illegible]	
30.	VERONICAH WANGARI		✓	PLOT OWNER	0720662157	
	Sub Totals Male/Female	14	07			

2

No.	Name	Sex Male	Sex Female	Project Designation	Phone No.	Signature
52.	PETER WACHIRA KARIUKI	✓		PLOT OWNER	0718512672	
53.	JOSEPH WANJOHI	✓		PLOT OWNER	0727592173	
54.	MARY MUTHONI LIBITO		✓	PLOT OWNER	0720550434	
55.	Charles M. Mwangi	✓		PLOT OWNER	0720496335	
56.	Martha Wangari Kabuchi		✓	PLOT OWNER	0720409727	
57.	PURITY NJERI		✓	PLOT OWNER	0790640846	
58.	JAMES MWANGI	✓		PLOT OWNER	0715869479	
59.	FRANCIS MWAURA MUINAMI	✓		PLOT OWNER	0722153882	
60.	GOD WACHIRA WAMBUGU	✓		PLOT OWNER	0717775383	
61.	NAVIS GITHAE	✓		PLOT OWNER	0704262955	
62.	CHARLES MWANGI	✓		PLOT OWNER	0706225078	
63.	JAMES MACHARIA	✓		PLOT OWNER	0722335167	
64.	HANNAH HARUN	✓		PLOT OWNER	0725432104	
65.	Reuben Kihoro Ngozoge	✓		PLOT OWNER	0724444185	
66.	NDEGE NJOROGE	✓		PLOT OWNER	0726897581	
67.	ABRAHAM KARAU	✓		PLOT OWNER	0725506403	
68.	Samuel Kavonja	✓		PLOT OWNER	0719176037	
69.	LAWRENCE NGANDU	✓		PLOT OWNER	0721549517	
70.	John Mwangi	✓		PLOT OWNER	0720100576	
	Sub-totals Male/Female	16	03			

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Ministry of Lands, Public Works Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP 2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR EIGHT (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES PHASE IIC CLUSTER 1

County: Laikipia Settlement: Mawa B Venue: P.CMA

Meeting/ Activity: PRESENTATION OF DRAFT PLANS Date:

No.	Name	Sex Male	Sex Female	Project Designation	Phone No.	Signature
1.	ONESMUS GITUMBA NDEGWA	M		PLOT OWNER	0720541266	
2.	STEPHEN MASYOKA WAITA	M		PLOT OWNER	0711222698	
3.	MARGRET MUTHONI KARIUKI		✓	PLOT OWNER	0712672495	
4.	TABITHA WANJIRU		✓	PLOT OWNER	0715932676	
5.	DETERTHMO MUSYOKA	✓		PLOT OWNER	0720[illegible]	
6.	NJUGUNA KERUKI	M		PLOT OWNER	0734504474	
7.	GLADYS M. KARIUKI	F		PLOT OWNER	0729934501	
8.	DANIEL GAMUNA KUSCHAI	—		PLOT OWNER	0723717069	
9.	ERASTUS NYAGHA OTAHI	✓		PLOT OWNER	0722336923	
	Sub -totals Male/female	06	04			

1

No.	Name	Sex Male	Sex Female	Project Designation	Phone No.	Signature
10.	MIRIAM MUTHONI		✓	plot owner	0710569200	
11.	GRACE WAIRIMU NDEGE		✓	plot owner	0704219078	
12.	ROSE WAIRIMU		✓	plot owner	0742587826	
13.	ANNASTASIA WAIRIMU MAINA		✓	plot owner	0706567070	
14.	PAUL NJENGA WAITHAKA	✓		PLOT OWNER	0727152637	
15.	DANIEL KANYORA GACHAU	✓		Plot Owner	0705103512	
16.	GRACE WAIRIMU KIAMA		✓	plot owner	0710364568	
17.	PETER MRUTHIA MUTURIA	✓		plot owner	0716153 68	
18.	LYDIA NYAKABI WAMBUGU		✓	plot owner	0723231802	
19.	RICHARD KINYUI MAINA	✓		plot owner	0729671568	
20.	PAUL MUNYUA MUNGAI	✓		plot owner	0728478404	
21.	HANNAH WANGUI KIAMA		✓	Plot owner	0743671215	
22.	ZACHARIA NJORONGE NGANGA	✓		Plot owner	0726412678	
23.	MARY MAIGWA NDATHI		✓	Plot owner	0724230372	
24.	LUKA NGWARE NGOTHA	✓		Plot owner	0758607615	
25.	CHARLES MAINA MURIU	✓		plot owner		
26.	CHARLES MWIRI MAINA	✓		plot owner	0706567070	
27.						
28.						
29.						
30.						
	Sub Totals Male/Female	09	08			

ATTENDANCE LIST

Ministry of Lands, Public Works Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP 2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR EIGHT (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES PHASE IIC CLUSTER 1

County: Laikipia Settlement: Mawa B Venue: PCMA

Meeting/ Activity: PRESENTATION OF DRAFT PLANS Date: 25/08/2025

No.	Name	Sex Male	Sex Female	Project Designation	Phone No.	Signature
1.	MERCY N. KIAMBA		✓	KLAS KISIPSECK	0728645206	
2.	MACHARIA KAHWAI	✓		GRC	0722413665	
3.	PURITY W. MWENJA		✓	KISIP	0729607446	
4.	Patrick Riungu Ruiru	✓		GRC CHAIR	0721838914	
5.	Samson Malesi	✓		GRC	0742056418	
6.	Rachel Wachuka		✓	GRC	0725052593	
7.	Susan Wanjiku Kimani		✓	PWDs	0705152678	
8.	Hannah Wambui Kimani		✓	WIDOWS	0715130010	
9.	MORRIS MAITHI WAMBUGU	✓			0727163646	
	Sub -totals Male/female	04	05			

No.	Name	Sex Male	Sex Female	Project Designation	Phone No.	Signature
10.	STANELY WAIRUNE MWANGI	✓			0728615354	
11.	JUSTUS NTHIGA KAVINA	✓			0724538377	
12.	JOSEPH NSUGI NJIMA	✓			0726899966	
13.	Josphat Mungai Kachiro	✓			0727173993	
14.	Leah Nyoki Kiria		✓		0702280302	
15.	MARY WANGU KIUTU		✓		0726749862	
16.	Margaret Wangeci Njuguna		✓		0715[illegible]	
17.	Eunice Wangui Kariuki		✓		0727709243	
18.	TERESIA WAIRIMU MURIU		✓		0712422660	
19.	Eunice Wanjiku Kuria		✓		0710672871	
20.	Jesika Nyambura		✓		0710425787	
21.	Eunice Kavuali		✓		0706624209	
22.	VERONICAH WAITHERA KIRATU		✓		0703463525	
23.	Hannah Wangui Kimani		✓		0715927798	
24.	ESTHER WAMBUI GITONGA		✓		0710	
25.	Hannah Wairimu Waweru		✓		0701[illegible]	
26.	Jane Mbula Kinuthia		✓		0733396307	
27.	GLADYS RUGURU GICHUKA		✓	KIPIS	0727337254	
28.	LEAH GATHONI NJUGUNA		✓	"	0[illegible]	
29.	ANNASTACIA WANGARI MUNIA		✓			
30.	MARGARET NJOKI WAMBANA		✓	"	0725409896	
	Sub Totals Male/Female	03	18			

MINISTRY OF LANDS, PUBLIC WORKS, HOUSING, AND URBAN DEVELOPMENT

KENYA INFORMAL SETTLEMENT IMPROVEMENT PROJECT (KISIP) PLANNING, CADASTRAL SURVEYING, AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES PHASE IIC-CLUSTER 1

Project by:

E&G Spatial Consultants Ltd

MINUTES FOR THE PRESENTATION OF SOCIO-ECONOMIC SURVEY FINDINGS, VISIONING, COMMUNITY PARTICIPATORY PLANNING, AND VERIFICATION OF THE PRELIMINARY LIST OF BENEFICIARIES HELD AT PCMA CHURCH IN MAINA B ON WEDNESDAY 19TH FEBRUARY 2025

Agenda

i. Introductions and Preliminaries
ii. Presentation by the consultant – project updates and presentation of socio-economic survey results
iii. Visioning
iv. Community participatory planning
v. Verification of the Preliminary List of Beneficiaries
vi. Adjournment

Members present

Find the lists of attendance attached.

MIN/MNB/ 01/19/02/2025: Preliminaries and Introductions

The meeting started with prayers led by a community member and followed by short speeches from the leaders present.

SEC Chairman: The Chairman of the SEC welcomed all the leaders and community members present at the meeting. He thereafter gave an opportunity to the SEC and GRC members to introduce themselves. He went ahead to thank the NPCT AND CPCT team for their efforts since the beginning of the project to this point. He went ahead to outline the activities that had been undertaken from introduction meetings to the socioeconomic survey that had recently been conducted.

Assistant County Commissioner: she urged everyone to cooperate with the consultant to achieve a successful end to the project. She also encouraged all members to make inquiries concerning the project to achieve full understanding by everyone.

Area Chief: The Area Chief welcomed everyone to the meeting and expressed her gratitude to the consultant and KISIP for bringing the project to her area. She noted that only a few issues

regarding land disputes had come up and that this was a sign that the project was on a smooth course.

CPCT: Under the leadership of the county planner, the team—which included planners, an environmentalist, and a sociologist—was formally introduced. He then expressed his sincere appreciation to both the community and the consultants for their cooperation. Furthermore, he emphasized that the plan preparation activity that had been scheduled on the same day, would be community-centered, thereby underscoring the essential role of participatory planning.

Area MCA: she thanked the CPCT and consultancy for bringing the project to Maina. She also encouraged the residents to take this opportunity to inquire on any matter regarding the project and reminded them that this project was free of charge and fully funded by the World bank. She concluded by extending her sincere appreciation to the consultant for engaging local youth in the execution of the socio-economic survey.

MIN/MNB/ 02/19/02/2025; Presentation by the Project

a. ***Project updates***
   The project team leader invited her team members to introduce themselves. She then emphasized the importance of developing local and physical land use plans which would guide the surveying and beaconing activities. Furthermore, she noted that the preceding socioeconomic survey had been successful and would contribute to the formulation of the draft plans. Additionally, she clarified that Maina A and Maina B represent a single entity, having been divided solely on the basis of contractual acreages.
b. ***Presentation of socio-economic survey***
   The project team leader proceeded to introduce herself and emphasized the significance of the meeting at this critical stage of the project. She urged community members present to encourage their neighbors to attend, highlighting the importance of collective participation.

   She elaborated that the socio-economic survey was conducted to gather essential data regarding:
   - The types of structures present within the project area
   - The total number of parcels within the settlement.
   - The classification of structures within the settlement
   - The population residing within the project area
   - Patterns of land ownership within the settlement
   - The existing infrastructure available in the settlement
   - Among others

She reported that Maina B comprised a total of **399 parcels** that were mapped during the physical mapping exercise, of which **375 parcels** have been successfully enumerated. This indicated that **24 parcels** remain unenumerated.

She reiterated that achieving full enumeration is essential to preventing potential discrepancies in land registration and ownership regularization processes. She further clarified that any parcels left unclaimed by the end of the project will be registered in the name of the county government. In such cases, the respective owners will be required to follow up with the county government for transfer to their names at their own cost**.**

Summary of the settlement's key results and Findings

1. On infrastructural facilities and networks, the community was commended for having observed road reserves, with most being retained at widths between 9m and 12m
2. On education status: it was notable that as much as the achievement of primary education was commendable, the transition to secondary and university education was significantly lower.
3. On population, the settlements pyramid was abnormal with a very small young population, especially below 11 years.
4. Community priority areas for upgrading other than tenure- from the findings, Maina B residents noted the high levels of insecurity experienced in the area and would also inform some of their planning proposals

Other settlement socio-economic traits were as follows:

	Socio-economic Element	Characteristics
1	**Demographic characteristics**	The team leader reported that a total of 1,016 individuals resided within the settlement, with an average household size of approximately 2 persons per HH. She further provided insights into the demographic composition, highlighting the gender distribution as follows: • **Male:** 54% • **Female:** 46% • **Persons with Disabilities (PWDs):** 6.9% of the total population
2	**Economic Profile**	The team leader reported a high unemployment rate within the population, with the following key statistics: • 36.60% of people are unemployed, while 26.90% are casual laborers. • 18.60% of the population engages in livestock keeping and farming. • Up to 81.90% earn between ksh 0 and ksh 5,000. • More than half the population (54.4%) work within the settlement.
3	**Settlement structure**	• The settlement was predominantly residential, accounting for 66% of the land use. • Generally, the settlement had a well-structured hierarchical access network with roads ranging from 9 and 12 m wide. She noted that most roads are of standard size with minimal encroachment. • The settlement has structured parcels and access layout heavily influenced by a previous PDP of 1993
4	**Parcel sizes**	The planner informed the meeting that under normal circumstances, the minimum registrable parcel sizes are 50 ft. x 100ft (460 sq.m) - However, KISIP considers a minimum of 100 sq.m, because informal settlement dwellers are vulnerable populations. The socio-economic survey revealed that the parcel sizes in Maina B settlement are as follows: • 82% above 450 sq. meters • 18% between 220 and 450 sq. meters

		This implies that they all qualified for individual titles; however, any parties that would like to register their parcels jointly were informed they could do so.
5	**Building typology**	She mentioned that the built-up area is 17.61% with the unbuilt area occupying 82.39%. The unbuilt area constituted of the unbuilt sections of individual parcels, areas used for roads and footpaths, school land, etc. She also mentioned that: • There is available space for (re)development and future expansion. • Interventions can be implemented with minimal disruption. • Sufficient space exists for the provision of social facilities. • The current layout supports redevelopment with minimal disturbance to existing structures. She indicated that most housing structures are semi-permanent (72.9%), while 16.5% are temporary, and only 10.6% are permanent.
6	**Land Use**	The majority of the land is used for residential purposes. Public facilities are sufficient, with most being in the surrounding neighborhood (Maina dispensary, Thama primary and Maina schools).
7	**Transportation**	• The settlement is characterized by roads of widths between 9 and 12m • She elaborated that this represents a well-planned transportation and access network with few accommodations that would be made to align them along their lengths
8	**Water supply**	• The main water source is piped water from individual compounds (86.60%). • 4.10% Access water from rivers and streams
9	**Sanitation and hygiene**	• Most of the residents relied on pit latrines (90.70%) • The over reliance on pit latrines exacerbates public health risks, especially with the danger of contamination between solid waste and underground water.
10	**Energy**	• Most residents heavily relied on charcoal for cooking, which is unsustainable and poses respiratory health risks. This accounts for 66.60% of the settlement's population. • In addition to that, 28.30% use firewood as a source of fuel for cooking. • The settlement has good electricity connectivity.
11.	**Waste management**	• Plastics comprise the greatest waste generated at about 54.50%.

		• In addition, the main form of waste disposal for the settlement was burning at 71.30% followed by indiscriminate burning at 18.62%.
12.	**Drainage and stormwater management**	• The settlement slopes towards the south western side where River Gathara is located.
13.	**Social facilities**	The team leader noted that the settlement is largely served by neighbouring public facilities which are sufficient enough for the population. These facilities include: • Maina schools • Thama Primary • Ndururumo secondary school • Nyahururu Munyaka secondary • Maina dispensary
14	**Education**	The education level of people living in the settlement was as follows: • At least 30.35% have attained primary education, 13.3% secondary and 3.6% have no formal education • TVET 1.52%, university education 1.2%
	Priority List	• Security was the highest priority at 32.80% • Roads (23.80%), • Health (17.20%), • Sanitation (8.50%) • Employment at 7.20%.

Following her remarks, she invited the project GIS expert, to lead the next phase of visioning.

MIN/MNB/ 03/19/02/2025: Visioning

The session was chaired by the project GIS analyst, who began by acknowledging all attendees. He emphasized the critical role of road networks in supporting the development of line infrastructure, including sewerage and water reticulation. Additionally, he explained that the constitution mandates public participation in planning processes, insisting that all plots must have access and clearly defined geometries. To articulate a comprehensive vision, he invited residents to identify the primary challenges facing the settlement and suggest potential interventions, as summarized in the table below.

CHALLENGE	INTERVENTION
Access, Motor ability: Liquid waste management - Sanitation, high water table Disaster preparedness	Roads first!!! --- Upgrade & improve the access network & line utilities (Maintain the existing road sizes, fire hydrants
Stormwater management/Drainage	Sewerage reticulation system
Solid waste management	Waste collection services
No market	Develop the market area
Low education transition rates	TVET institutions; ICT centre

The community then went ahead to give three visions as stated below:

1. From an informal settlement "Gishagi" to an estate
2. A settlement with a vibrant economy

3. Maina Vision 2035 - A settlement with upgraded houses and infrastructure

To get a unified common vision, the residents allowed the Consultant to restructure all visions and come up with a composite vision statement that incorporates all the desired aspects.

The amalgamated vision generated for the community was: **Maina Vision 2035: From an Informal settlement "Gishagi" to an Estate with Upgraded Houses, Infrastructure and a Vibrant Economy**

MIN/MNB/ 04/19/02/2025; Participatory Planning Session

The community reached a consensus that all roads should be properly aligned, with widths maintained between 9 and 12 meters. Furthermore, the project team leader emphasized that the social facilities proposed for Maina A would be shared throughout the neighbourhood, including Maina B. She clarified that, although publicly owned plots are not available in Maina B, the proposals for such plots in Maina A, that were developed during the public participation meeting, would apply here as well.

Several residents made additional recommendations:

- One resident suggested that the publicly owned plot in Maina A (MNA/97) be retained as a bus park.
- Another proposed the establishment of a police station, citing high levels of insecurity as identified in the socioeconomic survey under community prioritization.
- Additionally, one resident recommended that the MNA/97 plot be allocated for a vocational training centre aimed at young teenagers and the youth population.
- Another resident also proposed that the utilization of the existing water spring as the primary water source for residents would reduce over reliance on NYAHUWASCO for water provision and be preferably more affordable
- In addition to that, one more resident also proposed for better ways of refuse collection and sewer management in the settlement.
- A resident also proposed for the establishment of street lighting to reduce cases of insecurity.

MIN/MNB/ 05/19/02/2025: Verification

The project team leader informed the community that after the meeting the next exercise will involve verification of the List of Beneficiaries, which contains their details as enumerated. She further explained that there would be different verification desks in the room and provided guidance on how the beneficiaries should organize themselves for the verification exercise.

MIN/MNB/ 06/19/02/2025: Meeting Closure and Adjournment

There being no other business, the meeting ended at 1:00 pm with a word of prayer from a community member. The exercise that followed was the verification of structure owner information as contained in the List of Beneficiaries (LOB).

This exercise commenced at 2:00 pm, right after the adjournment of the community meeting. The following were the key highlights:

- Verification of beneficiaries' details, which involved confirmation of the correctness of the name, photo, ID no, KRA PIN, and enumeration certificate. Once these details were

confirmed, the beneficiary appended their signature against their names. Where errors were noted, the relevant amendments were made by hand, pending subsequent amendments on the official list.

- A total number of **346** turned up for the verification exercise
- **10** new enumerations were conducted, bringing the enumerated parcels to **385**.

The exercise was adjourned at 5:45p.m

Minutes Confirmed by:

Consultant's Representative

Name..... Designation:.....

Signature:.....Date.....

County Representative

Name:.....Designation.....

Signature.....Date.....

KISIP National Representative

Name:.....Designation .....

Signature.....Date.....

SEC Representative

Name:.....Designation .....

Signature.....

Date.....

Attendance List

ATTENDANCE LIST

Ministry of Lands, Public Works Housing and Urban Development

E&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP 2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County Laikipia Settlement Maina B Venue P.C.M.A Church

Meeting/ Activity Pre presentation of Sub-Exp. survey, validation & participatory planning Date 19.2.2025

No.	Name	Project Designation	Contact	Email Address	Signature
1.					
2.	Susan Wendy Odoyo	ACC	0719873753		
3.	Zipporah Maina	Ag. chief	0728989375		
4.	Richard Muchoki	Physical Planner	0723666756 06		
5.	Patrick Gachagua	Physical Planner	0720662929		
6.	Fiona Wangari	Ex. Officer	0724073665		
7.	Diana Wangari	Social Dev. Officer	0700834753		
8.	Joyce Kamau	Sociologist	0725254895		
9.	Julius Ngumbo	RAP/IMP expert E&G	0722223724		
10	Nancy A. Okoodi	Urban Planner	0704490381		

1

No.	Name	Project Designation	Contact	Email Address	Signature
11	Nahashon Mawe	E&G Planner	0703397618		
12	Paul Kigen	E&G Planner	0110061715		
13	Hezron Karia Gathura	E&G – Planner	0723686277		
14	Melinda Sabiny	E&G – GIS Expert	0714 — 500		
15	Jane Teddy	E&G – Planner	0724723862		
16	Frida Muritha	E&G - Planner	0703644098		
17	Hon Irene Wachuka	MCA Kiawamiti Ward	0721322847		
18	Crispin Anthony	LCA	0724920222		
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ATTENDANCE LIST

Ministry of Lands, Public Works Housing and Urban Development

E&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County Laikipia Settlement Maina B Venue P.C.M.A

Meeting/ Activity Presentation of Sub-Exp. Survey findings Date 19th February 2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	Stanley Wanderi Gikonyo	✓		Community member	0726403257	
2.	Julius Mwiti Karuki	✓		Community Member	0721200397	
3.	Margaret Wangari Kibuka		✓	GRC member	0721394275	
4.	Susan Wanjiku Kinyua		✓	SEC Member	0705137078	
5.	Rachael Nyambura Wangu		✓	Community Member	0701778577	
6.	Hannah Wairimu Kimani		✓	SEC Member	0715130010	
7.	Hannah Wairimu Waweru		✓	Community Member		
8.	David Wachira Mwangi	✓		Community Member	0727069470	
9.	Macharia Kahuthi	✓		SEC	0722443665	
	Sub-totals Male/Female	4	5			

1

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	Simon Njuage Mwangi	✓		CRC Member	0728205648	
11	Maurice Maina Wambugu	✓		Community Member	0722153666	
12	Rachael Wangeri Kamau		✓	Community Member	0728411455	
13	Luka Ngware Ngutthi	✓		Community Member	0715660765	
14	Charles Wanjuki Kamau	✓		Community Member	0714339761	
15	Simon Kuria Kamau	✓		Community Member	0723359002	
16	Samson Kamau Kuria	✓		Community Member	0725437517	
17	Patrick Nyagwan Waiyaua	✓		Community Member	0725440150	
18	Elud Maina Karuthi	✓		Community Member	0723445899	
19	Jedidah Wairimu Gateage		✓	Community Member	0723237670	
20	Mary Muguee Mathu		✓	Community Member	0724230373	
21	Joseph Njugi Njoroge	✓		GRC Member	0729599466	
22	Lucy Nungari Ndegwa		✓	Community Member	0723576012	
23	John Kelige Kiige Kelige	✓		Community Member	0721945582	
24	Simon Gichuki Gicheha	✓		Community Member	0703766979	
25	Esther Mwikali Kaeyangi		✓	Community Member	0726107219	
26	Teresia Muthee Mbogo		✓	Community Member	0715356909	
27	Samuel Kage Mwangi	✓		Community member	0726028298	
28	Ruth Wambui Mwangi		✓	Community member	0720661146	
29	David Kinyua Kiruji	✓		Community member	0715421317	
30	Samuel Jane Wambui Mathenge		✓	Community member	0113537242	
	Sub-totals Male/Female	13	8			

2

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
31	Daniel Maiyo Muego	✓		Community Member	0703287093	
32	Jane Nyambura Mukoma		✓	Community Member	0728597384	
33	Charles Maina Muiru	✓		Community Member	0723524705	
34	Miriam Wachira		✓	Community Member	0725711173	
35	Joseph Wangoni Gathuku	✓		Community Member	0727522173	
36	Christopher Kamau Atudu	✓		Community member	0115094320	
37	Joseph Mwangi Kuria	✓		Community Member	0712877115	
38	Teresia Wairimu Muriku		✓	Community Member	0712472640	
39	Robert Kiunga Ruoni	✓		GRC Chairp	0721338914	
40	Naomi Wambui Kamau		✓	SEC Member	0714338702	
41	Patrick Kabahi Gichure	✓		Community Member	0726596595	
42	Elizabeth Wairimu Muraku		✓	Community Member	0725303506	
43	Evah Wangira Gitonga		✓	Community Member	0722985645	
44	Rose Wangiru Kuria		✓	Community Member	0711161637	
45	Joseph Muraya Maina	✓		Community 11	0726975157	
46	Peter Thuo Mwaka	✓		"	0725929234	
47	Ruth Wangare Wakabi		✓	"	0705914913	
48	Esther Muthoni Karanja		✓	"	0110862203	
49	Humphrey Maina Kigathi	✓		"	0721975045	
50	Mary Wangui Wanderi		✓	"	0723164789	
51	Muraya Muraya Wambugu	✓		"	0722716660	
	Sub-totals Male/Female	11	10			

3

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
52	Mary Wangari Ngure		✓	"	0710718878	
53	Fr Moses Mochario Njoroge	✓		"	0720897581	
54	Chris Muturi Wanderi	✓		"	0723333823	
55	Paul Muturi Muiruri	✓		"	0720363000	
56	Jane Wanjiku Mwangi		✓	"	0726403257	
57	Jane Wangari Waithaka		✓	"	0719611568	
58	Lucy N Karogo		✓	"	0710483780	
59	Teresia Wangira Chege		✓	"	0701805077	
60	Jane Muretti		✓	"	0710107719	
61	Angela Gathuri		✓	"	07[illegible]0499810	
62	Paul Nyenga	✓		"	0727132637	
63	Bob Wachira	✓		"	0719775353	
64	Joseph Olucha	✓		"	0795106077	
65	Rosmary Wangui		✓	"	0712787376	
66	Margaret Nyakabi		✓		0797285665	
67	Anastacia Wairimu Maina		✓		0706567070	
68	Samuel Kamau Njoroge	✓			0727094228	
69	John Mwangi Maina	✓		"	0720100576	
70	Stanley Wahome Mukathi	✓		"	0728615353	
	Sub-totals Male/Female	9	10			

Male: 37

Female: 33

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ATTENDANCE LIST

Ministry of Lands, Public Works
Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County LAIKIPIA Settlement MAINA B Venue P.C.M.A

Meeting/ Activity PRESENTATION OF SOCIO-ECONOMIC SURVEY FINDINGS Date 19TH FEBRUARY 2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	Pr. Damian Ndunge Ngatia	✓		Community member	0722165284	
2.	ANTONY KARANJA MJ	✓		Sec Mathathan	0722410931	
3.	Miriam Wangeshi Ndungu		✓	Community member	0722165285	
4.	Anastacia Wangari John Muya		✓	"	0714463245	
5.	Eunice Gaamai Robert Karani		✓	"	0706634209	
6.	Gladys Muthoni Kimani		✓	"	0729934501	
7.	Samuel Wangai Nyange	✓		"	0715650477	
8.	Susan Muthoni Njau		✓	"	0726573820	
9.	Mary Nyambura Kinyua		✓	"	0728465206	
	Sub-totals Male/Female					

1

ATTENDANCE LIST

Ministry of Lands, Public Works
Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County LAIKIPIA Settlement MAINA B Venue P.C.M.A CHURCH

Meeting/ Activity PRESENTATION OF SOCIO-ECON. SURVEY FINDINGS Date 19/2/2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	CHARLES MWANGI MORAGE	✓		Community member	0726496339	
2.	RACHAEL WACHUKA WANJOU		✓	Sec member ~~Community member~~	0723052393	
3.	MARY WANGUI NJOKU		✓	Community member	0726719862	
4.	LYDIA WAIRIMU NJIRU		✓	Community member	0729329978	
5.	SAMUEL KIRU NAMUTHA	✓		Community member	0721850916	
6.	EMILY MUTHONI MBAUNI		✓	community member	0719369708	
7.	RUTH THUMBI		✓	community member	0723281896	
8.	ABRAHAM KIRAGU	✓		community member	0725506903	
9.	PAUL MACHARIA THEURI	✓		Community member	0721602169	
	Sub-totals Male/Female	4	5			

1

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	CHARLES THUMBI NGARE	✓		community member	0726056845	
11	Margaret MUMBI GISHERU		✓	community member	0721850598	
12	CECILIA WANGUI NYAGA		✓	community member	0725750525	
13	Henry Gathuka Ngure	✓		community member	0723298501	
14	Simon Nyogu Ngure	✓		community member	0726090391	
15	David Muiruri Mambo	✓		community member	0717956298	
16	David Joash Mahasamba	✓		community member	0726345185	
17	Mathoni Nyagura		✓	community member	0716591596	
18	Daniel kariuki Gachau	✓		community member	0705102312	
19	Joseph Waweru Wachira	✓		community member	0726397612	
20	Stephen kimbu Muruthi	✓		community member	0726078017	
21	Francis Mwaura Muriuki	✓		community member	0722163862	
22	Henry Masiga Mbedzi	✓		community member	0722557529	
23	Josphat Mungai Wachira	✓		community member	0721713422	
24	John kimani Wachira	✓		community member	0726356061	
25	John Githua kametha	✓		Sec member	0720179668	
26	Lydia Wambui Mdinai		✓	Community member	0726708225	
27	Rosemary Wambui Mwangi		✓	community member	0726856798	
28	Gladys Rugwaru		✓	community member	0723333256	
29	Cecily Wambui Mbugua		✓	community member	0705864710	
30	Leah Njeri kuria		✓	community member	0707230302	
	Sub-totals Male/Female	13	8			

2

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
31	Margret Waithaona Maina		✓	community member	0729015855	
32	Obadiah Mugo Thuo	✓		community member	0714005276	
33	Francis kamau chege	✓		community member	0716502080	
34	Zipporah Muthoni		✓	community member	0726596935	
35	Oliver Nyambi Maingi		✓	community member	0719318127	
36	philip Muchendu Waitethu	✓		community member	0713918535	
37	Esther Wangu kinyua		✓	Sec member	0710368910	
38	Ruben Muangi	✓		community member	0721293252	
39	Cyprus Mathew kamau	✓		community member	0722262173	
40	Richard Muiruri	✓		community member	0725181262	
41	Francis kamanja Njeru	✓		community member	0727678526	
42	Joyce Wangui kagoni		✓	community member	0711259483	
43	Reuben MICHAEL LUNA AHIO	✓		community member	0726157026	
44	Charles Waweru Mwangi	✓		community member	0726725078	
45	Winnie Wangui kamuiki		✓	community member	0727709213	
46	Margret Nyambura Njuguna		✓	community member	0726895569	
47	ISHMAEL INDHRA INDURO	✓		COMMUNITY MEMBER	0724932771	
48	Maina Guchuki	✓		community member	0733910167	
49	Regina Wangari kimani		✓	community member	0725465980	
50	Mary Muthoni		✓	community member	0720556436	
51	John Waweru	✓		community member	0706469561	
	Sub-totals Male/Female	12	9			

3

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
52	Reuben kosgei	✓		community member	0722412720	
53	John Munyiri Mathangani	✓		community member	0723359923	
54	Stephen Nyagura	✓		Sec member	0728963385	
55	patrick Nyagura	✓		community member	0725490150	
56	Salome Wambui Nyamage		✓	community member	0720710116	
57	Jane Ndoka kinuthia		✓	community member	0722396367	
58	Edith Njeri Maina		✓	community member	0716985769	
59	Miriam Wamuyu Nyagu		✓	community member	0748709014	
60	Jane Ndoka Ndungu		✓	community member	0722576205	
61	Margret Muthoni kamuiki		✓	community member	0712672995	
62	Elizabeth Njeri Ngugi		✓	community member	0719351014	
63	Simon kihoro Waweru	✓		community member	0722716638	
64	Mary Nyambura		✓	community member	0712509330	
65	Margaret Njoki Waihana		✓	community member	0725409866	
66	Joseph Dzuchina	✓		community member	0795106077	
67	Francis Mwaniki	✓		community member	0723352416	
68	Mary Wakamina Ngucuga		✓	community member	0727654929	
69	Moses kamuiki	✓		community member	0746482713	
70	Joseph Mwenda Sila	✓		community member	0720413567	
	Sub-totals Male/Female	9	10			

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ATTENDANCE LIST

Ministry of Lands, Public Works
Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County LAIKIPIA Settlement MAINA B Venue P.C.M.A

Meeting/ Activity PRESENTATION OF SOCIO-ECON SURVEY FINDINGS Date 19TH FEBRUARY, 2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	Joseph Nyagwa Kamuiki	✓		Community Member	0725757888	
2.	Leah Nyawira Ndegwa		✓	"	0725807795	
3.	Joseph Wilkome Wanjau	✓		"	0726862387	
4.	Tony Wangari Muraki		✓	"	0712148424	
5.	Jane Wanjiku Rukwaro		✓	"	0729870110	
6.	Margret Wanjiku Muhia		✓	"	0722465037	
7.	Stephen Musyoka Waita	✓		"	0714223698	
8.	PETER Nyaroge Kamuiki	✓		"	0729720597	
9.	Gladys Nduta Kariuki		✓	"	0748381180	
	Sub-totals Male/Female	4	5			

1

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	Caroline Wangui		✓	"	0726657915	C.W.K
11	Violet Ndufa		✓	"	0719309128	
12	Alice Muriuki Gitonga		✓	"	0723159647	
13	Grace Kerubo		✓	"	0701445107	
14	Asha Adijah Amina		✓	"	0112580514	
15	Joseph Gikonyo	✓		"	0723339090	
16	Mary Njambura Kamau		✓	"	0764275947	
17	Gerald Kipkoti Chice	✓		"	0780866806	
18	Alice Wangeshi Waiganjo		✓	"	0715691901	Alice
19	Esther Wangeshi Muiruri		✓	"	0711449463	
20	Jane Wangari Ndirangu	✓		"	0725774245	
21	Elvid Mathu Kanyunge	✓		"	0724858078	
22	Zilporah Muriuki		✓	"	0727039139	
23	Veronicah Wangeshi Wachira		✓	"	0720821159	
24	Daniel Kipkoti Kipkoti	✓		"	0728039498	
25	Lydiah Wathira Wangethe		✓	"	0721312495	
26	Francis Njoki Muiruri	✓		"	0715462611	
27	Hannah Muthoni Kabiru		✓	"	0711963183	
28	Virginiah Muthoni Gichuki		✓	"	0710765563	
29	Esther Wangeshi Gaithi		✓	"	0725747797	
30	Benald Kirabiri Gathigi	✓		"	0723579341	
	Sub-totals Male/Female	7	14			

2

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
31	Naomi Wangeshi Ngange		✓	"	0714437914	NW
32	Anne Njeri Wachira		✓	"	0721148212	
33	Paul Muwandai Kiritu	✓		"	0718515099	
34	David Muiruri Thuo	✓		"	0725215535	
35	Wachire Waho	✓		"	0718007066	
36	Peter Murethi Gachuhi	✓		"	0703381755	
37	John Ndufu Nduku Muga	✓		"	0714668874	
38	Caroline Wambui Wawira		✓	"	0723593597	
39	Joseph Muranga Kuria	✓		"	0114800330	
40	David Ndungu Kiratu	✓		"	0721260511	
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51						
	Sub-totals Male/Female					

3

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ATTENDANCE LIST

Ministry of Lands, Public Works
Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County LAIKIPIA **Settlement** MAIRA B **Venue** P.CMA

Meeting/ Activity PRESENTATION OF SOCIO ECONOMIC SURVEY **Date** 19th February 2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	Leah Wagiini		✓	Community Member	0718514252	
2.	Naomi Wangui Gathigi		✓	"	0718861862	
3.	Monitah Wanja		✓	Community member	0724358332	
4.	Lawer Wangui		✓	"	0726887936	
5.	Samuel Kamau Wambugu	✓		"	0720439212	
6.	Jacob Muthoni Kiguru		✓	"	0710435939	
7.	Lucy Wangu Njuguna		✓	"	0716468701	
8.	Albert Ndiritu Kiggen	✓		"	0717206831	
9.	John Mugaay	✓		"	0714439771	
	Sub-totals Male/Female					

1

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	Mary Asma		✓	Community Member	0740496516	
11	Mary Wangechi Muangi		✓	"	0727706686	
12	Margaret Njeri		✓	"	0715823705	
13	David Gichuhi	✓		"	0724947269	
14	Mary Muruku		✓	"	0734464416	
15	Grace Nyokabi Waweru		✓	"		
16	Lucy Muchiri		✓	"	0712101148	
17	Leah Waweru		✓	"	0759396165	
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	Sub-totals Male/Female					

2

ATTENDANCE LIST

Ministry of Lands, Public Works
Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County LAIKIPIA **Settlement** MAIRA B **Venue** P.CMA

Meeting/ Activity PRESENTATION OF SOCIO -ECONOMIC SURVEY FINDINGS **Date** 19/2/2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	Lydia Muthoni Maingi		✓	community member	0715616081	
2.	Peter Wachira Kamuiki	✓		community member	0718517672	
3.	Tabitha Wanjiru Kamangara		✓	community member	0715936616	
4.	Ruth Muthoni Njenga		✓	community member	0721144195	
5.	Patrick Mathenge Wachuka	✓		community member	0725546691	
6.	Lydia Nyokabi Wambugu		✓	community member	0723231502	
7.	Virginia Muthoni Mbugua		✓	community member	0726307166	
8.	Esther Wanjiku Ndungu		✓	community member	0720511477	
9.	Margaret Nyanjui Wathiku		✓	community member	0729986793	
	Sub-totals Male/Female	2	7			

1

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	Tabitha Muthoni Joshua		✓	community member	0716526121	
11	David Gichiri Wachira	✓		Community member	0704262255	
12	Mary Wachinga		✓	Community member	0745394921	
13	Margaret Leri		✓	Community member	0723312966	
14	Elizabeth Wangari		✓	Community member	0718855828	
15	Simon Ngeke	✓		Community member	0720824202	
16	Virginah Gigiri Wathaka		✓	Community member	0703431321	
17	Martha Wangari Muthee		✓	Community member	0705832460	
18	Peter Mbuthia Muiruri	✓		Community member	0721165268	
19	Ruth Kamau		✓	Community member	0729303995	
20	Damaris Maruhi		✓	Community member	0729905598	
21	Elizabeth Wanjiku Wachira		✓	Community member	0723339883	
22	Anthony Muiruri Muiruri	✓		Community member	0728832811	
23	Nancy Wangeri Wambugu		✓	Community member	0712832628	
24	Christopher Wanja Thuo		✓	Community member	0723559925	
25	Denis Ndirangu Temba	✓		Community member	0790401189	
26	Simon Maina Ndirange	✓		Community member	0718537138	
27	Peter Kiarelio	✓		Community member	0790339499	
28	Leah Njeri Njenga		✓	Community member	0717386130	
29	Grace Mangusi		✓	community member	0729147066	
30	Esther Njeri Mwangi		✓	Community member	0714357678	
	Sub-totals Male/Female	7	14			

2

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
31	Caroline Wanjiku Muchangi		✓	Community member	0799909239	
32	Lydia Wamuchii		✓	Community member	0712877155	
33	Samuel Mbaru Kamande	✓		community member	0792110105	
34	Lawrence Mamo	✓		community member	0726198517	
35	Rosemary Wangari Thoni		✓	community member	0723816195	
36	Mary Nyazivi Waithaka		✓	community member	0725719691	
37	Mary Muthoni Mwangi		✓	community member	0702883376	
38	Kenny Nzambu Mutonga		✓	community member	0723114181	
39	Martin Kimia Maina	✓		community member	0726478365	
40	Rebecca Muthoni Gitonga		✓	community member	0723777019	
41	Wachuka Kamani		✓	community member	0722397232	
42	David Mbiangya Muthoni	✓		community member	0746415521	
43	Zachary Munga Gikonjo	✓		"	0723817541	
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	Sub-totals Male/Female	4	8			

3

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	Mary Mambu Maina		✓	Community Member	0743797289	
11	Margret Wangari		✓	Community Member	0798406287	
12	THE MOTHER WACHIRA		✓	SGC MEMBER	0796352715	
13	Jacob Gachara Kariuki	✓		Community Member	0758741045	
14	Gladys Mumbi Mwangi		✓	Community Member	0700916161	
15	Margret Njeri Mugwe		✓	Community Member	0713793045	
16	Daniel Kingori	✓		Community Member	0723717069	
17	Juniet Mathenia Gitonga	✓		Community Member	0724167794	
18	Hannah Nambu Kamau		✓	Community Member	0759277981	
19	Emily Wangari		✓	Community Member	0703905036	
20	Virginia Mugwe Mwangi		✓	Community Member	0729981963	
21	Joyce Waimaka Maingi	✓		Community Member	0714374555	
22	Mary Nyawira Muriithi		✓	Community Member	0727307113	
23	Rose Wairimu @Kibugi		✓	"	0742887826	
24	Veronah Wairimu Kiratu		✓	"	0705463555	
25	Damaris Wairimu Wachira		✓	"	0710837245	
26	Hannah Ngina		✓	"	0110504761	
27	Francis Muiru Kiratu	✓		"	0721119284	
28	Hannah Wangui Kuria		✓	"	0711649537	
29	Martha Wangari Kahochi		✓	"	0726409727	
30	Leah Njeri		✓	"	0725874869	
	Sub-totals Male/Female					

2

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
31	Stephen Ngumo	✓		Community Member	0795312602	
32	Rocheal Njeri Karau		✓	"	0711223361	
33	Lucy Wangui		✓	"	0726459337	
34	Joseph Mbacha	✓		"	0727965023	
35	Joyce Wambui Ngugumo		✓	"	0705512406	
36	Teresia Wamaitha Mugo		✓	"	0726755660	
37	Nicholas Kimathi	✓		"	0729398671	
38	Sarah Margaret Ngumo Gitonga		✓	"	0745731261	
39	Nicasio Kagoi Karau	✓		"	0727785613	
40	Joseph Wangombe Mwaura	✓		"	0712876715	
41	Francis Maina	✓		"	0726796173	
42	Cosmas G. Ndegwa	✓		"	0726581266	
43	David Macharia	✓		"	0723573613	
44	Mary Wanja		✓	"	0769504100	
45	Esther Wambui		✓	"	0782657628	
46	Mary Wangui		✓	"	0797925618	
47	Ann Wanjiru		✓	"	0726521893	
48	Esther Wanjiru		✓	"	0719726609	
49	Monicah Wanjiru		✓	"	0713665211	
50	Teresa Nyawira		✓	"	0714046602	
51	Margaret Wanjiru		✓	"	0718514397	
	Sub-totals Male/Female					

3

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
52	Rose Muriuki Mbura	✓		Community Member	0723482062	
53	Grace Wairimu Mwangi		✓	"	0700900119	
54	Wachia Kago	✓		"	0726507805	
55	ALBERT WACHIRA WACHIRA	✓		"	0799853352	
56	FATUMA WAMBIRU KAMAU		—	"	0783047231	
57	WILSON K. KAMAU	✓		"	0721610177	
58	PATRICK NJERI		✓	"	0790860846	
59	PETER Ndungi Kingori	✓		"	0723966756	
60	JOHN MUMBI MWAURA	✓		"	0723381696	
61	ALICE NJAMBI		✓	"	0720414865	
62	Margaret Wanjiru Gathungi			"	0720881693	
63	Leah Gathoni Muiruri		✓	"	0796510710	
64	DIANA NJERI Ngunga		✓	"	0748374502	
65	SAMUEL MWAURA NDIONGE	✓		"	0718537135	
66	Hannah Nyambura		✓	"	0725432104	
67	Juniet Gathiga Kamau	✓		"	0726556099	
68	Agnes Wanjiru Gitonga		✓	"	0701442373	
69	Naomi Muthoni Ndiritu		✓	"		
70	James Mwangi	✓		"	0715889479	
	Sub-totals Male/Female					

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ATTENDANCE LIST

Ministry of Lands, Public Works Housing and Urban Development

E&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP 2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County Laikipia **Settlement** MAIHA B **Venue** P.C.E.A CHURCH

Meeting/ Activity Pre Implementation of Socio Econ Survey, Validation & Participatory Planning **Date** 19.2.2025

No.	Name	Project Designation	Contact	Email Address	Signature
1.					
2.	Susan Wendy Odoyo	ACC	0719873753	susan.wendy@gmail.com	
3.	KIPPORAH MAIHA	Ag. chief	0722993375		
4.	RICHARD MUCHOKI	PHYSICAL PLANNER	0723667506	muchokirichard@gmail.com	
5.	Patrick Gachagua	Physical Planner	0700422929		
6.	Flower MAOHIRA	Ed. Informants Officer	0724073665		
7.	Diana Wangari	Social Dept Officer	0700634753	dwangari48@gmail.com	
8.	Jane Kamau	Sociologist	0725754495		
9.	Julius Ngunndo	KIP SMP EXPERT E&G	0722287316		
10	NANCY A. OKOOOL	URBAN PLANNER	0714460381		

1

No.	Name	Project Designation	Contact	Email Address	Signature
11	Nehemiah Mwaniki	E&G Planner	0790839618		
12	Paul Kigen	E&G Planner	0110061715	kigenkipsigis@gmail.com	
13	HEZRON RAGIA GAMURA	E&G — PLANNER	0724692771		
14	MUINDE ISAAHAY	E&G — GIS EXPERT	0714 — 506		
15	JACK TOROY	E&G — Planner	0729723502		
16	Frida Muritha	E&G - Planner	0703646098	muritha@gmail.com	
17	HON IRENE WACHUKA	MCA KWAMATI WARD	0721228617		
18	CHUPHI AMUNGA	LCA	0724928722		
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2

ATTENDANCE LIST

Ministry of Lands, Public Works
Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County LAIKIPIA Settlement MAINA B Venue P.C.M.A

Meeting/ Activity PRESENTATION OF SOCIO-ECON. SURVEY FINDINGS Date 19TH FEBRUARY 2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	Stanley Wander Gikonyo	✓		Community Member	0726403257	
2.	Julius Merigi Kariuki	✓		Community Member	0721200393	
3.	Margaret Wangari Kilbury		✓	GRC member	0701394275	
4.	Susan Wanjiku Kingira		✓	SEC Member	0705137078	
5.	Rachael Nyambura Wangu		✓	Community Member	0701778577	
6.	Hannah Wambui Kimani		✓	SEC Member	0715130010	
7.	Hannah Wairimu Waweru		✓	Community Member		
8.	David Wachira Mwangi	✓		Community Member	0727069470	
9.	MACHARIA KAHUAI	✓		SEC	0722443665	
	Sub-totals Male/Female	4	5			

1

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	Samson Njuage Mwangi	✓		CRC Member	0728205648	
11	Morris Maina Wambugu	✓		Community Member	0722153666	
12	Rachael Wangeci Kamau		✓	Community Member	0728401455	
13	LUKA NGUGURE NGUTHI	✓		Community Member	0715660765	
14	Charles Wanjuki Kamau	✓		Community Member	0714339761	
15	Simon Kuria Kamau	✓		Community Member	0723359007	
16	Samson Kamau Kuria	✓		Community Member	0725437513	
17	Patrick Nyugina Wairaine	✓		Community Member	0725400150	
18	Elud Maina Karushi	✓		Community Member	0727445499	
19	Jedidah Wairimu Gichage		✓	Community Member	0723227670	
20	Mary Muguire Mathu		✓	Community Member	0724230372	
21	Joseph Njugi Njiru	✓		GRC Member	0729649466	
22	Lucy Nuegeri Ndegwa		✓	Community Member	0727576012	
23	John Kariuki Kuge Keigei	✓		Community Member	0721495582	
24	Simon Gichuhi Gicheha	✓		Community Member	0703276674	
25	Esther Mwihaki Kaeyungi		✓	Community Member	0726107219	EM
26	Teresia Muthee Mbogo		✓	Community Member	0718356909	TEYPS
27	Samuel Kage Mwangi	✓		Community Member	0720238258	
28	Ruth Wambui Mwangi		✓	Community Member	0720661146	
29	David Kinyua Kinji	✓		Community Member	0715421317	
30	Samuel Jane Wambui Mutenge		✓	Community member	0113537242	
	Sub-totals Male/Female	13	8			

2

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
31	Daniel Mainu Muoga	✓		Community Member	0703287093	
32	Jane Nyambura Muthoma		✓	Community Member	0728697784	
33	Charles Maina Muiru	✓		Community Member	0722524765	
34	Miriam Wachira		✓	Community Member	0725114123	
35	Joseph Wangoshi Gaithuru	✓		Community Member	0727522173	
36	Christopher Kamau Atudu	✓		Community Member	0115054320	
37	Joseph Mwangi Kuria	✓		Community Member	0713817113	
38	Teresia Wairimu Muriku		✓	Community Member	0712422640	
39	Robert Kiunga Runu	✓		GRC Chair	0721338914	
40	Naomi Wangari Kamau		✓	SEC Member	0714337707	
41	Patrick Kababu Gichure	✓		Community Member	0726976595	
42	Elizabeth Wambui Murakoru		✓	Community Member	0725303500	
43	Evah Wangira Githaiga		✓	Community Member	0722983645	
44	Rose Wangini Kuria		✓	Community Member	0711161637	
45	Joseph Muraya Maina	✓		Community "	0726979154	
46	Peter Thuo Mwetia	✓		"	0725929734	
47	Ruth Wangare Wekabi		✓	"	0705944913	
48	Esther Muthoni Karanja		✓	"	0110862203	
49	Humphrey Maina Kigathi	✓		"	0721975045	
50	Mary Wangui Wanderi		✓	"	0727144787	
51	Jane Mureithi Wambugu	✓		"	0727179660	
	Sub-totals Male/Female	11	10			

3

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
52	Mary Wangari Ngure		✓	"	0710718878	
53	Fr Moses Mochario Njoroge	✓		"	0720897581	
54	Chris Mutua Wanderi	✓		"	0723337821	
55	Paul Muriuki Muiruri	✓		"	0720363000	
56	Jane Wanjiku Muiruri		✓	"	0726403257	
57	Jane Wangari Waithaka		✓	"	0719611568	
58	Lucy N Karaga		✓	"	0710483780	
59	Teresia Wangari Chege		✓	"	0701805072	
60	Jane Mureithi		✓	"	0710107719	
61	Angela Gathoni		✓	"	0720440810	
62	Paul Njoroge	✓		"	0727132637	
63	Bob Wachira	✓		"	0719775353	
64	Joseph Olucheng	✓		"	0795106077	
65	Rosmary Wangui		✓	"	0711287376	
66	Margaret Nyakabi		✓	✓	0797285665	
67	Anastacia Wairimu Maina		✓	✓	0706567070	
68	Samuel Kamau Njoroge	✓		✓	0727094228	
69	John Mwangi Maina	✓		"	0720100576	
70	Stanley Wahome Mukoshi	✓		"	0728615332	
	Sub-totals Male/Female	9	10			

Male: 37
Female: 33

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ATTENDANCE LIST

Ministry of Lands, Public Works
Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County LAIKIPIA Settlement MAINA B Venue P.C.M.A

Meeting/ Activity PRESENTATION OF SOCIO-ECONOMIC SURVEY FINDINGS Date 19TH FEBRUARY 2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	Fr Damian Ndungu Ngatia	✓		Community Member	0722165285	
2.	ANTONY KARANJA	✓		SEC Chairman	0724910781	
3.	Miriam Wangethi Ndungu		✓	Community Member	0722165285	
4.	Anastacia Wangare John Muya		✓	"	0714453345	
5.	Eunice Gathoni Robert Karani		✓	"	0706834209	
6.	Gladys Muthoni Kamau		✓	"	0729834501	
7.	Samuel Wangui Njoroge	✓		"	0715650477	
8.	Susan Muthoni Njau		✓	"	0725573820	
9.	Mary Nyawira Kinyua		✓	"	0728445206	
	Sub-totals Male/Female					

1

ATTENDANCE LIST

Ministry of Lands, Public Works
Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County LAIKIPIA Settlement MAINA B Venue P.C.M.A (CHURCH)

Meeting/ Activity PRESENTATION OF SOCIO-ECON. SURVEY FINDINGS Date 19/2/2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	CHARLES MWANGI MURAGE	✓		Community member	0720196329	
2.	RACHAEL WACHUKA WANGOU		✓	Sec member ~~Community member~~	0723059393	
3.	MARY WANGUI KIUTU		✓	Community member	0726718862	
4.	LYDIA WAIRIMU NTIBE		✓	Community member	0729329978	
5.	SAMUEL KIBAU WAMAITHA	✓		Community member	0721150596	
6.	EMILLY MUTHONI MBAUNI		✓	Community member	0719363768	
7.	RUTH THUMBI		✓	Community member	0723381896	
8.	ABRAHAM KIBAGU	✓		Community member	0725506903	
9.	PAUL MACHARIA THEURI	✓		Community member	0721602163	
	Sub-totals Male/Female	4	5			

1

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	CHARLES THUMBI NGARE	✓		community member	0720058625	
11	Margaret MUMBI GISHERU		✓	community member	0722150596	
12	CECILIA Wangui Nyaga		✓	community member	0725750525	
13	Henry Gathuku Mburu	✓		community member	0722729501	
14	Simon Njogu Ngure	✓		community member	0726690391	
15	David Muimi Mambo	✓		community member	0717956298	
16	David Joash Mahasomba	✓		community member	0726315185	
17	Mutheni Nyagura		✓	community member	0716159596	
18	Daniel Kayaza Gachau	✓		community member	0705102312	
19	Joseph Wenu Wachira	✓		community member	0726397462	
20	Stephen Kimitu Muruthi	✓		community member	0720078017	
21	Francis Muwana Murami	✓		community member	0726163862	
22	Henry Masiga Mbeloti	✓		community member	0722557579	
23	Josphat Mungai Wachira	✓		community member	0727173622	
24	John Kanimi Wachira	✓		community member	0726256061	
25	John Githua Kometha	✓		Sec member	0720179668	
26	Lydia Wambui Ndirai		✓	Community member	0726708225	
27	Rosemary Wambui Mwangi		✓	community member	0720856778	
28	Gladys Rugami		✓	community member	0727337256	
29	Cecily Wambui Mbugua		✓	community member	0705866710	
30	Leah Njoki Kuria		✓	community member	0707230302	
	Sub-totals Male/Female	19	8			

2

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
31	Margret Waithaka Maina		✓	community member	0729918855	
32	Obadiah Mbugua Thua	✓		community member	0716005276	
33	Francis Kamau Chege	✓		community member	0716502080	
34	Zipporah Muthoni		✓	community member	0726596935	
35	Oliver Nyambi Maingi		✓	community member	0719318127	
36	Philip Muchendu Waitethu	✓		community member	0713918535	
37	Esther Wangu Kinyua		✓	Sec member	0710389110	
38	Reuben Mwangi	✓		community member	0721293257	
39	Cyrus Mathari Kamau	✓		community member	0727262173	
40	Richard Muraguri	✓		community member	0725181262	
41	Francis Kamanja Nyeri	✓		community member	0727678520	
42	Joyce Wangui Kagoni		✓	community member	0726259482	
43	REUBEN MUSAL LUNG'AHO	✓		community member	0726757026	
44	Charles Waweru Mwangi	✓		community member	0726225078	
45	Winnie Wangui Kariuki		✓	community member	0727709213	
46	Margret Nyambura Njuguna		✓	community member	0726995569	
47	ISHMAEL MOHBA MOYO	✓		community member	0724932771	
48	Maina Gichuki	✓		community member	0733910167	
49	Regina Wangari Kimani		✓	community member	0725116980	
50	Mary Muthoni		✓	community member	0720550436	
51	John Waweru	✓		community member	0706469561	
	Sub-totals Male/Female	12	9			

3

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
52	Reuben Kosgei	✓		community member	0722112720	
53	John Mungai Mathangani	✓		community member	0725559923	
54	Stephen Nyagura	✓		Sec member	0728963383	
55	Patrick Nyagura	✓		community member	0725690150	
56	Salome Wambui Nyamage		✓	community member	0720710116	
57	Jane Mbula Kiruthia		✓	community member	0722396307	
58	Edith Njeri Maina		✓	community member	0716857769	
59	Miriam Wamuyu Njagu		✓	community member	0714870914	
60	Jane Mbula Ndungu		✓	community member	0722576205	
61	Margret Muthoni Kariuki		✓	community member	0726672995	
62	Elizabeth Njeri Ngugu		✓	community member	0719331014	
63	Simon Kihara Waweru	✓		community member	0727210638	
64	Mary Nyambura		✓	community member	0712509330	
65	Margret Njoki Wainana		✓	community member	0725409566	
66	Joseph Kiuchina	✓		community member	0795106077	
67	Francis Muraniki	✓		community member	0723352216	
68	Mary Wakaminia B Ngucuga		✓	community member	0727654929	
69	Moses Kariuki	✓		community member	0794182713	
70	Joseph Muenda Sila	✓		community member	0720613567	
	Sub-totals Male/Female	9	10			

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ATTENDANCE LIST

Ministry of Lands, Public Works Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County LAIKIPIA **Settlement** MAINA B **Venue** P.C.M.A

Meeting/ Activity PRESENTATION OF SOCIO-ECON SURVEY FINDINGS **Date** 19th FEBRUARY, 2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	Joseph Nyagwa Kariuki	✓		Community member	0725 351 888	
2.	Leah Nyawira Ndegwa		✓	"	0725 807795	
3.	Joseph Wilkome Iliaru	✓		"	0726862387	
4.	Tony Wangui Muraki		✓	"	0712 148 624	
5.	Jane Wanjiku Rukwaro		✓	"	0724 870 110	
6.	Margret Wangiku Muhia		✓	"	0722 465037	
7.	Stephen MUSYOKA WAITA	✓		"	0711 223 698	
8.	PETER Nyaoage Kariuki	✓		"	0724 240 592	
9.	Gladys Nduta Karusi		✓	"	0748 381180	
	Sub-totals Male/Female	4	5			

1

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	Caroline Wangui		✓	"	0726652915	
11	Violet Nduta		✓	"	0716 309128	
12	Alice Muriage Ngungi		✓	"	0723758647	
13	Grace Kerubo		✓	"	0701445107	
14	Asha Adijah Amina		✓	"	0112580514	
15	Joseph Gakenya	✓		"	0723339090	
16	Mary Nyambura Kamau		✓	"	0704275947	
17	Gerald Lafithi Chira	✓		"	0740846806	
18	Alice Wanjiku Kilakeza		✓	"	0715694901	
19	Esther Wanjiku Mwangi		✓	"	0711449443	
20	James Wanyiri Ndirithi	✓		"	0725774245	
21	Elud Mathu Kenyenge	✓		"	0724858078	
22	Zillorah Muringe		✓	"	0727039139	
23	Veronicah Wangari Wachira		✓	"	0720852159	
24	Bernard Kariuki Kamau	✓		"	0728039498	
25	Lydiah Wathira Wangeshe		✓	"	0721312495	
26	Francis Njai Mwangi	✓		"	0725462664	
27	Hannah Muthoni Kabeel		✓	"	0711396383	
28	Virginiah Muthoni Gichuki		✓	"	0710765563	
29	Esther Wangiku Gaithi		✓	"	0726743797	
30	Benard Kirani Gakuji	✓		"	0723579341	
	Sub-totals Male/Female	7	14			

2

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
31	Naomi Wakiera Ngaruge		✓	"	0714 437 914	
32	Anne Njeri Wachiori		✓	"	0721 148 212	
33	Paul Muendani Kiruku	✓		"	0714 515 099	
34	David Muoawa Thua	✓		"	0725 215 535	
35	Wachire Wabo	✓		"	0718 007060	
36	Peter Murethi Gachuhi	✓		"	0703381755	
37	John Ndundu Muga	✓		"	0714 666924	
38	Caroline Wambui Wawira		✓	"	0723 593 597	
39	Joseph Muronga Kuria	✓		"	0114 800 230	
40	David Ndungu Kiaru	✓		"	0712260341	
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	Sub-totals Male/Female					

3

ATTENDANCE LIST

Ministry of Lands, Public Works Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER I

County LAIKIPIA **Settlement** MAWA B **Venue** P CMA

Meeting/ Activity PRESENTATION OF SOCIO ECONOMIC SURVEY **Date** 18th February 2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	Leah Wagithi		✓	Community Member	0718514252	
2.	Naomi Wangu Gathigi		✓	"	0718861862	
3.	Nancy Wanja		✓	Community member	0724358732	
4.	Peter Wangui		✓	"	0726887936	
5.	Samuel Kamau Wambugu	✓		"	0720439212	
6.	Janina Muthoni Kiguru		✓	"	0710425929	
7.	Lucy Wangu Njuguna		✓	"	0716468701	
8.	Alfred Ndiritu Kogou	✓		"	0717204839	
9.	John Mugaa	✓		"	0745439771	
	Sub-totals Male/Female					

1

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	Mary Asoni		✓	Community Member	0740496516	
11	Mary Wangechi Mwangi		✓	"	0727706686	
12	Margaret Njeri		✓	"	0715823705	
13	David Gachuhi	✓		"	0724967264	
14	Mary Muchiri		✓	"	0734486418	
15	Grace Nyokabi Waleen		✓	"		
16	Lucy Muchiri		✓	"	0713101198	
17	Leah Wairimu		✓	"	0758396165	
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30						
	Sub-totals Male/Female					

2

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
31	Caroline Wambui Muchangi		✓	Community member	0799909239	
32	Lydia Wamuchi		"	Community member	0712877155	
33	Samuel Mbaru Kamande	✓		community member	0792119005	
34	Lawrence Mambo Mambo	✓		community member	0721549517	
35	Rosemary Wangui Thoni		✓	community member	0723816195	
36	Mary Nyamwai Waithaka		✓	community member	0725719691	
37	Mary Muthoni Mwangi		✓	community member	0710238337	
38	Jenifer Wambui Mutonya		✓	community member	0723714481	
39	Martin Kimia Maina	✓		community member	0726478365	
40	Rebecca Muthoni Gitonga		✓	community member	0722777079	
41	Wachuka Kanani		✓	community member	0722397232	
42	David Mbwangu Muthoni	✓		community member	0746415521	
43	Zachary Mugga Gikonyo	✓		"	0725817561	
44						
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	Sub-totals Male/Female	4	8			

3

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	Tabitha Muthoni Joshua		✓	community member	0716626121	
11	DAVID GITHAE MASHARIA	✓		Community member	0704262255	
12	Mary Wachinga		✓	Community member	0768394921	
13	Margaret Leri		✓	Community member	0723312966	
14	Elizabeth Wairugiri		✓	Community member	0718858528	
15	Simon Ngeke	✓		Community member	0720224202	
16	Virginah Figuni Waithaka		✓	Community member	0708491921	
17	Martha Wanjiru Muthee		✓	Community member	0705834960	
18	Peter Mbuthia Muharia	✓		Community member	0791653768	
19	Violet Kamau		✓	Community member	0729303795	
20	Damaris Maruhi		✓	Community member	0729905378	
21	Elizabeth Wamiriki Wachira		✓	Community member	0723779983	
22	Antony Muiruri Mutisia	✓		Community member	0728832811	
23	Mary Wangeri Wambungu		✓	community member	0712422628	
24	Cathryn Wanja Thuo		✓	Community member	0782551925	
25	Evans Ndorange Tembo	✓		Community member	0790401189	
26	Samuel Maina Mwange	✓		Community member	0718537138	
27	Peter Kavaro	✓		Community member	0790739499	
28	Leah Nati Njenga		✓	Community member	0711786130	
29	Grace Muruguri		✓	community member	0729467066	
30	Esther Nzoki Mwanzau		✓	Community member	0716332378	
	Sub-totals Male/Female	7	14			

2

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
10	Mary Wambui Maina		✓	Community Member	0714379289	
11	Margaret Wangari		✓	Community Member	0798406087	
12	JANE MUERE WACHIRA		✓	SEC MEMBER	0796352915	
13	Jacob Gachoka Kariuki	✓		Community Member	0758741045	
14	Gladys Muthoni Mwangi		✓	Community Member	0700516181	
15	Margaret Njeri Mugue		✓	Community Member	0713793045	
16	Daniel Kingori	✓		Community Member	0723717069	
17	James Mochoria Githae	✓		Community Member	0726167794	
18	Hannah Wambui Kamau		✓	Community Member	0715927981	Hannah K.
19	Emily Wangari		✓	Community Member	0703903036	
20	Virginia Mugure Mwangi		✓	Community Member	0729851963	
21	Josphat Kaimara Maingi	✓		Community Member	0714374555	
22	Mary Nyawira Muriithi		✓	Community Member	0727302113	
23	Rose Wairimu Kibugi		✓	"	0742887826	
24	Veronah Wairimu Kiratu		✓	"	0703464535	
25	Dennis Wairimu Wachira		✓	"	0710832745	
26	Hannah Ngina		✓	"	0110504761	
27	Francis Muriu Kiratu	✓		"	0721119084	
28	Hannah Wangui Kuria		✓	"	0711649537	
29	Martha Wangari Kahoshi		✓	"	0720409727	
30	Leah Njeri		✓	"	0725674869	
	Sub-totals Male/Female					

2

ATTENDANCE LIST

Ministry of Lands, Public Works Housing and Urban Development

e&G SPATIAL CONSULTANTS LTD

KENYA INFORMAL SETTLEMENTS IMPROVEMENT PROJECT (KISIP2)

PLANNING, CADASTRAL SURVEYING AND DETAILED TOPOGRAPHICAL SURVEY FOR ELEVEN (11) SELECTED INFORMAL SETTLEMENTS IN EMBU AND LAIKIPIA COUNTIES: LOT VII PHASE IIC, CLUSTER 1

County LAIKIPIA **Settlement** MNAPB **Venue** PCMA

Meeting/ Activity PRESENTATION OF GRID - LEVEL SURVEY FINDINGS **Date** 19/2/2025

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
1.	Lydia Muthoni Maingi		✓	community member	0715616081	
2.	Peter Wachira Kariuki	✓		community member	0718512672	
3.	Tabitha Wanjiru Kamargara		✓	community member	0715930676	
4.	Ruth Muthoni Njemage		✓	community member	0721464195	
5.	patrick Mathenge Wachuka	✓		community member	0725946069	
6.	Lydia Nyokabi Wambugu		✓	community member	0723323502	
7.	Virginia Muthoni Ndegu		✓	community member	0726307166	
8.	Esther Wanjiku Ndungu		✓	community member	0790511177	
9.	Margaret Nyanjui Kathitu		✓	community member	0720896792	
	Sub-totals Male/Female	2	7			

1

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
31	Stephen Njuma	✓		Community Member	0795312600	
32	Racheal Njeri Kamau		✓	"	0711223341	
33	Lucy Wangiru		✓	"	0720459337	
34	Joseph Mbacha	✓		"	0723965023	
35	Joyce Wambui Njuguna		✓	"	0705523406	
36	Teresia Wamuthu Muge		✓	"	0726365661	
37	Nicholas Kimoth	✓		"	0723989671	
38	Sarah Margaret Nyawira Gitonga		✓	"	0745731361	
39	Nicasio Kagai Kamau	✓		"	0723785143	
40	Joseph Wangiru Mbatha	✓		"	0712886715	
41	Francis Maina	✓		"	0725791173	
42	Onesmus G. Ndegwa	✓		"	0720581266	
43	David Macharia	✓		"	0721871147	
44	Mary Wanja		✓	"	0769506100	
45	Esther Wambui		✓	"	0742653626	
46	Mary Wangiru		✓	"	0797928618	
47	Ann Wangiru		✓	"	0726521893	
48	Esther Wangiru		✓	"	0719729609	
49	Monicah Wangiru		✓	"	0713665211	
50	Teresa Nyawira		✓	"	0714904602	
51	Margaret Wangiru		✓	"	0718516393	
	Sub-totals Male/Female					

3

No.	Name	Gender		Project Designation	Contact	Signature
		Male	Female			
52	Peter Muriithi Mbura	✓		Community Member	0721282062	
53	Loise Wanjiku Mwangi		✓	"	0700990119	
54	Wachira Kago	✓		"	0726509805	
55	ALBERT WACHIRA WACHIRA	✓		"	0799457352	
56	TABITHA WANJIKU KAMAU		✓	"	0718804731	
57	Julian K. Kamau	✓		"	0792161027	
58	Purity Njeri		✓	"	0790640846	
59	Peter Ndungu Kingori	✓		"	0723866750	
60	JOHN THUMBI MWAURA	✓		"	0722381896	
61	ALICE NTAMBI		✓	"	0720441865	
62	Margaret Wangira Gathungu			"	0720881610	
63	Leah Gathoni Muiruri		✓	"	0796510720	
64	MARTHA NJERI Ngunga		✓	"	0748374502	
65	SAMUEL MWAURA NDIONGE	✓		"	0718537138	
66	Hannah Nyambura		✓	"	0725432104	
67	James Gitu Thogi Kamau	✓		"	0726555099	
68	Agnes Wanjiru Gitonga		✓	"	0701443273	
69	Maria Muthoni Ndirity		✓	"		
70	James Mwangi	✓		"	0715869479	
	Sub-totals Male/Female					

4