INTEGRATED STRATEGIC URBAN DEVELOPMENT PLAN

(ISUDP) 2017-2037

KERICHO TOWN

MINISTRY OF TRANSPORT INFRASTRUCTURE & URBAN DEVELOPMENT

KENYA MUNICIPAL PROGRAMME (KMP)
AND
COUNTY GOVERNMENT OF KERICHO

Kericho Town- A Green, Clean, Safe and Economically Vibrant Town

urbaplan

ADCL

ramani geosystems

Integrated Strategic Urban Development Plans
KERICHO
2017-2037

Contract No. MLHUD/KMP/COMP2/ISUD-05/2012/13

Consultancy Services for Mapping and the Preparation of Integrated Strategic Urban Development Plans in Selected Municipalities in Kenya

Cluster V: Kakamega, Kericho, Turbo, Cheramei and Soy

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Abbreviations

ISUDP	Integrated Strategic Urban Development Plan
KMP	Kenya Municipal Program
CIP	Capital Investment Plan
NGOs	Non-Governmental Organizations
FBOs	Faith Based Organizations
CBOs	Community Based Organizations
FGDs	Focus Group Discussions
MITHUD	Ministry of Infrastructure, Transport, Housing and Urban Development
MLPP	Ministry of Lands of Physical Planning
CBD	Central Business District
SGR	Standard Gauge Railway
RVR	Rift Valley Railways
ICT	Information Communication Technology
CCTV	Close Circuit Television
ECD	Early Childhood Development
PWDs	People with Disabilities
KRA	Kenya Revenue Authority
KeNHA,	Kenya National Highways Authority
KeRRA	Kenya Rural Roads Authority
KURA	Kenya Urban Roads Authority
KAA	Kenya Airports Authority
KWS	Kenya Wildlife Service
PSV	Passenger Service Vehicle.
BRT	Bus Rapid Transit
EIA	Environmental Impact Assessment
KPLC	Kenya Power and Lighting Company
REA	Rural Electrification Authority
SMEs	Small & Medium Enterprises
FY	Financial Year
CFSP	County Fiscal Strategy Paper
CILOR	Contribution in Lieu of Rates
CIDP	County Integrated Development Plans
OVCs	Orphans and Vulnerable Children
VRC	Vocational Rehabilitation Centre
UNCHS	United Nation Commission for Human Settlements
UNDP	United Nations Development Programme
NMT	Non-Motorized Traffic

EXECUTIVE SUMMARY

The Kericho Town ISUD plan is formulated as part of the Kenya Municipal Program (KMP). KMP aims to strengthen local governance and improve urban service delivery in selected urban municipalities by reforming frameworks for urban governance, municipal restructuring, strengthening of planning mechanism, financing and capacity building, and investment in infrastructure and service delivery improvements in the towns. KMP has four components namely:

The purpose of the Integrated Strategic Urban Development (ISUD) plan is to provide a framework for future growth and development of the town over the next 10 to 20 years and will thus be used budgeting and management tool by the town's administration.

Public participation was key to the whole process. These included the Launch Workshop, Focus Group Discussions, Round Table Discussions, Situation Analysis and Mapping Stakeholder Validation Workshop, Visioning Workshop, Interim Report Validation Workshop, Draft ISUD Plan Validation Workshop, Final Draft ISUD Plan and Capital Investment Plan Validation Workshop and a series of Technical Meetings

The assignment involded digital mapping of the planning area covering **111 Sq.km** , and availing these for use in digital format and preparation of an ISUD Plan and a Capital Investment Plan and Implementation plan. The ISUD Plan builds on a situation analysis which leaves to the different growth scenarios and eventually the preferred growth scenario. There is a presentation of the Structure Plan and then the Sectoral Plans (Transportation plan, Infrastructure plan, Economic development plan, Environmental and Disaster management plan). Development Control mechanisms are provided which together with the Capital Investment should be effective in guiding the plan implementation.

The Plan is divided into nine chapters as follows: Chapter 1: Introduction, Chapter 2: Development Concept, Chapter 3 Town Profile and Projections , Chapter 4: Structure Plan, Chapter 5: Strategic Sector Plans, Chapter 6: Action Area Plans, Chapter 7: Development Controls and Zoning Regulations, Chapter 8: Implementation Plan, Chapter 9: Plan Monitoring and Review

The ISUD Plan is anchored on the Vision of Kericho town - ***a green, clean, safe and economically vibrant town***

The total population of the plan area is 157,789 and is projected to grow to 306, 805 at a an average growth rate of 3.75% per annum. Population densities are highest in Kericho town and the nodal points of Kapsuser, Kapsoit, Kapkugerwet and Kipchimchim.. With densification these areas will have to accommodate a substantially higher densities. This would involve providing infrastructure and other incentives to encourage development of high-rise residential units with substantial ground coverage to enhance the concept of dense town.

Structure Plan

Kericho has not fully tapped into its growth potential. Located on the key arterials BI and C23 it has linkage to major economic zones within the region. The resources in the hinterland include commercial agriculture, tourism and natural resource production. The town has potential for industrial processing and tourism development within the greater Western Kenya region. It is this potential that should be tapped into for the towns growth. The existence of the large tea farms within the planning area is an issue that requires special consideration. A few pockets of landless people like the Nubians and Laibon should be factored in the land management. Compulsory acquisition of land will be necessary to provide land for public facilities and infrastructure.

Land requirement for various uses are estimated as follows: Residential 9,204, Industrial 22.5 ha., Commercial 136ha , Education: ECD 22 ha , Primary 286 ha, Secondary 171 ha, College 10.2 ha and University 50 ha., Public Purpose 1,485, Public utility 297, transport. 1980, Recreation 130ha To cater for unforeseen land requirements it is proposed that 160ha of the land be banked for such eventualities. The plan proposes that the tracts of land between the nodes and the urban core be preserves as areas for urban agriculture. Consideration shall be provided for management of environmentally sensitive areas with the Tea Estates being maintained for both economic and environmental considerations.

Strategic Sector Plan

In order to make the development of the town efficient and sustainable the ISUDP provides sectoral strategies that will provide a framework for integrated urban development. It presents sector wise proposals including Economy and Employment, Physical and Social Infrastructure, Housing and Informal Settlements, Transportation, Environment Management and Disaster Management and Tourism Management. The strategic sector goals are based on stakeholder's visions for the town for the year 2037.

Tea farming is the driver of the Kericho economy. It provides the anchor on which the other sectors in the town are developing. Land continues to be a key factor in the development of the town and hence the need to maximize the use of existing land in urban areas and have a dense and compact development.

The following are the goals to drive the sectoral development

- **Economy**: To attract investment and create employment opportunities for town residents
- **Physical Infrastructure**: To provide adequate infrastructure services to support urban development
- **Social Infrastructure**: Access to quality social facilities
- **Housing**: Improve access to affordable housing
- **Transportation**: Providing sustainable, integrated and accessible urban transportation for all residents of the towns.
- **Environment and Disaster Management**: Improving Urban Environment through Integrated Land Use Planning
- **Tourism**: To Enhance the income from tourism in Kericho

Action Area Plans

Action Area Plan 1: Central Business District: Create a post-modern nucleus that would position Kericho town as a key urban centre in the region and provide support infrastructure and services that would stimulate the renewal of the CBD. This will entail the following: Create pedestrian only streets with enhanced street furniture, Create routes for NMT, Encourage amalgamation of plots to allow for more functional building designs, Upgrade the service infrastructure (water, sewer, electricity), Provide for public spaces, Provide multi-level parking able to accommodate off-street parking within walking distance to CBD, Legislate by-laws that would guide the urban renewal, Formulate and enact a by-law requiring a full Transportation Impact Assessment to be undertaken for all new developments with a Gross Floor Area of 500 square metres within the planning area.

Action Area Plan 2: Tea Plantations and Forest: Enhance the Tea Plantations and forest as a tourism destination of choice in the region through the following interventions: Create a gate to the forest near the Kerenga aerodrome, Gravel the key roads to make them all weather, Create an animal sanctuary to attract more visitor, Create a "Tea House" as a tourist information centre, Develop an Eco-lodge in the Plantation, Legislate by-laws to address encroachment and illegal logging, Acquire

Chelimo Area for development of County Complex to include Executive, Legislature and Judiciary. Other facilities to include Level 6 County Hospital and other priority public service facilities

Action Area Plan 3: Kerenga Aerodrome : Provide air mode of transport as a driver of the town's economy by extending the runway to a length of 2 km as well as widen the runway strip by 50m and 90m to the North and South respectively, Developing a terminal building for passengers, Upgrading the service road from the aerodrome to bitumen standards and Providing street lighting on the road

Action Area Plan 4: Kapkugerwet, Kapsuser and Kapsoit: Develop the nodes as nucleus for Sub-Business Districts of Kericho Municipality. This shall require the following interventions: Transport terminus, Public park,Police Station,Covered Market with services, Commercial Buildings with harmonious design,Light industrial parks for SMEs and Residential Designed Neighborhoods

Development control and building standards have been provided as the mechanism through which entire process of urban development is regulated to achieve the objective of promoting overall benefit of the society and creating a distinct image of the town. It includes guiding the development and use of land, curbing misuse of land and promoting rational and orderly development of built environment. Development controls are required to meet situations and contexts which are generally static.

All the buildings are subjected to different development controls for regulating their design and construction. The application of the development controls have been largely dictated by the category of buildings, location of the site, size of the site and need to regulate the building design/architecture etc.

Zoning by-laws consists of a text and a map or a series of maps. The map establishes the districts; the text, the land uses allowed in each district, and the standards that are applicable to each of the districts. Administration, enforcement, and appeal procedures, as well as procedures that govern proposals for changes to both the text and the map are established by the by-laws.

The **prioritization of the projects** are based on stakeholder prioritization. The projects are spread out in the 20 years in batches of five years for ease of management running up to year 2037.

The **monitoring process** involves establishment of a dedicated Monitoring Unit, a high-level Steering committee under the Town Manager and Citizen Ward Committees

The following would be the indicators of physical and socio-economic changes to be monitored periodically: Demographic changes; Land use pattern, and Development; Housing increase, distribution and actors; Social Infrastructure and services in terms of quantity and quality; Transport Provision in terms of modes, infrastructure, use and access; Economic Aspects focusing on change in households by income, expenditure; employment, development of new employment areas and enhanced informal sector; Environment quality, conservation and management; Natural Disasters prevention and mitigation

The GIS developed from the digital maps will be used as a spatial monitoring tool by the Monitoring Unit. The Steering Committee will prepare an Annual Financial Report anchored on the Capital Investment Plan. The report shall be presented as part of the Project Reporting structure to the County Government. The Citizen Ward Committee will provide a regular briefing at each ward level and get feedback to help monitor implementation of the ISUDP. A mid term review of the ISUD plan shall ensure adjustments if needed in the Plan implementation.

Kericho ISUDP sets the direction for the development for the next 20 years. After approval and adoption of the ISUDP the subsequent phase will include the following key tasks:

- Prepare Strategic Environment Assessment Plan for Kericho ISUDP
- Prepare Special Area Plans for Milimani, CBD, Chelimo

1 INTRODUCTION

1.1 BACKGROUND

The project is part of the Kenya Municipal Program (KMP). KMP aims to strengthen local governance and improve urban service delivery in selected urban municipalities by reforming frameworks for urban governance, municipal restructuring, strengthening of planning mechanism, financing and capacity building, and investment in infrastructure and service delivery improvements in the towns. KMP has four components namely:

1. Institutional restructuring and empowering local governments;
2. Participatory strategic planning for urban development;
3. Investment in infrastructure and service delivery; and
4. Programme management, monitoring and evaluation.

This project is part of component two.

The planning horizon for the ISUD plan is set at 10–20 years thatare considered reasonable balance between an appropriate period for strategic planning and the predictability of key variables and future trends. This project period is also pegged to Kenya Vision 2030.

The plan was informed, inter alia, by:

- The nature, scale and requirements of developmental needs;
- Resources, their availability, scale, characteristics and/or constraints and the need to attain synergies;
- The tools, requirements and constraints defined in relevant legislation;
- Public policy goals and directives (e.g. developmental goals and policies, spatial and sector priorities);
- The need to meet existing and projected demands for economic development, housing, infrastructure and services;
- Environmental sensitivities;
- The need to identify and indeed create points of opportunity and choice, define key projects and ensure their implementation and development to enable and leverage further development;
- The need to ensure access for all sectors of the population to services;
- The need to protect the natural environment and to enhance and upgrade the built environment;
- The function and role of the town as a regional, economic, administrative and cultural centre; and
- The critical function and role of the town as home and environment to its residents.

1.2 PURPOSE OF ISUD PLAN

The purpose of the Integrated Strategic Urban Development plan is to:

- Define a vision for future growth and development of the town over the next 10 to 20 years.
- Provide an overall integrated physical framework for urban growth of the town.
- Provide a basis for coordinated programming of projects and budgets, thereby serving as a downstream management tool.

1.3 OBJECTIVES

The specific objectives of the assignment are:

- To produce accurate up-to-date digital topographic maps;
- To prepare digital cadastral layers in the same system as the digital topographical maps;
- To conduct participatory planning exercises in the municipality and identify citizens' priorities;
- To prepare 10-20 year strategic structure plans, showing current and proposed land use and infrastructure (transport, water, drainage, power, etc), requirements;
- To prepare short and medium term plans to guide urban development, including action area plans, subject plans, advisory or zoning plans and development control regulations;
- To provide hands-on training to technical staff in the town planning and land survey departments on plan and map preparation;
- To prepare a monitoring and evaluation strategy to assist the town planning and survey departments in reviewing and updating the plan and maps in line with the ever-changing trends; and
- To advise on the establishment and organization structure of the town planning and surveying departments in the project town.

1.4 SCOPE OF WORK

The scope of the Kericho ISUD Plan was:

Digital mapping:

- Identification of existing geodetic control network
- Aerial photography acquisition
- Aerial photography data processing and terrain data mapping
- Acquisition and Digitalisation of Cadastral Plans
- Quality control & assurance and final delivery of products
- A situational analysis of the current socio-economic, physical, environmental and cultural characteristics of the city

ISUD Plan:

- Growth assumption, formulation of future development scenarios,
- Structure plan with detailed land use, design guidelines and action area
- Strategic Sector Plans:
    - Transportation Plan
    - Environmental Management Plan
    - Disaster Management Plan
    - Cultural Heritage Conservation Plan
- Capital Investment Plan and Implementation plan
- Training

Area of Interest

- The mapping and planning area will cover 111Sq.km, the new area include satellite villages around the towns ofKericho.
- The area to be mapped and planned is as shown on Figure 1 below.

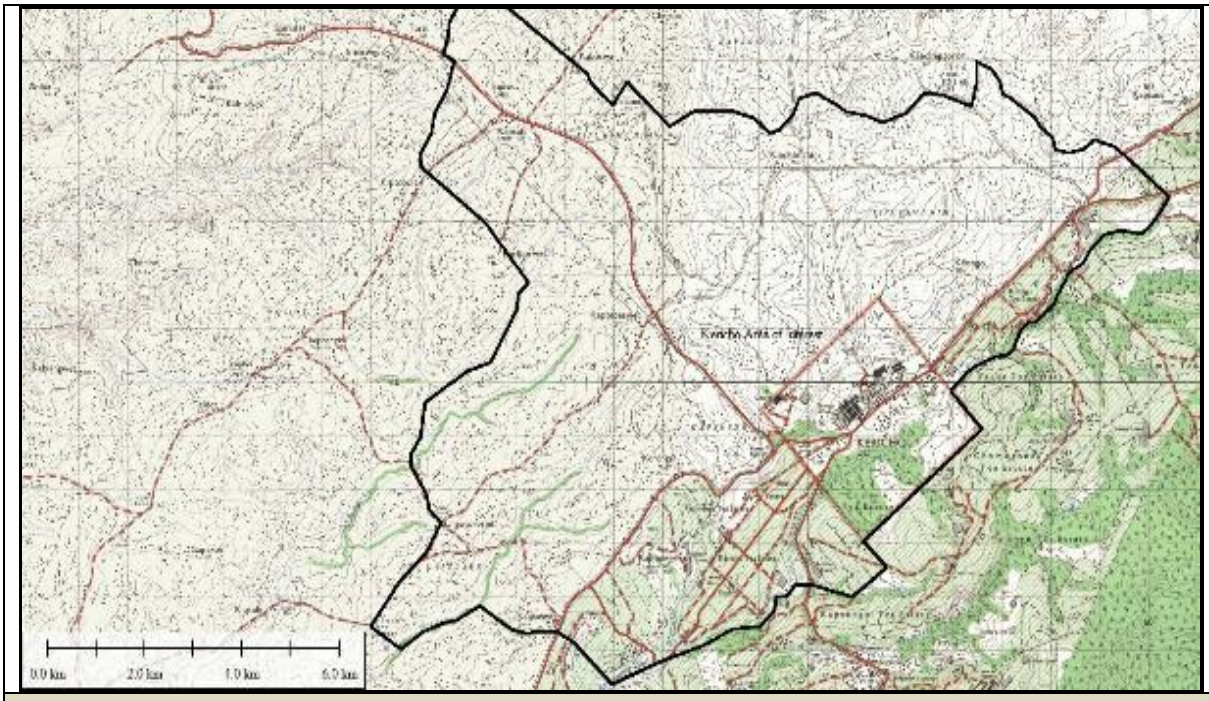


Figure 1-1: Mapping and planning area

1.5 DURATION OF STUDY

The assignment was planned to run for 44 weeks for both the mapping exercise and ISUP planning process.

1.6 COMMENCEMENT AND COMPLETEION OF THE PROJECT

The project was formally started in June 2016. The Inception Report was prepared and submitted. After feedback from the Client the Final Inception Report was submitted in July 2016. The team was mobilized and formally presented in the first meeting on 14th of August 2016.

1.7 PROJECT DELIVERABLES

The timeline for outputs and deliverables was as follows:

Table 1-1: List of tasks

Output/deliverable	Submission of draft report by end of project week	Client approval by end of project week	Submission of final report by end of project week
Inception Report	6	8	9
Launch Workshop reports	8	9	10
Preliminary Maps and inventory	12	14	16
	16	17	18
First Draft ISUD	28	30	32
Draft final ISUD and CPI	38	40	42
Coloured copies of ISUD plans	39	41	43

Final ISUD and CPI	40	42	44

Public participation as enshrined in the Constitution and Urban Areas and Cities Act is provided for in this planning process. These are designed to allow for an iteration process with stakeholder feedback and sharing of results at each stage. The planning workshops that will ensure stakeholder participation are listed in the table below

Table 1-2: Workshops

Workshop	Week
Phase 0: Launch workshop	**7**
Phase 1: Preliminary Maps workshop	**13**
Phase 2: Strategic options/vision workshop	**19**
Phase 2: Validation of Draft ISUD workshop	**28**
Phase 3: Validation of Draft final ISUD workshop	**35**
Phase 3: Official launch of approved ISUD	**41**

1.8 STAKEHOLDERS CONSULTATIONS

The new constitution provides rights for citizens regarding participation in public affairs, and duties on behalf of Counties and urban governments to share information and seek the views of citizens. In the context of physical planning, stakeholders' participation through face-to-face meetings, discussion and focus groups provides planners with insights and information regarding community needs, and promotes public understanding of the project.

The main purpose of the stakeholder consultation process is to build consensus among key stakeholders. on planning process and outcome; to determine positive qualities and assets of the town and to develop a vision statement, which best articulate the desires of the citizens about the future of the town. This is done through Workshops, Focus Group Discussions (FGD), one to one meetings and interviews to gauge their views and

The Planning Team made an assessment of stakeholders to:

1. Identify the key stakeholders and their interests (positive or negative) in the plan;
2. Assess the relative influence and importance of each stakeholder and their potential impact on the plan as well as the impact of the plan on each stakeholder; and
3. Identify how best to engage stakeholders.

This was to ensure wide and inclusive representation of all relevant stakeholders including local NGOs, FBOs, CBOs, political and community leaders, investors, landowners, industrialists, businessmen, provincial administration, locally based professionals, vulnerable groups and any other relevant individuals, group and institution.

1.8.1 Identification of Stakeholders

The following guidelines were used in selecting stakeholders in the planning process:

- People with register-able interests
- Registered property owners
- Registered Faith-based, Community-based institutions, Non-Governmental operating in the

area
- Inter-Governmental Organizations
- Traditional/ Cultural institutions
- Constitutionally elected leaders
- Defined vulnerable groups in the area
- People with business interests
- Service Providers
- Government Line Ministries/Departments

The complete checklist and mobilization of stakeholders was undertaken in consultation with the County Planning Team.

1.8.2 Stakeholder Consultation

The consultation with stakeholders included the following activities:

- Inception Workshop
- Launch Workshop
- Focus Group Discussions
- Round Table Discussions
- Situation Analysis Stakeholder Validation Workshop
- Visioning Workshop
- Interim Report Validation Workshop
- Draft ISUD Plan Validation Workshop
- Final Draft ISUD Plan and Capital Investment Plan Validation Workshop
- Monthly Technical Meetings

The information generated was used to prepare and finalize the proposals

1. Launch Workshop

This session gave the stakeholders an opportunity to appreciate the objectives of the ISUD Planning and the methodology that would be used as outlined in the Inception Report. It also allowed for creation of the operational parameters for the engagement of stakeholders in the entire planning process.

2. Focus Group Discussions

These were sessions held with specific groups within the town, mainly the market traders, informal sector businesses and community institutions. The information was for purposes of triangulation with data generated through other techniques.

3. Round Table Discussions

These sessions were with Key Informants to tease out issues. These sessions allowed for sharing and fine-tuning sectorial issues and opportunities at the County and town level. It allowed focusing on key planning parameters.

4. Situation Analysis and Mapping Stakeholder Validation Workshop

This session was designed provide the stakeholders with highlights of the key issues identified during the data collection. The preliminary maps were presented to allow for appreciation of the spatial situation of the study area. Data was also presented on the key planning sectors for validation by the stakeholders.

5. Visioning Workshop

This allowed the participants to translate information from the Situation Analysis in to vision of the town. The overall town vision for Kericho was then derived from the

sectorial vision.

6. Interim Report Validation Workshop

This session allowed for presentation of the thematic studies looking at the current provisions and the future demand. It also allowed for spatial analysis of these demands and possible direction of supply distribution. Concepts of spatial development were generated and would inform the planning proposals.

Participants at Validation Workshop

7. Draft ISUD Plan Validation Workshop

The consultant presented development proposals for each sector for stakeholder input and approval. Participants were given a chance to prioritize identified projects that would be implemented in the short and long term.

8. Final Draft ISUD Plan and Capital Investment Plan Validation Workshop

This was a session for presentation of the final plan to the County Government and key stakeholders for final approval of the plan.

9. Technical Meetings

The technical meetings were held on a regular basis to get technical input from experts within the County. These sessions also included staff from the Ministry of Infrastructure, Transport, Housing and Urban Development with participation of the Ministry of Lands of Physical Planning. There was also occasional input from UN Habitat

1.9 METHODOLOGY

The process of the assignment is an iterative process in which the plans, instruments and implementation strategy link up and build upon each other.

1.9.1 FRAMEWORK

The approach focuses on three aspects as follows:

1. An Integrated approach:
   - The Consultant work will take into considerations all aspects, physical, social and economic which are affected by and which shape the urban environment. This shall be mapped and linked to a situation analysis.

2. Planning process as an outcome:
   - The plan shall be the expression of common values and vision for the towns development and integrate local implementation capacities

3. Communicating the ISUD Project

- Visual communication is an important component of the project,
- There will be production of popular versions of the plan for diffusion to a large audience

These are highlighted in the framework below.

1.9.2 CONCEPTUAL FRAMEWORK

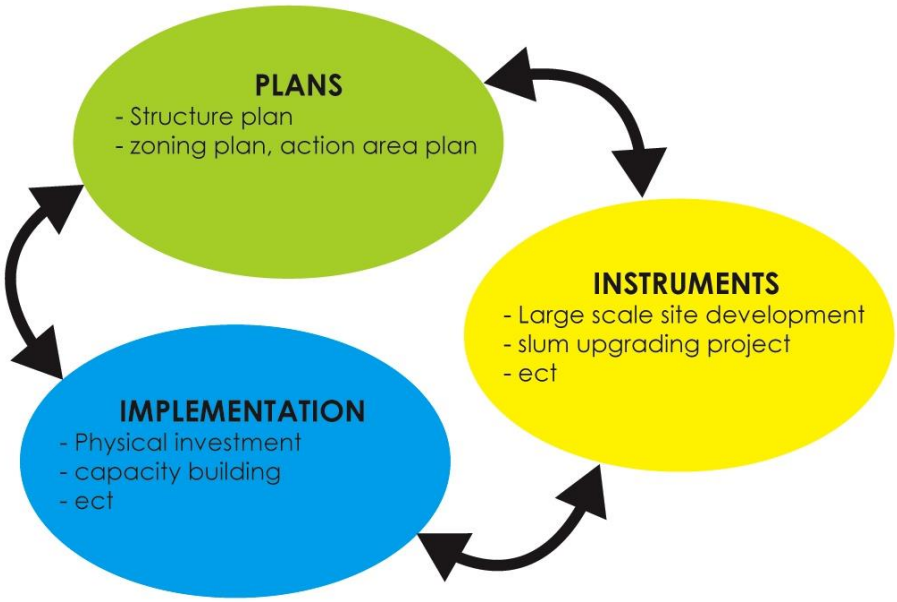


Figure 1-2: Conceptual framework

1.9.3 PHASE 1: MAPPING AND SITUATION ANALYSIS

This phase involved comprehensive assessment of the project site and mapping which helped provide a picture of the current situation.

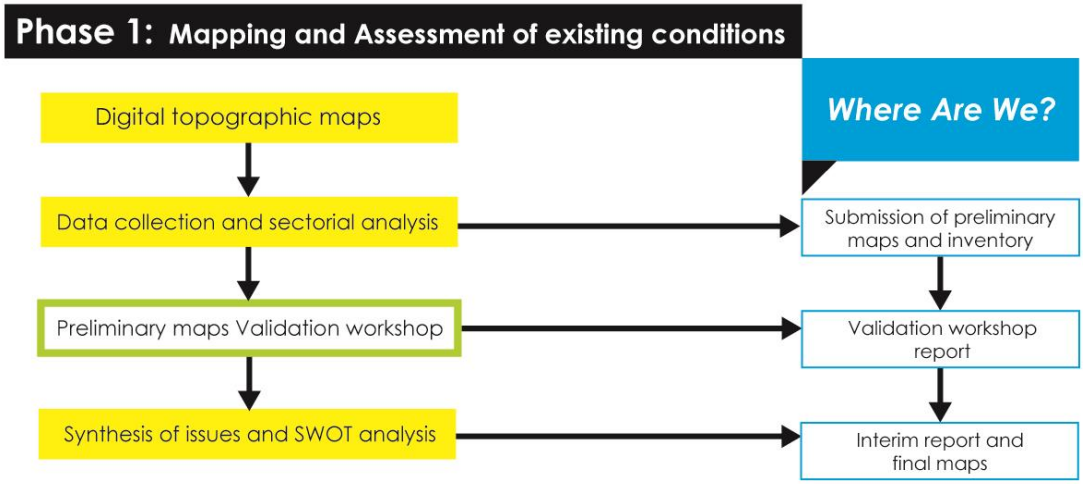


Figure 1-3: Phase 1 Process of Mapping and assessment of existing conditions

1.9.3.1 Mapping

Activities 1 & 2: Planning operation and control establishment

- Control point establishment and planning operation were done in July 2016

Activity 3: Aerial survey and mapping

- Arial survey requires an official flight permission
- Climate constraints
- Data processing: Digital Terrain Model, topographical maps, reference layers (roads, building, physical features)

Activity 4: Cadastral mapping

- Requires an access to existing cadastral data base

Activity 4: Organisation of deliverables

Activity 5: Training

- Knowledge transfer was completed during the entire process
- Capacity Building of County Survey staff was done in order to use the database

1.9.3.2 Data Collection and Assessment

1. Primary data collection included: Density/block survey", quick traffic survey, land use survey, market survey, informal sector survey
2. Secondary data collection

Data collection covered the following key components:

Table 1-3: Data collection key components

Socio-economic condition	Regional economy	Urban structure, planning and housing	Urban environment	Infrastructure and urban services	Institutional and legal analysis
Population: demographic trends Social infrastructure and access to basic services (education, heath, and security)	**Sector analysis:** employment, industries, Tourism potential Municipal finance Major urban project	Urban morphology built environment Access to housing Land management system Previous planning	Natural environment and climate Identification of risks and vulnerable areas	Transportation and road network Water supply, Storm Water Drainage system Sewerage System Solid waste collection and removal Electricty Communication	Institutional context and decentralization Planning legal framework Building permit process

1.9.4 PHASE 2 DRAFT ISUD PLAN

The information from Phase 1 provided the basis for preparing the Draft ISUD. The main thrust was development of strategic options and growth scenarios which were subjected to stakeholder validation.

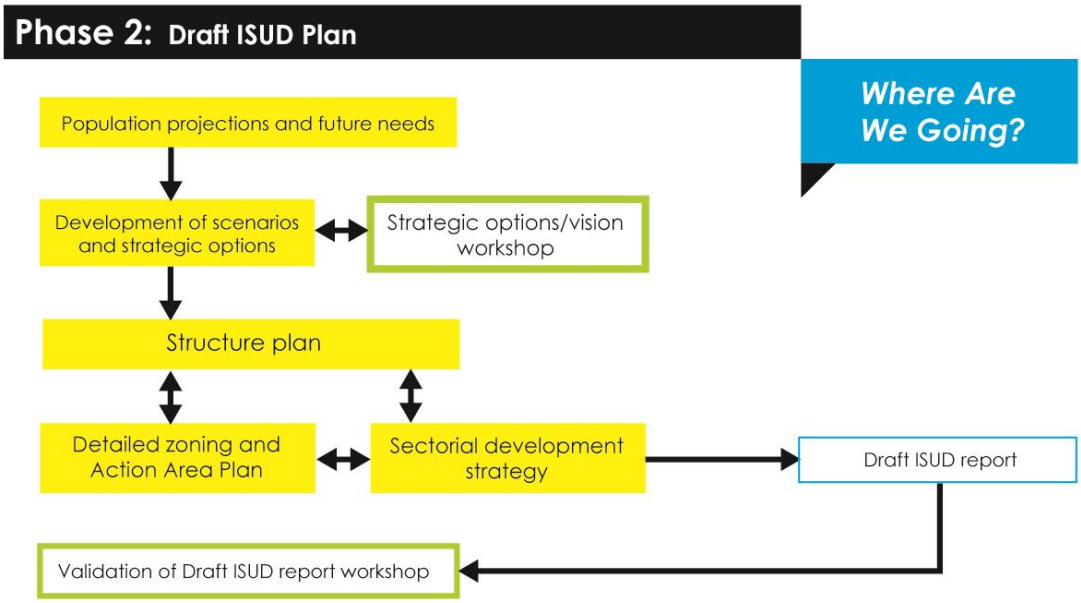


Figure 1-4: Phase 2 Process of preparing the Draft ISUD Plan

1.9.4.1 Growth Assumptions And Scenarios

Growth assumptions and future needs

- How many new residents need to be accommodated?
- How and where will those residents be accommodated?
- What are the needs of this additional population in terms of infrastructure, social services and major facilities?

Development scenarios

- Step 1: Identification of policy framework and draft vision; (proposed by the consultant)
- Step 2: participatory vision; These scenarios developed based on perceptions of beneficiaries and stakeholders during the vision workshop
- Step 3: synthesis of the participatory vision workshop and finalization of common vision and future development scenario.

1.9.4.2 Strategic Option/Vision

The policy/vision workshop is an important step in the ISUD process

- Purpose was to set a clear vision and development objectives that were shared by the main stakeholders,

Participatory mapping process:

- The policy formulation was based on the result of the vision workshop. Participants were asked:
  - What is that they value, what are the assets in the town?
  - What they would like to change?
  - How do they see the future of the town (future development scenario)?
  - How do they make the change happen?

1.9.4.3 Structure Plan

This includes:

- The future land-use (residential, commercial, industrial andpublic purpose) in accordance with national land-use guidelines;
- A proposed road network and land reservation for major future facilities;
- Proposed areas earmarked for future engineering infrastructure (sewage treatment plants; water reservoirs; as well as cemeteries and other cultural needs)
- The delimitation of zones unsuitable for development (e.g natural constraints, risks);
- The major project areas. (CBD area, and areas for large scale development area)

1.9.4.4 Design Guidelines And Zoning Code

There are preparation of:

- Action area planning:
  - Strategic issues: CBD, new industrial areas, slum upgrading zones
- Design guidelines
  - Public space (street design);
  - Construction guidelines for residential areas; and
  - New development (housing, major projects).
  - Detailed zoning
  - Authorized uses,
  - Construction rules
  - Infrastructures (roads section, drainage and sewerage, etc)

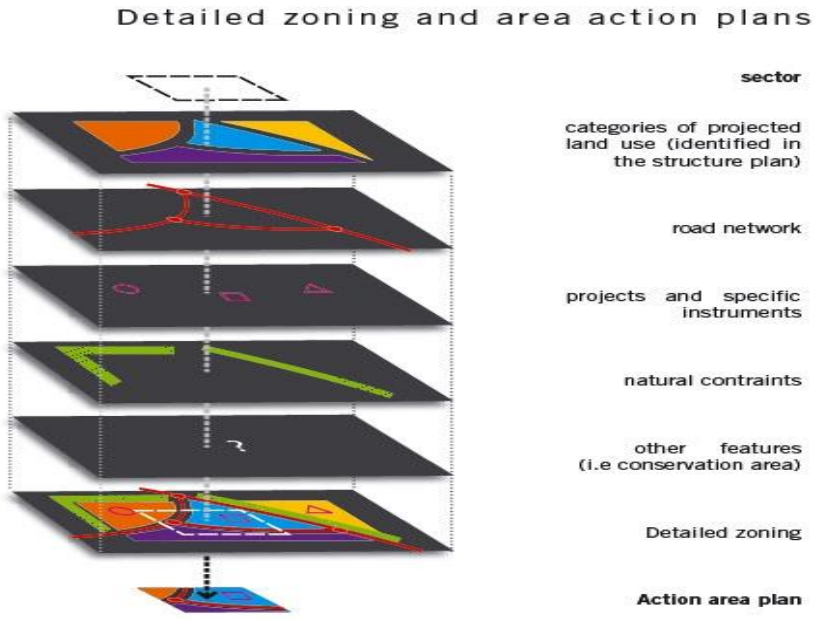


Figure 1-5: Detailed zoning and area action plans process

1.9.4.5 Sectoral Strategy

The following sectoral plans have been prepared.

Transportation plan :

- A multimodal concept (formulated for the policy framework); Road network development principles and public transportation strategy;
- Proposed road sections and road intersection descriptions and Parking requirements;

Infrastructure plan:

- Assessment of the improvements required in order to close existing service gaps; and meet future service demands up to the year 2037;
- Estimation of the total cost of the required investments for the first phase of implementation.

Economic development plan

- Opportunities to develop driven sectors of the towns economy (commerce, tourism, agriculture);
- Land requirements and special zoning (e.g protection of agricultural land; identification of area for light industries).

Environmental and Disaster management plan

- Natural features to be protected (and included in the structure and detailed plan) and additional measures of conservation; climate change risks,
- Disaster management plan including: disaster prone areas; areas vulnerable to disaster;

1.9.5 PHASE 3 FINAL ISUD CAPITAL INVESTEMENT PLAN AND IMPLEMENTATION

The final phase provides documents which shall be used to actualize the proposed planning strategies, namely the ISUD and the Capital Investment Plan.

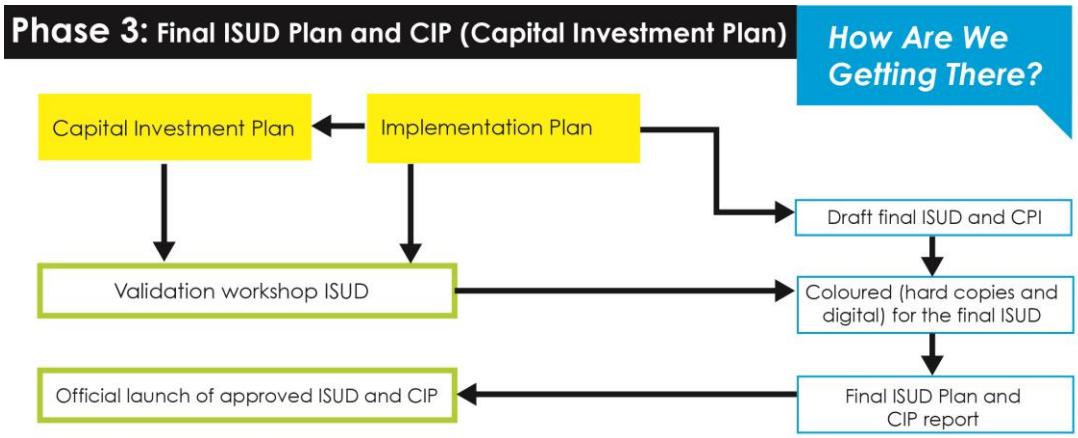


Figure 1-6: Final ISUD Plan, CIP and Implementation

1.9.5.1 Capital Investment Plan

- Identify and agree on a limited number of priority development projects, with a high rate of return.
- Indicate objectives, expected output, responsibilities, capacity issues and capacity development needs.
- Include annual maintenance costs; authority in charge of maintenance operations; and potential source of income (e.g. local taxes) that will finance the maintenance costs.

1.9.5.2 Implementation Plan

- Funding urban projects and infrastructure: local tax improvement, leveraging land value, Public/private partnership opportunities;

- Controlling urban development: planning and building permit process improvement; and
- Data management/GIS: use and maintenance of the GIS data base created during the ISUD project (phase 1 and 2).
- Capacity building plan

1.9.5.3 Final Deliverables

Draft final ISUD (Validated in a workshop)

- Summary of existing conditions and SWOT analysis;
- Projections; growth assumptions; and planning horizons;
- Development of scenarios and strategic options
- Structure plan
- Sectorial strategy
- Detailed zoning and Action Area Plan
- Capital Investment Plan, and
- Implementation Plan
- Final ISUD delivery with coloured (hard and print copy of the plans)

1.10 STRUCTURE OF FINAL ISUD PLAN

Chapter 2: Town Profile and Projection
Chapter 3: Concept Plan
Chapter 4: Structure Plan
Chapter 5: Strategic Sector Plans
Chapter 6: Action Area Plans
Chapter 7: Development Controls and Zoning Regulations
Chapter 8: Implementation Plan
Chapter 9: Plan Monitoring and Review

2 TOWN PROFILE AND PROJECTION

2.1 HISTORICAL ORIGIN OF KERICHO TOWN

The origin of the town's name is not clear. One view is that town was home to the region's first public hospital, built by the British at the dawn of the 20th century. With regard to this because of its association to medicine and in the local Kipsigis language is referred to as "Kericheek", the place became Kericho. The view is that the settlers called it "Kericho" instead of the Kipsigis word "Kericheek". Another view was the town was originally home of a medicine man named Kipkerich while another says the town was named after a Maasai Chief, Ole Kericho, who was killed during the 18th century by the Abagusii. The last view was that Kericho was named after an English tea planter John Kerich.Kericho has a layout plan for the old "Square" town boundary.

Kericho town is located in the south-west of the country, within the highlands west of The Kenyan Rift Valley. The County is well known for being the producer of the best of Kenyan tea. Some of the largest tea companies including Unilever Kenya, James Finlay and Williamson Tea are based here.

The designed planning area of Kericho Town will cover a total of 111 square kilometres including Kapkugerwet, Ainamoi, Kipchimchim, Kapsoit and Kapsuser. This covers some trading centres but mainly the rural agricultural lands excluding the land under leases to the multinational companies in the area.

2.2 LOCATION AND CONNECTIVITY

2.2.1 Regional Context

Kericho County is one of the 14 Counties in the Rift Valley region. It lies between longitude 35º 02' and 35º 40' East and between the equator and latitude 0 23' South. The county is bordered by the Uasin Gishu County to the north, Baringo County to the northeast, Nandi to the northwest, Nakuru County to the east and Bomet County to the south. It is bordered to the South West by Nyamira and Homa Bay Counties and to the West by Kisumu County. The county covers a total area of 2,479 sq. km.

Kericho town is located on the South Eastern part of Kenya. It acts as a transit point linking the greater Western Kenya. Its strategic location as a transport node has seen it grow. It has also been a net in-migration node for workers moving into the large tea plantations in the region. Kericho town strategic position gives it a comparative advantage as a key node in the regions development linking to Kisumu, Kisii, Bomet, Kericho among other towns in the region. It is the "headquarters" of tea and positions itself as the driver of this key national sub-sector. It has thus attracted a mix of communities who moved to Kericho to seek employment. This has made Kericho quite cosmopolitan.

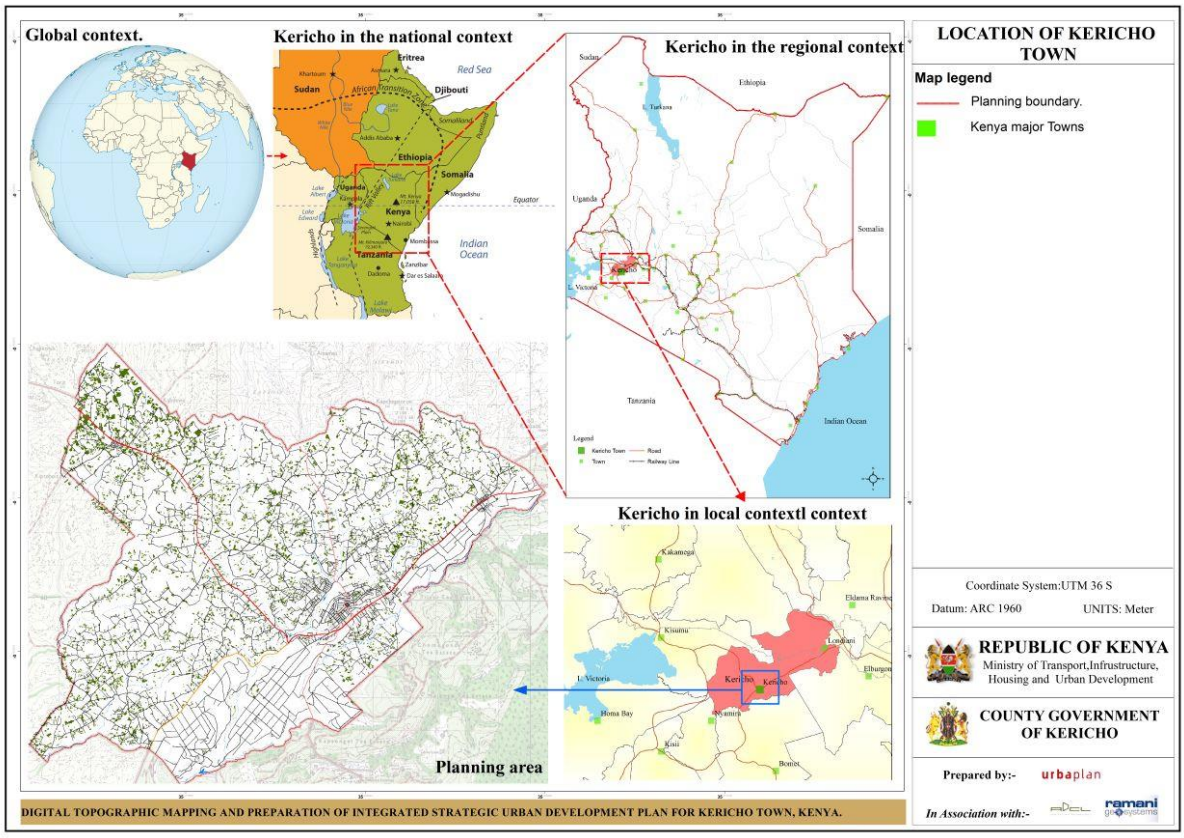


Figure 2-1: Location of Kericho town

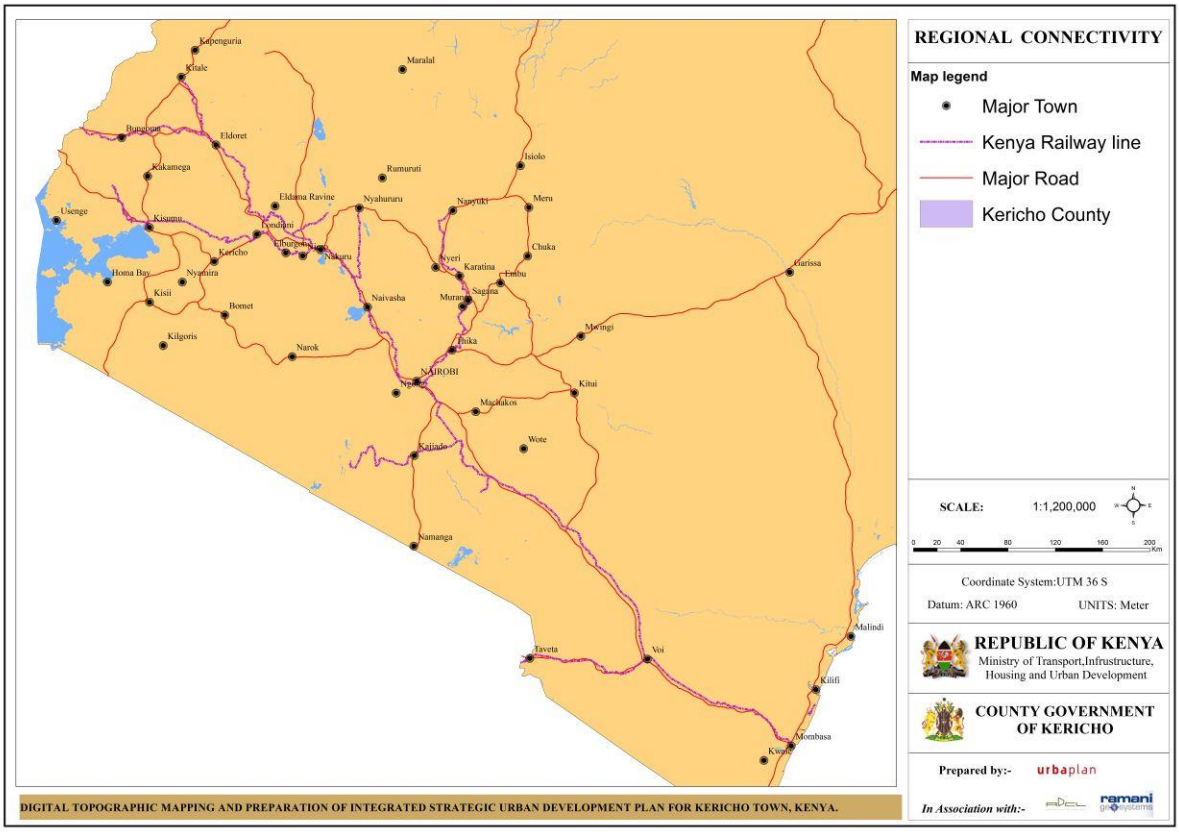


Figure 2-2: Regional road and connectivity of Kericho

2.3 PRESENT CONDITION

2.3.1 Administrative

As the County administrative headquarters Kericho is well positioned to serve the largely agricultural county. The county is composed of six Constituencies, 15 administrative divisions namely: Ainamoi, Belgut, Kabianga, Bureti, Roret, Cheborge, Sigowet and Soin. Other Administrative Divisions are Kunyak, Chilchila, Kamasian, Kipkelion, Londiani, Sorget and Chepseon.

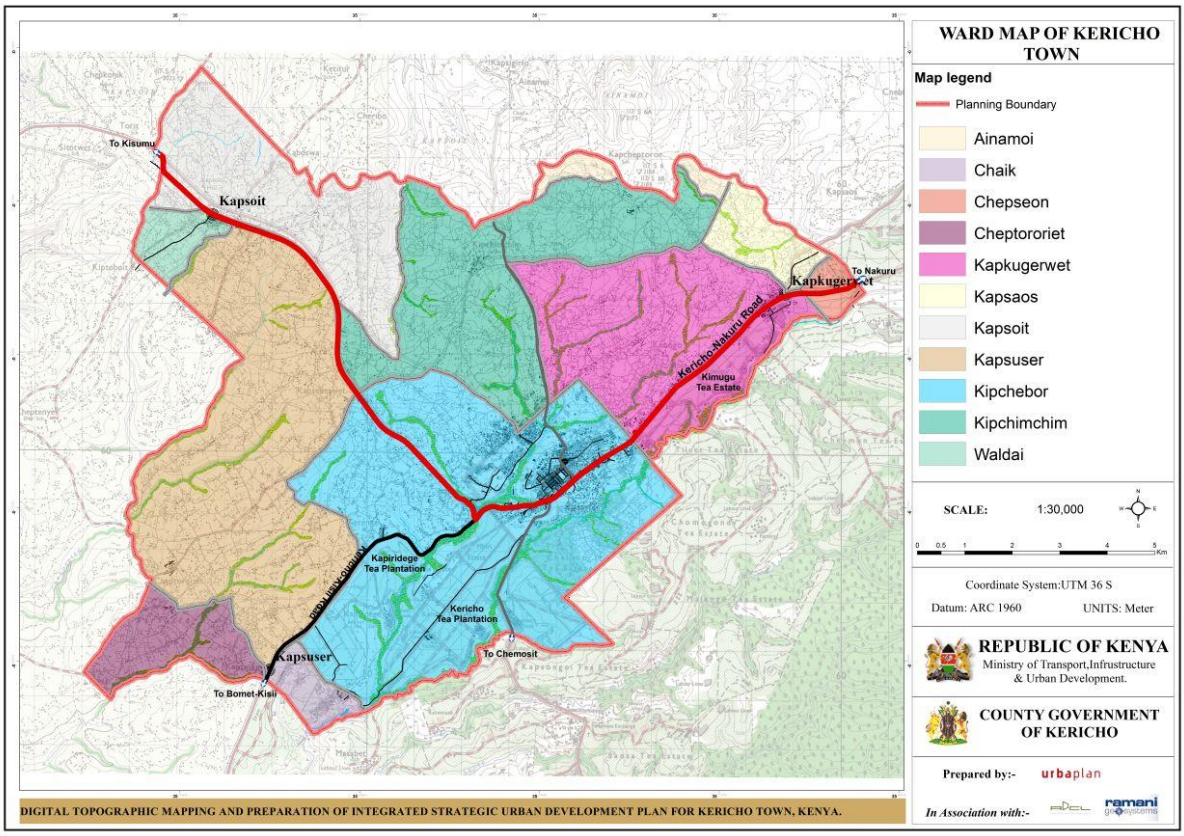


Figure 2-3: Ward map of Kericho

The County Executive and Assembly are located in Kericho town as are National Government offices. With the advent of the devolved government the town has got new development incentive to enable it serve it key role of County Administrative Headquarters. This has implications in terms of office space, house and support services.

2.3.2 Spatial Growth

The star development of the town is controlled by the arterial roads that pass through the town. Nodes are forming at Kapkugerwet, Kapsoit and Kapsuser

Kapsoit is growing as a commercial outpost and so is Kapsuser. Kapkugerwet is more or less a commercial centre for the people engaged in the Tea Estates, having grown from the establishment of the Tea Factory

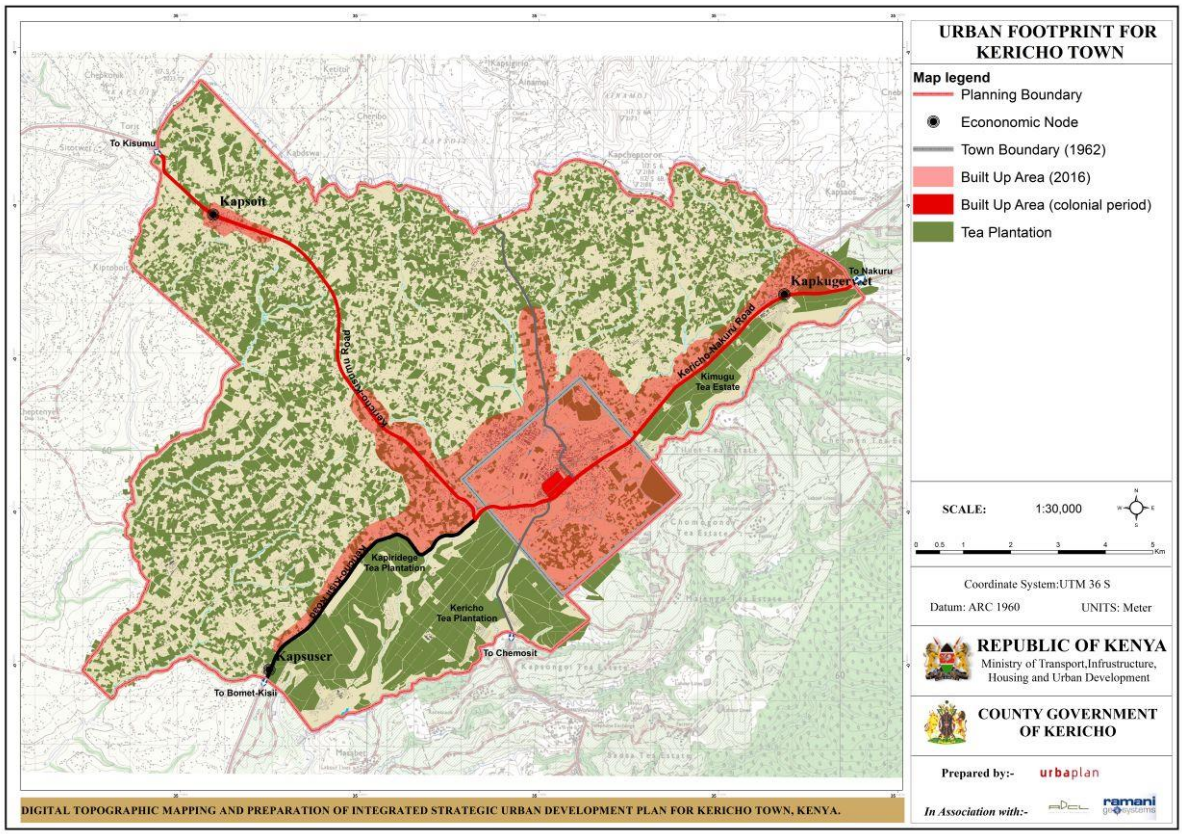


Figure 2-4: Kericho Urban Footprint

The Urban footprints shown in the map on Spatial Growth Trends gives an indication of the trend of urban development in the planned area. There are large swathes of land under agricultural activities between the urban nodes. The bulk of the urban growth is in the area around the old Municipal boundary with expansion along the B1 highway. The valleys in the town have forced the residential areas to spread along the ridges.

The town has a small but vibrant CBD surrounded by public purpose beyond which we find the residential neighborhoods. There is a small industrial area to the North-West of the town. There are also tea factories in the tea zone to the South West of the town with a Kapkugerwet having the better known factory. The tea plantations have virtually stopped the expansion of the town to the East forcing it to expand West and Northwards.

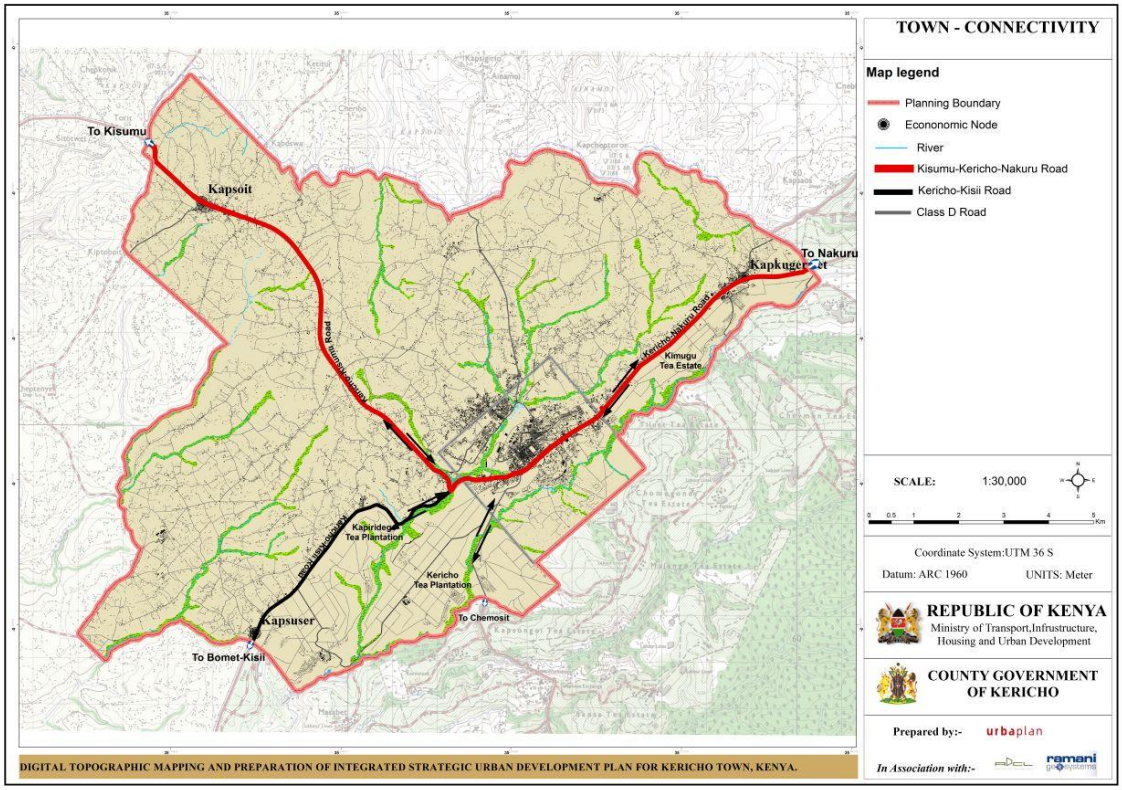


Figure 2-5: Kericho town connectivity

2.3.3 Development Constraints and Opportunities

The rugged terrain which is good for the growing of tea has implications in terms of development of housing and infrastructure. It has cost and design constraints that have to a large extent shaped the growth of the town.

The location of the town on the main highway to Western Kenya provides it with opportunities for development that links it to this wider region. Kericho has abundant presence of natural water sources an opportunity for water abstraction and the geological stability is suitable for urban development.

2.4 FUTURE OUTLOOK

2.4.1 Demographic Growth Scenario

Kericho town as the headquarters of the county has the highest population among the major urban centres the projected population of Kericho Town for 2017 according to the Kenya Population and Housing Census 2009 is 157,789. These figures include the expanded Kericho Town covering the triangle between Kapkugerwet, Kapsoit and Kapsuser.Kericho town is estimated to house 104,282 people.

When the 8.3% annual growth rate of total urban population of Kenya is compared with the growth rate of Kericho town for the same period, it is merely 3.6%. It may be concluded that the high urban growth rate of Kenya is not reflected in Kericho town. The main reasons for low growth rate of Kericho town could the decreasing attractive opportunities in the town and its environs.

The three annual growth scenarios for the 20-year period 2016 – 2037 have been suggested in an

earlier study. The lowest would be for Kericho to grow at the rate of latest trend (1999-2009) of increase (about 3.63%) in the next 2 decades. The conservative estimate would be for it to grow slightly faster than the rate of latest trend increase – say 3.63% to 3.75% in the year 2026 and 2036respectively.

The high projection would be for it to grow at 3.75% to 4% in the year 2026and 2036 respectively.

Table 2-1: Population projection

2017	Intercensal Growth rate (annual)	2027	Intercensal Growth rate (annual)	2037
157,789	3.63	222,872	3.63	303,766
157,789	3.63	222,872	3.75	306,805
157,789	3.75	298,320	4	315,893

Population densities are highest in Kericho town and the nodal points of Kapsuser, Kapsoit, Kapkugerwet and Kipchimchim.

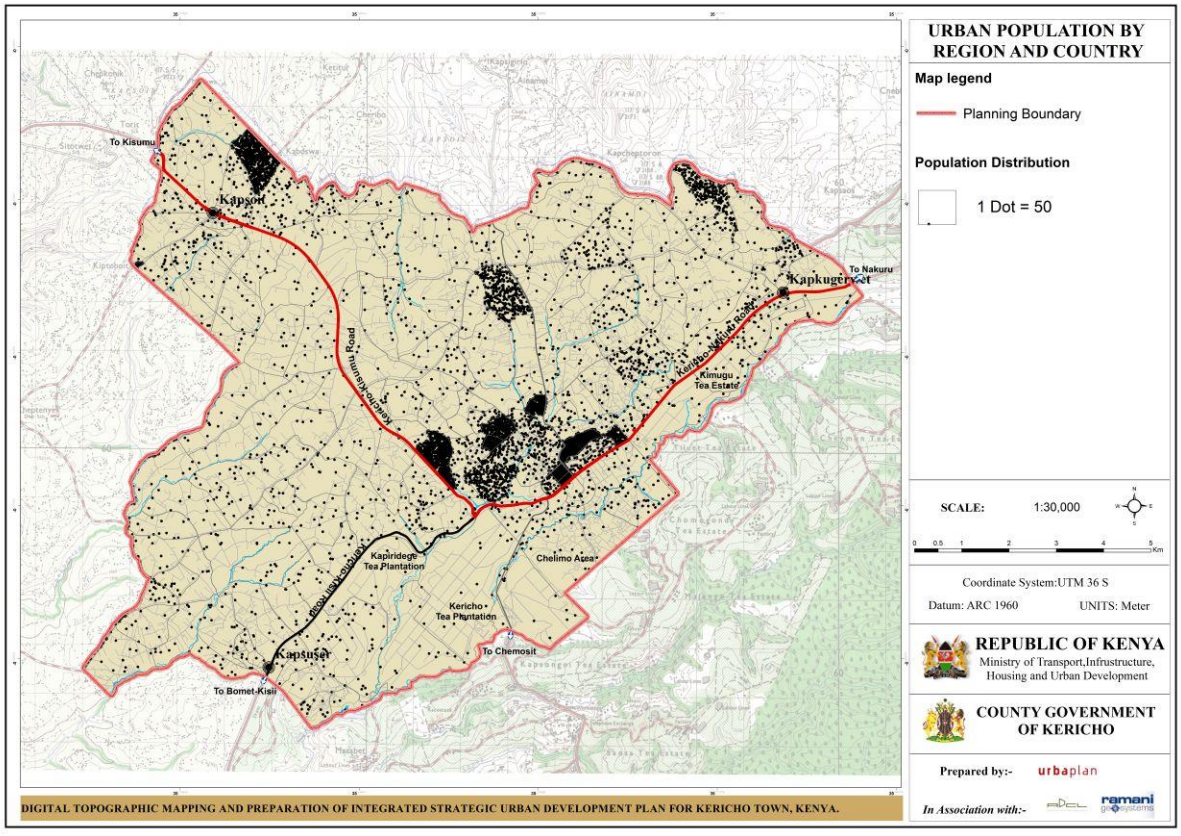


Figure 2-6: Kericho town population

2.4.2 Emerging issues

- In Kericho there is an anticipated doubling of the population in the next 20 years. This will require increased provision of services and infrastructure
- The risk of a massive slum area is noted in Nyagacho where uncontrolled development is creating a large informal settlement

- Migration into Kericho town has created an unprecedented demand for housing especially for middle income workers.
- Infrastructure for water, sewerage and solid waste will be hard put to cope with anticipated demand.

2.5 LAND REQUIREMENT PROJECTIONS

2.5.1 Land use Standards

In order to develop future land use projections for the Kericho town a market analysis was undertaken. The analysis included a review and projections of the town's primary market sectors (residential, commercial, industrial and public facilities) from 2017 to 2037 and the expected population growth and distribution. The standards used are anchored in the Physical Planning Handbook and benchmarking with comparable urban areas. The standards used for the ISUD Plan are presented in the following sub-sections.

2.5.2 Public Purpose Facilities

Table 2-2: Proposed Public purpose facilities

Facility	Catchment Population	Area in ha.
Cemetery	500,000	5.0
Crematorium	500,000	1.0
Town Library	500,000	0.2
Community Library	100,000	0.01
Community Centre	100,000	1.0
Orphanage/Children centre/Destitute home	500,000	3.5

2.5.3 Postal and Tele-Communication

Although there has been a major shift to the private sector for postal and communication services with changes in ICT, these services are still provided by State Corporation. Planning provision are made as shown in the table below.

Table 2-3: Proposed Postal and Tele-communication

Facility	Catchment Population	Area in ha.
Sub-Post Office	150,000	0.1
Head Post Office	500,000	0.25
Telephone Exchange 50,000 line	500,000	0.01

2.5.4 Fire Stations

All the Nodes should have a Sub-Fire Station. These are provided at two levels, Nodes and Municipal level.

Table 2-4: Proposed fire station

Security Facility	Catchment Population	Area in ha.
Sub-Fire station	150,000	0.5
Fire Station Headquarters	500,000	1.0

2.5.5 Security Facilities

The table below gives indications for security facilities. A juvenile home is expected to operate at the level of a school. The police stations should be provided at all the nodes and posts within critical areas like the University.

Table 2-5: Proposed security facilities

Security Facility	Catchment Population	Area in ha.
Police Post	50,000	0.2
Police Station	100,000	2.0
Police County Headquarters	Town	5.0
Prison	500,000	10
Juvenile Home	500,000	3.5

2.5.6 Health Facilities

Kenya's healthcare system is structured in a hierarchical manner that begins with primary healthcare, with the lowest unit being the community, and then graduates, with complicated cases being referred to higher levels of healthcare.

Primary care units consist of dispensaries and health centers. The current structure consists of the following six levels and estimated land requirements. Level 1 is the Community, addressing public health issues.

Table 2-6: Proposed health facilities

Health Facility	Catchment Population	Area in ha.
Level 6: Tertiary referral facilities	1,000,000	8
Level 5: Secondary referral facilities	100,000	4
Level 4: Primary referral facilities	30,000	2
Level 3: Health centres	10,000	1
Level 2: Dispensaries	5,000	0.5

2.5.7 Educational Facilities

The idea here is to provide the neighborhoods with adequate land for ECD, primary and secondary schools with the future requirements being taken into account. To economize on land and reduce on distance that pupils have to walk from one place to the other within the schools compound, it is suggested that tuition blocks, libraries and offices should be accommodated in well-designed storied buildings wherever possible.

Land requirements for colleges should be 10.2 Ha. for 960 students. The Legal Notice No. 56 of 1989 indicates that land requirements for a University should be at least 50 hectares.

Table 2-7: Proposed educational facilities

Facility	Catchment Population for 1 facility	Area required in ha.
ECD	3500	0.25
Primary School	3500	3.25
Secondary School	8000	4.5
College	500,000	10.2
University	1,000,000	50

2.5.8 Recreational Facilities

Recreation is the sum total of all human, social-cultural and economic activities that enhances the therapeutic status of the mind. The facilities include major open spaces (parks and buffer zones), stadia, sports complexes, theatre, cinemas, restaurants, etc.

These demand the market of a total urban population including local and foreign tourists. It

is not possible to fix standards for open spaces at the urban level as these essentially develop from opportunities in the environment. However, specific recreational spaces are preferred to mere open spaces. For the purposes of the Plan the following are proposed:

Table 2-8: Proposed recreational facilities

Facility	Catchment Population	Area in ha
Neighborhood Park	15,000	1
Ward Level Park	150,000	1
Neighborhood Playground	15,000	1
Stadium	500,000	5
Zoo	500,000	50
Amusement park	500,000	30
Social Halls/ and Community Centers	25,000	0.25

2.5.9 Commercial Facilities

The town centre offers commercial and other related services that are used by the population of the town or urban area as a whole including the inhabitants of its hinterland. The most important requirements for a town centre are geographical centrality, accessibility to vehicles and pedestrians, ample parking space and have four different degrees of completeness in separating pedestrians from vehicles in a town centre. The other Nodes also require commercial facilities. The minimum size for a commercial plot should be 0.045 hectares. Plot length versus the width should not be more than 1:3. The wholesale market should 7provide space for transport logistics.

Table 2-9: Proposed creational facilities

Facility	Catchment Population	Area in ha
Corner shop	500	0.01
Neighborhood Shopping Centre	5,000	0.5
Shopping Mall/Commercial Centre	15,000	1.0
Slaughter House	500,000	2
Ward Level Market	50,000	1.0
Wholesale Market	500,000	2.5
Central Business District	Whole town	50

2.5.10 Parking

Parking facilities should be related to the level of commercial activities created. For every $100m^2$ of land in the Central Business District a minimum of 1½ parking space may be provided except where Basement parking is provided. However, for the Nodes, car park shall be provided for every $500m^2$ of floor space.

2.5.11 Industry

Major Industrial Areas

(a) Location and Special Requirements

These areas provide suitable accommodation for the following types of industry; heavy and manufacturing, and noxious industries with large waste; large scale and users industrial plants; industries requiring excellent national/ international communication network; and industries requiring close links with other firms e.g. those firms which produce component parts for the same product or those involved in separate stages of the same industrial process. Accessibility to labour, communication routes, and ample supplies of power and water and sewage disposal facilities are of

prime importance. Separation from residential areas through buffer zones is essential.

(b) Land Requirements
In selecting an area for location of major industries in Growth Centres, a site must be provided which is neither too small to inhibit the location of industries requiring large areas, not too large to increase the possibilities of congestion. The total site area for a major industrial area would therefore probably lie between 500-1200 acres for a town with a population of 200,000 and 5000,000. It willprovide between 20,000 and 50,000 jobs, based on an average industrial density of 40 workers per acre.

Light Industrial Areas/Jua Kali
(a) Location Requirements
Light Industrial areas/estates cater for types of industries that are compatible with residential areas. They provide favorable locations for Lab our intensive industries e.g. workshops, large laundries; dry cleansing depots, printing; packaging; food industries; light assembly furniture makers etc. These estates would be scattered throughout residential areas, approximately one estate per 30,000 population. They should be located on the major internal routes of the township with separated access from residential feeder roads.

(b) Land Requirements
The probable total area of each estate would range from 10-50 hectares, which would be sufficient to cater for 1500-7500 workers at a density of 60 workers per acre. An area of 10-20 small firms without creating congestion in the residential areas. An area of 50 hectares would allow large firms to locate in addition. Anything beyond 50 hectares would begin to create major conflicts and incompatibilities with the surrounding residential areas.

Workshop Areas
These cater for types of activities existing in a relatively uncontrolled way, close to retail activities primarily in low income residential areas e.g. repair workshops, carpenters, small tin smiths, re-use industries etc. As these workshops are also retail outlets, their location is more sensitive to the market than raw materials.

Table 2-10: Land requirements for industries

Type of Industry	Land Requirements in ha.	Catchment Population	Min Land Size in Ha.
Light	4	30,000	0.05
Medium	10	100,000 to500,000	2
Heavy	None	Over 1 million	20

2.6 FUTURE LAND REQUIREMENTS

2.6.1 Existing Land Use
The total land for the ISUD Plan is 111km^2. The total population of the urban core is about 104,282 with an average gross density of 910 persons per km^2. The planning area is made up of predominantly agricultural use making up 88% of the total area. This is the land that would accommodate urban expansion.

Table 2-11: Existing Land use distribution

Use	Area in ha	% of Total Area
Residential	735	5.81
Education	36	0.28
Public Purpose	30	0.24
Commercial	56	0.44
Industry	13	0.10
Aerodrome	3	0.02
Recreation	47	0.37
Agriculture	6750	53.35
Agriculture (Plantation)	4469	35.32
Wetland	83	0.66
Future Development	50	0.40
Total	**12,272**	**97**

2.6.2 Density Projections

The urban core, Kapkugerwet, Kapsuser and Kapsoit exhibit high population densities. These are the areas that carry the bulk of the residential areas. With densification these areas will have to accommodate substantially higher densities. This would involve providing infrastructure and other incentives to encourage development of high-rise residential units with substantial ground coverage to enhance the concept of dense town. The development of new residential areas should also aim at densities of 70 dwelling units per hectare. The Nodes (Kapkugerwet, Kapsuser and Kapsoit) should develop with a lower density of 20 to 32 dwelling units per ha to cater for the commuting population and provide more luxurious suburbs.

2.6.3 Enhancing Population Holding Capacity In Existing Built-Up Areas

There is potential for enhancing the holding capacity of existing built up areas through densification. This will involve

- Multifamily residential development
- Development of residential neighborhoods
- Infill development in government residential estates
- Improving the quality of access roads to bitumen level
- Development of new employment zones near residential areas or with good access to residential areas

It is proposed that the population holding capacity of alreadydeveloped areas be enhanced throughprovision of improved social facilities and physical infrastructure. This will include improvement of existing facilities for a higher capacity.

2.6.4 Residential Land Requirements

Most of the planning area is rural with large agricultural units. As part of densification this is planned to increase to average 60 dwelling units per hectarein the urban area with provision of multi family

dwelling units in a mix of low, medium and high density. The total housing demand will be 76,701 units with 46,020 for the urban development. Due to densification some of the existing housing units will be demolished to create new housing hence the presentation of the total housing demand rather than additional housing. The built up urban area is estimated to take up 40% (44.4km sq) of total land and house 60% (184,083)of total population.

Table 2-12: Projected population

Projected population for 2037	**306,805**
Urban core population	184,083
Peri-urban population	122,722
Urban Housing Demand (Total) 4/hh	76,701
Total Land required for urban residential development (hectares)@ 70unit/ha	657 ha
Total Land required for urban residential development (hectares) @ 30 unit/ha	1,534

2.6.5 Commercial Land Requirements

The minimum size for a commercial plot should be 0.045 hectares. Plot length versus the width should not be more than 1:3

Planning for kiosks and hawking is considered as a special feature in planning. The land requirement is considered under Commercial Sector

Table 2-13: Land projection per facility

Facility	**Land Requirements per facility in ha.**	**Land required 2037 in ha**
Corner shop	0.01	6
Neighborhood Shopping Centre	0.5	30
Shopping Mall/Commercial Centre	1.0	20
Slaughter House	2	2
Ward Level Market	1.0	6
Wholesale Market	2.5	2.5
Central Business District	50	50

2.6.6 Industrial Land Requirements

The planned industrial area should have proper relations to residential, commercial and recreational areas as an integral part of the overall urban development plan. Overall total land reserved for industry should form 8% of the total area planned. A ratio of 1:3 should be maintained for light and heavy industry. The percentage allocation of land for industrial area/estate may be as suggested below, depending upon the type of industries and the extent of the industrial area/estate.

Table 2-14: Industrial land requirement per industry

Type of Industry	**Land Requirements per facility in ha.**	**Land required 2037 in ha**
Light	0.05	0.5
Medium	2	2
Heavy	20	20

2.6.7 Public Purpose and Institutional Use Land Requirements

Land requirement for public purpose includes land for education facilities, health, and community and recreation facilities.

Table 2-15: Land requirement per facility by 2037

Facility	Area required in ha.	Land required 2037 in ha
Education		
ECD	0.25	22
Primary School	3.25	286
Secondary School	4.5	171
College	10.2	10.2
University	50	50
Health		
Level 5: Secondary referral facilities	4	12
Level 4: Primary referral facilities	2	20
Level 3: Health centres	1	30
Level 2: Dispensaries	0.5	30
Recreation		
Neighborhood Park	1	20
Ward Level Park	1	2
Neighbourhood Playground	1	20
Stadium	5	5
Zoo	50	50
Amusement park	30	30
Social Halls/ and Community Centres	0.25	3
Security		
Police Post	0.2	1.2
Police Station	2.0	6
Police County Headquarters	5.0	5
Prison	10	10
Juvenile Home	3.5	3.5
Sub-Fire station	0.5	1
Fire Station Headquarters	1.0	1
Postal and Communication		
Sub-Post Office	0.1	0.2
Head Post Office	0.25	0.25
Telephone Exchange 50,000 line	0.01	0.01
Others		
Cemetery	5.0	5
Crematorium	1.0	1
Town Library	0.2	0.2
Community Library	0.01	0.03
Community Centre	1.0	3
Orphanage/Children Centre	3.5	3.5

2.6.8 Land Requirements

The land requirements are estimated from current trends and population projection for the planning area. It comprises residential use with high-density use and the estimate

for the other land uses. The additional land to accommodate future population and other land uses is about 700ha.

Table 2-126: Land requirements

Estimated Population 2017	**157,789**
Current developed area (hectares)	920
Current gross population density (persons/ha) in AOI	14.2
Land available in AOI, which can be made available for development, excluding environmentally sensitive, agriculture (tea), forest etc. (ha)	6,750
Projected population for 2037	**306,805**
Proposed Net Population density (within proposed developable area excluding area under agriculture, forest, ponds, quarry and future development) (p/ha)	280
Additional Land required to accommodate future population (based on net density) in ha	376
Population to be accommodated in existing developed area	157,789
Population to be accommodated in new development	26,294
Total Land required including existing developed land (hectares)	1,600

3 DEVELOPMENT CONCEPT

3.1 VISION

The Vision of the town was developed through a consultative iterative process with stakeholders. The final vision statement was crafted in a validation workshop and is posited to drive what the town will become. The statement is provided herebelow.

Kericho Town -a green,clean, safe and economically vibrant town

3.2 GOALS

To achieve the Vision the stakeholders have created the following sectoral goals that the ISUDP should work towards the development strategy.

3.2.1 ENVIRONMENT AND CONSERVATION

3.2.1.1 Liquid Waste

- Construct new sewerage treatment plant
- Technical team to promptly respond to burst or blocked sewerage lines
- Public Health Officers to monitor and enforce rules by prosecuting those who intentionally release raw sewerage in the open
- Authorities to monitor and supervise construction of new connection to the sewer system

3.2.1.2 Solid Waste

- Recycle solid waste through systematic sorting out
- Educate the community on the need for sorting out and recycling solid waste
- Each Sub county to provide own sanitary solid waste disposal sites
- Use abandoned and open quarries as solid waste disposal sites
- Increase the number of private solid waste collection firms and ensure the solid waste is collected daily

3.2.1.3 Wetlands and Water Sources

- Enforce proper agricultural practices (GAP) around the wetlands and water sources
- All stakeholder to be held accountable for monitoring and enforcing regulations on wetland management
- Cut down all eucalyptus trees grown along the riparian areas and on the water resource catchment
- Demarcate and fence water catchment areas in addition to reforestation

3.2.1.4 Forests, Slopes and other Vegetation

- Enforce 10% forest cover Government regulation
- Enforce requirement by Rainforest Alliance that all tea factories meet the regulations

3.2.1.5 Air Quality

- Government to enforce laws on air and other pollution
- Vehicles emitting carbon fumes to be banned from using the roads
- Policy regarding incinerators enforced
- Enforce regulation regarding smoking zones (Cigarettes)

3.2.1.6 Noise Pollution

- Entertainment licenses should include limit on sound produced
- Enforce the regulation on level of noise produced in all places

3.2.1.7 Safety and Security

- Increase use of solar power for lighting
- Maintain street lights
- Enforce adherence to road signs
- Ban trailers from parking within CBD and Residential areas
- Educate community on the orderly use of bus stops

3.2.2 ECONOMIC DEVELOPMENT

3.2.2.1 BodaBoda Business

- Increase safety both for operators and clients:
- Safe parking
- Enforce use of operating kitty
- Enforce revenue collection from the operators

3.2.2.2 Jua Kali Business

- Allocate suitable space for jua kali operators
- Enforce revenue collection from the operators

3.2.2.3 Open Air Markets

- Improve the markets by:
- Fencing
- Providing shades to traders
- Construct ablution block
- Ensure management is efficient

3.2.2.4 Hotels and Restaurants

- Increase capacity and quality
- Improve security to attract visitors
- Encourage investors

3.2.2.5 Industries

- Encourage production for direct export

Reclaim land originally belonging to the Industrial Estates

3.2.3 TRANSPORTATION

3.2.3.1 Roads

- Carryout regular maintenance
- Roads to be planned according to acceptable standards and to cater for all road users
- Roads to have proper and adequate signs and marking
- Authorities to enforce road use regulations and laws
- Proper civic education with regard to effects of pollution
- Garages to be located in specific areas
- Demolish all illegal structures in the bus park
- Include heavy deterrent fines for those abusing roads use regulations
- Heavy trucks to be directed to roads outside the CBD
- Heavy trucks to park outside town area
- Provide for flyover at Kisumu Road, KCC and Nyagacho Area and Provide pedestrian flyover at Parkmart to Hospital
- Provide specific parking for bodabodas separate from Matatus

3.2.3.2 Air Transport

- Need for expansion of the airstrip and to be maintained regularly
- All houses next to the airstrip or along the landing approach to be relocated
- Need for international standard airport to serve:
- Air transport of tea and horticulture
- For medical evacuation
- Provide proper signage for the airstrip to enhance marketing

3.2.3.3 Railways Transportation

- There should be provision for connection to standard gauge railways
- There should be network for connecting the different parts of extended Kericho town

3.2.4 HOUSING

3.2.4.1 Housing / Houses

- Have enough housing facilities in town through PPP and Loans from NHC
- Policies and legislation on housing in place
- Introduce proper zoning systems and categorization of housing areas
- Adhere to zoning regulations
- County to have standard hosing design for different categories of housing
- Upgrade existing housing
- Acquire more land and Relocate prison to another place from CBD County Government to liaise with National Government
- Review laws on cash crop farming
- Construct wide roads within the housing areas

- Standardize charges for approvals
- Introduce new and cheaper building technologies Provide access to subsidized facilities and equipment for manufacturing cheap building materials

3.2.5 COMMUNITY FACILITIES AND UTILITIES

3.2.5.1 Water

- Identify and develop additional water sources
- Seek funds and allocate appropriately for the development of water supply
- Develop proper plans for the distribution of water

3.2.5.2 Electricity

- Develop and encourage investment in alternative energy sources
- Improve efficiency in the power service provider (KPCL)
- Invite public private partnership in investment and development of power supply

3.2.5.3 Slaughter Houses

- Construct new slaughter house with improved standards adhering to technology
- Link slaughter houses to value addition and production of meat products

3.2.5.4 Public Toilets

- Encourage private investment in public pay toilets
- Every new development (commercial and public housing) should include provision of public toilet facilities
- Rehabilitate and renovate existing public toilets to meet higher standard of technology and cleanliness

3.2.5.5 Sewerage Systems

- Rehabilitate the sewerage systems
- Construct new sewerage system to cover the whole town

3.2.6 RECREATION

3.2.6.1 Parks and Gardens

- Plant more trees at the Uhuru Park and Moi Garden
- Introduce concrete benches for the convenience of the users
- Introduce animal orphanage and sanctuary to enhance attraction to the parks and gardens
- Provide better security through:
- Fencing
- Lighting and paths
- Introduce cultural centres into the parks to increase attraction and serve as community and visitors education on the cultures of the local community

3.2.6.2 Swimming Pools

- The County should plan for swimming pools in the town. At least each planned stadium should include a swimming pool

3.2.6.3 Cinema Halls

- The County should attract private investment in cinema halls

3.2.6.4 Hotels and Restaurants

- Encourage private investors to invest in developing hotel of higher standards
- Provide incentive for maintaining the hotels at the higher levels through quality service
- Encourage hotel to invest in swimming pools as part of attraction

3.2.6.5 Sporting Facilities

- Invest in stadia that will be open to the public and provide a variety of sporting facilities
- The stadia should be well drained to avoid storm water and stagnating waste water
- Provide facilities for public conveniences such as toilets, lighting and water
- The stadia should provide the following sporting services inter allia:Hiking, Cycling, Biking, Athletics, Gymnastic facilities etc.

3.2.6.6 Beautification and Landmarks of the Town

- Plant more flowers and trees in the CBD and along the dual carriage roads in and out of the town
- Ensure that street light and serviced and working always from 6pm to 6am
- Erect monuments to celebrate lives on local heroes
- Introduce standards for construction of high rise building in the CBD to reduce pressure on land and congestion

3.3 PLANNING FOR SUSTAINABILITY

Cities and towns are often described as nodes for economic, social, cultural and political development. In some cases, they are also administrative centres. Urban development and growth is generally seen in terms of increased population, economic growth and geographic size. However, a wider perspective is needed to address the sustainability of urban areas, which include economic, social and environmental dimensions.

Sustainable urban development requires a cross-sector and multidimensional approach, as towns and cities involve complex functions, systems and relationships. This integrated approach addresses the interrelated social, economic and environmental dimensions (including cultural and technical aspects). Considering the complexity of urban areas with all the interrelations and interdependencies between different sectors and systems, there are several ways of describing the three main dimensions of urban sustainability. However, in order to approach the definition of sustainability it is necessary to

include the spatial dimension of the built environment in relation to environmental, social and economic aspects of sustainable urban development.

3.4 PROPOSED DEVELOPMENT CONCEPT

The development concept is guided by the structuring elements which determine the direction and form of the growth of the town.The urban typology, density and design of the town affects land use efficiency, and possibilities for economic development and socio-cultural sustainability. The typologies below show some of the key planning and design issues for new and regeneration areas. The examples are single blocks, but urban typology and density are equally important at area, district and city level.

Integrated planning and design of urban area should promote access to services and mobility systems for all citizens. Many people believe that high urban density requires high-rise buildings. However, a compact yet varied and attractive built environment can be created by combining a range of urban typologies and building designs.

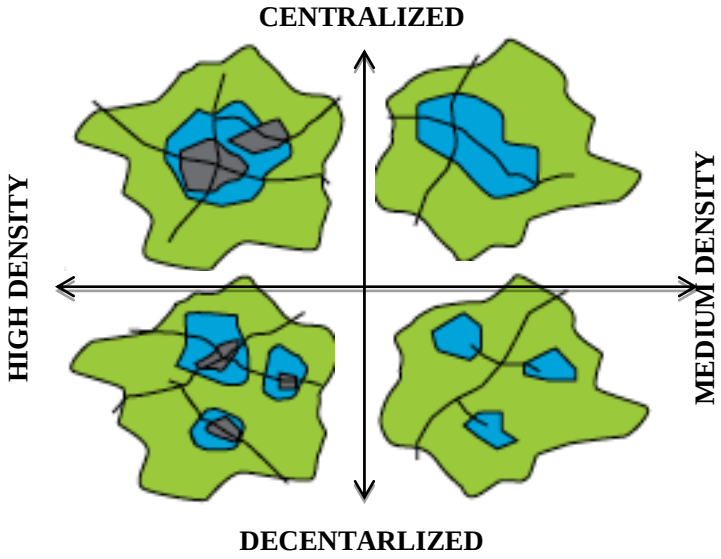
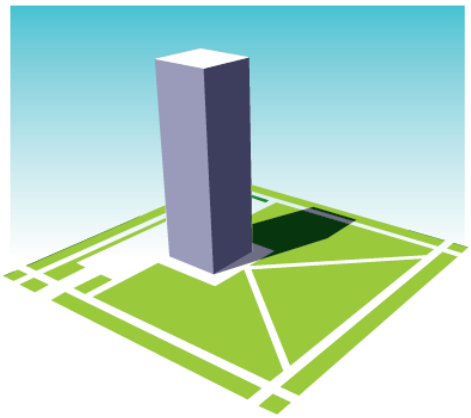


Figure 3-1: Scenario matrix showing different urban structures

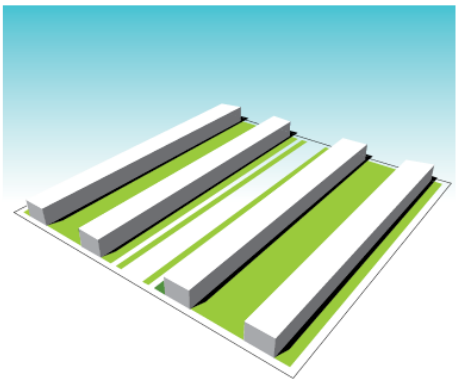
High-rise, low-coverage single point block



site 100x100 metres	1 ha
floor area/level	324 m²
levels	18
total floor area	5 832 m²
FAR (floor area ratio)	58%
no units (á 80 m²)	73

This solution does not offer private gardens or amenities. There is no direct relationship between the building and surrounding streets, and the large open space might require significant investments for maintenance and management.

Low-rise, high-coverage back-to-back terraces



site 100x100 metres	1 ha
floor area/level	1 440 m²
levels	2
total floor area	2 880 m²
FAR (floor area ratio)	29%
no units (á 80 m²)	36

This solution offers a well-defined public space with clear division between public and private realms. All dwellings have direct access to private gardens. The high site coverage minimises the potential for communal space and a more varied urban landscape.

Medium-rise, medium-coverage urban block

site 100x100 metres	1 ha
floor area/level	3 500 m²
levels	3
total floor area	10 500 m²
FAR (floor area ratio)	105%
no units (á 80 m²)	131

The design has an active street frontage with potential for commercial and public activities at ground floor level. More space can be made available for private gardens, communal areas or a park. Different building heights and plot widths create variety.

(Source: SymbioCity Approach 2012 SKL International, Stockholm, Sweden)

Guided by the above conceptual framework Kericho is designed as a decentralized high density town with amix of housing development that enhances the quality of the environment and makes the town a beautiful place to engage in work, learning and play. The integration of nodes on the development corridors will enhance access to services for the residents.

3.4.1 Significance of Kericho in the Region

Kericho is posited as a key urban area in the Lake Victoria region acting as a transport link between Kisumu, Bomet, Kisii and Sotik. It has potential for growth as the link roads are improved and as the

regional economy becomes more interwoven. As the County Capital the town has got renewed impetus and is positioned to drive the economy of a very vibrant county in terms of population and resources. The ISUDP should take cognizance of this key central place function.

3.4.2 Land Suitability Assessment

The conceptual framework posits environment at the nexus of the ISUDP. It looks at elevation, slope, protected areas and environmentally sensitive area to assess areas that would be suitable for spatial development. The concept envisages a balance between spatial considerations, institutional parameters, economic and social considerations and how these relate to environmental sustainability. There is consideration of conservation and development of natural resources optimally.

The suitability for development has been assessed by looking at the digital terrain model (DTM), elevation, Natural environment including the rivers and their drainage valleys. The DTM reflects the land in Kericho is undulating with ridges towards the north eastern parts of the town. Most of the land (85%) has slopes less than 7 degrees. The land with a slope of less than fifteen degrees is classified as suitable for development and 90% of the land in Kericho is suitable for development. The tea estates make up about5% of the urban land. Forested land may increase to 10% if conservation measures are instituted on the River valleys and tea belt.

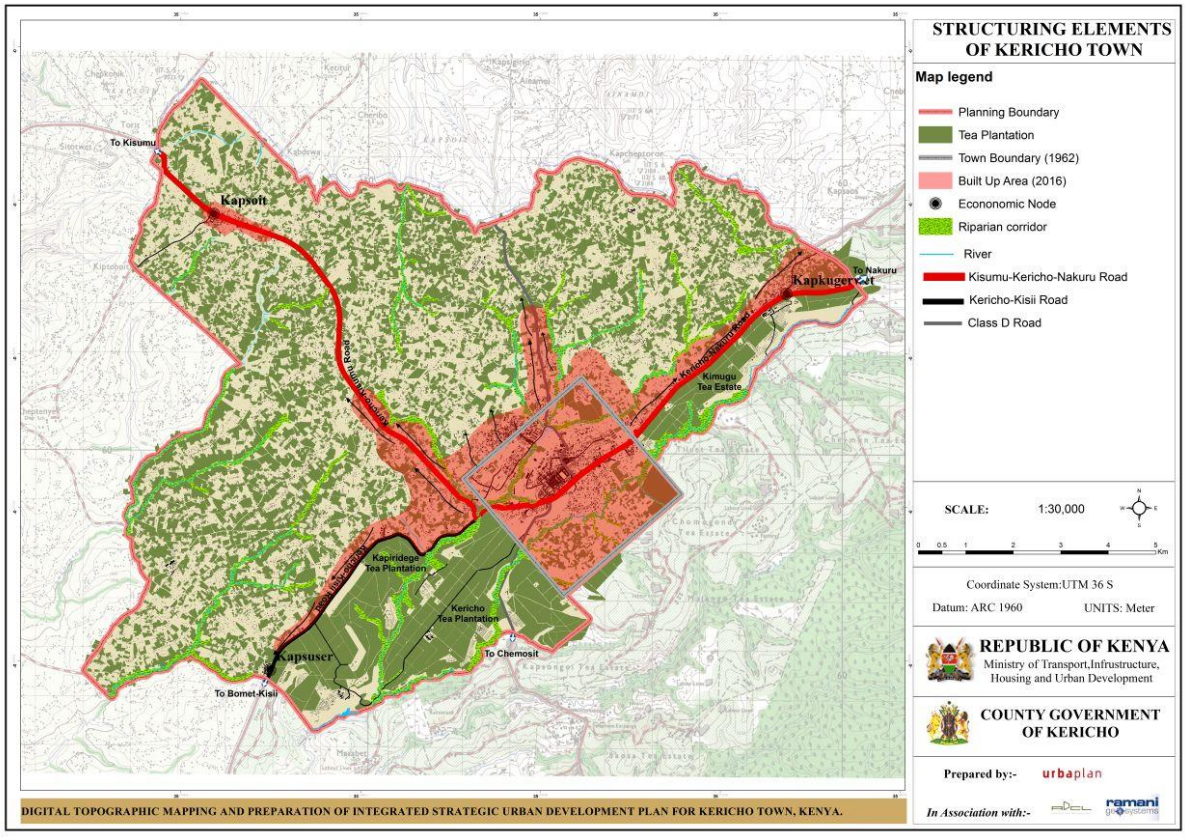


Figure 3-2: Structuring elements of Kericho town

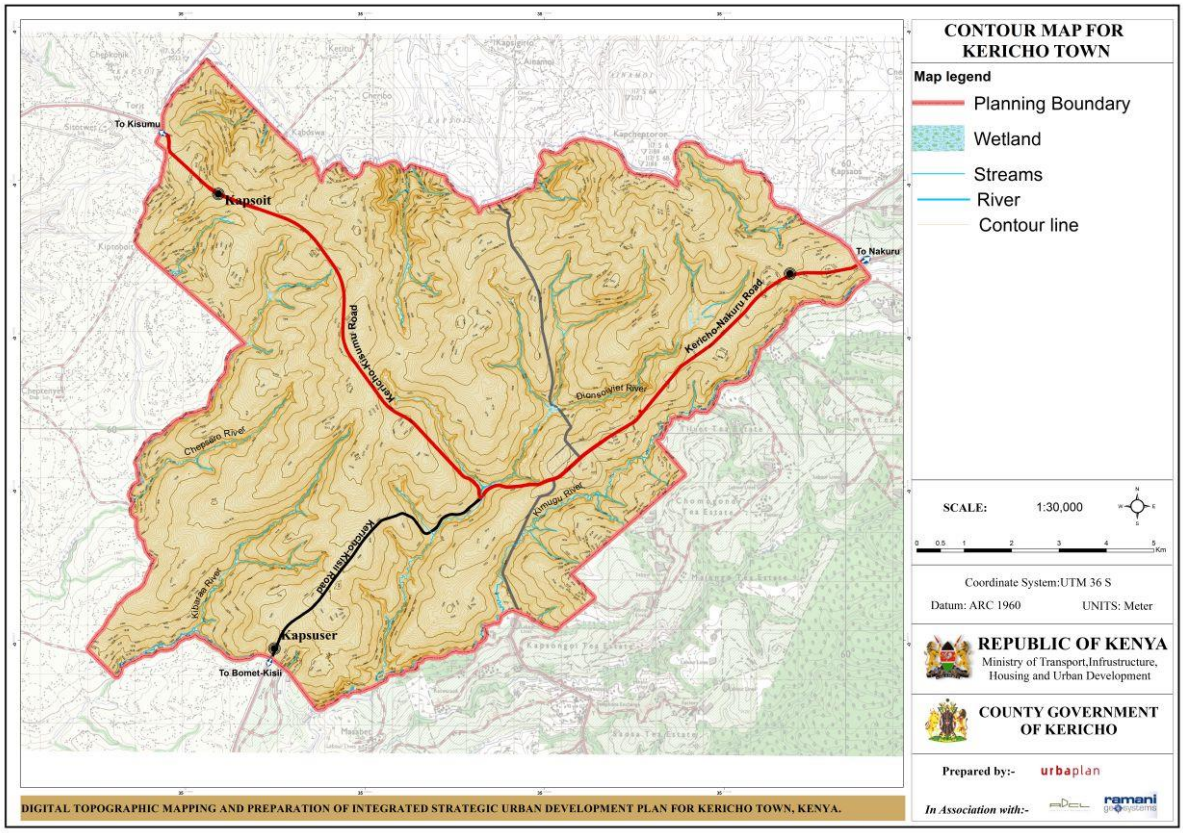


Figure 3-3: Contour Map

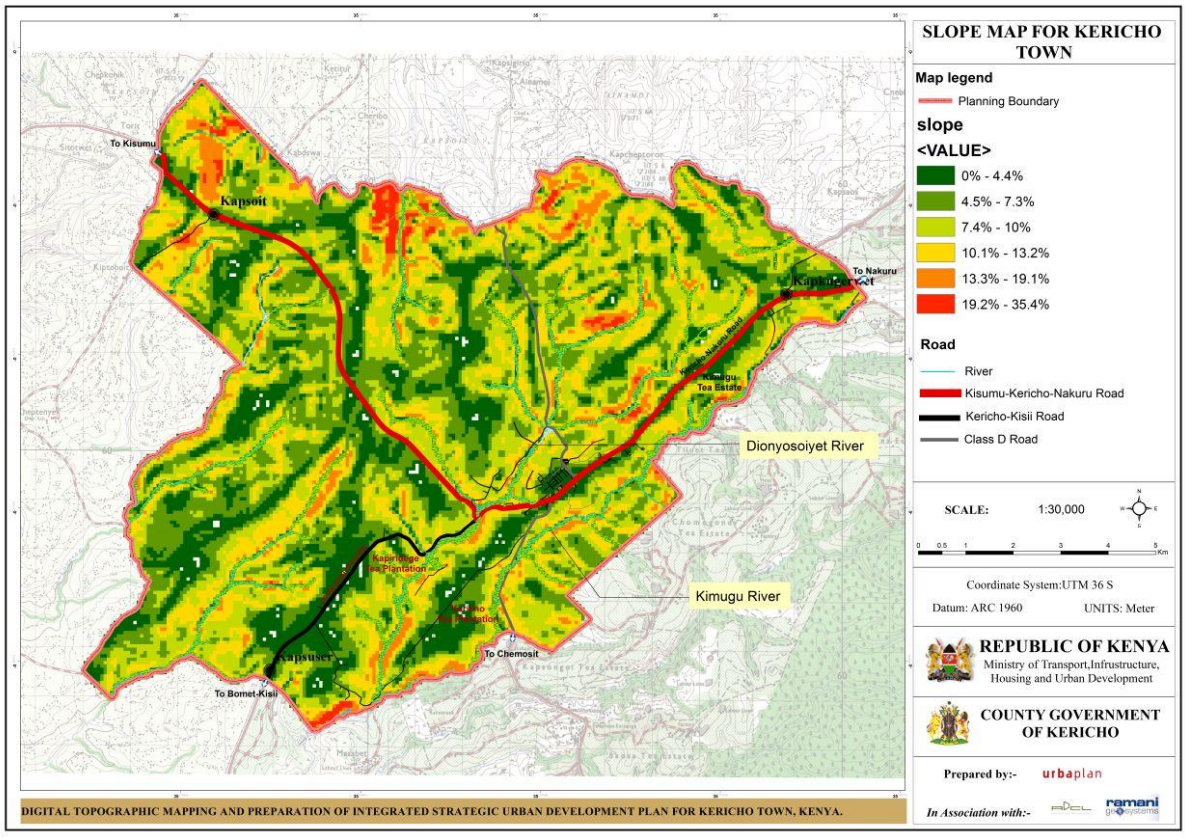


Figure 3-4: Slope Map

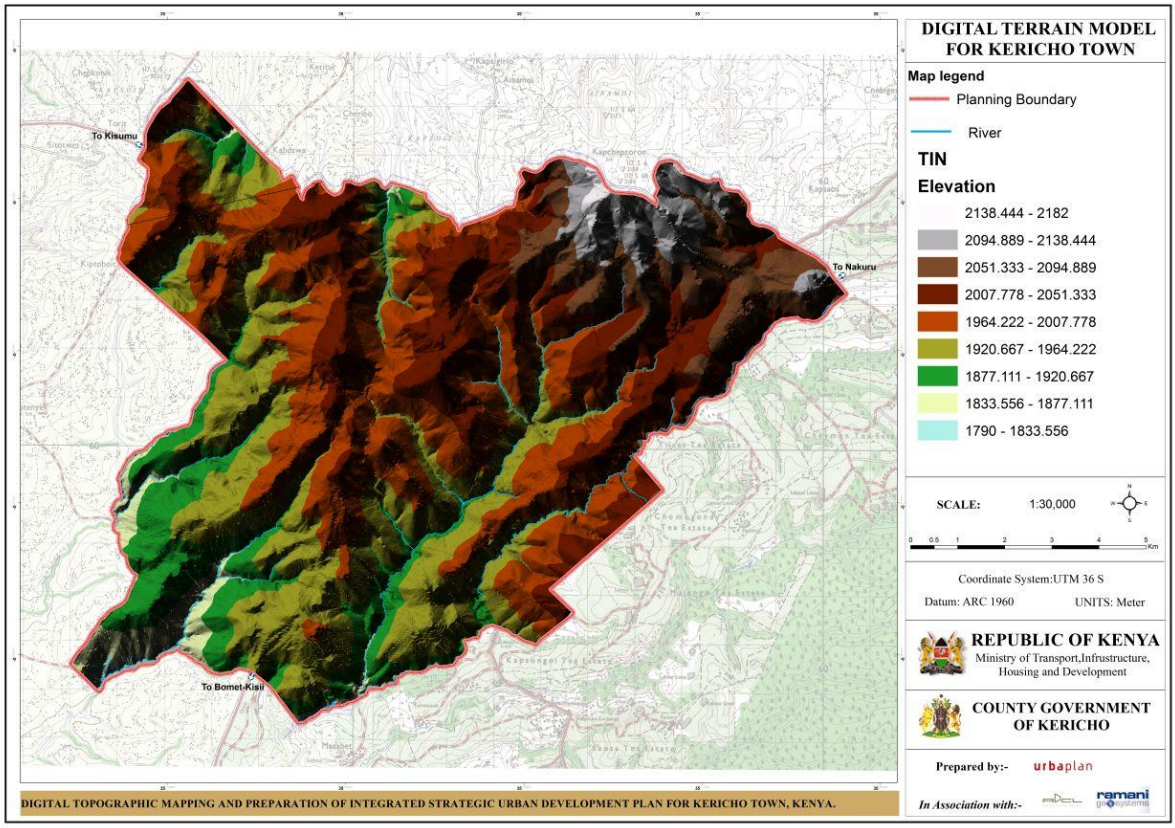


Figure 3-5: Digital Terrain Model

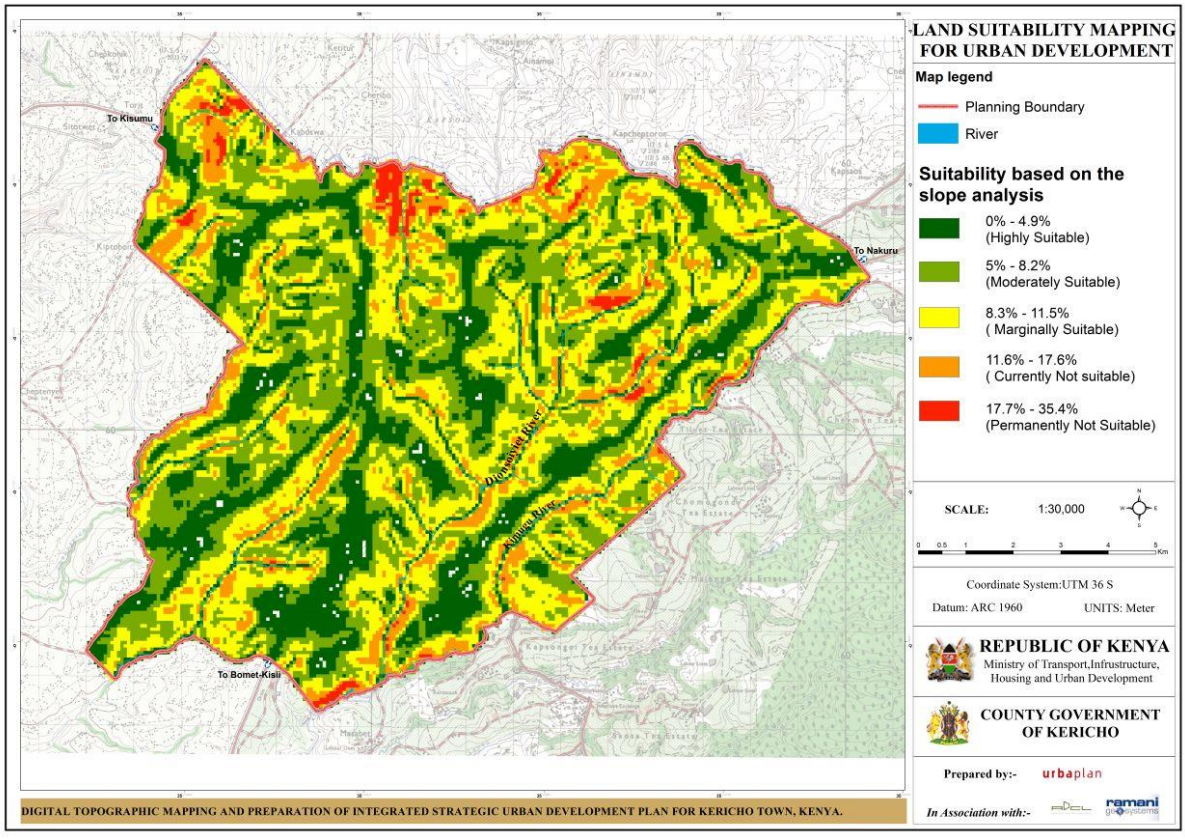


Figure 3-6: Land Suitability for Urban Development

3.4.3 Development Potential and Constraints

The Tea plantations, forest, rivers and steep slopes are constraints as well as potentials for development of the town. There are a number of rivers and streams that traverse the planning area. They have created generally fragile areas that require controlled use to ensure soil conservation.

- Maintain natural drainage channels as much as possible
- Set back development up to 30 meters on the main rivers.
- No development on roads designated for expansion
- Develop the tourist potential of the tea plantations

3.4.4 New Development Integrated with Arterial Corridors

As a strategy to enhance balance of residential areas within the town and enhancing use of community facilities the ISUDP focuses on development of the three nodes linked through the key arterials, which will be further developed to enhance rapid movement between the nodes and the CBD. It also envisages densification in the areas around the old town. At a broader scale, it shall promote reverse-flow of movement in the transport system by encouraging commuting away from city center out to major employment hubs located in Nodes thus reducing the pressure in the CBD. The mutate operators shall be provided with incentives to have higher capacity vehicles operating on the improved arterials with bus-free ways in the built up areas.

3.4.5 Decentralized Planning

The conceptual approach is to decentralize the attraction areas in the city by developing the nodes as unique centers providing jobs away from the old urban core. This should reduce vehicular movement in the urban core but also allow development of the CBD as a pedestrian only area. Each of the nodes will have a different economic focus and unique identity, while the present CBD will continue to be the key business center of Kericho. The planning units will be the administrative Wards.

3.4.6 Low and High Rise Development with Medium and High Density

Development of housing is geared towards a densified urban area able to provide quality service. The plan also envisions a mix of housing design that would allow for various user desires. The layout for residential areas shall allow for medium and high density development with the nodes having medium development and the urban core having a greater concentration of high density development. This would allow for reduction of vehicular traffic with high density residential areas near the CBD.

3.4.7 Infill or Brownfield Development

Urban infill is defined as new development that is sited on vacant or undeveloped land within an existing community, and that is enclosed by other types of development. The term "urban infill" it implies that existing land is mostly built-out and what is being built is in effect "filling in" the gaps. Brownfield redevelopment on the other hand is a broad term used to describe the reuse and revitalization of abandoned, underutilized or stigmatized properties through the use of one or more local, county or national programs.

Municipalities are also encouraging the practice of infill as it is more efficient to use existing infrastructure and services than it is to extend infrastructure and services farther afield, Infill development can also help a community achieve or sustain thresholds of population density necessary for amenities such as park space, community services, retail establishments, and affordable housing. The ISUDP proposes such development in institution housing and GK Prison area and other such government land within the urban core that would provide an opportunity for showcasing densification neighbourhoods.

3.4.8 Control of the Sprawl Development

Kericho is showing a tendency of development, especially commercial facilities along the major highways. Such development may cause resource inefficiency in provision of services. Regulations shall be put in place to create agricultural buffer zones between the development nodes and the urban core.

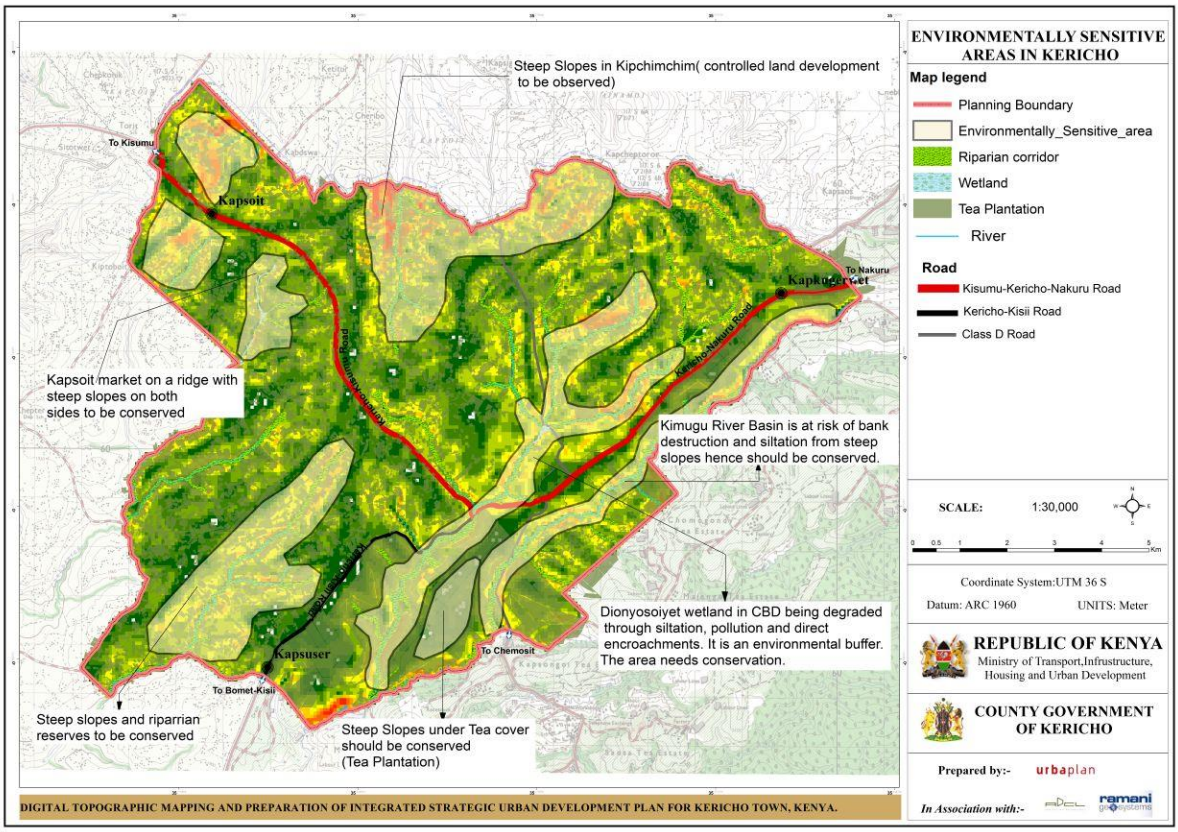


Figure 3-7: Environmentally sensitive area

3.4.9 Renewal of CBD

Urban renewal is critical issue for Kericho CBD. The old CBD was not designed for the emergent urban role as a commercial and administrative hub of the County. The street are narrow and the infrastructure is not able to cope with increasing demand the plots are also small and development requires a rethinking on land management to create enhanced urban aesthetics. The leases in the CBD should be used to facilitate renewal of the CBD to position it as an urban core of a modern city.

3.4.10 Quality Living

Kerichoplays a vital role in economic growth and county development as it offers employment, higher education and specialised services whilst being centre of innovation and technology. At the same time, however, it struggles for social cohesion and environmental sustainability, since serious contemporary problems, like social inequality, environmental degradation, crime, etc., are traditionally considered to accompany urban life. The Town Vision anticipates a place that is green, clean and safe. The proposals for residential, commercial, industrial, education, recreation and other uses shall see a blend of development that enhances the vision of the town's residents.

3.5 PLANNING HIERARCHIES/ DECENTRALIZED PLANNING

The provision of services in the Town is guided by the Physical Planning Handbook and the Devolved Government Act which provides for various levels of planning.

3.5.1 Estates

An estate is a spatial planning unit, which is adequately provided for in terms of basic community facilities bordered by principle through roads and has an identity. The service center which forms the focal point of the estate satisfies the minimum walking distance from the perimeter. The population of the estate should be able to support the services within the physical entity. It is recommended that an estate shall have 100 households on the average.

3.5.2 Neighbourhood

This can be defined as a comprehensive planning unit with some of the following characteristics:

1. Socio-economic identity
2. Common facilities such as schools, recreational, shopping centers, etc.
3. An almost self-contained unit
4. It may include several estates.

It is estimated to have a population of between 5,000 and 15,000.

3.5.3 Ward

This is an administrative unit that is the lowest unit just before a village/neighborhood. It forms the unit for service provision just below a sub-county. It is estimated to have a population of between 15,000 and 20,000

3.5.4 Sub-County

The Municipality has two sub-counties each with a population of about 80,000

3.5.5 Municipality

This is the entire planning area with a population projected to reach over 300,000.The provision of service facilities and infrastructure as informed by these decentralized units of planning and administration.

4 STRUCTURE PLAN

4.1 INTRODUCTION

The town covers total area of 111 square kilometers including Kapkugerwet, Ainamoi, Kipchimchim, Kapsoit and Kapsuser. This covers some trading centers but mainly the rural agricultural lands excluding the land under leases to the multinational companies in the area. The town acts as a transit point linking the greater Western Kenya. Its strategic location as a transport node has seen it grow. It has also been a net in-migration node for workers moving into the large tea plantations in the region. Kericho town strategic position gives it a comparative advantage as a key node in the regions development.

The Integrated Strategic Urban Development Plan (ISUDP) provides an opportunity to address these planning needs. This chapter posits the development concept for the structure plan.

4.2 GROWTH TREND

There is no clear explanation of the growth trend of the town. From the historical trend the town started as a meeting for treatment: the local medicine men then to the colonial hospital. It was later demarcated by the colonial government in 1962 as the district headquarters where it housed the administrative offices. The town population has been growing rapidly as a result of cash high cash circulation in the region from the tea companies.

The rapidly growing population will also see the need to double the facilities and infrastructure provided in the town. This would be a very expensive exercise if the growth sprawls through the town boundaries. There should be consideration to densify the development of the town to reduce the overall investment costs. This would include multistory buildings for schools, hospitals and housing.

4.3 GROWTH POTENTIAL

Kericho has not fully tapped into its growth potential. Located on the key arterials BI and C23 it has linkage to major economic zones within the region. The resources in the hinterland include commercial agriculture, tourism and natural resource production. The town has potential for industrial processing and tourism development within the greater Western Kenya region. It is this potential that should be tapped into for the town's growth. In-migration to the town has created a lot of potential to develop infrastructure and facilities to cater for this population.

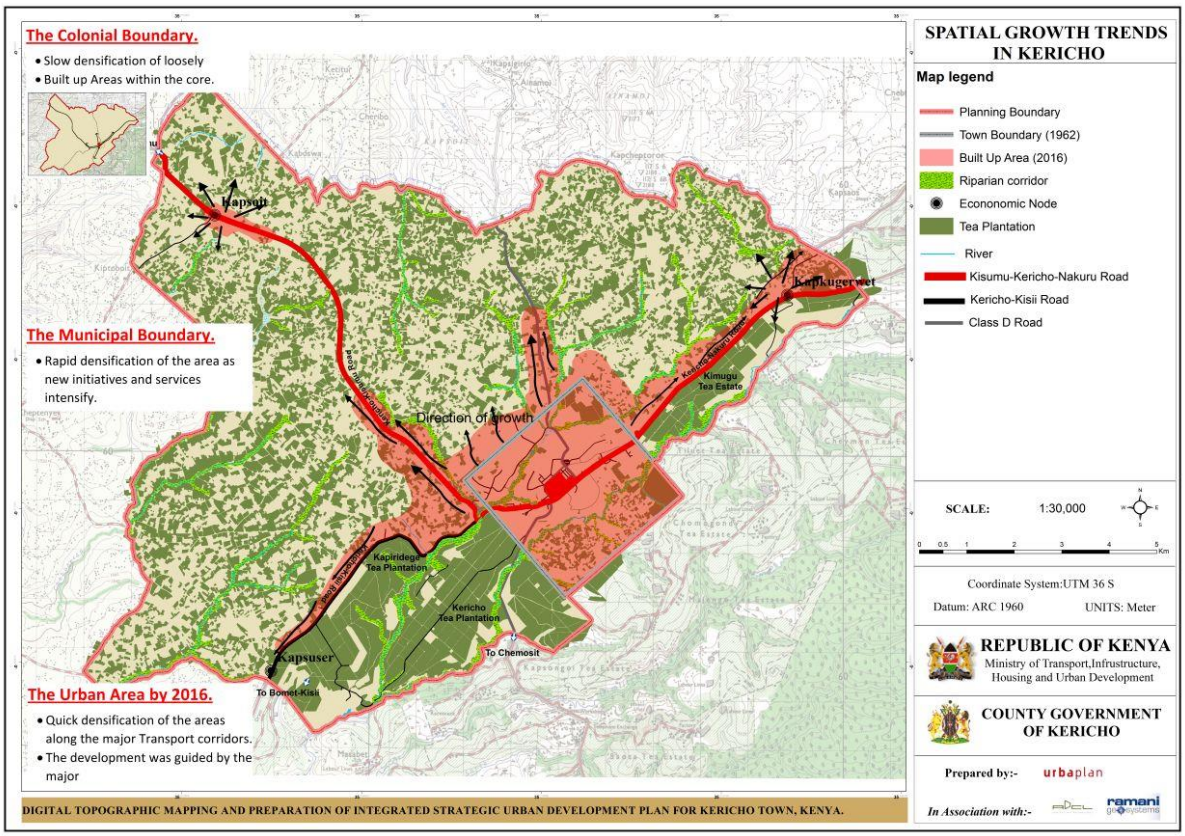


Figure 4-1: Spatial growth trend

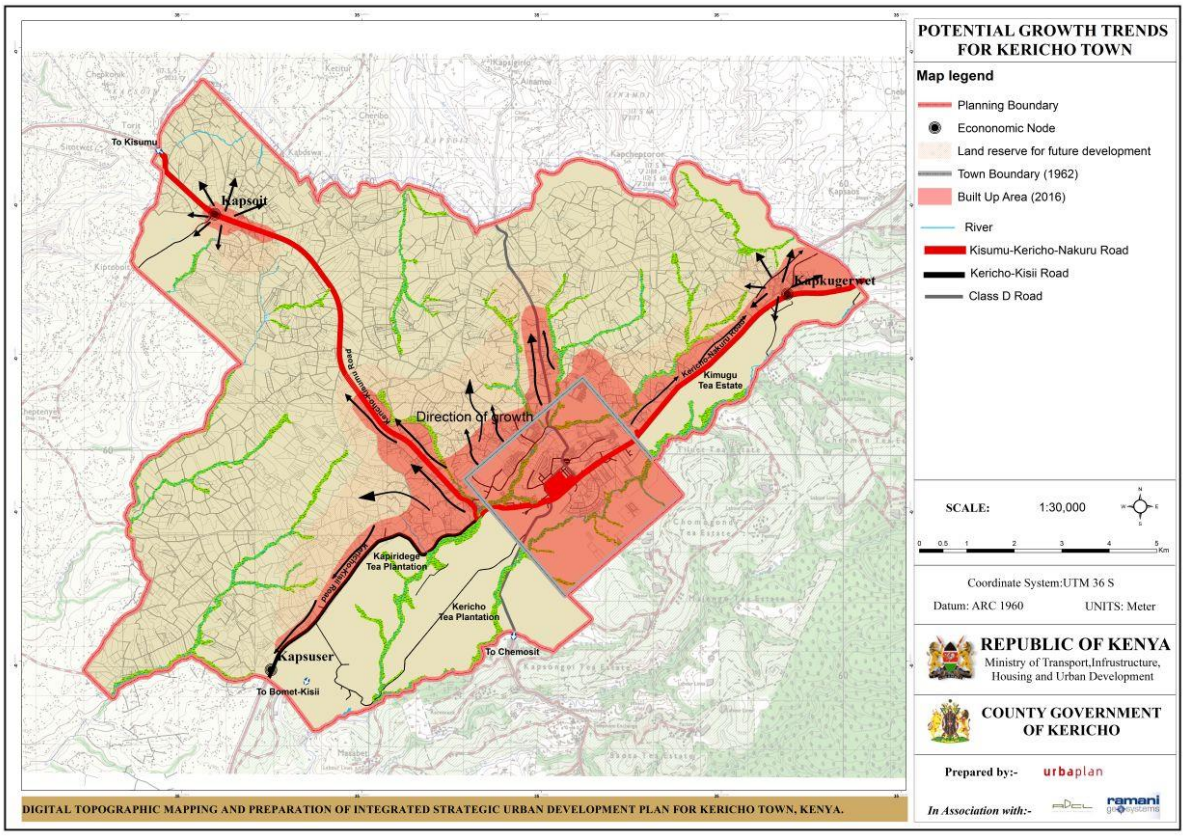


Figure 4-2: Potential growth trend

4.4 PREVIOUS PLANNING EFFORTS

There has been no comprehensive development plan for Kericho except for the 1998 Zoning Plan which covered the old Municipal Boundary. A number of sector studies have also been undertaken in the town including studies on Slum Upgrading under Kenya Informal Sector Improvement Program, Storm Water Drainage, and Solid Waste Management among others. These studies have informed this planning process.

4.5 LAND ADMINISTRATION AND LAND TENURE

4.5.1 Land Administration

According to the first National Medium Term Plan (2008 – 2012), accessibility to land is a key aspect as it is an important factor in economic production. It lays the foundation for all activities such as agriculture, water supply, settlement, tourism, wildlife and forestry. Kericho County is blessed with arable land but the steadily increasing population is reducing average farm size to range from 0.57 – 3ha for small scale farmers and 10ha for large scale farming. Most of the farming is done in the rural areas where mixed livestock keeping and crop farming are done. Growing of tea, maize, beans, bananas, traditional vegetables, sugar cane, sorghum and such fruit trees as mangoes, oranges, paw paws and avocadoes. Other uses of land include soil mining which has several uses ranging from making bricks and pots for sale and domestic use.

The administration of this land is vested in national and county institutions. The National Land Policy addresses land management. Key issues include Section 3.4.3.2 – ecosystem protection (including wetlands). Measures for protection are required with sub-section 135 addressing fragile ecosystems to be managed and protected. Sub-section 137 focuses on Protection of watersheds, lakes, drainage basins & wetlands shall be guided by among other principles prohibition of settlement and agricultural activities in the water catchment areas, identification, delineation and gazettement of all water courses and wetlands as well as integrated resource management based on ecosystem structure. Section 3.4.3.3 addresses urban environment management on the face of the rapid urban development in the country. The section calls for control of waste dumping, regulation quarrying activities and rehabilitation of material dumping sites and land.

The Land Act, 2012 is an Act of Parliament to give effect to Article 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, and for connected purposes. The planning considerations are made within the framework of this act with regards to land-use. This includes public land, land for conservation, natural resources including such development of public land.

4.5.2 Land Tenure

Land use in the larger Kericho County is extensively cropped with 80% of the land being utilized for commercial crops and mixed farming including food crop plantation (maize, beans and vegetables). Livestock keeping is also dominant in the area. These features are also notable in the areas surrounding Kericho town. Land use is a major link factor between the social and development on the one hand and environment conservation among other aspects.

The average land holding size in the county is 0.9 ha. for the small holders and 14 ha. for large scale holders. The large scale holders are mostly the multinationals which utilize the land for tea and flower farming. Small scale farms are under food crop and livestock production.

Landlessness within the county remains an issue that requires immediate attention. The Laibon community is an example of people who until late 2012 were without land. The Nubians, who are concentrated mostly within Kericho Town, are equally affected. These groups are facing major socio-economic challenges as a result of the shanty structures that they live in and the lack of land to farm. The Laibon who were issued with allotment letters require title deeds in order to allow them fully utilize their land.

4.5.3 Land Market

4.5.3.1 Kericho CBD

Kericho is a town in Kenya that has experienced growth in property market due to the rising demand for plots for both commercial and residential development. The land values within Kericho Central Business District currently trades for between **Kenya Shillings 200 – 250Million** for a parcel size of 1Hectare. This is because the land use patterns are generally commercial in nature. The smaller parcel sizes are viable for commercial land use in form of office blocks, shopping complexes, as well as special purposes of petrol stations.

The leases comprising grants are trading for the highest values of up to **Kenya Shillings 250million** particularly leases with pending lease term exceeding 30years subject to the ability to renew from National Land Commission. These areas comprise areas around Kericho Primary School and are plots with LR Numbers (IR Numbers). The leases with the pending lease term exceeding 25years command a marginal difference in values with freehold interests in the same area due to the ability to recoup the investment returns with a payback period not less than 25years.

Kericho generally is noted to be growing in linear form of development with plots along the main tarmac roads noted to be commanding high values compared to plots off the tarmac roads.

4.5.3.2 Kericho Residential Area

Kericho Municipality Block 2, 4, 5 comprises a higher market value with a parcel size comprising 1Hectare trading in the range of between **Kenya shillings80million to 100million.** This area is largely developed with residential buildings comprising bungalows, maisonettes and a few tenement blocks developed within enclosed compounds. The area is situated within a high end area of Kericho Municipality and proximity to Kericho Central Business District is good and is via well maintained estate access roads as well as tarmac roads. The social infrastructural services of mains power and water systems are in the neighborhood.

4.5.3.3 Kericho Residential Area (Kipchimchim Area)

Kericho Kipchimchim is a very prime residential area with ease in accessibility of the services within Kericho CBD. It is estimated that a parcel of land size comprising 1Hectare is estimated to be in the range of **Kenya Shillings 20million to 25Million**. Parcels falling along the tarmac roads are expected to exceed these values with a margin of expected **3 -5Million** due to the viability for commercial land use These are areas along the Kericho – Kisumu tarmac roads and the adjacent estates. The areas within Kipchimchim neighboring Kericho Prisons are fairly low in pricing with a hectare of land trading for as low as **Kenya Shillings 17-20Million.**

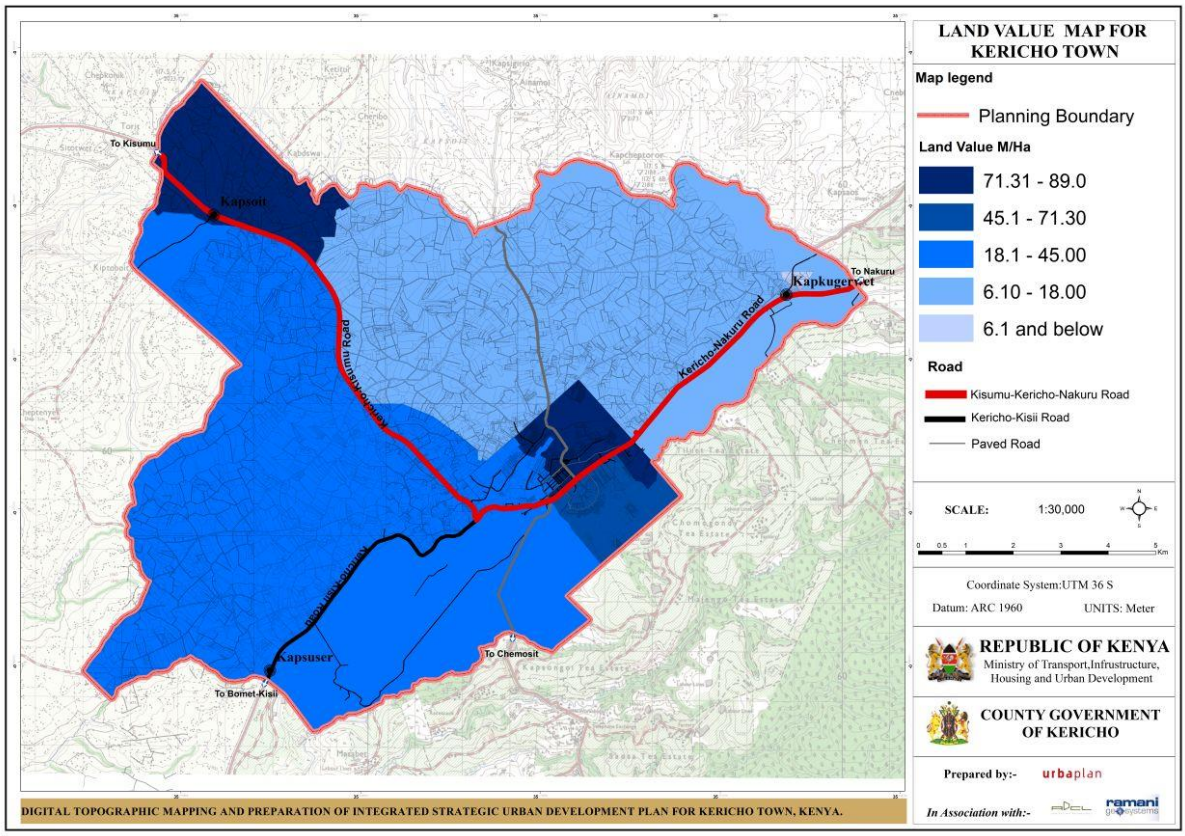


Figure 4-3: Land values for Kericho

4.5.3.4 Kericho Commercial Cum ResidentialArea (Kapsoit Area)

Kericho Kapsoit Shopping Centre is falling within the commercial growing shopping center along the main Kisumu tarmac road and falling at the junction leading to Sondu Town. This area is also noted to be very prime for commercial land use due to the rising population within Kapsoit Shopping center. We noted that commercial plots along the main Kericho – Kisumu tarmac road are high and this comprise a parcel size of 1Hectare trading for **Kenya Shillings 40 -50Million.** The parcels comprising 1Hectare within the residential neighborhoods of Kapsoit currently trades for **Kenya shillings 15 - 20Million.** The increasing population within the shopping center has led to the rising demand for parcels within the residential neighborhood especially for developments of residential households for owner occupier or lease purposes.
Large parcels of 1Hectare sizes outside the shopping center trades for estimated **Kenya shillings 5 - 6Million**

We noted that parcels within Kapsuser areas trades for between 15Million to 20Million per hectare of land depending on the proximity to Kericho CBD. The more close a parcel of land is to the CBD the higher the values due the proximity and demand based on the urban sprawl. The more inhabited parcels trade for higher values than the sparsely populated areas.

The Kericho tea farms are commanding lesser values as compared to the residential areas due to the land use patterns. The agricultural nature generates less income as compared to the commercial, industrial and residential usage. We noted that tea farms trades for between 5million to 8Million per hectare depending on the proximity to the Kericho Town Central Business District.

4.5.3.5 Estimated 5 Kilometres from Kericho Town

We noted that regions outside Kericho Town Centre but falling within Kericho Municipality within the peripheries of Kericho Township constitutes sales ranging Kenya Shillings 5,000,000.00 to 7,500,000.00. per hectare.

4.6 MAJOR ISSUES/ OBSERVATIONS

The major challenge in land tenure is the issue of Freehold Tenure within the planning area. This type of land does lend itself easily to development control. Land for public purpose would therefore be acquired through compulsory acquisition or surrender by community which makes it a very expensive exercise.

The existence of the large tea farms within the planning area is an issue that requires consideration. This can be considered as a constraint or opportunity.

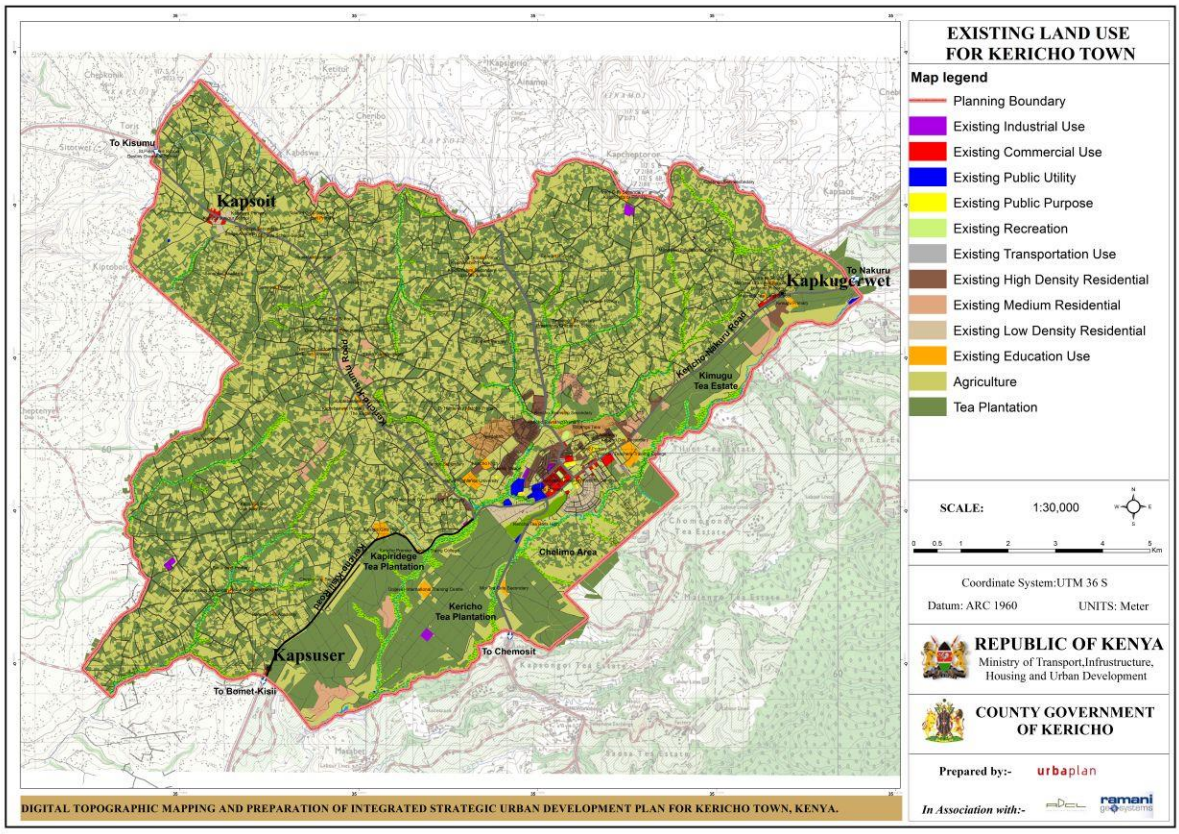


Figure 4-4: Existing land use for Kericho town

4.7 NORMS OF LAND USE

The Physical Planning Handbook has been used as the basis of assessment of the various categories of land use. This has been supplemented with guidelines and standards for comparable processes from other planning associations and institutions in so far as they help to position the planning process well. Benchmarking has also been made with towns within Kenya to ensure that proposals made here are not way off national trends.

The distribution of land use in urban areas is based on norms factored on studies done by GoK in various urban centers in Kenya. The distribution of the land use by category is shown in the table below.

Table: Land-use Distribution by Category of Urban Core

CATEGORY	%	Ha
Residential	57.6	42,508.8
Industrial	8.7	6,420.6
Education	9.4	6,937.2
Recreation	5.1	3,763.8
Public Purpose	12.2	9,003.6
Commercial	6.8	5,018.4
Public Utilities	3.8	2,804.4
Total Area	100	73,800

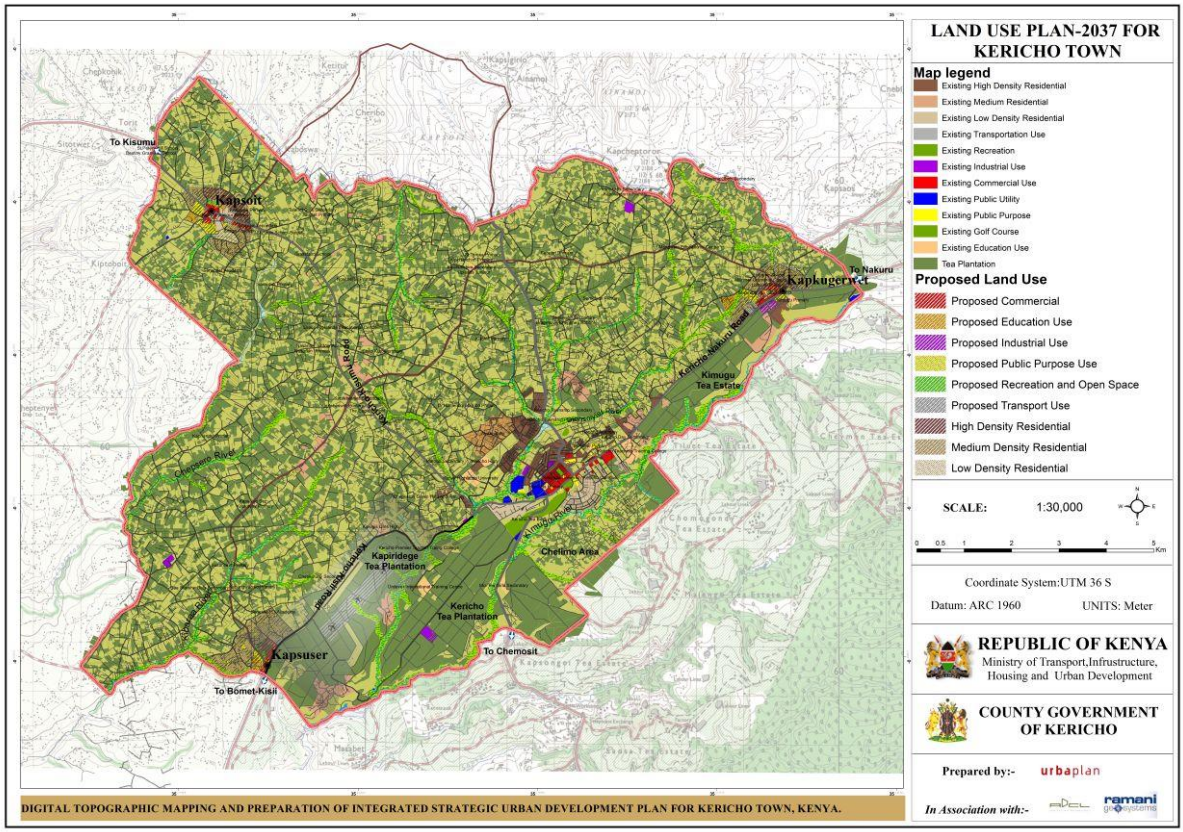


Figure 4-5: Land use Plan for Kericho town 2037

4.8 PROPOSED LAND USE

4.8.1 Residential

The densification of the urban core areas will target residential land-use development. Ground coverage to be used is as tabulated below. As part of densification it is proposed to increase density for housing to 70units/ha with provision of multi family dwelling units in a mix of low, medium and high density.

Table 4-1: Proposed residential use

TYPE	Ground Coverage	% of Total Land	Ha
Residential Low density	50	20	1840
Residential Medium Density	65	30	2760
Residential High Density	70	50	4604
TOTAL			**9,204**

The development of low income residential housing shall be anchored on high density development with regulations that encourage high-rise development. Moi estate shall be redeveloped as a high density low income residential area. This development shall spread to Swahili, Talai and Nyagacho areas with both the County and the private sector being players in housing provision. The high income residential belt running from the Golf Course to Kericho Teacher College will have controlled development that allows for medium density development. This shall in the long run spill over to Chelimo area as the residential area is expanded. From Nyagacho running through Kenya Highlands University onto Kisumu Road will be a medium to high density mixed development that allows for establishment of public institutions and pockets of commercial activities preferably located on the ground floor of high rise buildings. The plot ratio will be varied across this sub-sector to ensure that the bulk of low income housing is within walking distance of the key activity areas. This will reduce the overall demand on transport and also enhance the return on investment for infrastructure. The nodes (Kapsoit, Kapkugerwet, and Kapsuser) will be apportioned the new requirements for low density development while low density in the urban core will be infill projects. The Urban core will be developed as medium and high density.

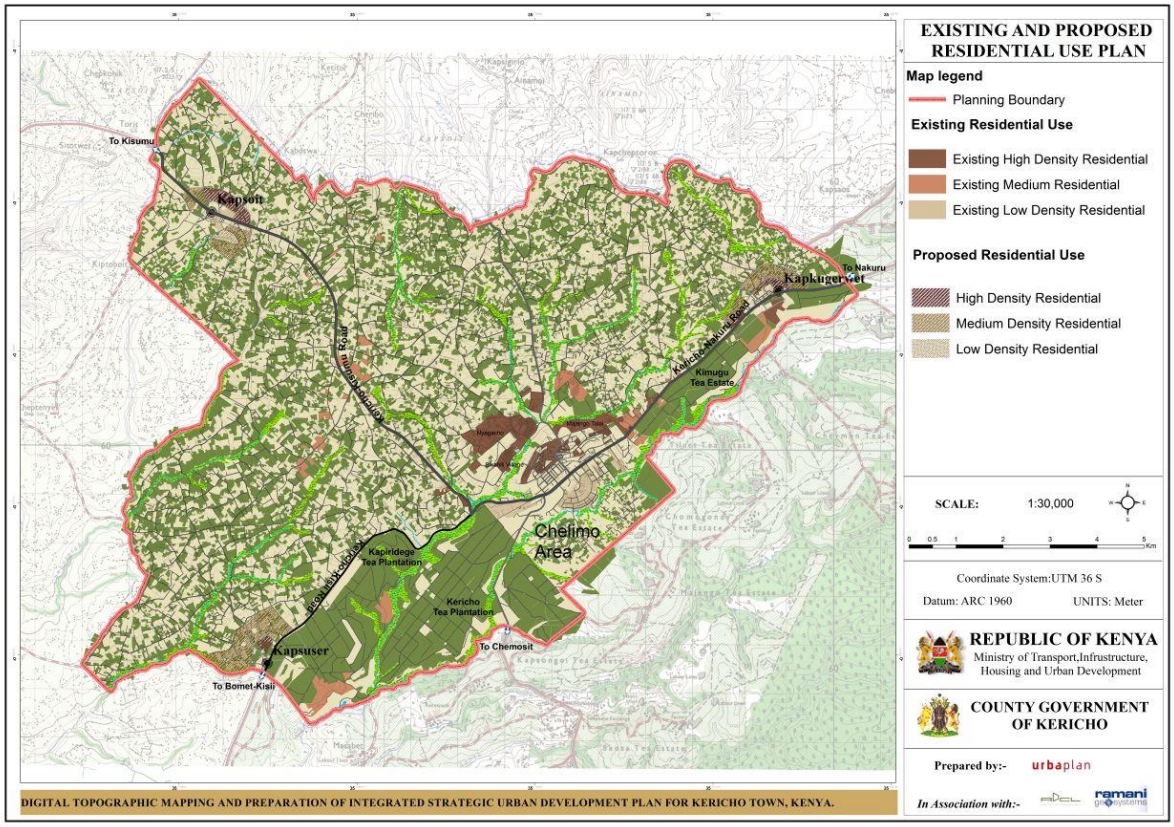


Figure 4-4: Existing and proposed residential use plan

4.8.2 Industrial Use Plan

Kericho has investment mainly in the tea in industry. Industrial land makes up about 5% of the developed land located mainly in the old parts of the CBD. The plan proposes to increase land for industry to 22.5 ha.

4.8.2.1 Light Industry

These are industries such as furniture and shoe making, repair, tailoring, flour milling, Jua kali fabrication, craftsand mechanic repairs among others. They are located mainly in the areas abutting the Kericho Stadium and Municipal Market. This area also extends to the river Donyosoyiet. There are a number of residential flats that are being put up competing with these SMEs effectively pushing them out of this prime location.The minimum plot size proposed under light industries is 0.05ha put up in a complex of Light Industry zone. The total land required is 0.5ha distributed across the town with some attached to the neighborhood commercial area. These industries will continue as part of mixed use in the current and extended locations.

4.8.2.2 Medium and Heavy Industry

Some medium industries already exist within the town. These are mainly the tree factories at Brooke and Kapsuser. It is proposed that such other agro basedindustries be provide for targeting agro-processing and be located within the nodes and also the urban core. The minimum plot size for heavy industry is 2ha. This will require 2ha for such development. These should be linked to the vibrant dairy, fruit and vegetable production in the urban hinterland. This shall include revival of the milling factory at Kapsoit to produce livestock feed.It is proposed that three sites be provided in the nodes to cater for such industry. This will require a total of 20ha banked for such investors.

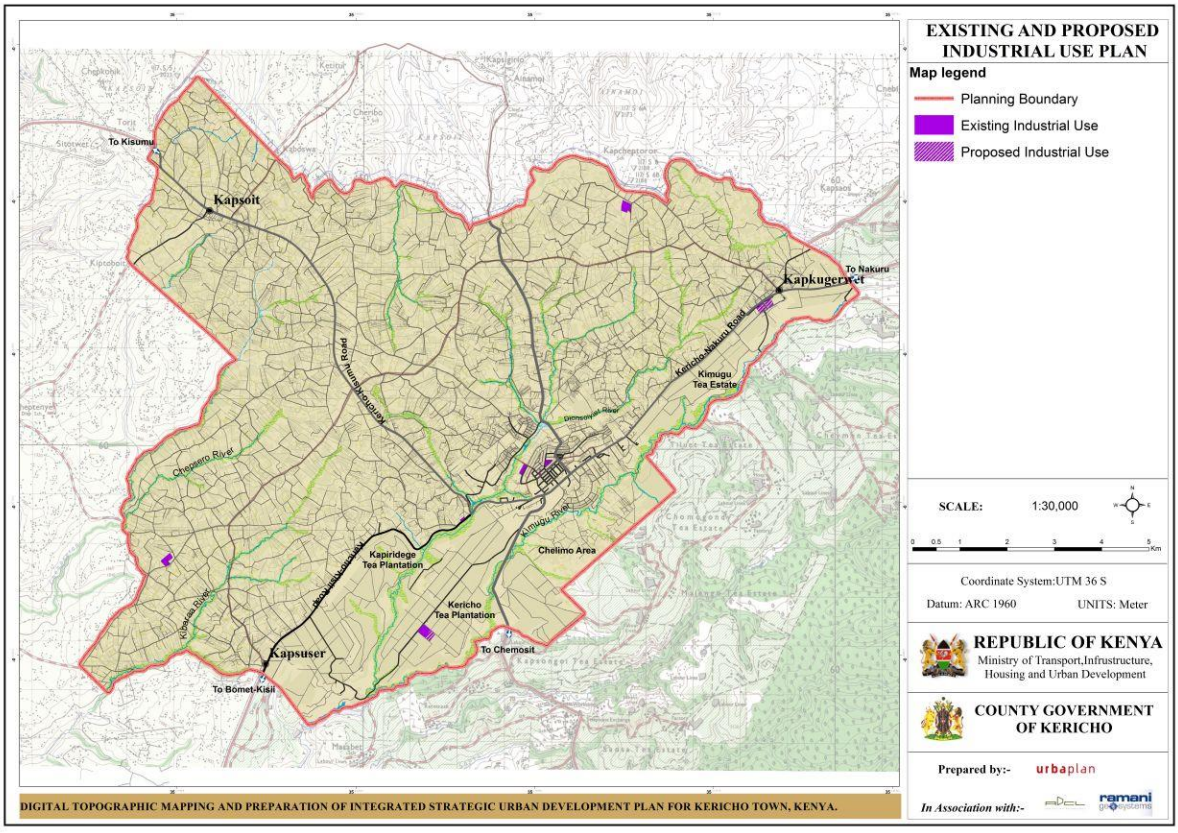


Figure 4-5: Existing and proposed industrial use plan

4.8.3 Commercial Land Use

Commercial land use will be distributed between the three Nodes, the CBD and Ward/Neighborhood Centres. The total land required is estimated at 136ha spread out in these centres. This will result in doubling of land under commercial use.

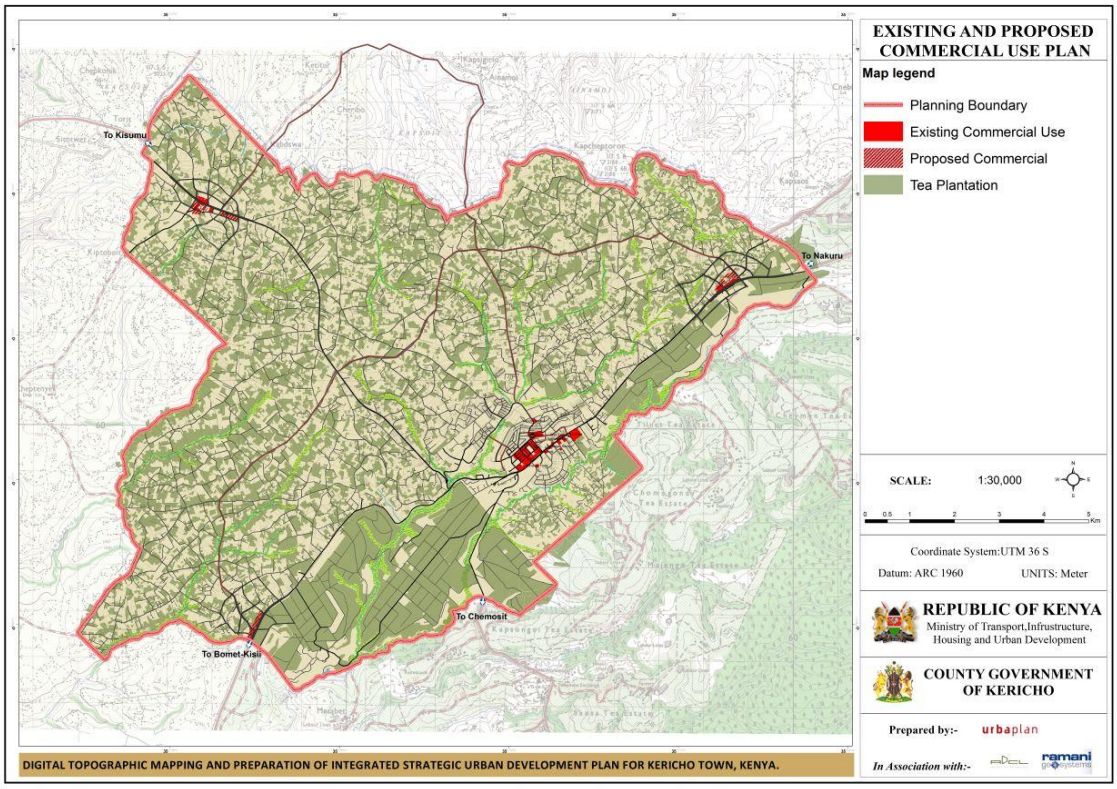


Figure 4-6: Existing and Proposed CommercialUse for Kericho town

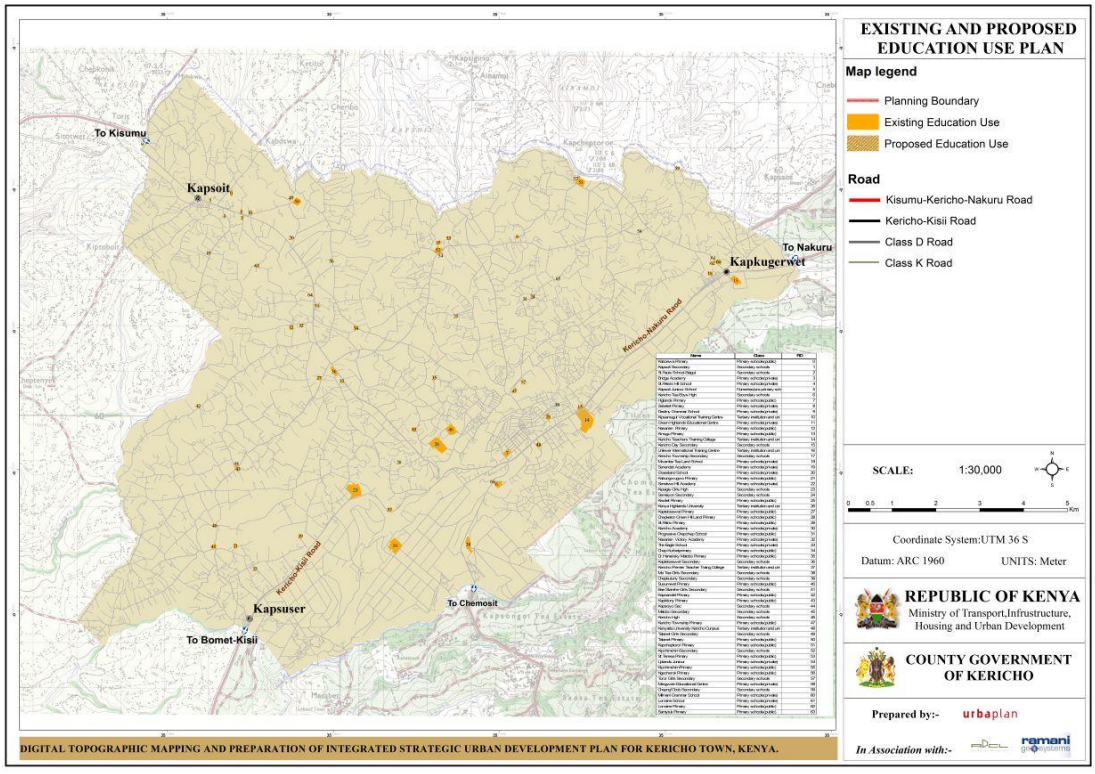


Figure 4-9: Existing and Proposed Education Use for Kericho town

4.8.4 Education Use Plan

With a projected population of 306,805by the year 2037 the followingland will be required. The total land to be occupied: ECD 22 ha , Primary 286 ha, Secondary 171 ha, College 10.2 ha and University 50 ha. The University land may need to be expanded to cater for increased programs as need arises and as part of a techno-park.

4.8.5 Public Purpose use

Public purpose facilities includes health facilities, security facilities, community facilities like social centres, religious institutions, libraries, post offices, government offices. It is proposed that the land under this category be increased to 15% to ensure adequate land for such service provision for the future demand. This will include land for a cemetery at Chelimo area.

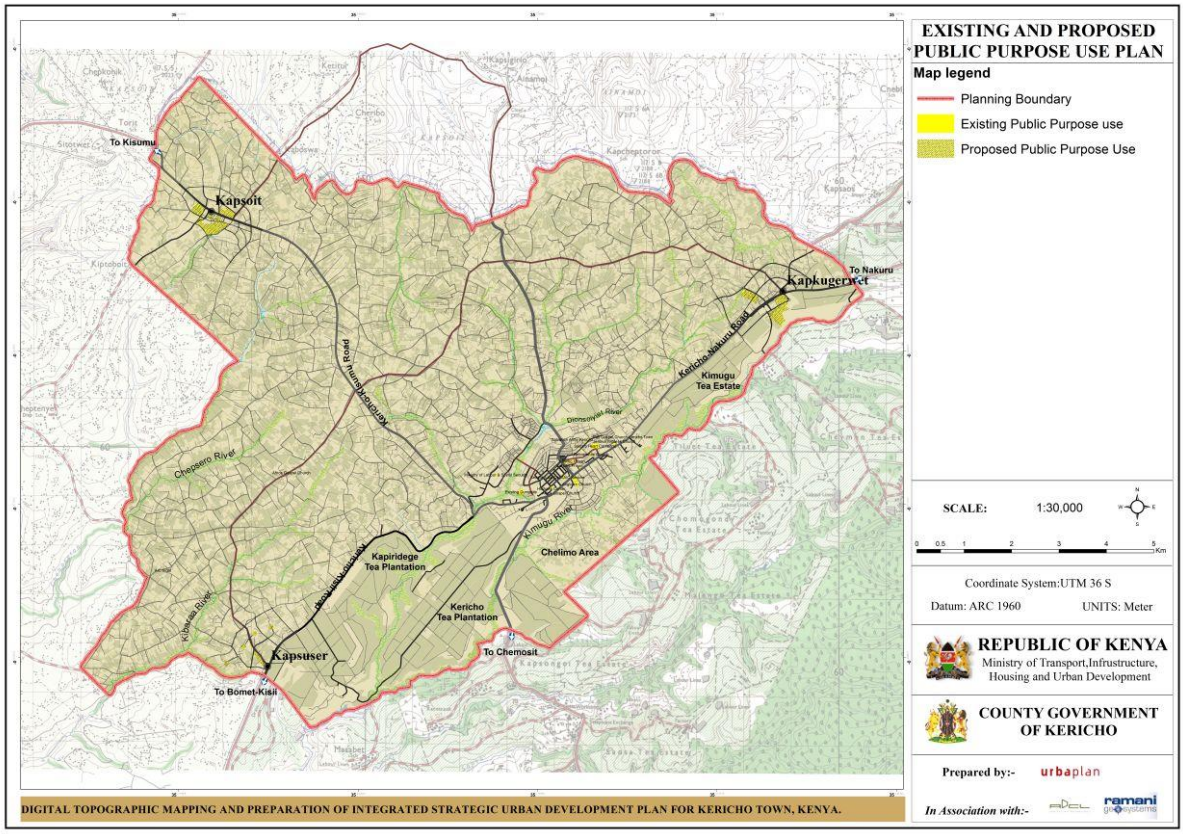


Figure 4-10: Existing and proposed public purpose use plan

4.8.6 Public Utility Use

Public utility land will be provided up to 3% of total land area to cater for the expansion of water and sanitation, cemetery and fire stations. The actual location of the sites may vary based on detailed engineering designs. The increase in the land allocation is projected on an increase in demand by year 2037.

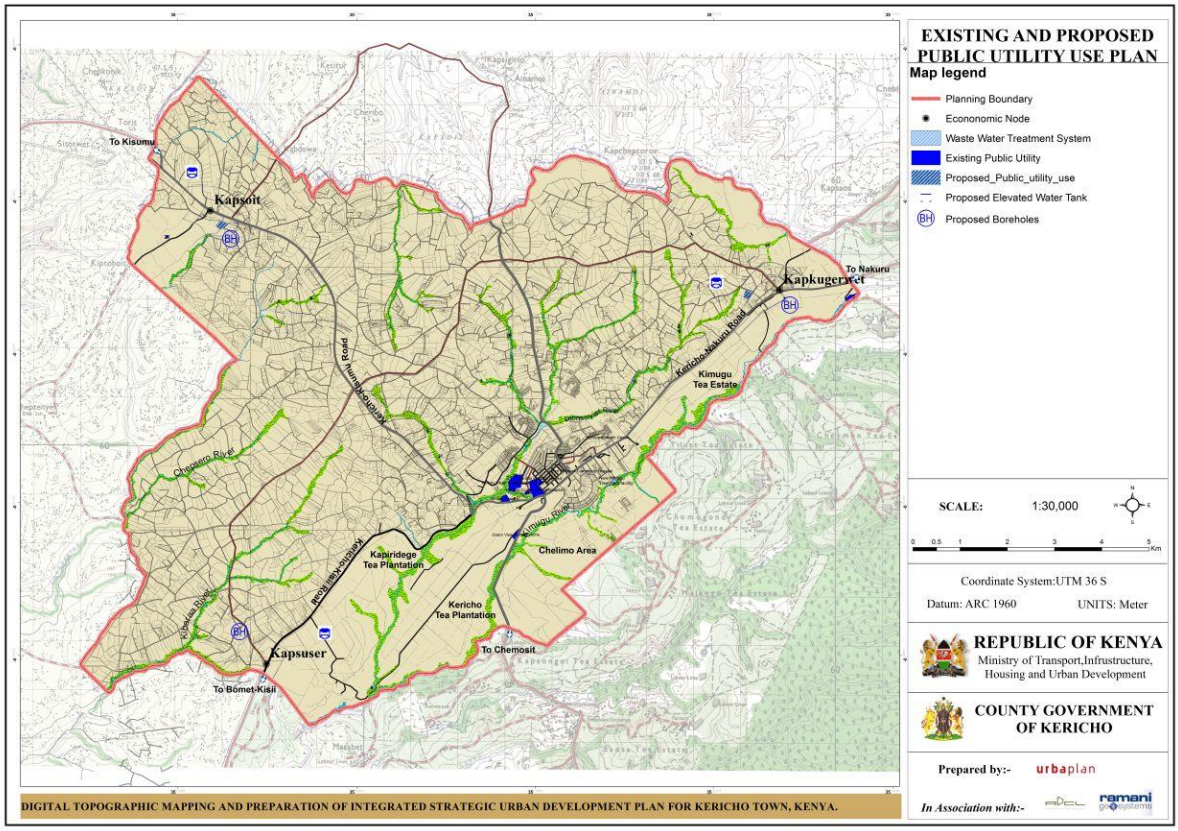


Figure 4-11: Existing and proposed public utility use plan

4.8.7 Transportation Use

The viability of the four nodes linked to the urban core is anchored on good road transport. These will cater for local and through transport. There is also need to provide alternative routes, especially for through traffic and also linking up new residential and industrial neighborhood. There will there be need for expansion of existing roads in order to accommodate the volume of growth in road transport. Such roads will cater for motorized and NMT. This plan also provides for new parking areas, bus terminals and lorry park. Land for transport areas is given as 10-20% of total land area within the residential, commercial and industrial zones. Land for expansion of the Kerenga Aerodrome shall be acquired at the present site to allow for expansion of the runway and provision of terminal facilities.

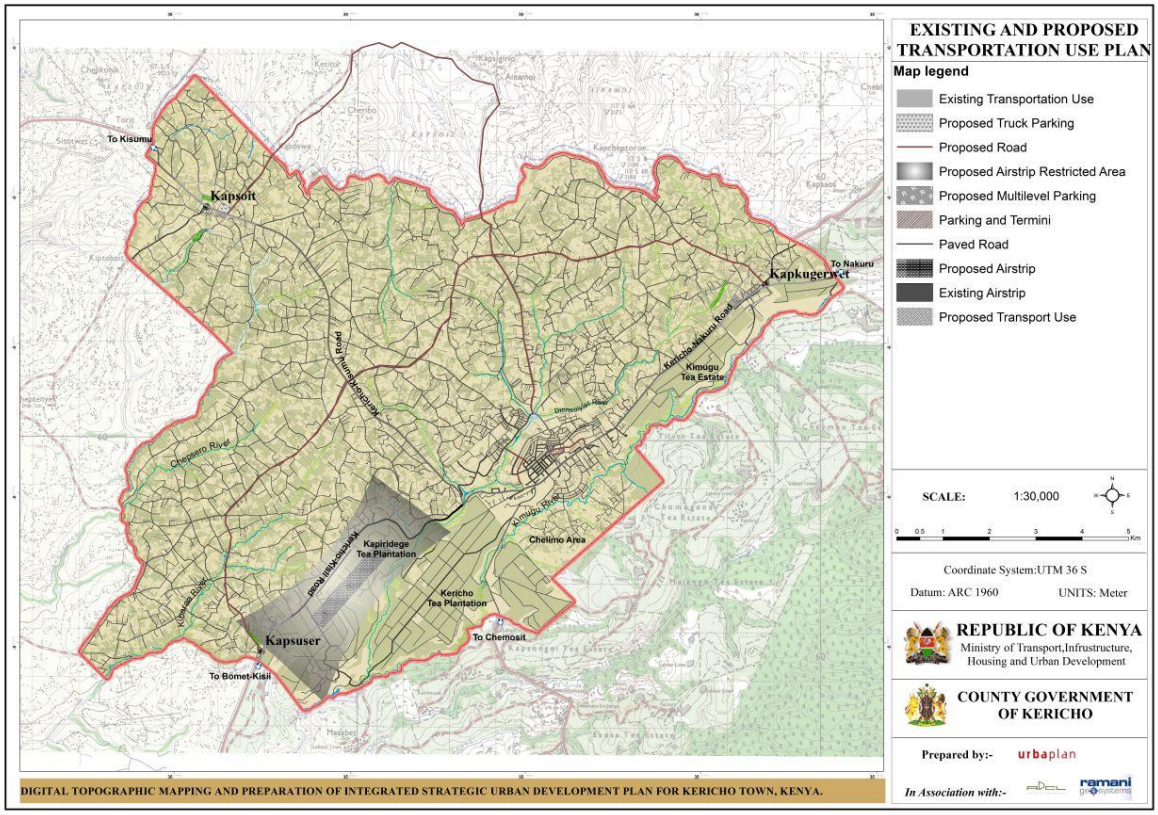


Figure 4-12: Existing and proposed transportation use plan

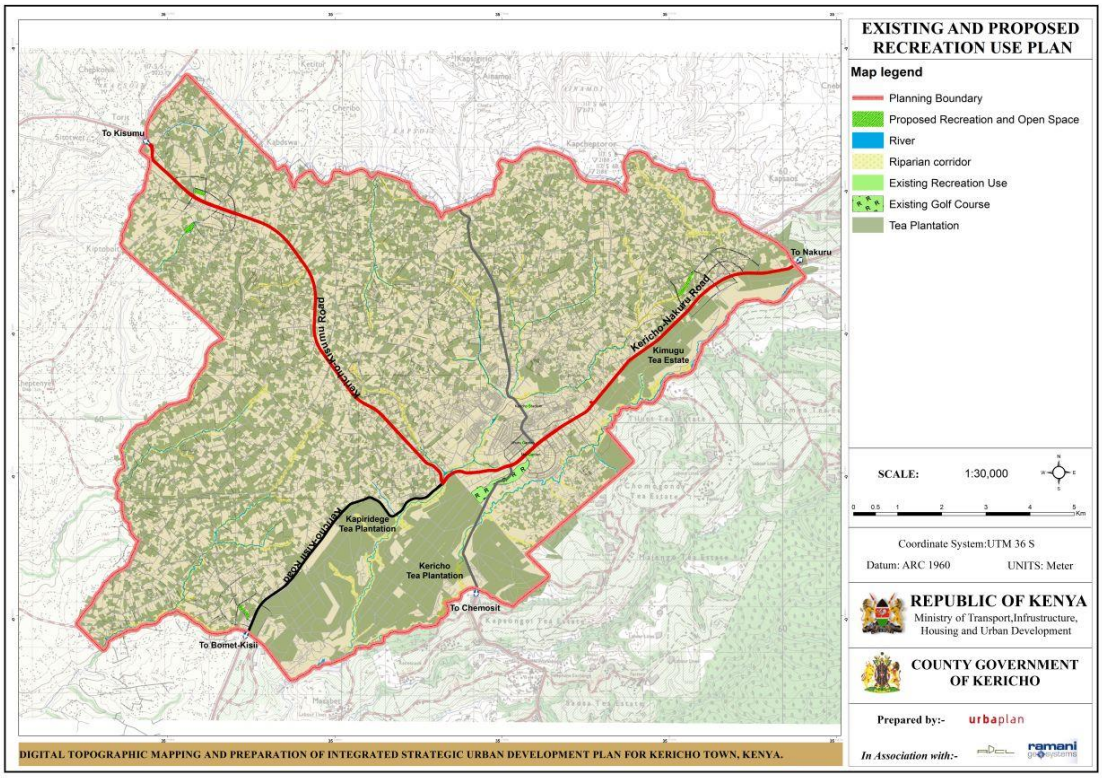


Figure 4-13: Existing and proposed recreation use plan

4.8.8 Recreational Land Use

The desire to increase this category of land to 130ha will also involve development of riparian reserves, rehabilitation of the parks within the town and creation of neighborhood parks and other recreation facilities within the town such as improvements in the stadium.

The Golf club is proposed for relocation to the adjacent land. This will free the current Golf Course for development of a town park with support infrastructure to make it attractive especially for domestic tourism.

Figure 4-14: Existing and proposed area for Golf Club

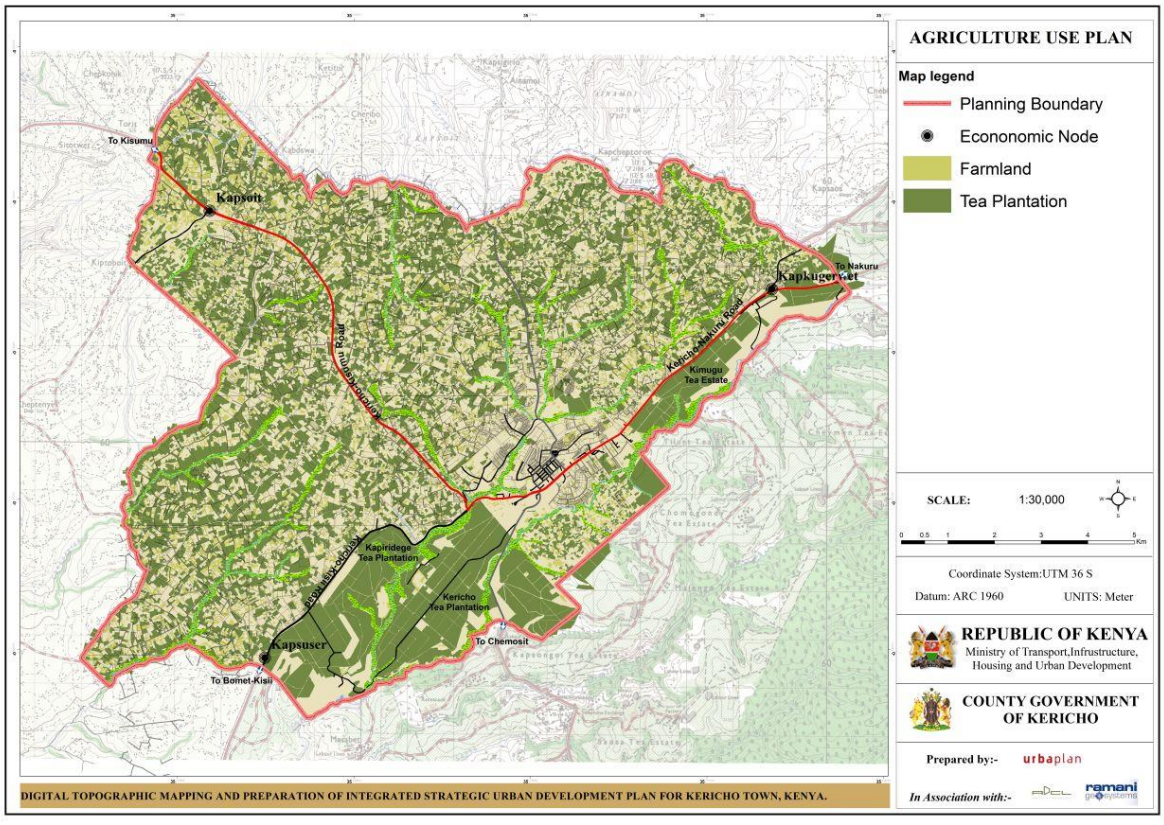


Figure 4-15: Agricultural use plan

4.8.9 Agriculture Use

The plan proposes that the tracts of land between the nodes and the urban core be preserves as areas for urban agriculture. Proposals include intensive, mechanized production systems of fruits and vegetables to feed the proposed agro-processing industries in the town.

4.8.10 Environmental Sensitive Areas

Environmentally sensitive areas in Kericho include Dionyosoiyet Wetland system which is a major feature running through the immediate northern edge of the CBD in a valley between the CBD and a highly populated informal estate of Nyagacho (Motobio), Kimugu River system flowing East – West along the immediate Southern edge of the CBD. With its source in the Mau Hills, the river is a source of water for high populations within and downstream of Kericho Town. While appreciating that it has not been adversely affected by urban development, it is at risk in future growth of the town compromising its suitability for social and economic use. Kimugu River also contributes to the water supply of Kericho town. There areas with steep slopes which include the eroded sections along Dionyosoiyet wetland (with upto 15% incline), steep slopes along Kimugu River (with between 7 – 10%), habited slopes on both sides of Kapsoit market (mild slopes of between 5 – 7% and the western side of Kapsuser market (with the steepest sections being upto 15%).

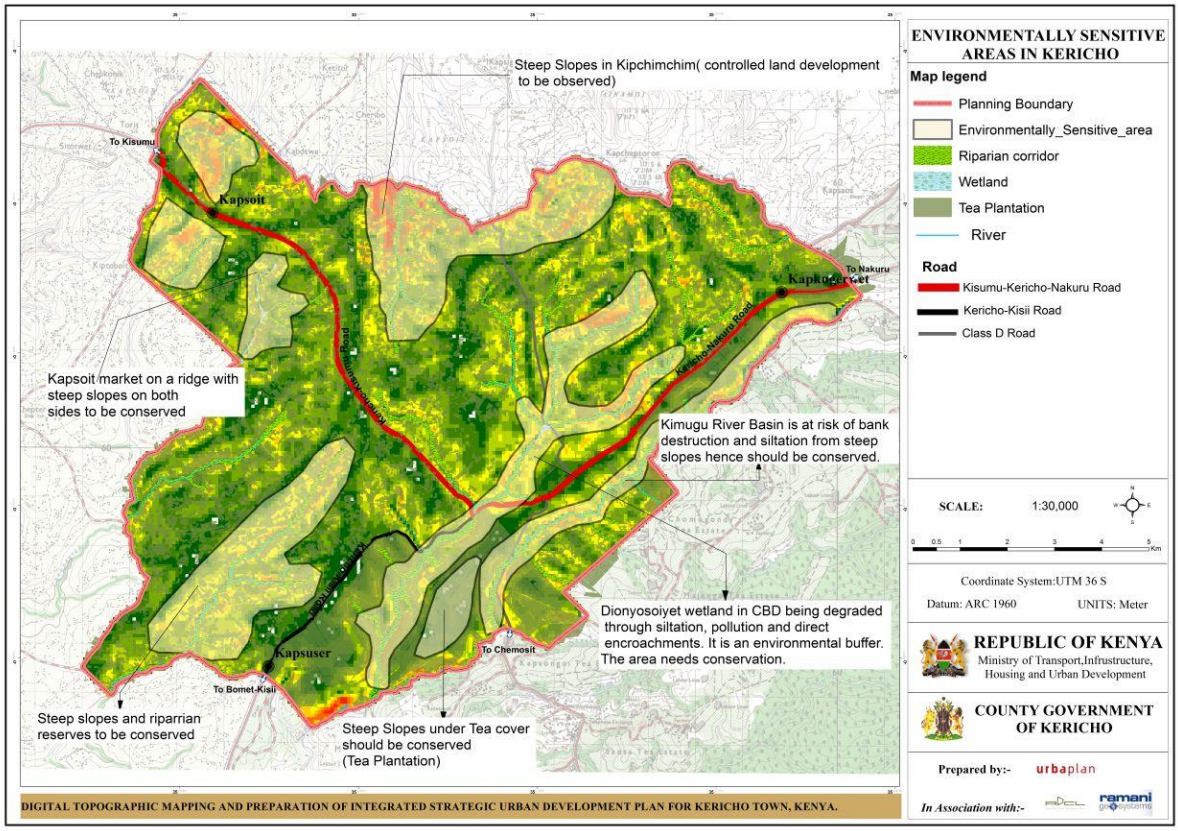


Figure 4-76: Environmentally sensitive area

Kericho Town has public green areas set out for public recreation and rest places. Among them include Uhuru and Moi Gardens. The areas provide social values to the residents as well as climate and aesthetic moderations of the town as opposed to "Concrete Features" all around. These areas should be enhanced as well consider creating the same in the satellite towns (Kapkugerwet, Kapsuser and Kapsoit markets).

Tea Estates within and around Kericho Town are not only commercial land use but may also be viewed as a landscape feature unique to the town (and the county in general) that should be conserved. The features may also have a touristic value for the town and the county in general.

Waste management and disposal sites (including solid waste disposal locations and wastewater treatment plants) are sensitive zones due to the associated environmental and public health linkages. While the sewage treatment works are defined, it is not clear what ultimate locations are currently earmarked for solid waste disposal. The proposed location(s) need to be delineated as sensitive areas for appropriate management with respect to neighbouring land use features, environmental features and overall people welfare.

4.8.11 Land Banking

To cater for unforeseen land requirements it is proposed that 10% of the land be banked for such eventualities. These shall be distributed in the four nodes and the urban core. They shall be kept under tree cover for the foreseeable future. The land for banking will be procured over the plan period in the second phase of five years in the plan period. The estimated land required for banking is 160ha.

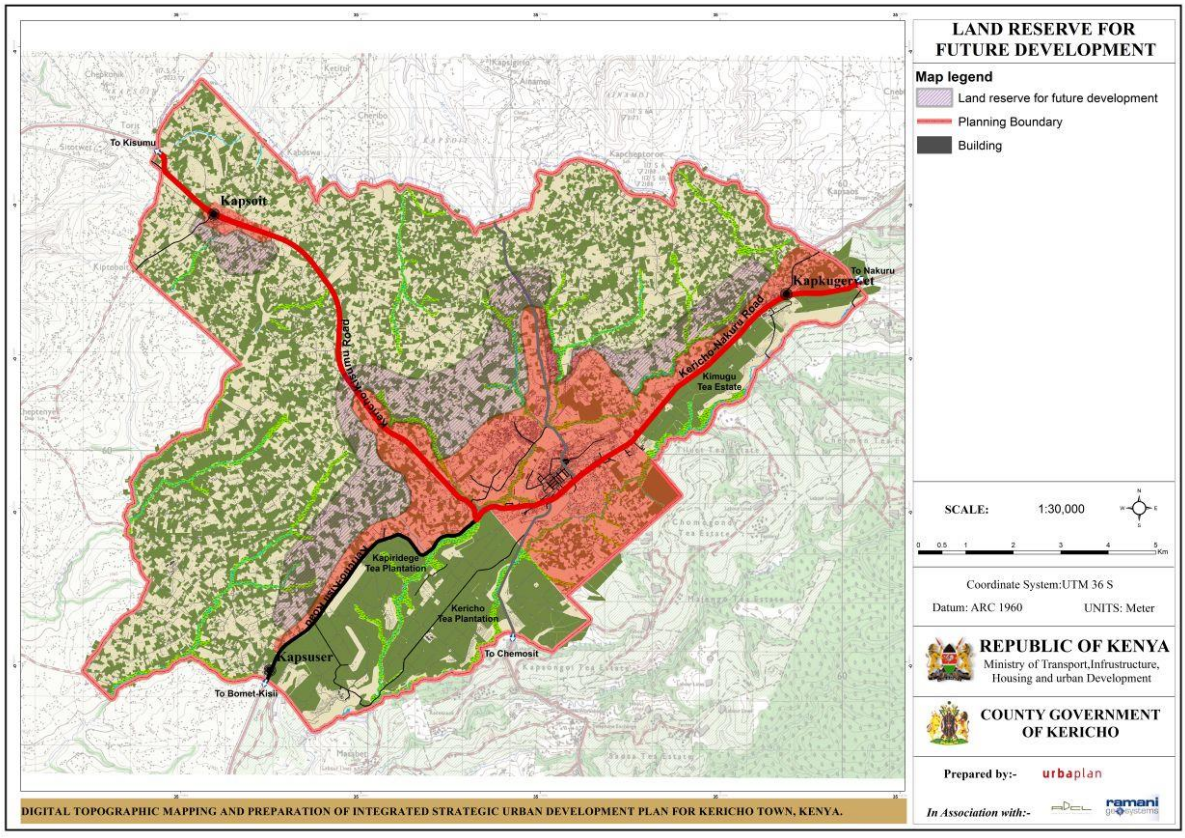


Figure 4-17: Land Reserved for Future Developement

4.9 SPECIAL AREA

These are areas that require special planning considerations to enable them perform the unique roles that makes them distinct drivers of the town's economy. They include 1) Kerenga airstrip, 2) Tea Plantation 3) The CBD and 4) The three Nodes.

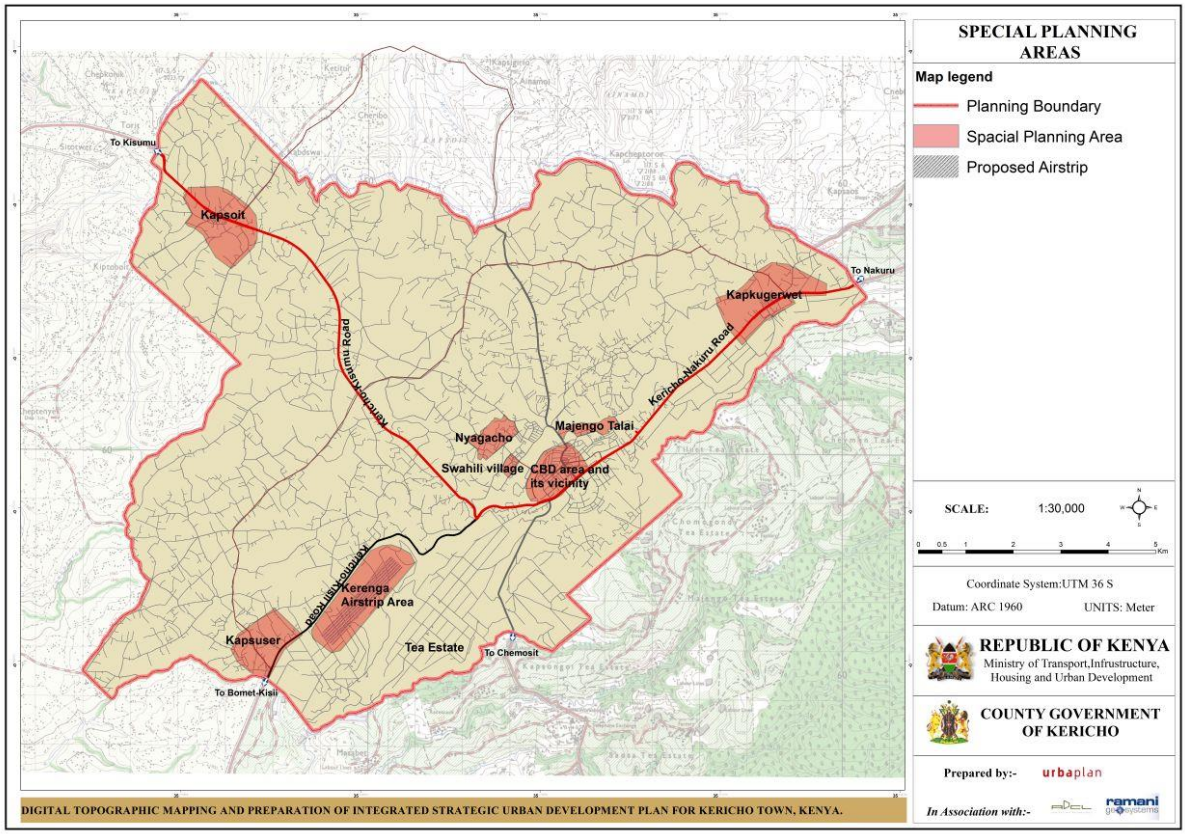


Figure 4-8: Special Planning Areas

4.9.1 Kerenga Aerodrome

4.9.1.1 Exiting Situation

The Kerenga aerodrome, located 6 kilometers from Kericho town centre, off the road to Kapsuser, is disused and requires rehabilitation.
The condition is as follows:

- Runway length – approx. 1.0km
- Runway surface type and condition – gravel, eroded, corrugated and stony surface
- Airstrip area – 0.23km^2 (approx. 56.2 acres)
- The runway is only 35m from the Kericho – Sotik Road and is surrounded by tall trees. These two compromise air traffic safety.

4.9.1.2 Objectives

To increase transport and mobility options for travellers to Kericho town

Proposals

The following proposals are made to enhance the viability of the airstrip:

- Acquisition of land within restricted areas for future expansion and to meet airport safety standards.
- Upgrading of roads and related services: this should include the widening and developing to bitumen standards the access road to the aerodrome
- Restricting growth of human settlement within permissible zones and subjecting the same to recommended height restrictions.
- Extend the runway to a length of 2 km as well as widen the runway strip by 50m and 90m to

the North and South respectively.
- Provision of Terminal facilities for passengers

4.9.2 Tea Plantation

4.9.2.1 Exiting Situation

The major Tea Plantations are located to the immediate South East of Kericho CBD running from Kapkugerwet to Kapsuser and is an important and unique ecological feature in Kerichotown and the County. It is linked to the Mau Forest ecosystem with a number of plantation forests. The plantations have been key in reducing encroachment on the Mau forest and maintain the vegetation cover. The plantations are owned by multi-national corporations who have controlled access to this land.

4.9.2.2 Objectives

- Conserve and improve aesthetics of the Tea Plantations as a recreation and tourism destination
- To develop infrastructure in the Tea Plantations

4.9.2.3 Proposals

The following proposals are made to enhance the development of the Tea Plantations.
- The boundaries of the ecosystem will be delineated and isolated from the rest of the land use activities in the town
- By-laws to control the use of the Tea Plantation land within the town to enhance conservation

4.9.3 Central Business District

4.9.3.1 Exiting Situation

The public space in the central business district of Kericho town in largely allocated to the motorized vehicles for circulating and parking. No facilities are available for NMT, sometimes the verandas of the shops block the sidewalks and oblige people walking on the road. Many heavy goods vehicles circulate and park in the CBD creating congestion, occupying precious public space and decreasing the safety for NMT.

4.9.3.2 Objectives

- Improve the functionality, quality and beauty of the CBD
- To allow for comprehensive redevelopment of the towns superstructure

4.9.3.3 Proposals

- The urban core within the old town boundary shall be developed as a Special Planning Area.
- Regulations shall be provided to enhance the quality of the environment and increase the density within the zone.
- Improvement of the support infrastructure to allow for higher densities (Water, Sanitation, Storm Water and Lighting).
- Relocate bus terminus to new site currently occupied by the GoK Prison
- Convert current terminus into multistory parking and local public transport terminus
- Develop circulation systems that allow for flow of traffic; motorized and NMT
- Prepare indicative plans for densification of development

4.9.4 Township Nodes

4.9.4.1 Exiting Situation

The nodes of Kapkugerwet, Kapsuser, and Kapsoit have developed as market centres and transport nodes within the network of roads linking Kericho to Kisumu, Kisii, and Nakuru. They have blocks of shops, a few services and residential blocks. Kapsuser has a new covered market. Kapsoit has a small open market. These nodes operate as service points for the surrounding rural communities. However they have little evidence of services required of an urban centre. Transports has been a major driving factor in the growth of these nodes and are captured here to showcase this.

The average daily traffic (ADV) measured in the planning area is higher in the most important center of the Kericho town and lower in the secondary centers:

- Kericho town = 15,700 veh/day;
- Kapkugerwet = 7,500 veh/day;
- Kapsuser = 7,400 veh/day;
- Kapsoit = 6'600 veh/day.

The analysis of the traffic structure in the area leads to the following results:

- most of the traffic is generated by the town itself (90% of the overall traffic);
- only 10% of the traffic passes though Kericho town without any purpose (about 2,500 veh/day);
- the through traffic is principally concentrated in the B1 road (Kisumu-Mau) but the volume is very low (1,500 veh/day).

As the long distance traffic is very low, there is no need in investing in any kind of major by-pass road around Kericho.

4.9.4.2 Objectives

- To develop the nodes as the alternate driver of the town's development
- To locate land-use activities; namely industry and commercial activities, in the nodes that would stimulate development

4.9.4.3 Proposals

The following proposals are provide to achieve the objective of development of the nodes as drivers of symbiotic urban growth.

- Designation of Nodes as special planning areas
- Effective linkage of the arterial roads to local service roads
- Provision of access roads within the node
- Development of multimodal transport infrastructure
- Provision of land for public purpose and utilities
- Provision of necessary social services and infrastructure
- Layout plan for landuse
- Regulations for housing development
- Development Control regulation to reduce urban sprawl

5 STRATEGIC SECTOR PLANS

5.1 INTRODUCTION

In order to make the development of the town efficient and sustainable the ISUDP provides sectoral strategies that will provide a framework for integrated urban development. This chapter presents sector wise proposals including Economy and Employment, Physical and Social Infrastructure, Housing and Informal Settlements, Transportation, Environment Management and Disaster Management and Tourism Management. The strategic sector goals are based on stakeholder's visions for the town for the year 2037.

5.2 ECONOMY AND EMPLOYMENT

5.2.1 The Economy

5.2.1.1 Current financial situation

The trend for FY 2015-2016 reflects that Kericho depends mainly on equitable national share for its revenue. To finance the budget, the County expected to receive Kshs.4.51 billion (80.9 per cent) as equitable share of revenue raised nationally, Kshs.193.69 million (3.5 per cent) as total conditional grants, generate Kshs.440 million (7.9 per cent) from local sources, and had a cash balance of Kshs.431.40 million (7.7 per cent) from FY 2014/15. The conditional grants comprised of Kshs.98.85 million (1.78 per cent) for Free Maternal Health Care, Kshs.57.23 million (1.0 per cent) from the Road Maintenance Fuel Levy Fund, Kshs.17.68 million (0.3 per cent) for User Fees Foregone and Kshs.19.93 million (0.4 per cent) as a grant from DANIDA

The total local revenue collected in FY 2015/16 of Kshs.434.44 million consisted of Kshs.43.72 million generated in the first quarter, Kshs.71.57 million in the second quarter, Kshs.133.84 million in the third quarter, and Kshs.185.31 million in the fourth quarter. The revenue collected was 98.7 per cent of the annual local revenue target, an increase from Kshs.413.31 million collected in FY 2014/15.

Consultancy Services for Digital Topographical Mapping and the Preparation of Integrated Strategic Urban Development Plans Kericho Town, Kenya An analysis of the local revenue collected by stream indicated that tea produce cess recorded the highest performance against the annual target at 165.2 per cent. This was closely followed by liquor license fees and single business permits at 133.5 per cent and 101.4 per cent respectively

According to the Office of the Controller of the Budget Report for the second quarter FY 2013/2014 Kericho had absorption of 81% of the resources allocated for both recurrent and development financing. Local revenue collection realised during the period was only 35% of the budget which was 15% below the estimates.

In the budgetary allocation Agriculture and Education was given 94% for the recurrent expenditure and was third in the order of magnitude. Overall, development expenditure was only 11% of the total budgetary allocation for the period. Local revenue for the period was 45% of the total budget. Revenue sources for the FY included:

a. Tea Cess from Tea Board of Kenya;
b. Property rates;
c. Parking fees;
d. Single business permits and

e. Market fees

It was reported that collections of revenue in Kericho did experiences fluctuation during the reporting period.

5.2.1.2 Agriculture Sector

This sector includes crop husbandry, livestock (dairy) and Fisheries. The aim/objective of the sector is to accelerate the transformation of agriculture, livestock and fisheries production into competitive and commercially viable enterprises at household level. . This presupposes improvement of service delivery to support the sector development. Current challenges experienced were reported to include:

1. Inadequate staff capacity with attendant competencies
2. Weakness in accountability.

5.2.1.3 Tea Production

Kericho is endowed with good climate which supports a vibrant tea growing and processing industry. Several multinational companies have long term leases which facilitate the development of tea industry. The tea sub-sector within Kericho County is dominated by production of tea on farms owned by the multinational companies who grow and process the tea, grade the product in readiness for auction which is done in Mombasa. Besides the multinationals, KTDA has empowered local peasant farmers to grow tea which they market through factories owned specifically by KTDA for that purpose. KTDA has also invested in effective and efficient tea leaves collection points located close to the farmers.
Income generated from wages and salaries of tea factory works (both multinational and KTDA) and income periodically paid to the farmers has created a good effective demand which supports commercial and farmers businesses. The farmers can afford and able to buy their household assets from these resources. The Kenya Tea board pays annually cess to the Count of Kericho.

5.2.1.4 Opportunities

1. Currently tea auction is done in Mombasa. The management of Kericho County has proposed that auction of tea from Kericho be made within Kericho involving both the multinational and the KTDA. This suggestion is reasonable and will bring good economic returns to the County. It may also improve net payment to the farmers as the cost of auction will reduce resulting in tea fetching better prices.
2. In tandem with the recommendation above, this ISUD plan proposes that the stakeholders establish tea tasting facility which Kericho which should be linked to a tourist circuit around tea growing area including the famous Mau Forest.
3. Financing of the touristic circuit can be done by soliciting PPP which should include construction of higher hotel categories.

5.2.1.5 Dairy Production

Kericho County has a very conducive climate for the development of dairy industry. Some farmers are already keeping improved cattle breeds and produce milk surplus which they sell

through their Cooperative Societies. The County has taken some measures to improve the dairy industry as illustrated by recent issuing of several 50litrs milk cans to Cheborgei Dairy Cooperative Society with Cheboin Ward.

The potential for developing dairy industry in Kericho is high. Keeping cattle is natural to the community. Keeping improved or even grade cattle will definitely be attractive to many farmers. Introduction of pure breeds grades should be the ultimate aim of the dairy cattle farmers who will require expert support during the initial stages of the business. Access to grazing land should provide minimal challenges as the Kericho is endowed with good rainfall year round. The grass can be supplemented with fodder feeds from neighbouring Narok, Uasin Gishu and Nakuru Counties.

Opportunities

1. Introduce improved dairy farming

Introducing high grade pure breed cattle to the farmers should be done systematically. First, only those farmers who have demonstrated ability and capacity to maintain improved breeds should be considered for selection as the first bunch of those to benefit from trials phase. Those selected should be given sufficient and systematic training and education in the husbandry of the pure breed cattle. This should not be difficult as it will be part of the selection criteria. The selected farmers should then be taken through a systematic training on management of pure breed herd including keeping of records and tracking of progeny including milking and care of calves.

2. Value Addition of dairy products

In tandem with promoting dairy industry, the County should consider introducing, through participatory consultation, value addition in milk processing. Surplus milk can be used to produce:

- Low fat yoghurt;
- Ghee and
- Mala

Horizontal linkage can be incorporated with passion fruit, pineapple, avocado, orange and banana growers to supply fruit to the value addition processing plant in producing yoghurt.

5.2.1.6 Metal and Woodwork Fabrication

Kericho has a very vibrant informal sector engaged in the manufacture and production of metal and woodwork products. The problem is with quality of the end products and lack of efficient market. This sector is currently a major provider of employment opportunities which should be harnessed and supported to provide base for additional economic growth and continuous absorption of youth who graduate from technical institutions. This will fit well with the new school curriculum which puts emphasis on the technical training in schools.

Opportunities

1. Establish a vocational training incubator facility at Kapsoit Centre to absorb youth who will be graduating from schools, have shown interest in further vocational training and have the aptitude for further training for better production. The emphasis here will be creativity and interest in innovative work;

2. Provide the graduates of the incubator vocational training centre with equipments and starter capital to able to move forward. This will be an incentive especially for those who complete the training.

5.2.2 The Labour Force

The labour force in Kericho County was projected to be 494,710 in 2017 representing 49.7 per cent of the county population. According to the Population and Housing Census of 2009, the unemployed population in the county is estimated at 38% of the total labor force. This creates a dependency challenge for the working and active population. The source of income for the people of Kericho County comprises of proceeds from farmproduce such as tea, pineapples, coffee, sugarcane, potatoes, maize and horticultural crops.Employment by multinational companies such as tea farms and factories is another major sourceof income. The informal sector offers the largest and fastest growing form ofemployment.One of the features observed in Kericho is the sprawling hawking businesses around the central business district which are in direct competition with the formal businesses. If not controlled, this development will impact negatively on the established businesses which pay higher rates and taxes. Properly harnessed though, the informal hawking businesses will also contribute positively to the exchequer of each County while at the same time offering the traders secure source of income.

A small number households in the current Kericho Township are employed in formal establishments approximately 41,188(Statistical Abstract 2016). The multinationals are the biggest employer. Being the main commercial centre in Kericho County, Kerichotown offers a variety of employment opportunities in supermarkets, commercial outlets and small business enterprises. The entry of the County Government has also created new opportunities for formal employment. A larger percentage of people working in multinational companies such as tea factories and flower farms get their dues in terms of wages. This is because most of the employees of these firms are employed under contract terms. Roads and building construction is another source of wage though seasonal.

The major contributors to category of self-employment in the county are people working on their own farms. These are the people who spend most of their time engaged in tilling, harvesting and rearing livestock for their livelihood. This type of employment contributes more than 50 percent of employment in the county. Other kinds of self-employment comprise of people undertaking their own businesses either in the main trading centres or in the rural settings. These businesses range from small kiosks to wholesale trading.

5.2.3 Household Poverty

Household welfare is highly correlated with income. Household incomes are not easy tomeasure, because they are not always a true reflection of actual incomes, but household consumption expenditure is usually a reliable indicator. Individual expenditures have historically been shown to be correlated with income level. Household surveys have therefore traditionally captured data on expenditures as a proxy for estimating incomes. Consumption expenditure on a determined food basket is used to estimate the poverty line.

Poverty is measured using estimated consumption expenditures. The poverty line is a threshold below which people are deemed poor. In 2005/06, the poverty line was estimated at KSh 1,562 and KSh 2,913 per adult equivalent per month for rural and urban households respectively. Nationally, 45.2 percent of the population lives below the poverty line (2009 estimates), down from 46 percent in

2005/06 (see Exploring Kenya's Inequality). The table 3.1 below gives an indication of the poverty level in Kericho with over 32% living below the poverty line.

The key economic activities in Kericho include agriculture, trade, commerce, SME in the informal sector. Kericho town is also an administrative and education centre in the County. Low diversity in industry has constrained the growth of the town.

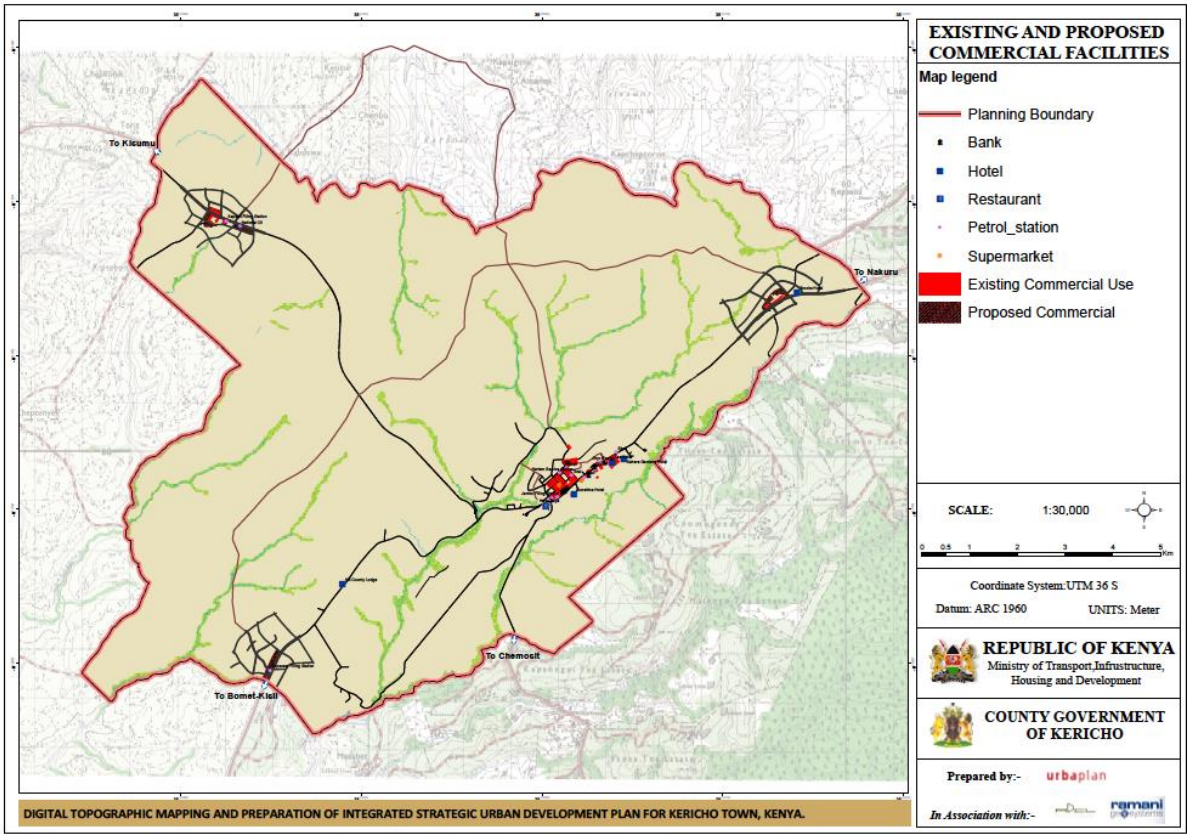


Figure 5-1: Proposed and existing commercial landuse for Kericho town

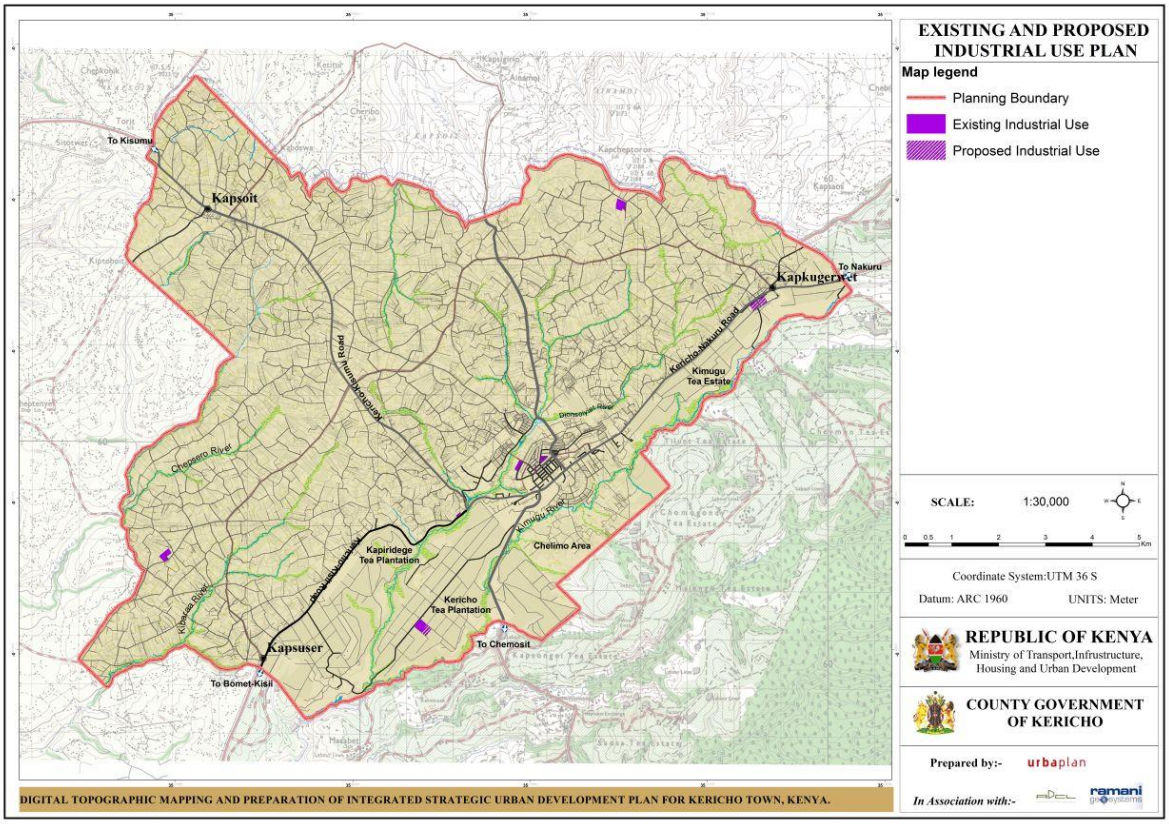


Figure 5-2: Proposed and existing Industrial landuse for Kericho town

5.2.4 Investment Environment inKericho

An investor in Kericho stands to gain from the various tax treaties and investment promotion and protection agreements that Kenya is a signatory to, enabling exports from Kenya to enjoy preferential access to world markets under a number of special access and duty reduction programmes.

Further, the cost of doing business in Kenya has significantly reduced in recent years. An investor would also have access to highly educated, skilled and sought after workforce, in addition to operating in Kenya's fully liberalized economy that includes unrestricted foreign exchange, readily available import and export licensing, as well as no restrictions on remittances of profits and dividends.

The following parameters would enhance investment in Kericho:

- Stable and declining inflation rate, currently lower than the average for Sub-Saharan Africa.
- Kericho has a relatively large well-educated and skilled labour force covering most sectors.
- Significant development of the County's transport infrastructure
- Access to both local and export markets through Kenya's membership in the East African Community (EAC) and Common Market for Eastern and Southern Africa (COMESA).

5.2.5 Major Challenges

Lack of adequate public land to attract investors is an issue that has to be addressed if the town wants to woo investors.

There is also no framework to support the Informal Industries to set up and operate. These include lack of a serviced site with sheds, water, electricity, sanitation and parking, Yet this is the largest employer in the town.

5.2.6 Economic Goal

To attract investment and create employment opportunities for town residents

5.2.7 Proposed Strategies for Economic Development

The ISUDP proposes the following strategies for economic development:

Table 5-1: Proposed strategies for economic development

Goal	Strategies	• Projects
To attract investment and create employment opportunities for town residents	New industrial areas linked to nodes	• Allocate land for new industrial areas • Roads) • Notification of the land demarcated for • industrial development
	New Commercial Districts	• Allocate land for new commercial districts • Notification of the land demarcated for commercial development
	Improve infrastructure for employment zones	• Electricity Supply in the proposed commercial and industrial area • Construct motorable Roads within proposed Industrial area

		• Construct truck terminals
	Promote SMEs	• Formulate county led SMEs policies • Lower transaction costs • Encourage cottage industries and strengthen value chain development • Establish County led SMEs oriented financial institutions
	Promote Urban Agriculture	• Develop water harvesting technologies, • Promotion of organic manure and high yield seeds • Explore daming of surface runoff for irrigation • Promote soil conservation and soil fertility • Establish County funding for agricultural based activities
	Institutional framework for Juakali sector	• Allocate Juakali traders designated areas in the Nodes and urban core • Training & capacity building on products improvement through County Trade Ministry
	County Investment Strategy	• Develop a Town Investment Policy • Develop Investment Information Centre • Give incentives to investors including serviced land and tax holidays

5.3 PHYSICAL INFRASTRUCTURE

The physical infrastructure forms the framework of the town's development. It is imperative that these are teased out to allow for projections for the future demand of the town and enable the spatial components be arranged in a functional manner.

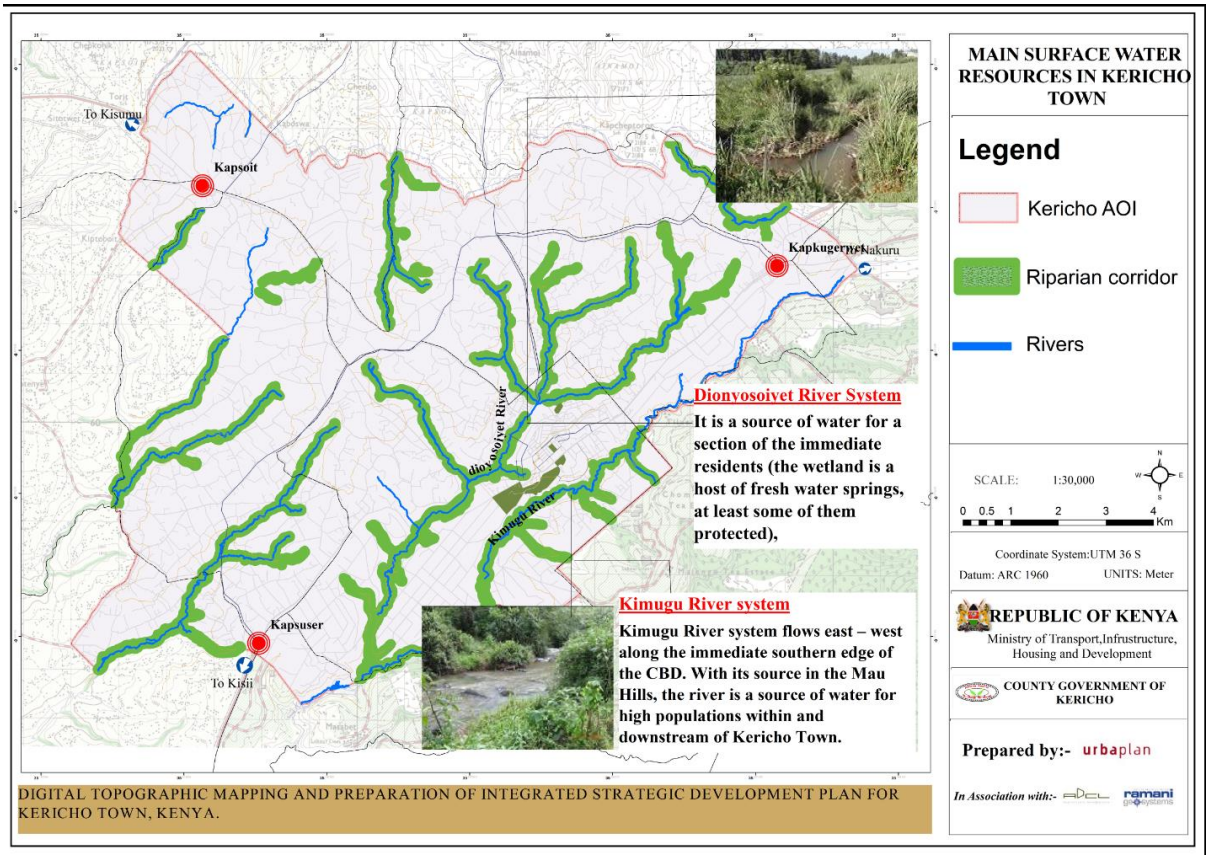


Figure 5-3: Main surface water resources in Kericho town

5.3.1 Water Supply

5.3.1.1 Existing Kericho Water Supply System

The Existing Kericho Water Supply System is designed to cover an area of approximately 126 km2 comprising of Kericho Municipality (111km2) and parts of the adjoining peri urban and rural areas. The System was first developed in the 1930s. It has since been expanded in the 1950s, 1970s and most recently in 1989 – 1991. The existing Water Supply System is designed to serve the Year 2005 population of the present service area.

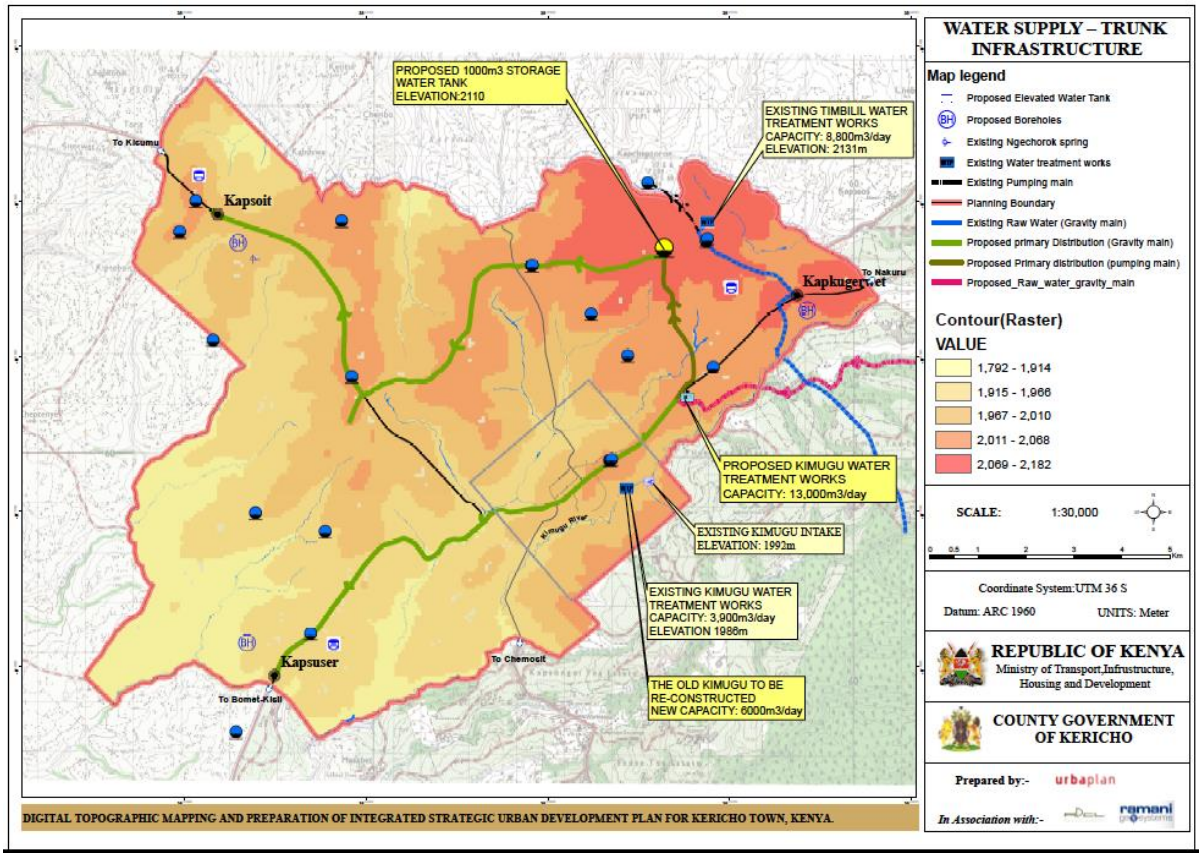


Figure 5-3: Water supply - trunk Infrastructure in Kericho town

5.3.1.1.1 Timbilil Treatment Facility

Kericho Town's Water Supply and Sanitation Systems are presently operated and managed by the Kericho Water and Sanitation Company Ltd. (KEWASCO). KEWASCO is a private commercialized company established under the company's Act CAP 486, Laws of Kenya and wholly owned by the County Government of Kericho.

The company was incorporated in October 1997. It has been contracted by Lake Victoria South Water Services Board to operate and manage Water & Sanitation Services within Kericho Municipality, an area of 111km²

The Timbilil System was commissioned in 1991 and is in generally in good operational condition. However most Treatment Works structures require rehabilitation, specifically relating to repair works of concrete surfaces affected by chemical attack (alum, soda ash and chlorine) so as to ensure the economic operational life of the structures is achieved (at least 50 years for concrete structures).

Potential Water Sources And River Volumes in Kericho

Table 5-2: Key flow volumes for river Kimugu at intake

Flow	Flow Volume	
	m^3/s	m^3/day
Q_{50}	1.480	127, 884
Q_{80}	0.568	49,107
Q_{90}	0.393	33,917
Q_{95}	0.288	24,896
Q_{98}	0.218	18,801

In accordance with the Water Allocation Guidelines by the Water Resources Management Authority (WRMA), at the existing Intake on River Kimugu:

- The Reserve Flow is Q_{95} = **24,896 m^3/d**
- Normal Flow Available for Allocation (NF) = $Q_{80} – Q_{95}$=**24,238 m^3/d**

Table 5-3: Water production

FACILITY	CAPACITY
Timbilil Treatment Works	8,800m^3
Kimugu (for use during dry seasons)	3,900m^3
Ngecherok	250m^3 but the capacity is 720m^3 per day (30l/per second)
Total Carrying Capacity	12,700m^3

Source: KEWASCO Strategic Plan 2013-17

5.3.1.1.2 Kimugu Treatment Facility

The Kimugu System is the oldest Water Supply System serving Kericho. It was initially developed in the 1930's and expanded in 1950's and 1970's. The System is only operated during dry periods when there is substantial reduction in flow in the Timbilil River. The Intake and Treatment Works are located within Kericho Town CBD (Central Business District). Water produced from the Kimugu System is pumped into a Storage Tank within Kericho Town. In addition to being a pumping system resulting in high operation costs, the Kimugu Works are in a very dilapidated state due to age and poor maintenance.

5.3.1.2 Analysis Of Water Demands

The population of Kericho county is steadily growing and the current population is approximately estimated at 174,141 in the year 2017 and 306,805 by the year 2037.

The table below indicates the water demands for the current population at 2017 and the projected population at 2037

Table 5-4: Analysis of water demand

YEAR	**2017**	**2027**	**2037**
WATER DEMAND	13,934	17,990	24,544
CAPACITY	8,800 m3/day		
Proposed New System (New Kimugu Intake) to produce 13,000m3/day			

5.3.1.1 Current Water Reticulation System

The spatial coverage by water reticulation is actually 89.83 sq.km. well below its planned coverage of 126 sq. km. The ISUD Plan area is 111sq.km giving an area of 21.17 sq.km. not covered.

Table 5-5: Water reticulation coverage

Area covered by water	In Sq.Km
Area covered by water in sq.km	89.83
Area not covered by water in sq.km	21.17
Percentage area covered by water	80.9%
Percentage area not covered by water	19.1%

The construction of the new Intake at Kimugu river and expansion of anew Kimugu water treatment facility is estimated to increase the volume of water production per day to 13,000m3/day the project is estimated to serve until year 2030.

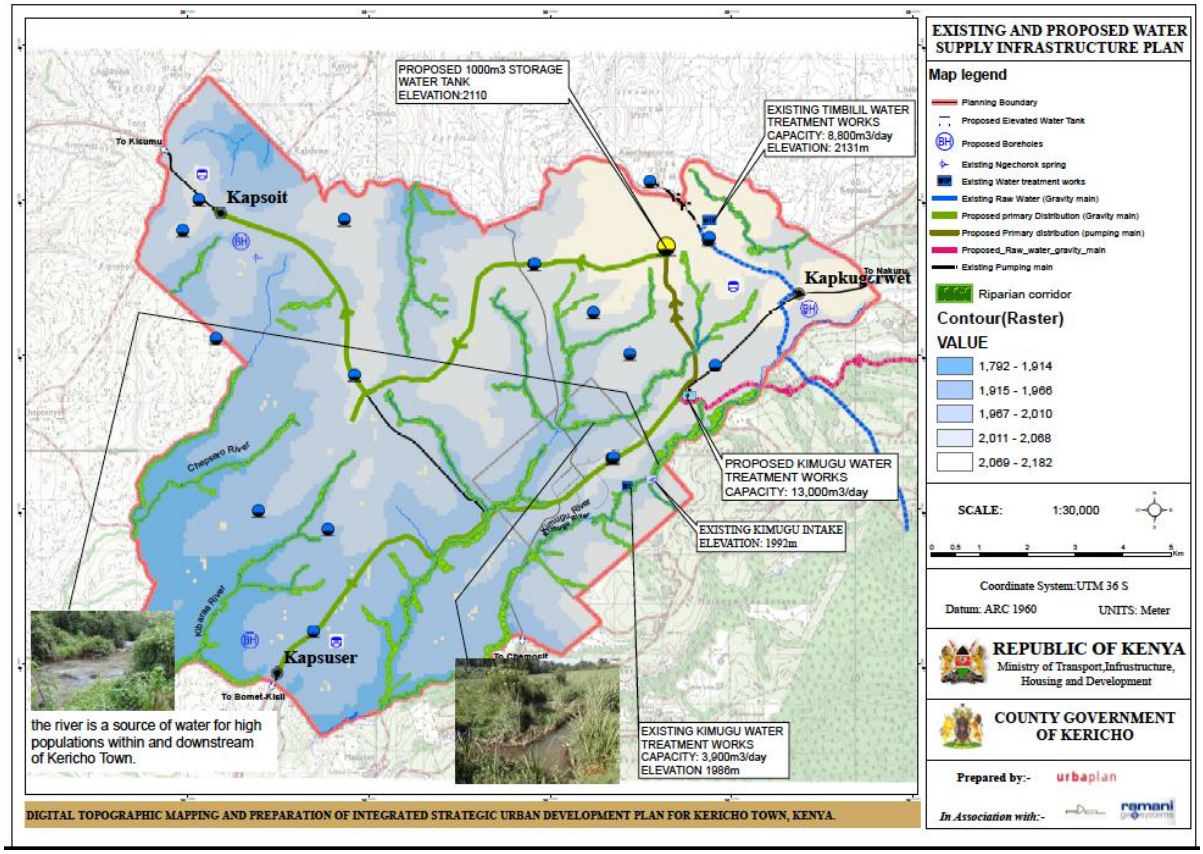


Figure 5-4: Existing and Proposed Water supply Infrastructure in Kericho town

5.3.1.2 Plans For Expansion

5.3.1.2.1 a) Location

The Proposed Intake Works is located on River Kimugu, approximately 10km North East of Kericho CBD at 0º 20' 30''S.(longitude) and 35º 21' 34''E (latitude), at 2060m AOD, near Kimugu Tea Estate.

5.3.1.2.2 b) Intake Weir and Intake Chamber

The Intake comprises of a Reinforced Concrete Weir, length 9.9m constructed across the Kimugu River. The Weir is divided into Primary and Secondary weirs separated by a reinforced concrete separating wall. The Secondary weir crest (EL 2060m) is 0.4m lower that the Primary one to concentrate the river flow toward the intake chamber during low flows.

The Weir has been provided with a scouring arrangement consisting of 3Nr. 300mm dia. pipes with control penstocks. An 800mm wide metal girder bridge has been provided over the Weir to enable operation of the penstocks and maintenance of the riverbank protection.

Abstraction of raw water is through 2 pipes of diameter 600mm into the Intake Chamber.The Intake Chamber comprises of a fixed coarse screen at the side inlet entry point of raw water from the weir. 3Nr. removable fine screens are provided in the Intake Chamber. The 600mm diameter outlet for the raw water gravity main is located with the Intake Chamber and controlled with a 600mm dia. circular penstock. A 200mm diameter scour pipe with a circular penstock control is provided in the Intake Chamber to allow for periodic scouring of the chamber.

It is proposed to demolish the existing Kimugu water treatment plant and expand it to a bigger and updated conventional system with a capacity of 6,000m3/day to improve on the currently ongoing new Kimugu water treatment system of 13,000 m3/day and the existing Timbili water treatment system with a capacity of 8000 this will in total add to 25,000 m3/ day that will be able to meet the water demand by 2037

5.3.1.2.3 c) River Bank Protection

To ensure unobstructed flow in the river, the banks will be protected using gabion boxes. Downstream of the weir, both banks of the river have existing rip-rap slope protection which is in good condition and only remedial Works will be carried out.

5.3.1.2.4 d) Other Works at Intake

Other Works proposed at the Intake Works include: -

- Provision of reinforced Concrete Aprons, 5.5m upstream and 3.6m downstream of the Weir.
- Provision of metal girder Access Bridge over Weir to enable general maintenance and operation of Penstocks.
- Provision of gabion protection on the river bed, upstream and downstream of Weir.

- Provision of gabion protection on river banks, upstream of Weir
- Intake Chamber, size 4.2m x 2.8m, for security of metal screens, penstocks, etc.
- Site and Ancillary Works will include access road to Intake Site, fencing, landscaping, etc.

There are plans to undertake a major upgrade for the town through a bilateral agreement with the German and the Kenyan Governments.

It is also proposed that in the town nodes of Kapsuser, Kapsoit and Kapkugerwet 3 No Boreholes be constructed and pumped to new and existing reservoirs at the highest point of each town node to improve on the water supply incase of adverse shortage of rains

It is also proposed to protect the catchment areas by planting trees that do not consume a lot of water, especialy avoid trees like eucalyptus.

5.3.2 Sewerage And Sanitation

5.3.2.1 Components of the Existing Sewerage System

Only a small area of Kericho Municipality, approximately 2.5 km^2, has a waterborne Sewerage System which was commissioned in 1962. The Sewerage System comprises of a piped Reticulation Network and a centralized Wastewater Treatment Plant (WWTP). The Sewerage System covers only the Central Business District (CBD) and a few Residential Estates.

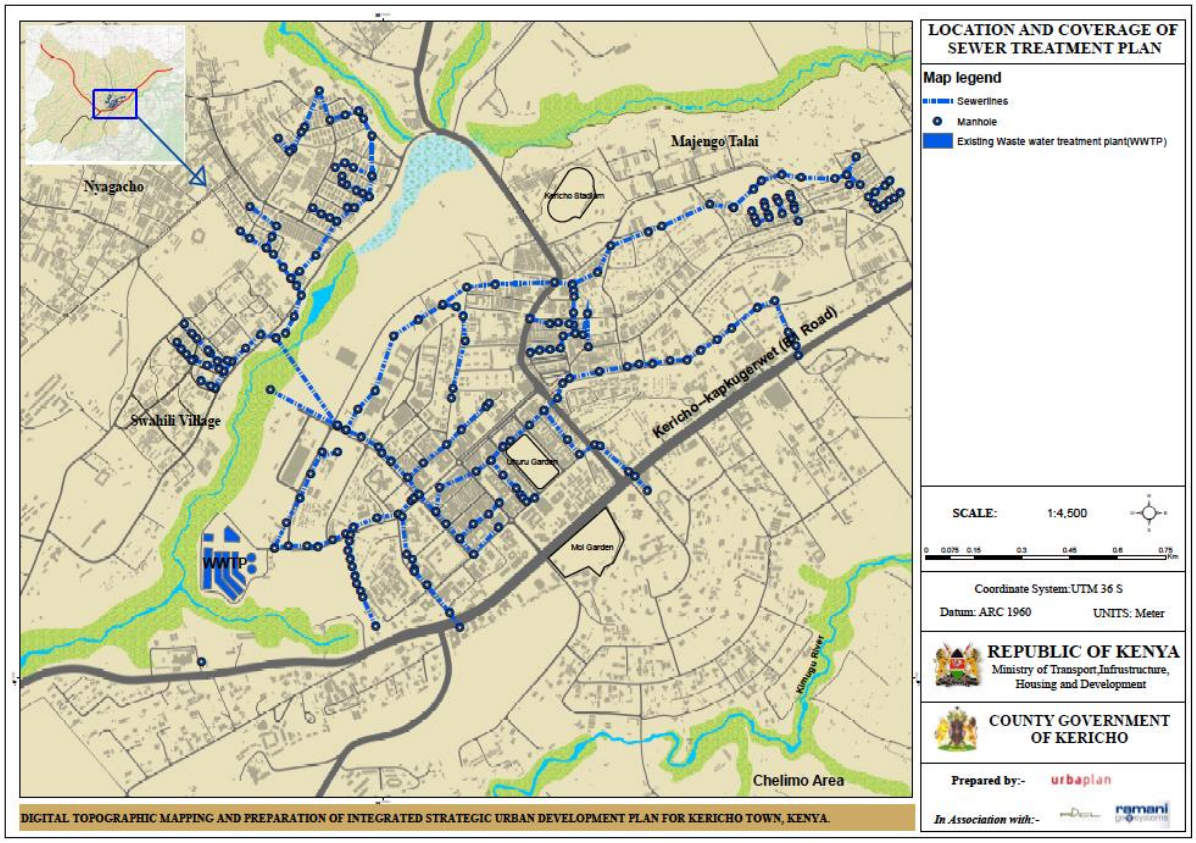


Figure 5-5: Location and Coverage of Sewer Reticulation in Kericho town

5.3.2.2 Existing Sewer Network

The existing Sewer Network comprises of approximate 12km of Sewer Lines, diameter varying in size from OD 315mm to OD 160mm and covers the Central Business District (CBD) North of the Nakuru-Kericho-Kisumu Road and small housing estates including Somali Village and Swahili Village, North of Dionsoyiet River. The Kenya Cooperative Creameries (KCC) Dairy located northeast of Somali Village is also connected to the Sewer System. The Existing Sewer Network is primarily a gravity system.

The Sewerage System intended to approximately 12,000 people through 2,262 piped sewer connections the area calculated on the study area is 1.94Sq.km the sewer network covers the CBD and a few residential areas. The remainder of the Town's population relies on on-site wastewater disposal methods, primarily Pit Latrines and Septic Tanks. The Kericho water and sanitation company has exhausters to transport the waste from the septic tanks to the waste stabilization ponds.

Table 5-6: Details of existing reticulation sewers

Pipe Material	Pipe Dia. (mm)	Total Pipe Length (m)
Concrete	160	6,007
	225	1,028
	315	2,232
uPVC	160	820
	200	1,139
Asbestos	160	381
Steel	150	364
Total		**11,971**

5.3.2.3 Existing Waste Water Treatment Plant

The existing Sewer Network conveys wastewater to the Kericho Waste Water Treatment Plant(WWTP)located 0.5km west of the Kericho CBD. The WWTP is a combination of Conventional Treatment Works and Waste Stabilisation Ponds comprising of the following units:

- Inlet Works and Pre-Treatment Unit, Screenings and Grit Removal
- 2 Nr Primary Sedimentation Tanks - 9.00m diameter
- 2 Nr Trickling Filters – 27.5m diameter
- 4 Nr Secondary Sedimentation Tanks - 9.15m diameter
- 2 Nr Sludge Digesters
- 3 Nr Facultative Ponds and 4 Nr Maturation Ponds
- 23 Nr Sludge Drying Beds, each of size 21.0m x 6.0m

Table 5-7: Waste treatment facilities

NAME OF WASTE TREATMENT FACILITY	
Description	**Data in Figures**
Volume input to facility	$450m^3$/day
No of filtration units	4
No of oxidation ponds	3
No of aeration ponds	4
Volume of treated water per day	$450m^3$/day
Water flowing to which river source after treatment	R. Dionysoet
Type of intake facility (e.g pipe, open channel)	Pipe

Target population for treatment facility	20,000
Comments	Operating Below capacity Rehabilitation ongoing

Table 5-8: Analysis of sewerage demand

YEAR	2017	2027	2037
Water Demand Based on population	13,934	17,990	24,544
Sewerage water Demands (80% of water demand)	11,147	14,392	19,635
Waste water capacity	450m3/Day		

Based on the results illustrated in the table above the current waste water facility is not able to meet the current and future sewerage demands.

KEWASCO provides exhauster services for customers who are not connected to the company's sewerage network. These services are also available to clients who are beyond the company's area of water provision coverage. The company also provides safe disposal services for exhauster dumping for firms & individuals who own exhauster equipments and wish to empty the sewage safely.

Currently,thereare3largeseptictanksinMortgage residentialarea.Thesetupconsistsofa sewernetworkwhichcollectswastewater fromindividual housesanddrainstolargeseptic tanksbygravity.Theseptictanksareemptiedperiodically byKEWASCOandthesewage dischargedat thewastewatertreatmentplant.

ThereareindividualseptictankslocatedwithinKEWASCO's areaofcoverageandtheseare emptiedbyKEWASCOatafee. KEWASCOalsohaspublictoiletsinthefollowingpublicplaces:

- MoiGardens;
- UhuruGardens;
- Openairmarket;
- Centralbusterminal;
- Districthospital
- Kerichostadium

5.3.2.4 Strategies for addressing the issues on Sanitation

To improve storm water drainage the following will be undertaken:

- Increase coverage of sewer to all the urbanized parts of the plan area
- Upgrade the sewer reticulation in the CBD
- Expand the sewer treatment works to handle the expected increased capacity
- Stop drainage of sewer into rivers and drainages
- Construct parallel sewer line along Kimugu river. This will involve construction of large waste water conventional treatment system to serve the Milimani area and area around Chelimo.

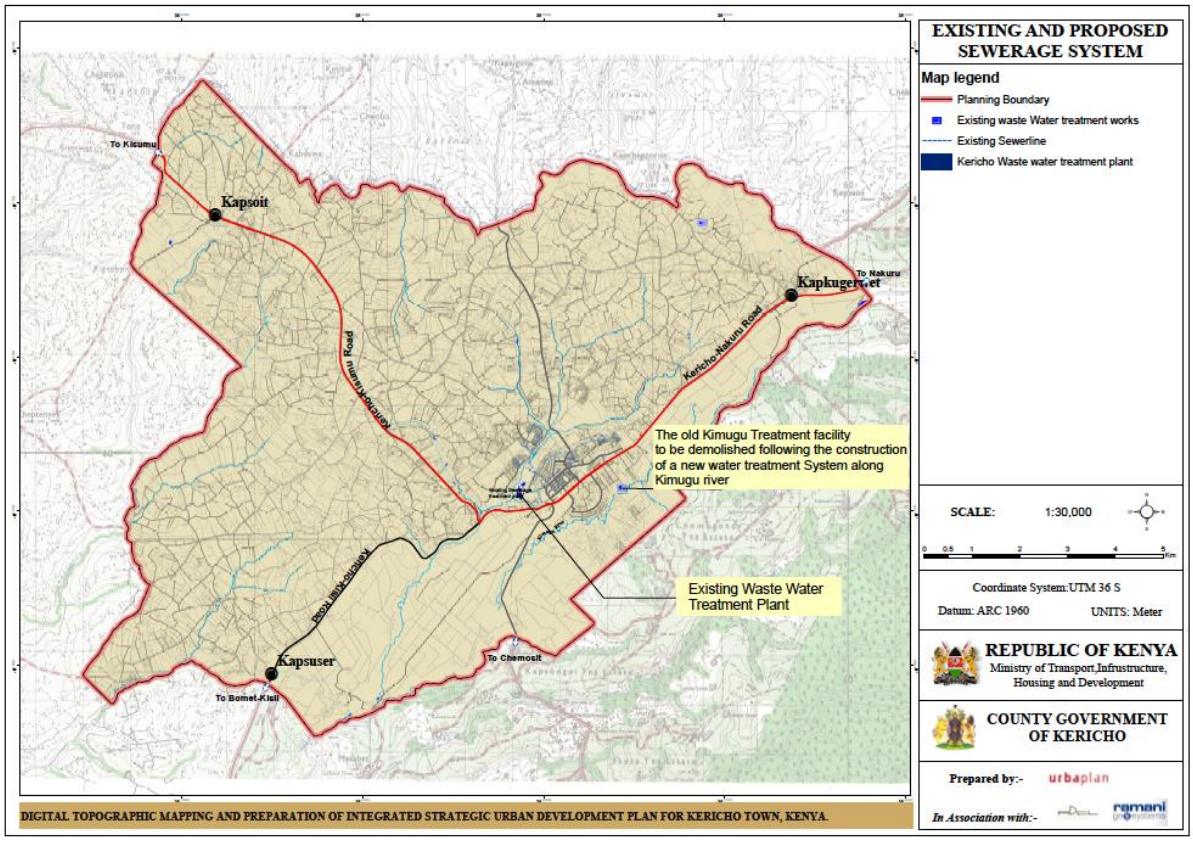


Figure 5-7: Proposed sewerage system in Kericho

5.3.3 Storm Water Drainage

The key influencing factors for the characteristics of drainage system in Kericho Town that may also be described as the challenges facing the town include the following;

(i) Climatic conditions where the town and its surroundings are endowed with heavy rains throughout the year generating huge volumes of storm water that need to be managed,

(ii) There are serious conflicts between land use trends and natural drainage systems leading to erosion and damages to road reserves,

(iii) Inadequate provision of drainage systems to match the expanding social and economic development of the town

(iv) Intrusion to the major storm water sinks including Dionyosoiyet wetland and the capacity of Kimugu Rivers being the main recipients of surface runoff from the town,

(v) Increasing hard surfaces in form of roads and buildings and diminishing open land surface for percolation,

(vi) Poor maintenance of the existing drainage systems.

The existing drainage network in Kericho Town only covers only the most developed parts mainly to the northeast of the CBD and sections of the CBD itself. Other places depend on natural drainage systems only. Kericho Town is also growing with residential and institutional developments sprouting in most parts of the town. The CBD area including the Site and Service Residential zones are provided with two major concrete drainage channels. The Western zones of the catchment are drained by unlined drains along the existing road reserves nut are of inadequate capacity.

The road reserves within the CBD are provided with concrete channel (trapezoidal or rectangular) which are narrow and potential for runoff overflows. Culverts are narrow and often blocked from silt

loading and solid wastes dumping. The drain channels around the open market area and the bus park, though seemingly adequately sized, have structures built over them by small scale roadside traders making management a challenge. The market itself is not served with internal drains and is often flooded or soggy during the rains. The bus-park, however, is well drained. Both areas are linked to the main drain discharging into Dionyosoiyet wetland a short distance downstream.

Informal Settlement and the satellite markets are not served with internal drainage system but the runoff is collected into undefined roadside drains along the main road leading into the estate. The roadside drains are often loaded with silt and solid waste materials disposed from the settlements. The waste materials are also washed down into the Dionyosoiyet wetland system. Other places including Kimugu Catchment, access into James Finlay's, St. Patrick and Motobo areas are not provided with drains due to the topography including lack of adequate slopes.

Among the challenges facing drainage infrastructure in Kericho Town include the following;

(i) Inadequate coverage of runoff catchment areas,
(ii) Inadequate sizing on the face of growing surface runoff volumes
(iii) Conflicts with land use practices
(iv) Solid waste management in the town
(v) Scouring of drainage systems from excessive flows
(vi) Risks of safety including that of motorists and pedestrians,
(vii) Pollutant transport into water bodies from point and non-point sources.

Kapkugerwet and Kapsuser Markets are not provided with any form of drainage for the surface runoff, and that include the highways traversing the areas (B1 through Kapkugerwet Market and C23 through Kapsuser Market). Surface drainage takes the natural topography though increasingly being compromised by the expanding social and economic development (settlements and commercial buildings). Kapsoit Market has benefited from the upgrading project of the Kericho – Kisumu (B1) that provided drainage along the main road reserve. The road lies on a crest with surface runoff draining to the north (low lying valley discharging towards Dionyosoiyet stream) and into a wetland on the south of the market center

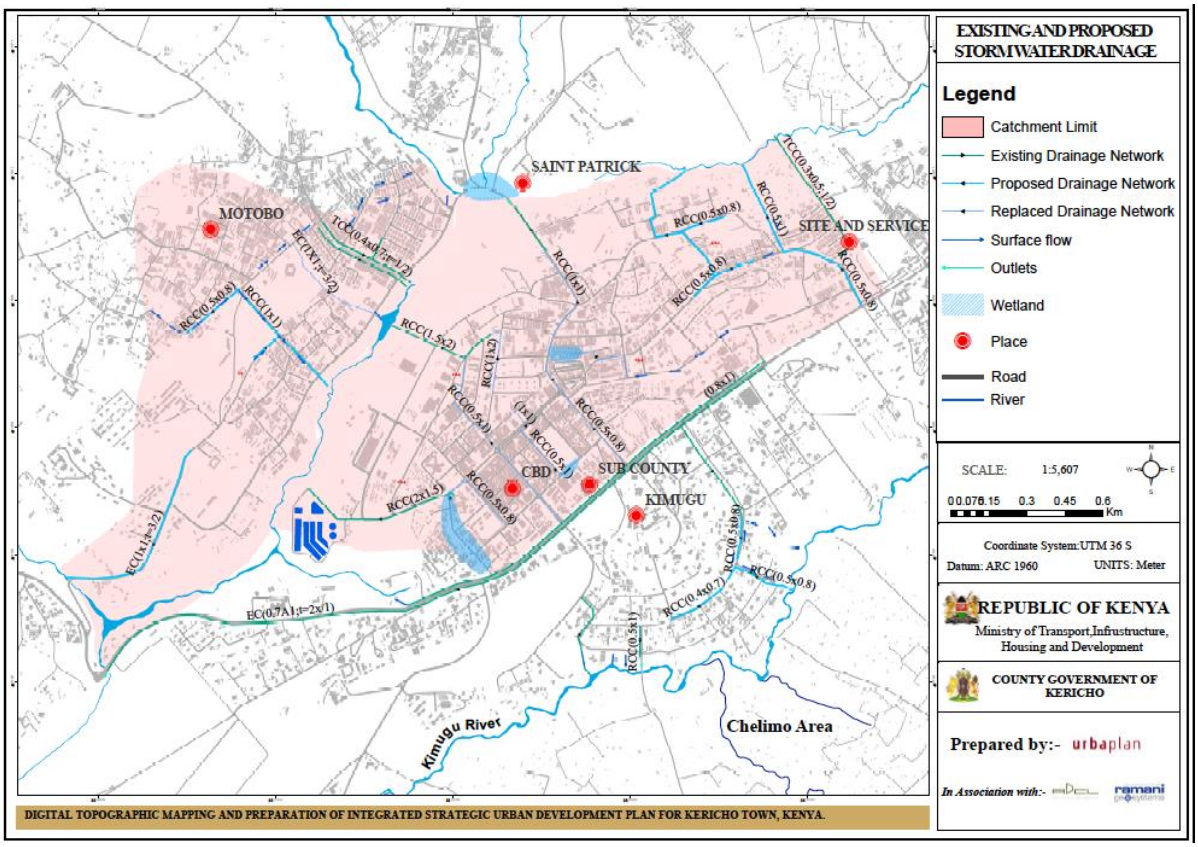


Figure 5-8: Existing and proposed stormwater drainage system

5.3.3.1 Strategies for addressing the issues on Storm water

To improve storm water drainage the following will be undertaken:

- Establish surface runoff catchments for integration into the land use plan
- Drainage channels and outfalls integration from the CDB into the rivers'
- Provide for drainage outfalls with minimal or no conflicts with land use features,
- Confine drains to natural drainage system to the extent possible.
- Establishing land requirements for drainage channels and outfalls
- Land acquisition plan development for necessary compensation where necessary

5.3.4 Solid Waste Management

5.3.4.1 General Status of solid waste collection:

Waste disposal in Kericho County is still a major challenge in towns. The dumping site in Kericho town is due for relocated since it is full and a contributing factor to the roadside waste disposal practices leading to public health and blockage of drainage channels. The town also lacks adequate litter bins and solid waste collection centers as well as inadequate law enforcement mechanisms resulting to indiscriminate solid waste. The satellite markets are worse off in regard to waste collection and disposal, no system exists and solid wastes are dumped within and around the road reserves and trade centres.

Unlike in other counties, Kericho Town has tried to map the locations of the solid waste collection points as seen in the map below, the centres are 45, the households connected to solid waste collection points are 7,574 households. The Green points indicate the collection centres,

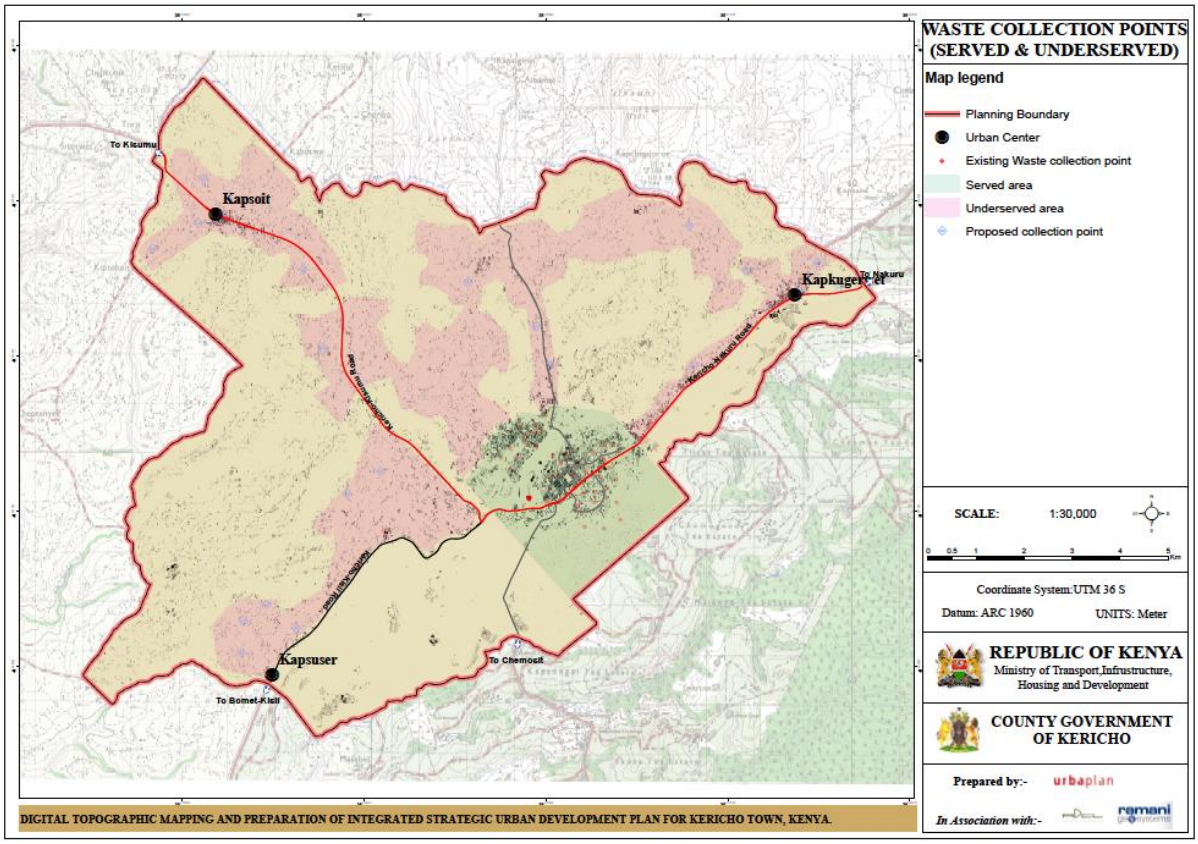


Figure 5-9: Waste Collection Served Areas

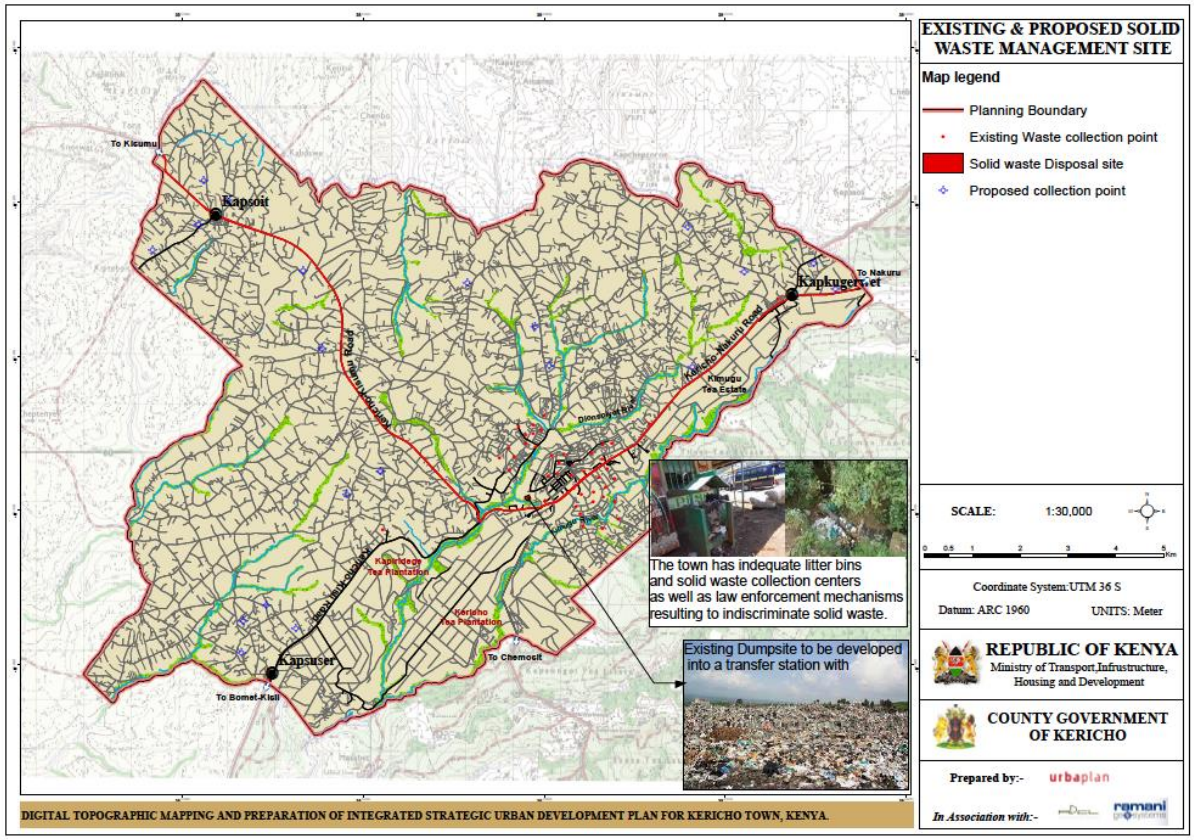


Figure 5-10: Waste Management Sites

5.3.4.2 Generation quantities

Kericho town produces 60 tonnes of waste per day the breakdown is indicated below.

Table 5-9: Waste generation

TYEP OF WASTE	% DISTRIBUTION
Organic waste	60%
Textiles	21%
Wood & cardboards	11%
Combustibles	10%
Glass	3%
Metals	3%
Others	3%

5.3.4.3 Transportation of Waste

The solidwastedumpsiteislocatedbehind the County Referral Hospital.Companies that handle waste use this small dumpsite which is currently overflowing. Others manage the waste on site.

5.3.4.4 Strategies to Address Solid Waste Management Issues

The main issues that need to be addressed for solid waste management are:

- A landfill site be identified and developed
- A comprehensive study on solid waste management be undertaken to work out the best strategy for waste management in the town.

5.3.5 Electricity

The Kenya Power Company has played an important role in lighting up the rural areas in the county. This is mainly through the Rural Electrification Programme which has enabled it not only cover the whole of Kericho town but also includes the ISUD Plan areas. Kericho town is connected to the national power Grid with 74.4% of households, commercial and residential houses connected to the KPLC, Solar power use of kerosene and other sources of energy account for the remaining percentages.

Multinational companies like James Finlay and Unilever Kenya generate their own power to supplement what the Kenya Power Company supplies them.

The table below indicates the power distribution in Kericho County

Table 5-10: Power distribution

Area Served with Power	82.32 sq.km
Area Not Served with power	28.68 Sq.km
Percentage Served	74.4%
No. of Light poles	618
Length of the power lines	615.7 km

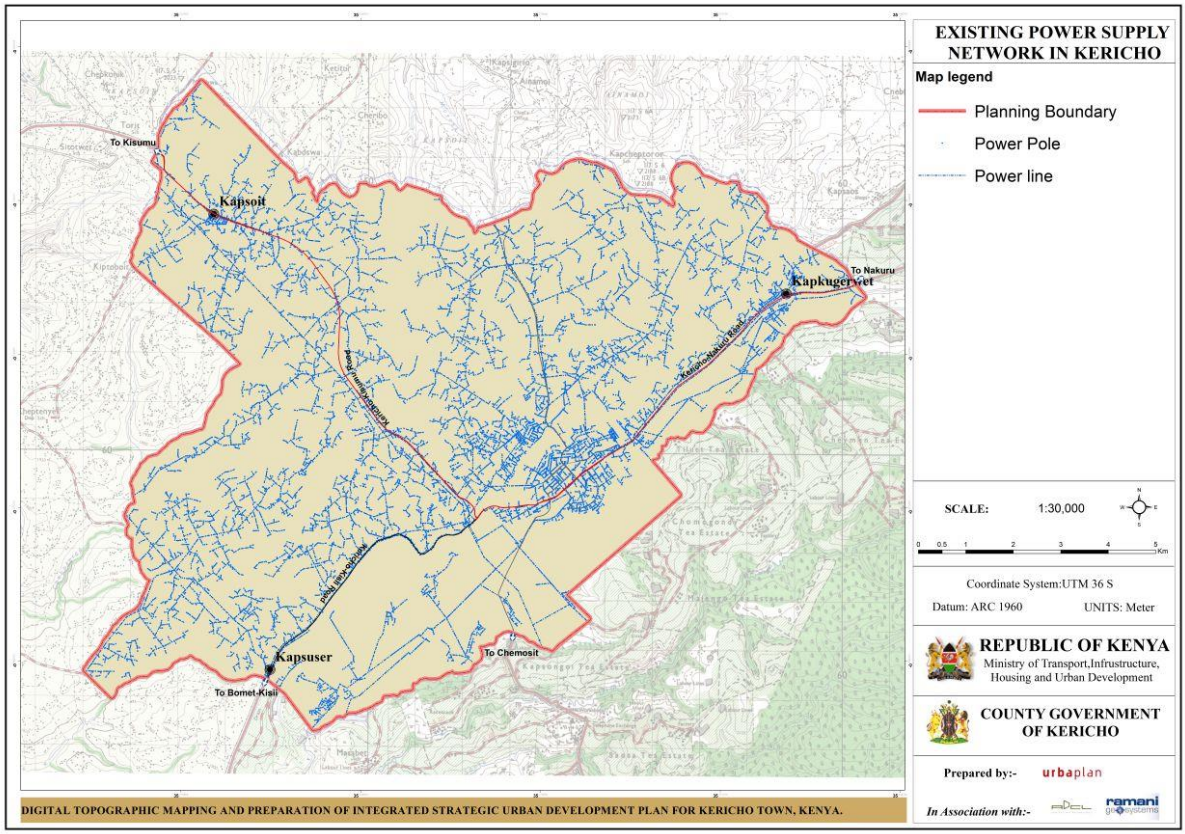


Figure 5-11: Kericho power supply

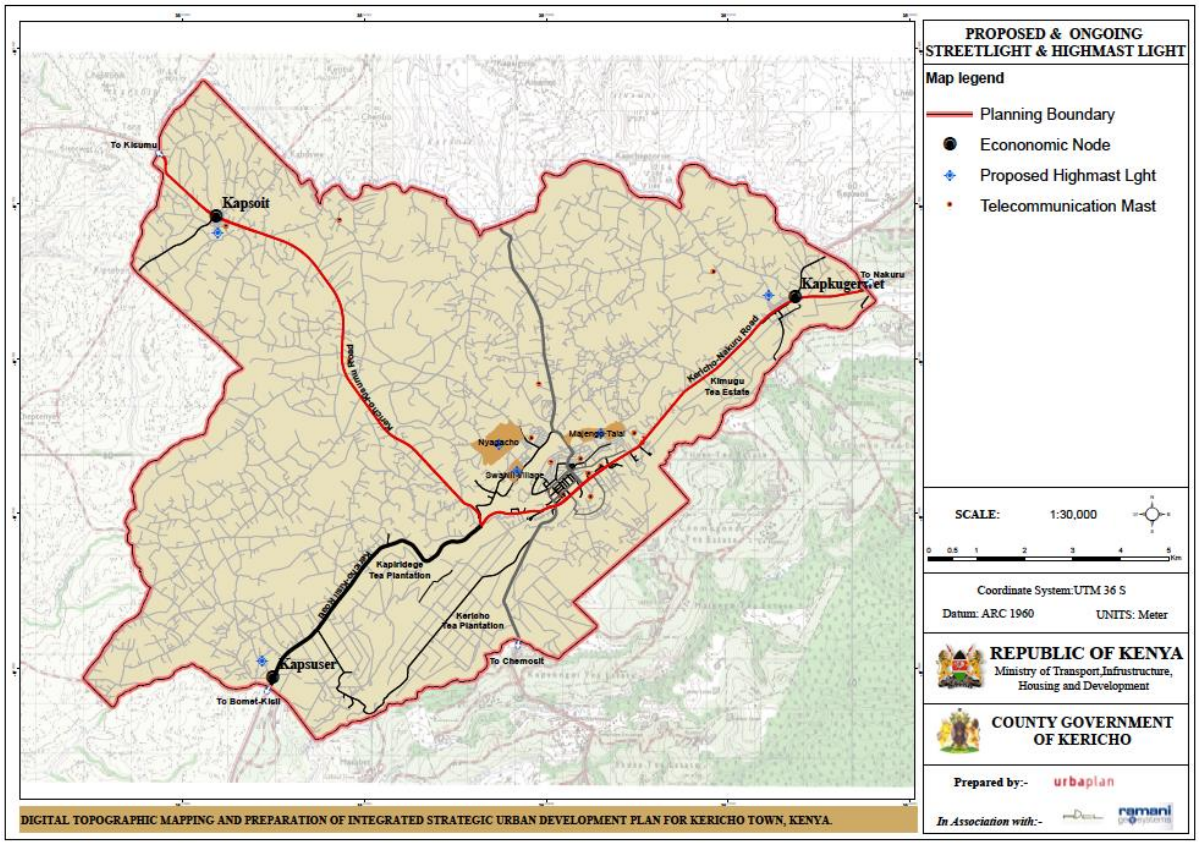


Figure 5-12: High Mast Lighting

5.3.5.1 Goal

To provide adequate infrastructure services to support urban development

Table 5-11: Adequate infrastructure services for urban development

Goal: To provide adequate infrastructure services to support urban development				
Sub Sector	**Strategies**	**Projects**	**Quantity**	**Units**
Water Supply	Access to potable water for all household	Increase water reticulation coverage to households in the built up areas	76,000	No
		Increase tank storage capacity	4	No
		Upgrade the water treatment works	100,000cm/ day	1
Sewerage and Sanitation	Improved sanitation network	Increase sewerage coverage and capacity to households in the built up areas	76,000	No
		Upgrade the sewer reticulation in the CBD	10	Km sq
		Stop drainage of sewer into rivers and drainages	1	Town
Storm Water Drainage	Reduce negative impact of storm water	Establish surface runoff catchments for integration into the land use plan	1	Town
		Drainage channels and outfalls integration from the CDB into the rivers'	10	Km sq
		Confine drains to natural drainage system to the extent possible.	1	Town
		Land acquisition plan development for necessary compensation where necessary in CBD, Kapsoit, Kapsuser and Kapkugerwet	15	Km sq
Solid Waste Management	Reduce proliferation of solid waste	A landfill site be identified and developed	1	No
		A comprehensive study on solid waste management be undertaken to work out the best strategy for waste management in the town.	1	NO
		Waste transfer stations in CBD (main commercial area, bus stage, market, stadium and hospital)	4	No
		Waste transfer stations in Kapsoit Market	2	No
		Waste transfer stations at Kapkugerwet market	2	No
		Waste transfer station Kapsuser market	1	No
Electricity and Street Light	Enhanced security and energy access	Grid network Coverage	100	%
		Street Lighting	30	km

5.4 SOCIAL INFRASTRUCTURE

Social infrastructure provision is crucial for a livable city. The provision of the facilities are guided by population sizes and planning standards. The Ministry of Health has provided a guideline on the hierarchy of health services that should be provided for various population areas. The social infrastructure is addressed in detail below.

5.4.1 Educational Facilities

5.4.1.1 Current Status

The guidelines for education facilities by the Physical Planning Handbook allow for gross estimation of education numbers needed.

Table 5-12: Education facilities provision

Facility	Population Catchment	Demand 2037	Existing	Additional
ECD	3500	88		
Primary School	3,500	88	42	46
Secondary School	8,000	38	18	20
College	500,000	1	5	-
University	1,000,000	1	1	-

Within the town the existing education facilities are as follows:

- Primary schools: 17 private and 25 Public
- Secondary Schools: 18
- Colleges: 5
- University: 1

Increase in population will impact on the demand for education facilities. This will cut across all levels of education including early childhood development, primary and secondary levels. Based on the population projection, the urban plans should anticipate increased demand on education facilities and infrastructure and make requisite provisions. In addition to standard classrooms, the education institutions will need laboratories for science and technical skills. Plans for tertiary education should include emphasis on the new education policy which emphasizes technical training.

One of the major issues raised during the study was scarcity of qualified teachers at all levels of education. This is in spite of the fact that many people graduate from universities each year. There is therefore need to review teacher employment/deployment policy to ensure schools are well staffed with qualified teachers to ensure quality education.

Demand for basic education at the level of ECD will increase in all the towns as population grows. Demand for primary and secondary school education facilities will similarly increase. Currently infrastructure and facilities in education institutions in all the towns need major overhaul especially provision for laboratories and ablution blocks for both day and boarding schools.

Main concern in education in Kericho is the dropout at the transition levels between primary and secondary education on the one hand and secondary and tertiary education on the other hand. This is manifested mainly among girls. Girls' dropout is attributed to early marriages or deliberate decision by parent to prefer boys' education. But lately the level of dropout among boys after secondary schools is progressively increasing and is attributed to interest in engaging in informal business mainly bodaboda business.

5.4.1.2 Early Childhood Development - ECD

Early childhood education and development facilities are well provided for in Kericho County generally and the ISUD plan area in particular. It is reported that the state of repairs of ECD education facilities in the County before devolution was very poor. Classrooms were dilapidated. Most ECDs did not have ablution blocks forcing the small children to share toilets facilities with older children in the Primary Schools. Since then deliberate efforts have been made to address this situation and positive challenge were reported.

The demand for ECD facilities had risen considerably since the first such facilities were established in the Primary Schools within the County. This has increased pressure to provide more such facilities in all the wards. It was pointed out that where the County has delayed in providing the facilities, the communities have started construction of the ECDs in anticipation that the County will take them over.

5.4.1.3 Primary Schools

Primary education in the County is fairly well developed. But there is room for improvement. Enrolment of boys and girls is fairly well balanced in classes 1 to 7 in all the zones. There is nevertheless a marked drop in the enrolment of boys in classes 7 and 8 in Kapsoit and Kapsaos. The trend may be influenced by the desire of boys to get into bodaboda sector that early even before they sit for their examinations.

5.4.1.4 Secondary Schools

The transition to secondary school is increase with the implementation of free secondary education. This has created pressure for more schools currently and into the future. However secondary schools tend to be boarding institutions. The current numbers can be enlarged to hold larger number while new schools will be day schools.

5.4.1.5 Polytechnics

There were a total of nine (9) polytechnics within the County with three being within Ainamoi Sub-county. At the moment these polytechnics are offering blanket training packages which include an assortment of artisanal courses. In future the polytechnics will be encouraged to offer special courses to enhance quality of products and in response to the recent National Government policy on Education.

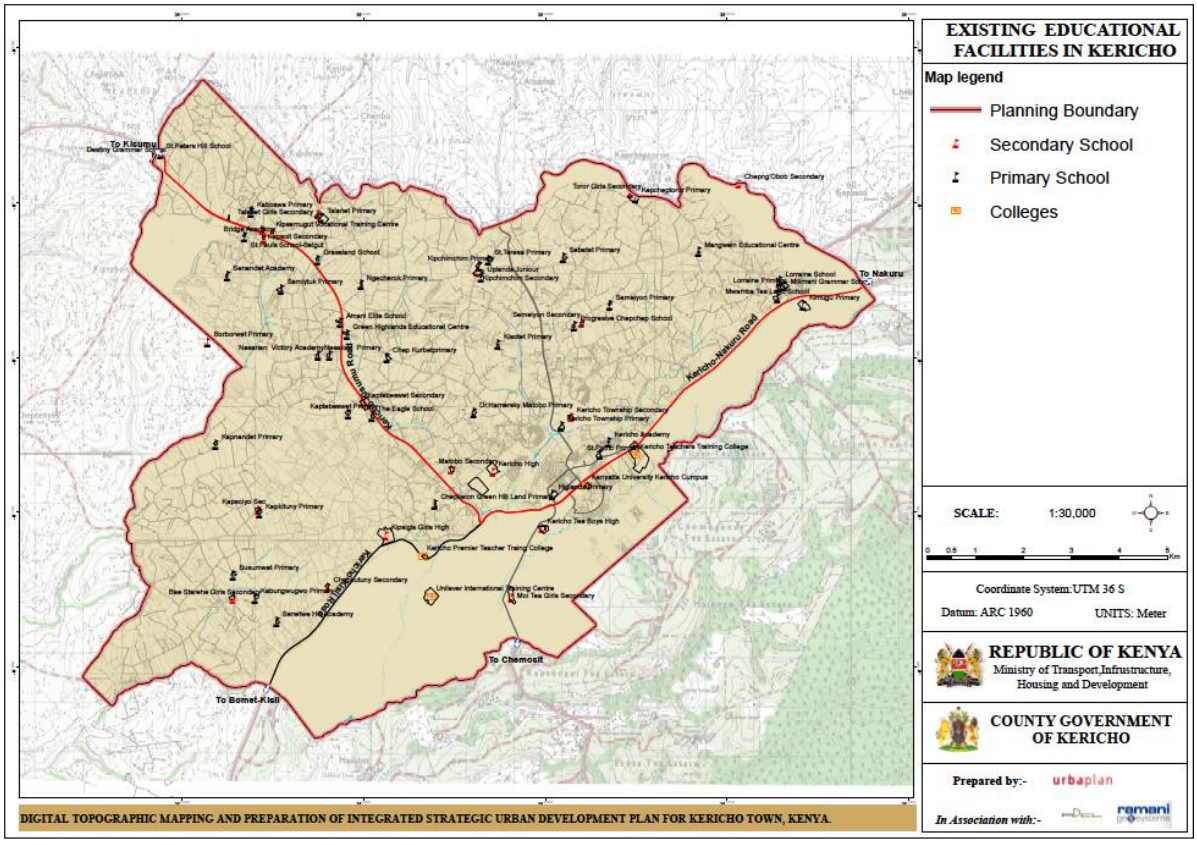


Figure 5-13: Education Facilities

5.4.2 Health Facilities

The increase in population will reciprocally increase demand on the health services. Health of a population is crucial to economic development. A healthy population will dedicate itself to engaging in productive activities in order to create wealth. An unhealthy population is usually a burden to the community. Health policy should focus on the following parameters:

- Improve the health, wellbeing and independence of all persons;
- Improve the quality of health in a sustainable, equitable and affordable manner;
- Improve accessibility to health services.

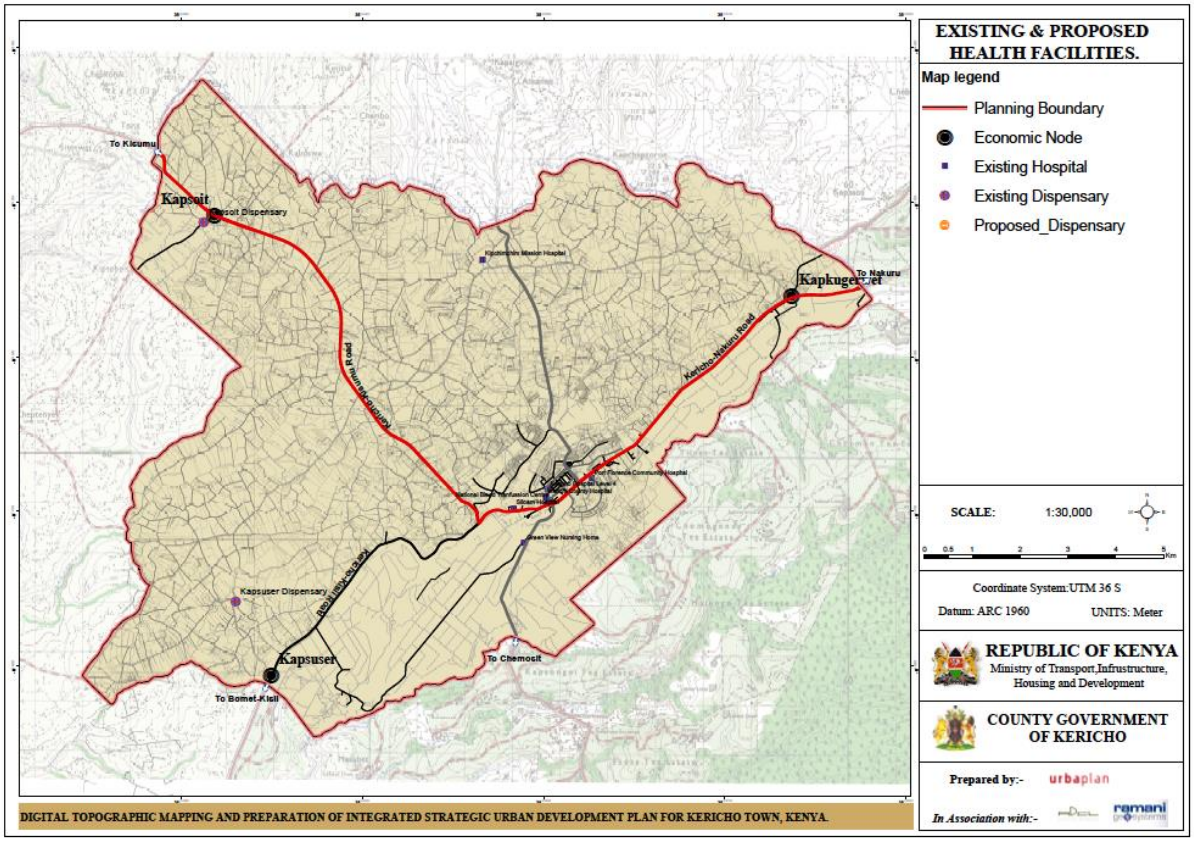


Figure 5-14: Proposed and existing health facilities

It is important to ensure availability of requisite infrastructure in the health institutions apart from increasing the number of facilities at different levels i.e. dispensaries, health centres and hospitals. Increase in population enhances chances of proliferation of communicable diseases. One of the main focuses of health delivery systems should be to address elimination or minimization of communicable diseases and child mortality. Distances travelled by sick persons should be minimal. In addition, suitably qualified staff should be engaged in all the health facilities. This included nursing personnel, clinical personnel and well qualified doctors.

Kericho County has two well-equippedpublic hospitals namely Kapkatet County Hospital and Kericho County Referral Hospital. Kericho County Referral Hospital has ultra-modern casualty wing which was built in partnership with the Chinese government. It is fitted with state-of-the art facilities to handle any emergencies. Others major health facilities include privately owned Siloam hospital, Kericho Nursing Home, St. Leonard's, Kipchimchim Mission hospital and Green View Nursing home.

There are 136 health facilities in Kericho County: 3 District Hospitals, 2 Sub-District Hospitals, 105 Dispensaries, 9 Health Centres, 7 Medical Clinics, 3 VCT Centres and Others (7) with a Doctor to Population Ratio: 1:15,000. This has great implication on upgrading of the Kericho County Referral Hospital to level 5 in terms of strengthening its role as referral facility.

5.4.3 Security

Kericho has a well-established central police station in the CBD. This provides services and administrative control for the various police posts established within the town and beyond. However there is need for establishment of police station in all the three nodes to provide a comprehensive network of police service. This is supplemented by the administration police service.

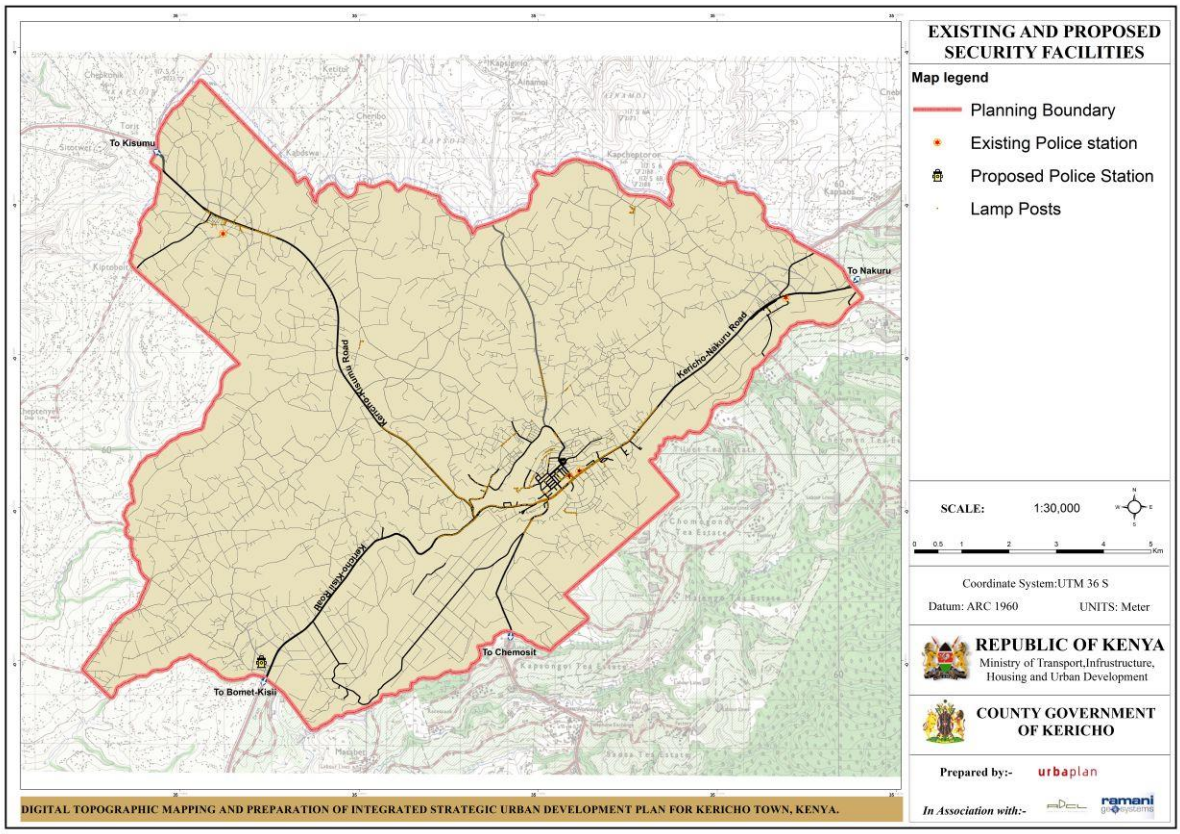


Figure 5-15: Proposed and existing security facilities

5.4.4 Fire Safety

With the growth of an urban area fire hazard assumes grand proportions since the density of structures and value of property keeps rising. Kerichohas a Fire Brigade. However the equipment is not responsive to the rapidly growing town. There are no functional fire hydrants which would be useable in case of fire emergence especially in the CBD. This is an area where there is need for comprehensive investment. There are no fire stations in the nodes and that would be necessary if this area were to develop as key components of the town. There is also need to provide fire hydrants at regular intervals across the town.

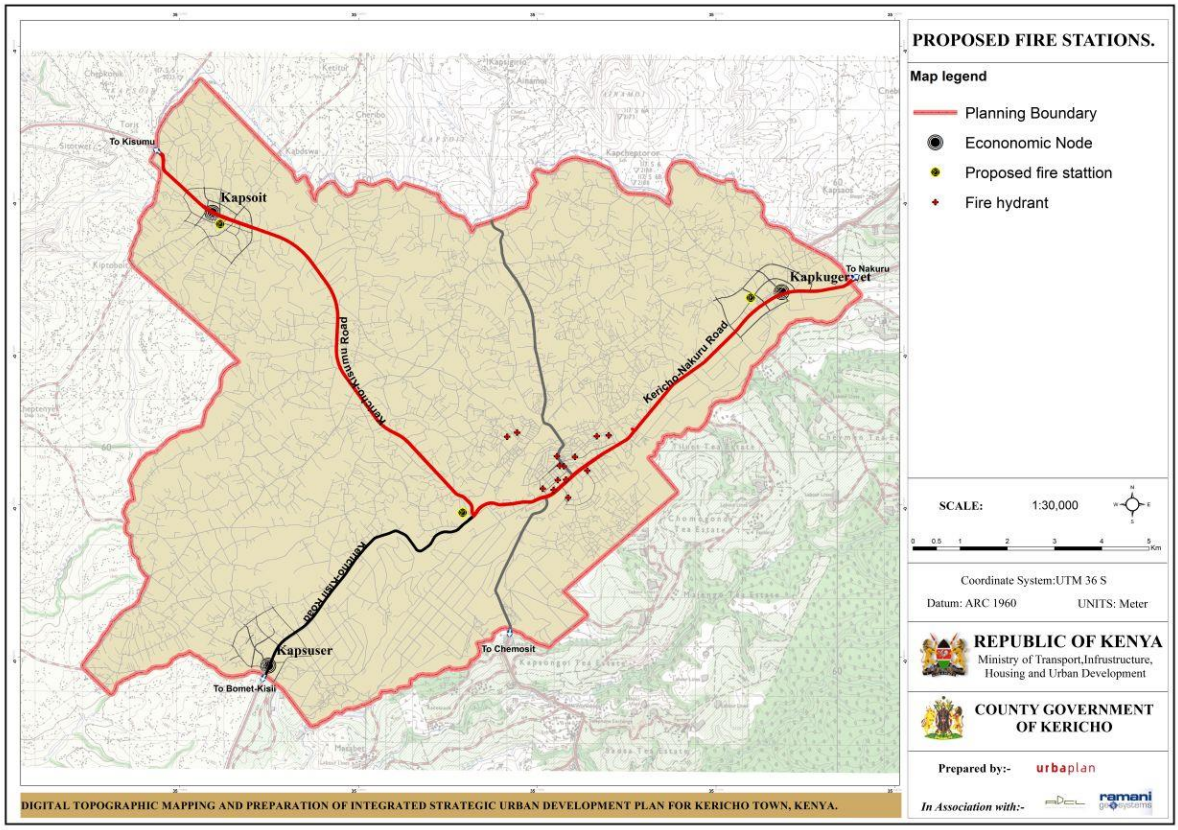


Figure 5-16: Proposed fire stations

5.4.5 Other Socio-Cultural Facilities

Social Facilities

Kericho Stadium is in poor state of repair. The Juakali traders have invaded the parking and surrounding area and most facilities are in disrepair. The Golf Course right in the centre of the town does not serve ordinary people. Kericho Town is therefore in dire need for more recreation space to benefit the majority of residents.

There is no functional community social hall. There is one bus park to the North West of CBD which is highly congested and also invaded by traders and hawkers. There is a public cemetery in the town.

5.4.6 Libraries

Kenya National Libraries has constructed a public library right in the centre of town. There are no other community library facilities. The public documentation centre is found in the government offices.

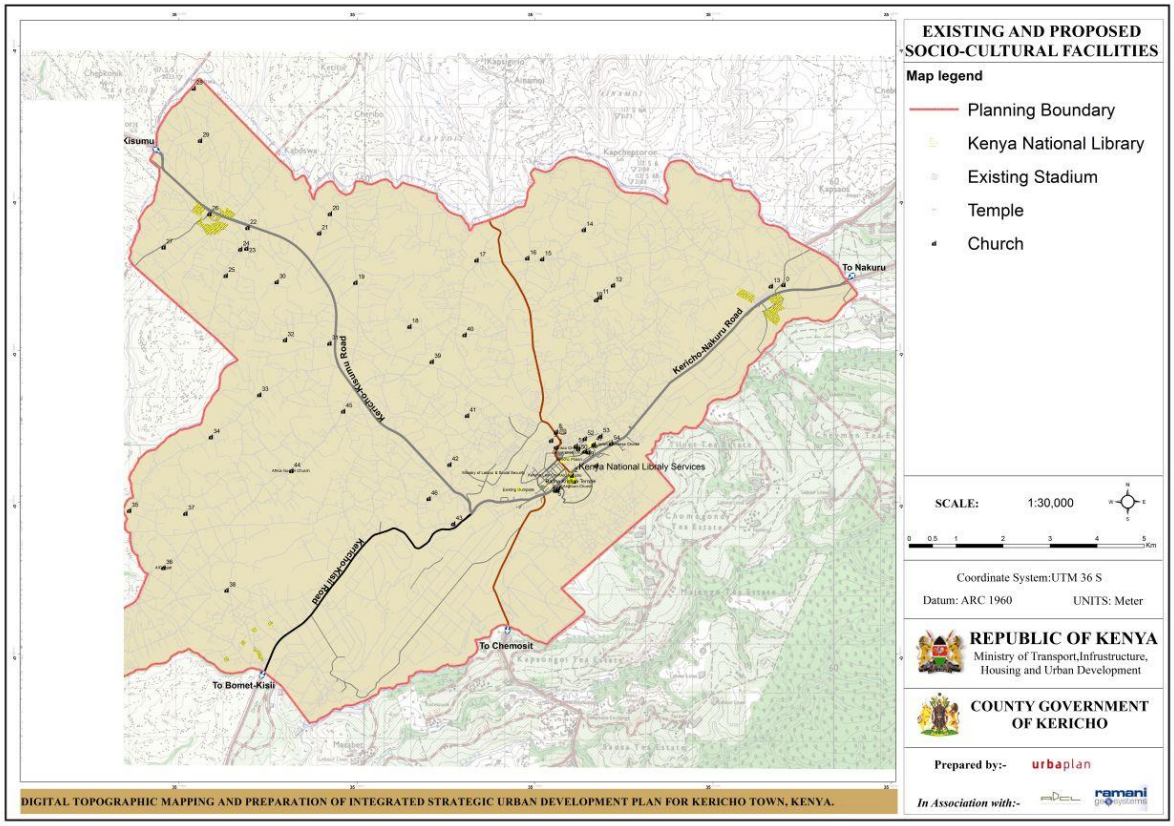


Figure 5-17: Proposed socio-cultural facilities

Table 5-13: Access to quality social facilities

Goal: Access to quality social facilities				
Sub sector	**Strategies**	**Projects**	**Quantity**	**Units**
Education	Provide schools within walking distance	ECD	46	No
		Primary School	46	No
		Secondary School	20	No
Health	Quality health referral systems	Level 5: Secondary referral facilities	3	No
		Level 4: Primary referral facilities	10	No
Disposal of human remains	Alternative methods for disposal of dead persons	Cemetery	1	No
		Crematorium	1	No
Library/ Community Centers	Enhance community interaction	Town Library	1	No
		Community Library (Kapsoit, Kapkugerwet, Kapsuser)	3	No
		Community Centre (Kapsoit, Kapkugerwet, Kapsuser)	3	No
OVC	Support to OVCs	Orphanage	1	No
Postal Services	Accessible postal facilities	Sub-Post Office in Kapsoit and Kapsuser	2	No
Security Services	Improve neighborhood security	Police Post (In neighborhoods)	6	No
		Police Station 9Kapsoit, Kapsuser,	3	No

		Kapkugerwet)		
		Police County Headquarters (upgrade)	1	No
		Prison (relocate to Kapsoit)	1	No
		Juvenile Home (In Kapkugerwet)	1	No
Fire Safety	Strengthen fire safety infrastructure	Sub-Fire station (Kapsuser, Kapsoit)	2	No
		Fire Station Headquarters 9Upgrade)	1	No
		Fire Hydrant (every neighborhood)	500	No
Recreation	Provide a beautiful livable environment	Neighborhood Park	20	1ha
		Ward Level Park	2	1ha
		Neighbourhood Playground	20	1ha
		Stadium	1	5ha
		Amusement park	1	30ha
		Social Halls/ and Community Centres	12	0.25ha

5.5 HOUSING AND INFORMAL SETTLEMENT PLAN

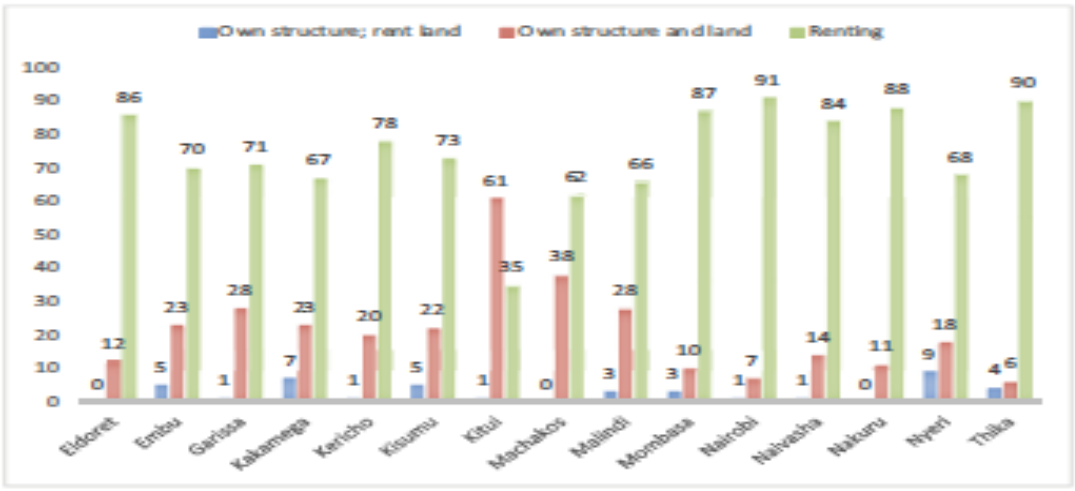
Housing is an integral element of a nation's economy. Its backward and forward linkages with other parts of the economy closely bond people's needs, demands and social processes with the supply of land, infrastructure, building materials, technology, labour, and housing finance. These linkages allow housing to act as an important engine for sustainable development and poverty reduction in both society and the economy. Operating within an overarching governance framework, defined by institutional and regulatory systems that enable society to build homes and neighbourhoods, housing has an inescapable physical manifestation through the building of houses, dwellings, shelter, accommodation, site & services and/or residential units. Without a functioning housing sector, urban centres cannot be established or developed. A functioning housing sector offers appropriate, affordable housing and sustainable patterns of urbanization - which are critical for the future of our ever-urbanizing planet.

5.5.1 Future Housing Requirement

There is a lot of concentration of property development in the high-income category although the demand for housing is most acute in the middle and low income categories. Some of the reasons behind this include availability of mortgage finance to Kenyans at the higher income end and insufficient serviced land that could be set aside for low income housing. The National Housing Corporation, charged with provision of housing, develops housing units that are not affordable for low- and moderate-income families

Existing regulations aimed at protecting tenants discourage landlords from providing formal low-income rentals. The Rent Restriction Act (Cap. 296) and the Landlord and Tenant Act provide protection for those households with rents at or below KSh 2,500 a month (US$27), such as notice requirements and limits on rent increases. Unfortunately, a side effect is that formal sector landlords avoid renting apartments at or below this level. Moreover, since this rent level was set in the 1980s, this will only apply to very low-rent units, which are the most likely to be unregistered and informal.

There has been little development of public housing in the town and the private sector targets the market segment that would guarantee them high returns on investment.



Source: World Bank (2014).

Figure 5-18: Housing status in select towns in Kenya

5.5.2 Proposed Housing Strategy

Housing cost is the biggest constraint to development of affordable housing. To obtain a mortgage on the lowest-priced property, a borrower would need KSh 1 million a year of formal income (KSh 84,000 or US$1,024 a month).40 The average annual income in the largest 15 urban areas is KSh 21,748 a month (US$265). This average income does not paint the full picture as the distribution of income is weighted toward top income earners (Table 3.1). A more accurate picture of income can be seen in that three-quarters of households earn less than KSh 22,500 a month ($257) or KSh 270,000 ($3,078) a year. A family earning KSh 22,500 a month (roughly the 75th income percentile) would only be able to afford a mortgage of KSh 485,968 (US$5,926). This means that the family purchasing a low-cost house (KSh 2,000,000) would need to earn well into the top income quintile

Interest rates are high- even when subsidized. The current interest rate for mortgages is approximately 18 percent- higher in some cases for a 20-year amortization period. On these terms, a family at the 75th income percentile with a monthly income of KSh 22,500 per month could afford a mortgage with a principal of KSh 485,968 (US$5,926) if they spend 30 percent of their income on mortgage payments

The housing development in the town is driven by the private sector. They provide over 90% of the housing stock with the government institutions providing the rest. Strategies for housing must therefore be focused on the private sector providers. The County should develop policies that provide incentives for investment in quality housing for all the town residents. One component of housing that puts it out of reach of the urban poor is the cost of housing technology. This needs to be revised to encourage investment in low cost housing. It may also be imperative on the County Government to source for finance that targets housing for the low income.

Along with land, available and affordable housing finance is a fundamental limitation to affordable housing in Kericho.

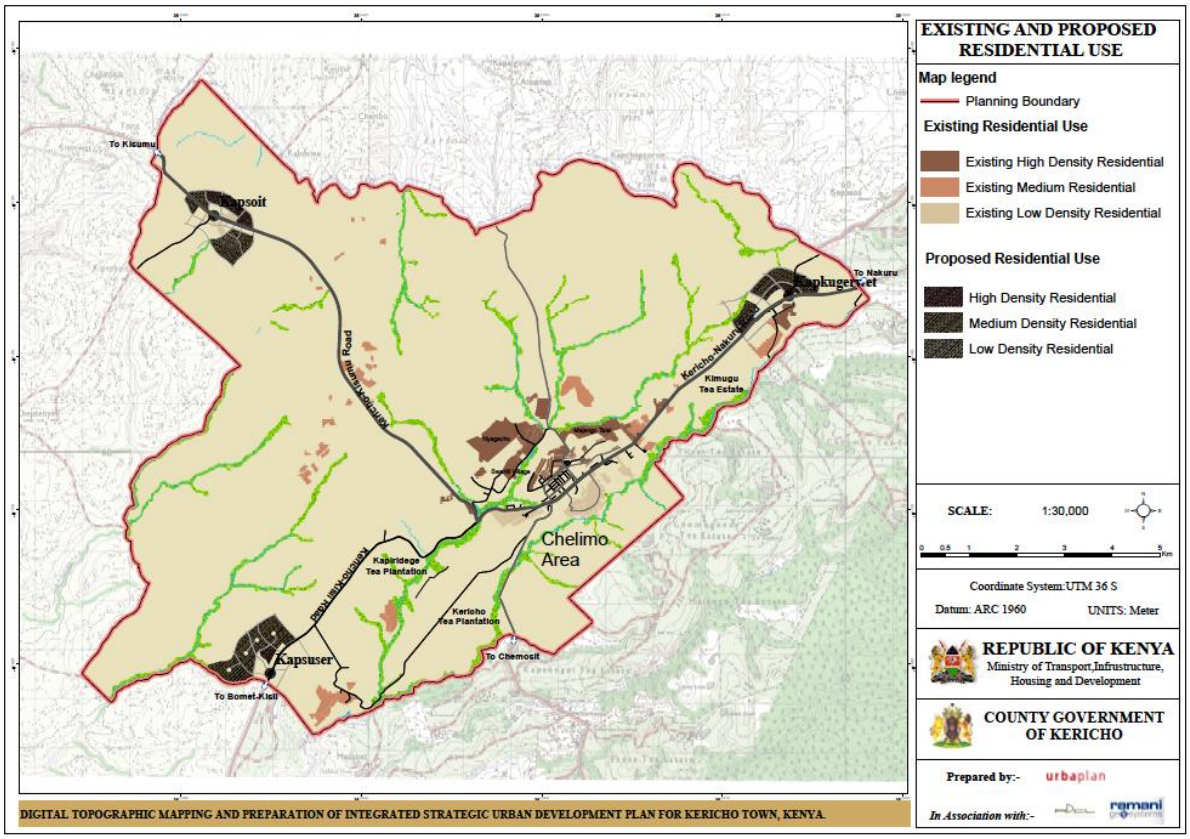


Figure 5-19: Housing status in select towns in Kenya

5.5.3 Strategy For Informal Settlements

The slums and informal settlements that proliferate within and on the periphery of Urban centres are a result of poorly functioning housing markets that do not provide a range of affordable housing alternatives, especially for low- and middle-income households

Informal settlements can be defined as dense settlements comprising communities housed in self-constructed shelters under conditions of informal land tenure arrangements. They are a common feature in the peri-urban environments as such they are prone to degradation of the local ecosystem, e.g., erosion, poor water quality, sanitation, and severe social problems (Nkwae 2006). A global report from United Nation Commission for Human Settlements (UNCHS) indicated that between 30 and 60 percent of residents of most large cities in the developing world live in informal settlements [UNDP, 1989].

There are three informal settlement in Kericho, mainly: Swahili village, Nyagacho and Talai. Swahili village was established about 120 years ago by settlers who moved into the area from different locations namely Ethiopia, the then Tanganyika and local people from the surrounding areas of Kericho. This village is located 2.5 km, North West of Kericho CBD. Today the village lies on public land measuring approximately 7.7 Hectares. Current beneficiaries were allocated the land by the government through letters of allotment and/or free land title deeds.

The total population of Swahili Village settlement is about 2,338 persons with average household size of 2.6. The population is dominated by the males 60% with the females forming 40% of the total number of residents. It houses approximately 897 households.

It is observed that most of the women in working age bracket are house wives and normally and traditionally stay indoors and do not go to seek for employment, thus increasing the dependency ration in the settlement. Among the residents about 94% are tenants, 2% are plot owner, 3% are structure owners and 1% others including visitors

Comprehensive studies have been done for two of the slum settlements namely Swahili and Talai. The proposals involve improvement of the infrastructure and services and rationalizing the use of land as shown in the two maps below.

Improvement of living conditions in informal settlement can only be effected by the assurance of security of use or tenure, provision of urban services, and regional opportunities. Easily accessible spatial data is a major requirement in the formalization and regularization of informal and customary peri-urban settlements.

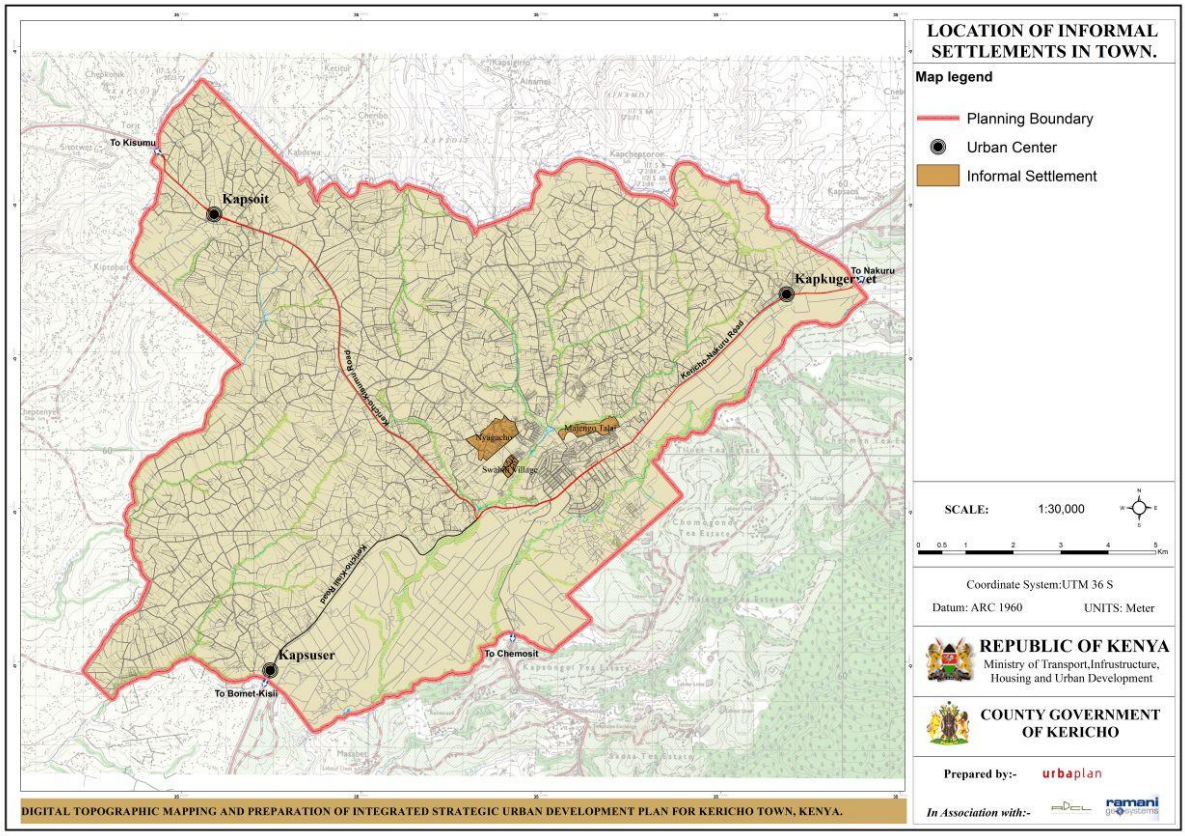


Figure 5-60a: Location of informal settlement in Kericho

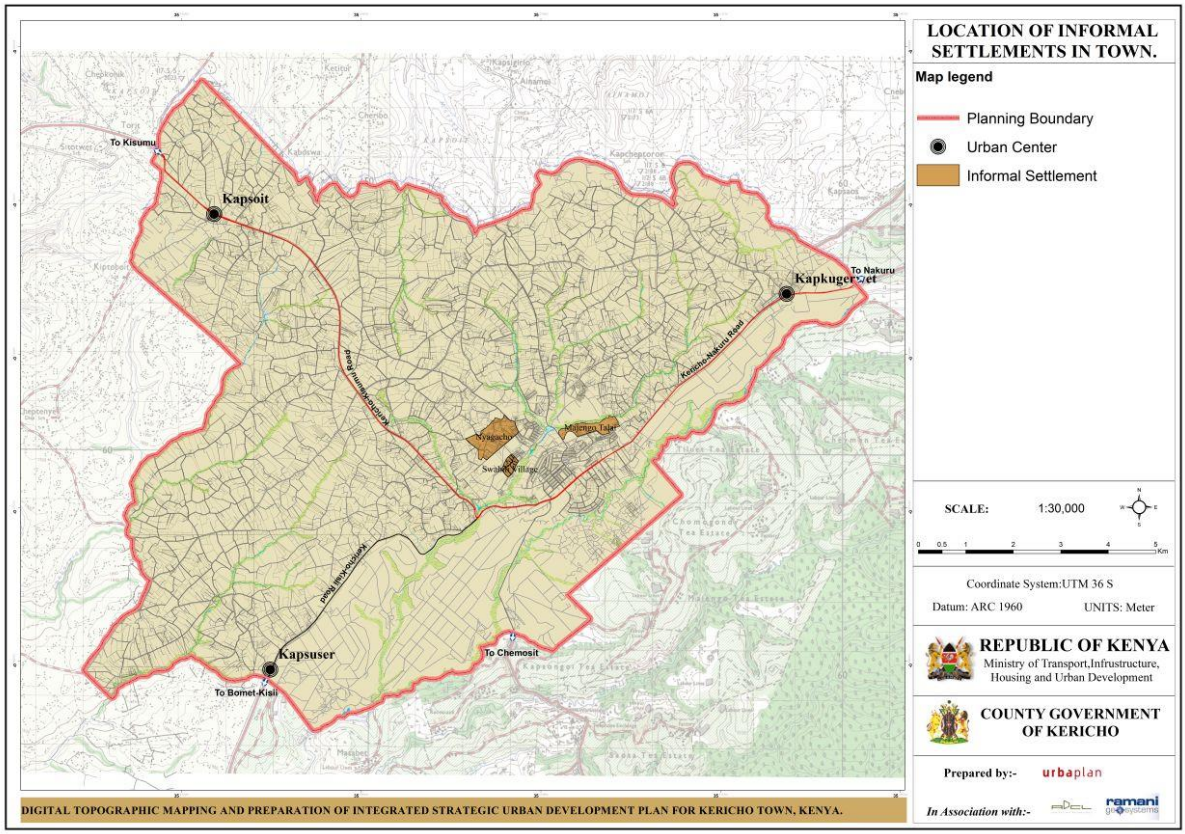


Figure 5-70b: Location of informal settlement in Kericho

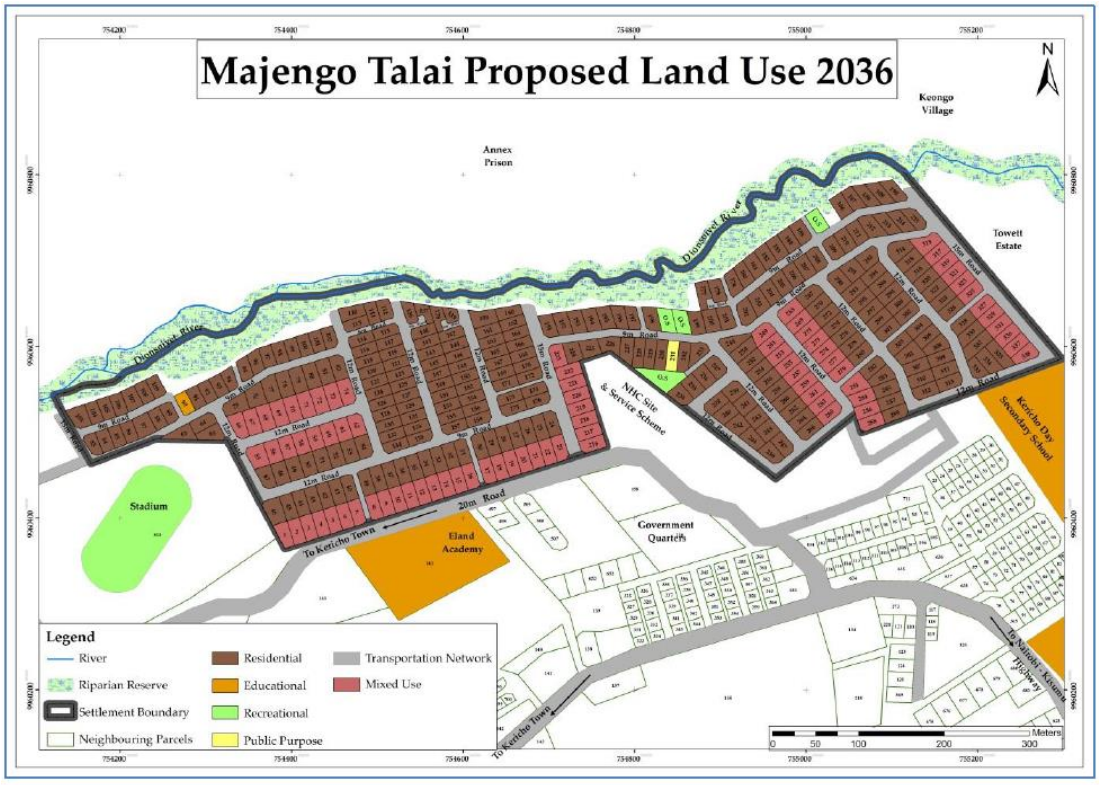


Figure 5-21: Majengo Talai proposed land use 2036
(Source: Intercontinental Consultants and Technocrats Pvt.)

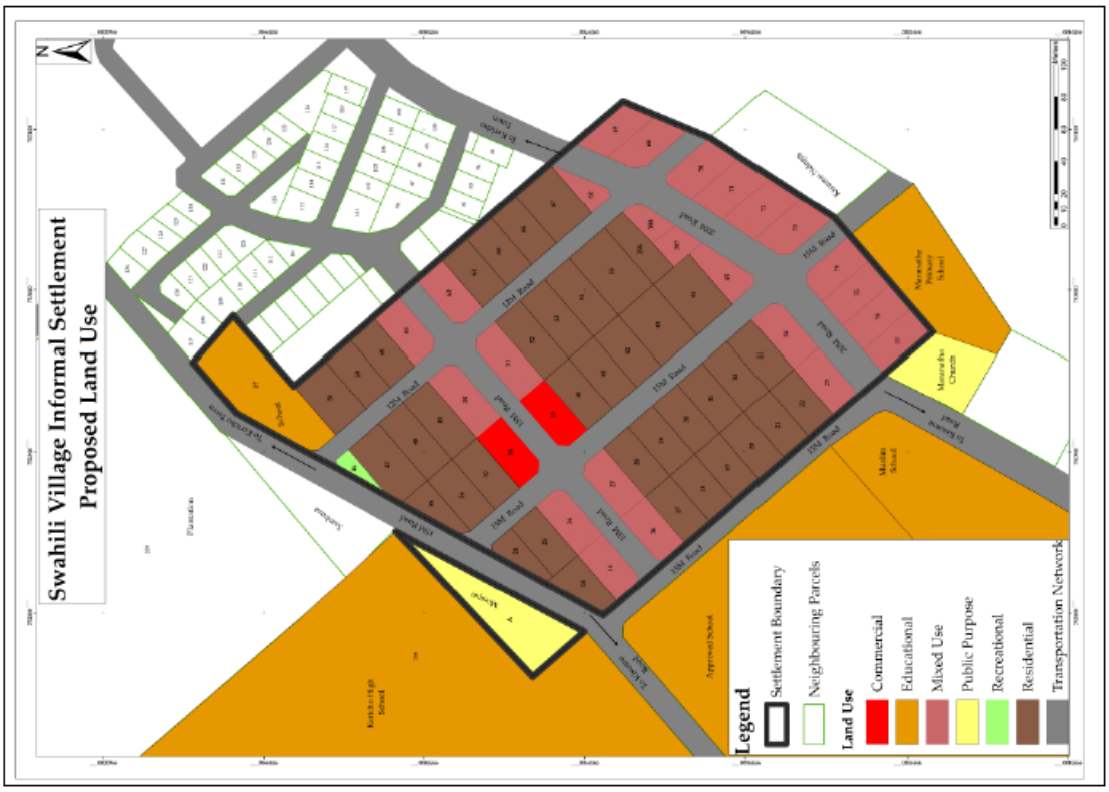


Figure 5-22: Swahili village informal settlement proposed land use
(Source: Intercontinental Consultants and Technocrats Pvt.)

5.5.4 Housing Strategies

5.5.4.1 Housing Demand Projections

The demand for housing needs to be projected to allow for adequate provision of land for such expansion and facilities to support the housing demand. The following factors will be considered in projecting demand:

- The core urban population. We can then project separately for the peri-urban population
- Assume a household size of four people (based on population census 2009)
- Kericho is projected to grow at 3.75 percent.

The information so generated would be used with the table below to distribute the demand by category based on current trends and extrapolated to a future time.

Table 5-14: Housing demand projections

Projected population for 2037	**306,805**
Housing Demand (Total Urban)	76,701
Proposed Gross population density (units/ha)	60
Total Land required for residential development (hectares) (60 units/ha)	9,204

Assuming a household size of 4 then the number of housing units in the urban built up area required would be approximately 76,701 total units up from 22,500 in year 2017.

5.5.5 Possible Housing Solutions

To address the Kericho urban housing challenges several **thematic clusters** are identified, including:

- **Affordable housing** including housing finance,
- **Slum upgrading and prevention** ensuring housing rights and preventing unlawful forced evictions,
- **Sustainable housing** including construction materials and practices,
- **Urban planning and housing** to ensure adequate supply of land for mixed uses,
- **Urban economy and housing** including the role of housing in the economy,
- **Housing tenure** types to ensure diversity to address different social group needs,
- **Women, youth, special groups, legislation and housing rights** sub-clusters and cross-cutting in all the other clusters**.**

5.5.6 The Roles of the Actors

In the past, the private sector had for various reasons concentrated its efforts on medium and high cost housing. While government did not wish to closely direct private sector investment in housing, there was ample justification for involvement of the formal private sector in the implementation of low to medium cost housing. Since enormous financial, land and management resources were held at the domestic level by the private sector the following incentives would underpin a strategy for mobilizing these latent resources and enhancing the participation of this sector in housing development: Co-operating in the opening up of either private or public land for urban development, thus curbing land speculation and also injecting long-term money into the mortgages market to stimulate and back up increased private investment into housing.

Table 5-15: Housing and informal settlement implementation plan

Goal: Improve access to affordable housing				
Sub sector	**Strategies**	**Projects**	**Quantity**	**Units**
Infrastructure	Quality infrastructure	Municipal Housing (low cost)	7,000	No
		Road improvement to bitumen in residential areas (include Informal settlements)	40	km
Housing Legislation	Facilitative legislation	By laws for affordable building material		
		By laws on tenure in Informal settlements		

5.6 TRANSPORTATION

5.6.1 Introduction

The national road network is managed by the national government through four different authorities: the Kenya National Highways Authority (KeNHA), the Kenya Rural Roads Authority (KeRRA), the Kenya Urban Roads Authority (KURA) and the Kenya Wildlife Service. Their mandate, as defined in the Kenya Roads Act 2007, is the management, development, rehabilitation and maintenance of different kinds of roads as below:

- **KeNHA** is a state corporation responsible of international trunk roads linking centres of international importance and crossing international boundaries or terminating at international ports(Class A road), national trunk roads linking internationally important centres (Class B roads), and primarily roads linking provincially important centres to each other or two

higher-class roads (Class C roads). In undertaking this mandate, the Authority propels the country to achieve its infrastructure goals espoused in the vision 2030.

- **KeRRA** is a state corporation responsible of the rural road network in the country. KeRRA is responsible for the management, development, rehabilitation and maintenance of rural roads (D, E & Others).
- **KURA** is responsible of all public roads in the cities and municipalities in Kenya except where those roads are national roads.
- **KWS** is mandated with the management of roads in national parks, game parks and national reserves. Roads under KWS mandate are therefore out of scope of this project.

According to the Fourth Schedule of the Constitution of Kenya 2010, county roads, parking and public transport is the responsibility of the county governments. Consequently, the Ministry of Transport following the constitution and the Urban Areas and Cities Act, 2011 is seeking to devolve transport management to the county level.

In addition, the Urban Areas and Cities Act of 2011 (Art. 36 (1) (d) (iii)), stipulates that one of the objectives of the integrated urban areas and city development planning is to provide a basis for provision of physical and social infrastructure and transportation. This anchors transport infrastructure planning in the law.

5.6.1.1 Existing And Projected Traffic

5.6.1.1.1 Road network

The delineated planning area for Kericho Town has a total road network of approx. 256.5km as indicated in the table below.

Table 5-16: Road Network for Kericho Town

Road Surface Type	Road Length (km)
Paved	36.9
Gravel	162.8
Earth	56.8
Total	**256.5**

5.6.1.1.2 Classification of the roads

The categories of classified roads in the planning area as well as the corresponding lengths are shown in table 5-17 below.

Table 5-17: Road Network by class for Kericho

Road Class	Road Length (km)
Class B	10.6
Class C	33.8
Class D	22.5
Class E and below	189.6
Total	**256.5**

All paved roads are engineered to meet design standards relevant to class of road including the road reserves and road widths. However, approx. 60% of the earth roads and 34% of gravel roads (by length) have road reserve widths of less than 6m, most with overgrown hedges barely allowing for two vehicles to pass.

5.6.2 Main roads

Kericho town is located along the main highway linking Kericho to Kisumu City (B1 road). This road is a 2-3 lanes road until the entrance of Kericho town then it becomes a dual carriage road with 3 lanes for each direction. One of the three lanes is not used for the traffic flow but it's occupied by car parking, PVSs loading and unloading customers, small stands, etc. Each side of the road has sidewalks and the cross-walks are on the speed humps/raised pedestrian crossings and painted for visibility.

The second main road arriving to Kericho is the C23 linking the town to Kisii and Bomet. This is a standard two lanes road (one lane in each direction).
The junction between B1 and C23 roads is currently a grade crossroad with no signaling. KeNHA has approved a project to build a grade-separated junction in the next years.

Kapsoit and Kapkugerwet are located along the B1 road while Kapsuser along the C23 road. All the activities of these centers are developed along the main road.

In Kapsoit the cross-section of the road is composed by the main road (one lane per direction) for the through traffic and a large side-path for the local access (about 6-7 meters).

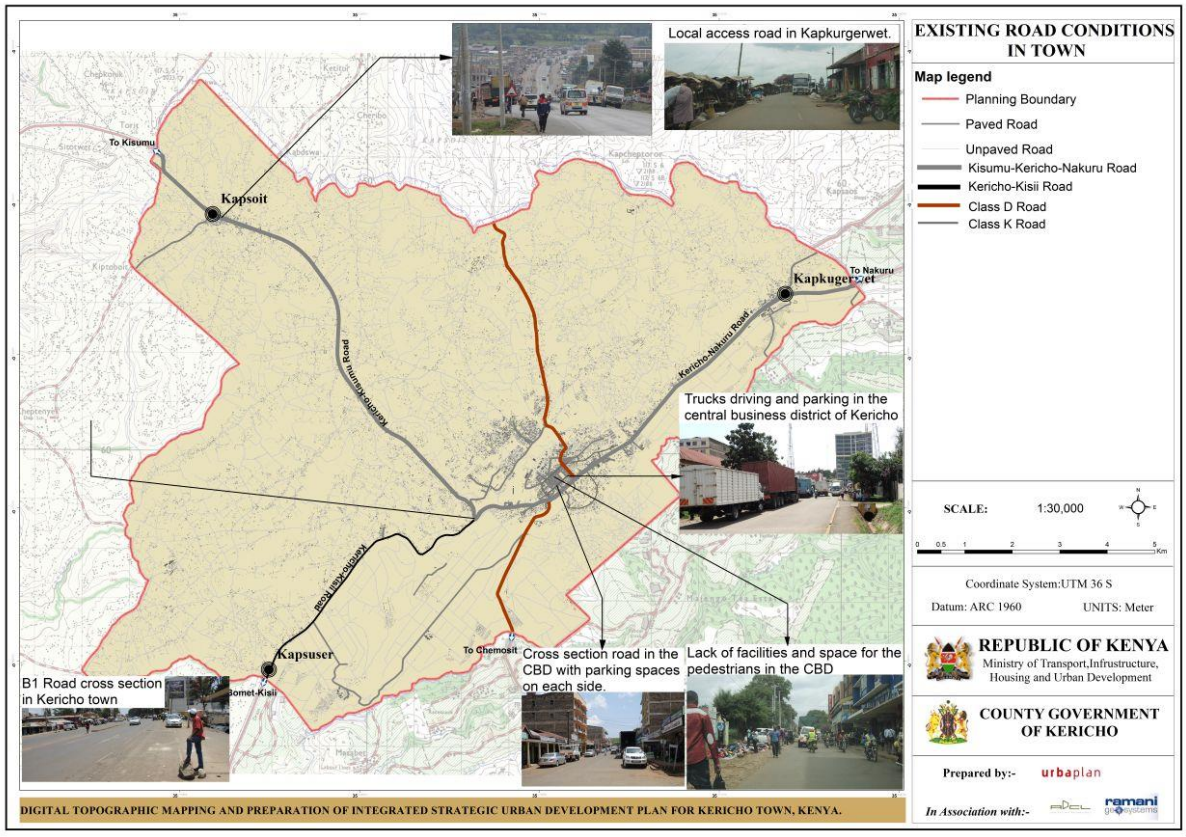


Figure 5-23: Existing road conditions

5.6.2.1 CBD roads

In the CBD, roads are not very wide and most of the space is allocated mainly to the motorized traffic. There is a lack of a continuous network layout for pedestrians as some of the roads are not equipped with sidewalks or where provided they are occupied for other uses, e.g. display of wares on sale. The junctions between the main roads in the CBD are roundabouts; the less important junctions are simple crossroads. Some of the roads provide parking spaces on the sides.

5.6.2.2 Local access roads to the residential areas

The main road providing the access to the north neighborhood of Kericho is paved and in fair condition with a sidewalk in the east side. The secondary roads are unpaved.
The road network of the south neighborhood of Kericho is composed of gravel roads in bad condition.

A section of the local road in Kapkugerwet is paved and with simple two lanes roads where all the users share the space.

All the others local roads of Kapsoit, Kapkugerwet and Kapsuser are gravel roads reducing the accessibility of the residential areas.

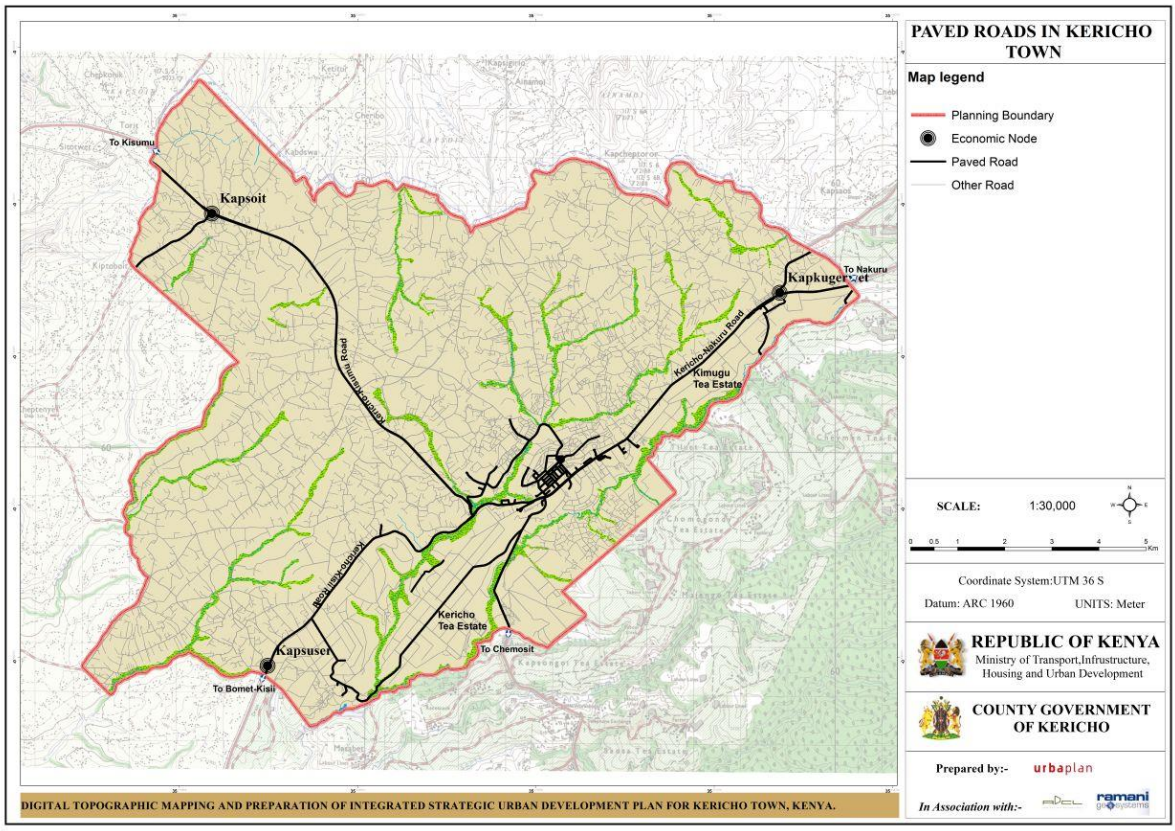


Figure 5-24: Paved roads

5.6.2.3 Public transport system

The public transport service is managed by private operators without any public subsidies. Some of them are officially recognized by the public authority (buses, matatu, taxi and boda boda) but the "probox" are informal and illegal.

None of them has predetermined schedules: they leave only when the vehicle is full. Apart from the long distance buses, most PSVs stop anywhere in order to load and unload the customers as close as possible to their origin/destination. This way of operating creates chaos and danger because of the unpredictable stops and maneuvers.
Each kind of service satisfies a different need of mobility, as described hereunder:

- Displacements within the town and the residential areas by boda boda and taxi;
- Intra-county trips by Toyota probox and taxi (Kapkugerwet, Kapsoit and Kapsuser);
- Regional/inter-county trips by matatus (14-seater) (Eldoret, Bomet, Kisii, etc.)
- National and international trips by buses and shuttle matatus (7-seater)

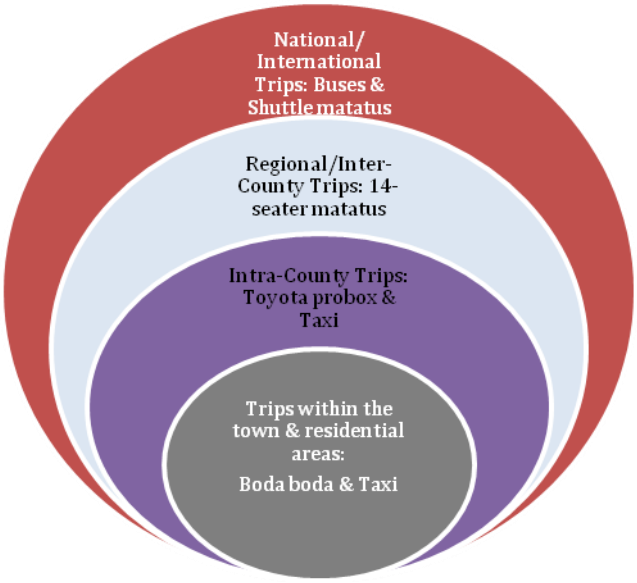


Figure 5-25: The public transport service in Kericho Town

The number of boda boda waiting for customers in almost each corner and along the roads obstructs the pedestrian flows and represents most of the time a danger for the traffic circulation because of unpredictable maneuvers and reduction of the road available carriage.
Taxi are not many, they always use the same places for waiting their customers. The taxi positions/spaces are not formalized with the County.

Only half of the capacity of the matatu/PSV station is in use because majority of the matatus are currently using informal stages in a couple of petrol stations at the junction between Hospital road and B1 road. The reasons of this behavior can be several: the stage is not easily accessible and it's used as parking for private cars plus matatus can find more customers in the opposite side of the CBD. These informal stages create problems of safety at the most important junction of the town (B1 road/Hospital road) due to the maneuvers of vehicles in the junction and the passengers crowding there.
Matatus are not allowed to carry people outside the stage but this behavior is tolerated and not persecuted by the authorities.

The way of operating of the Toyota probox is comparable to the one of the matatus.
The long distance trips are operated basically by the shuttle buses using the matatus stage and the Easy-coach company which has a proper stop and office on the B1 road about 600 meters north-east from the CBD (John Kerich road).

5.6.2.4 Air transport system

The Kerenga aerodrome, located 6 kilometres from Kericho town, off the road to Kapsuser, is disused and requires rehabilitation.
The condition is as follows:

- Runway length – approx. 1.0km
- Runway numbers – the runway numbers were unavailable
- Runway surface type and condition – gravel, eroded, corrugated and stony surface
- Airstrip area – 0.23km^2 (approx. 56.2 acres)
- The runway is only 35m from the Kericho – Sotik Road and is surrounded by tall trees. These two compromise air traffic safety.

It is proposed that the site of the existing airstrip be acquired for public use. The cost of this has been included in the cost of upgrading the airstrip provided in the CIP. The current airstrip occupies approx. 23ha. It is proposed to increase this land to 100ha to cater for a longer runway and also to provide terminal buildings. Acquisition is to be done with the fact that topography of the area slopes to the south east.

5.6.3 Transportation demand

5.6.3.1 a) Traffic count studies

Traffic studies were carried out over a period of 4 days from 23 to 26 February 2017 at Kapsoit, Kapsuser and Kapkugerwet and over 7 days between 23 February and 1 March 2017 in Kericho town. The locations, type and date of the traffic counts are as shown in **Error! Reference source not found.**.
The studies carried out included:

5.6.3.2 b) Motorized traffic counts

These were 12-hour categorized manual traffic counts undertaken from 7.00am to 7.00pm. These were then grossed up to 24-hour counts as outlined in the Overseas Road Note 40 using 24-hour conversion factors from the traffic study conducted for the design of the A1 road. The traffic categories were as recommended in the Kenya Road Design Manual as below:

- Motor Cycle
- Tuk tuk (3-wheeled motorized cycles)
- Saloon car
- Four-wheel drive (FWD)
- Pick-up/utility
- Matatu (14-seater)
- Minibus (25 – 30-seater)
- Large bus – typically with seat capacity > 40
- Light goods vehicle (LGV), 3 – 6 ton
- Medium truck (MGV), with 2 axles, typically 7 – 10 ton
- Heavy truck (3 axles), typically 12 – 15 ton capacity,
- Heavy truck (4 – 6 axles) and
- Others (e.g. Tractors, etc.)

5.6.3.3 c) Non-motorised traffic counts

NMT counts were carried out alongside the motorized traffic counts and the classification was as follows:

- Pedestrians
- Cyclists
- Handcarts/Animal carts

5.6.3.4 d) Origin – destination studies

Origin – destination studies were carried out along the B1 road just next to John Kerich Road. These were conducted via road side interviews for 3 days, from 27 February to 1 March 2017. The Consultant requested the assistance of the Kenya Police to stop vehicles at random. This was coordinated to avoid development of queues and subsequent delay of other motorists. Information collected during the roadside interview exercise includes, but is not limited to; vehicle category, trip origins and destinations, number of occupants and trip purpose.

5.6.3.5 e) Results

The average daily traffic (ADV) measured in the planning area is higher in the most important center of the County (Kericho town) and lower in the secondary centers:

- Kericho town = 15,700 veh/day;
- Kapkugerwet = 7,500 veh/day;
- Kapsuser = 7,400 veh/day;
- Kapsoit = 6'600 veh/day.

The analysis of the traffic structure in the area leads to the following results:

- most of the traffic is generated by the town itself (90% of the overall traffic);
- only 10% of the traffic passes though Kericho town without any purpose (about 2,500 veh/day);
- the through traffic is principally concentrated in the B1 road (Kisumu-Mau) but the volume is very low (1'500 veh/day).

As the long distance traffic is very low, there is no need in investing in any kind of main by-pass road around Kericho.

a. Kericho Town CBD

As observed traffic volumes are constant throughout the day during the weekdays, indicating a busy CBD. In Kericho, any particular characteristic of commuter behavior can be observed as in many other main cities (peak hour entering in the morning and going out in the evening). Weekend traffic however does not have a defined pattern. This is due to the influence of through traffic as travel is normally west-bound on Saturday and east-bound on Sunday at different times of the day. The volume of traffic is at maximum 1,100 veh/h between 11:00 and 12:00 AM, distributed equally in each direction.

From the vehicular modal split cars and motor cycles comprise 36% and 33% of the traffic stream, respectively. However, motor cycles ferry approx. 20% of the local passengers. This is due to the low capacity of transport of the motorcycles (1 passenger maximum). Instead bus and matatus represents only 10% of the vehicles and ferry about 45% of the overall passengers. Further, approx. 10% of the persons moving in Kericho town are pedestrians but adding it's important to not forget that a

passenger using public transport system will be a pedestrian for the last mile of his/her trip. This highlights the need for provision of better NMT facilities to encourage the use of this mode.

Cyclists make up less than 1% of the local traffic. This can be attributed to the hilly terrain of the area. The main catchment areas for the trips to the central business area are:

- Nyagacho/Mjini along Stadium Road or across the river by walking
- Chelimo/Kapsongoi Estates along the Nairobi-Kisumu Road (B1)
- The up-market housing area around the Golf Course and its vicinity
- Kericho Primary School neighbourhoods
- The Tea Estates to the south of the Town Centre.

NMT flow-lines are influenced by the location of the services that include:

- Business premises for commerce, trade and private offices
- The public offices both the County Administration and the State Government National Co-ordination
- The social amenities such as health and institutions of higher learning
- Public places of worship and faith adherence relative to the residential areas of adherents, and
- Location of places of public recreation such as stadium, public parks and hospitality premises
- Location of the public transport terminals within the town relative to the destinations

- Currently, trucks park along the B1 road as shown in photograph below, as there is a provision for an extra truck lane. However, this is not adequate.

Figure 5-26: Trucks Parked off the Highway

It is proposed to have truck parking areas on either side of B1 as shown below. Truck parks however fall on private partially developed land. It is proposed that a total area of 2ha is acquired for this truck parking area and accompanying amenities. As shown below.

Figure 5-278: Proposed Site for Truck Parking in Kapsoit

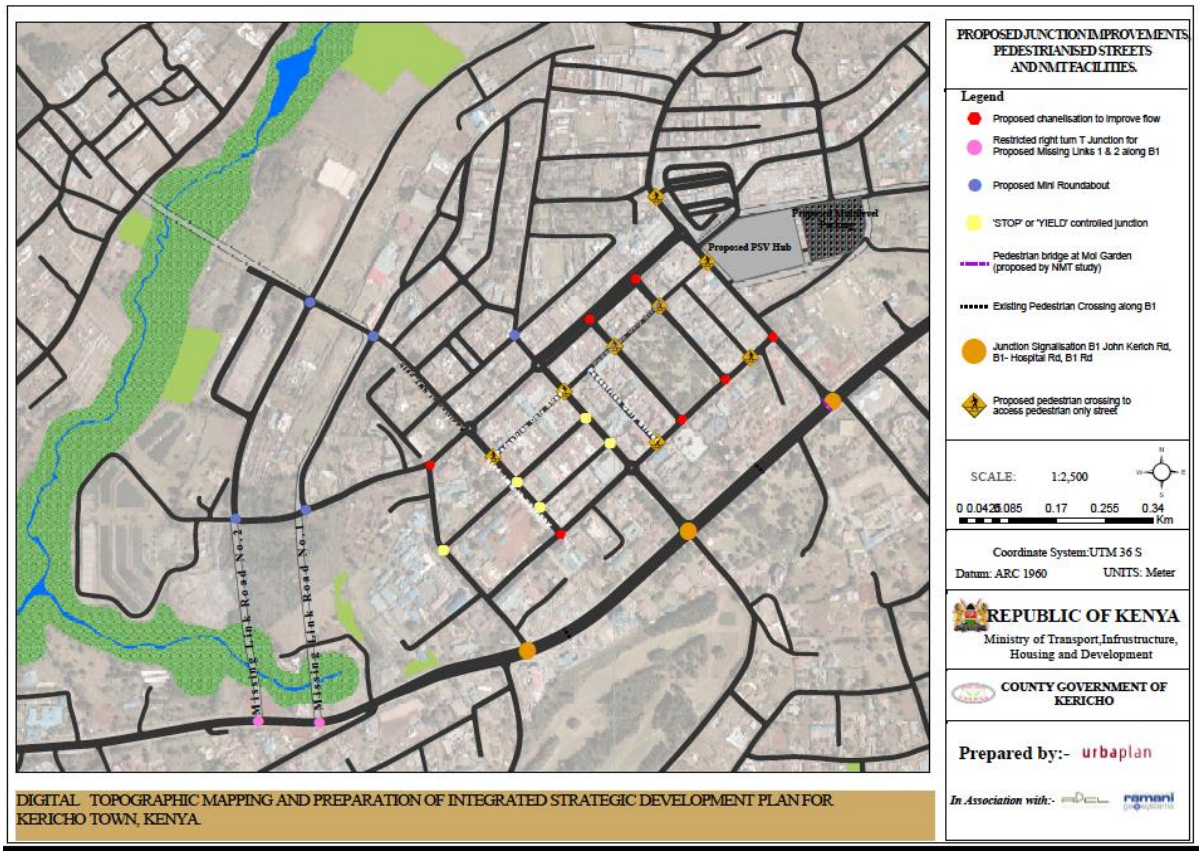


Figure 5-28: Transport proposals for Kericho town-CBD

b. Kapkugerwet

Weekend traffic in Kapkugerwet behaves in a similar manner to the Kericho CBD traffic but with lower volumes. Weekdays however have two peaks, one in the morning and one in the evening. Kapkugerwet is characterized by the presence of tea estates' housing and the traffic patterns are influenced by this fact.

As observed, almost half of the traffic stream comprises of cars (49.8%). This is not sustainable and the proposals in this ISUD will aim at rectifying this.

c. Kapsuser

Weekday traffic in Kapsuser has no definite peaks and increases gradually as the day progresses. Weekend traffic is just as erratic as in Kericho CBD and Kapkugerwet. 48% of the traffic stream is made up of cars from the modal split.

d. Kapsoit

Weekday traffic is constant throughout the entire day on the Kisumu – Kericho direction of travel. The Kericho – Kisumu direction exhibits an evening peak between 3-4pm. This could be attributed to the fact that through traffic prefers to get to Kisumu and spend the night there due to its proximity to Kericho. Weekend traffic is just as erratic as the other areas within Kericho's planning area.

Cars make up the largest portion of the traffic stream at 37% while motor cycles and matatus are at 20% and 17 % respectively.

e. Results and inferences from the origin – destination studies

i. Vehicle occupancy

The vehicle occupancy captured in Kericho is indicated below.

Table 5-18: Road Network for Kericho Town

	Vehicle Category	Average Vehicle Occupancy
1	Motor Cycle	2.14
2	Tuk tuk	2.00
3	Saloon car	3.30
4	Four-wheel drive	1.23
5	Pick-up/utility	2.47
6	Matatu (14-seater)	12.35
7	Minibus	31.60
8	Large bus	45.73
9	Light goods vehicle	2.25
10	Medium truck (MGV)	1.97
11	Heavy truck (3 axles)	2.08
12	Heavy truck (>3 axles)	1.74

It is observed that PSVs are travelling at full capacity. It was also deduced from the analysis that 67% of the exchange traffic is composed of PSVs. These two facts point out to the fact that Kericho town is a major transport hub serving Kisumu and Kisii towns. It also serves passengers destined to Bomet town. The cars have a higher occupancy due to the illegal use of the Toyota 'probox' as PSVs.

ii. Trip purpose

In line with the vehicle occupancy and accompanying inferences, 42.4% of trips interviewed during the origin-destination study were for passenger transit. 34% of the trips were work related. This is attributable to the fact that Kericho town is a major and vibrant commercial hub in the area. The economy of the town is driven by tea farming and processing.

iii. Goods carried by O-D sample

32% of the laden goods vehicles were carrying construction materials, consistent with the rest of the country where construction is on a boom. The number of goods vehicles observed to be ferrying tea either to the factories or to markets comprised 14% of the vehicles – tea, being the economic mainstay of Kericho town.

5.6.4 Main issues of the current situation

5.6.4.1 Central business district

The central business district is the most crowded area due to the concentration of most of the daily activities of Kericho (market, shops, offices, garages, matatus stage, etc.).
Pedestrians are many, largely the main users of the CBD. Despite this, walking is difficult and dangerous because of several reasons:

- volume and variety of vehicles driving through the CBD:
  - trucks delivering goods to the market and going to the garages;
  - matatus and probox reaching the stand and looking for customers;
  - boda boda loading and unloading customers and waiting for them anywhere;
  - private cars going to the shops and parking on the roads;
  - hand-carts moving goods within the CBD;
- lack or bad quality of sidewalks infrastructures;
- incorrect use of the sidewalk space as parking for private cars or boda boda or veranda of the shops and stands of small sellers;

So, the quality of the public space of this crowded business district is very low, walking is very difficult and not an enjoyable experience despite the big number of pedestrians. The infrastructure is not amenable to pedestrians and other forms of NMT.
Other important issues in Kericho are the following:

- in general infrastructures for non-motorized traffic are few and poor quality;
- the conditions of the gravel roads ensuring the accessibility to the residential areas are bad;
- the cross-section of the B1 road is composed by three lanes in each direction which is not justified by the volume of the traffic. One of these lanes are usually occupied by matatus, traders, parking cars;
- main issues of the central business district:
  - lack and poor quality infrastructures for pedestrians;
  - congestion in some peak hours due to heavy and light vehicles concentrated in a small and crowded area;
  - the matatus drive through the CBD creating more congestion instead of reaching the main road by the shortest path;
  - lack of parking space in the area of the CBD;
- the public bus terminus is used at half of its capacity. A part of it it's used as parking space;
- a new informal matatus stage occupying a petrol station in Hospital road creating chaos and danger at the junction between B1 road and Hospital road;
- unexpected dangerous stops of the matatus anywhere;
- boda boda waiting anywhere some public space is available;
- the priority rules at the B1/C23 junction is not clear. KeNHA is developing a project of a new interchange.

- Parking facilities should be related to the level of commercial activities created. For every 100m2 of land in the Central Business District a minimum of 1½ parking space may be provided except where Basement parking is provided. However, for the nodes, car park shall be provided for every 500m2 of floor space.

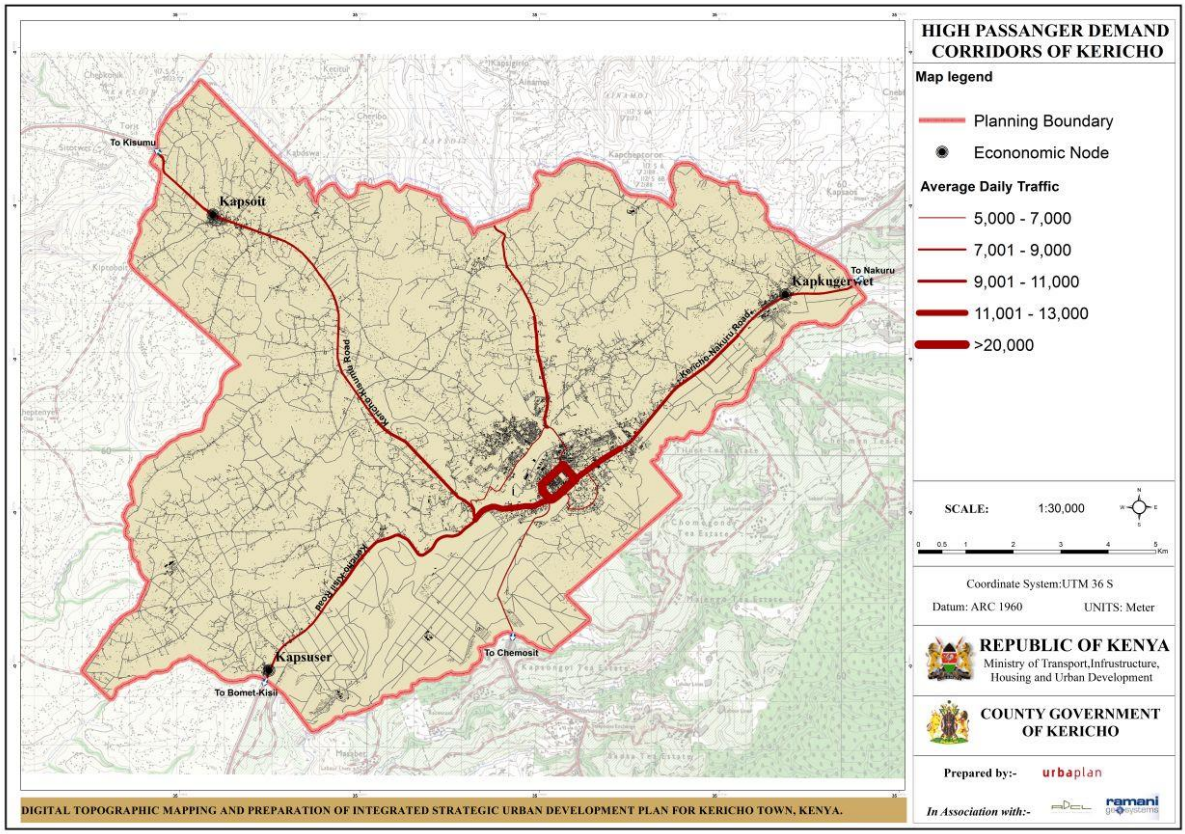


Figure 5-29: High passenger demand corridor

5.6.5 Estimation of the future traffic

5.6.5.1 a) Hypothesis

In order to estimate the future traffic in the study area three important factors must be taken in account:

- population growth rate
- growing of car ownership
- the Standard Gauge Railway (SGR) Project between Mombasa and Uganda, Rwanda and South Sudan.

The estimation is based on the following hypothesis:

- growing of the average daily traffic equal to the growing of population (3.75% / year):
- supplement of the traffic generated by cars equal to the car ownership growth rate (+5% / year);
- report of 50% of the trucks traffic from the road to the rail by means of the SGR project.

5.6.5.2 b) Results

The average daily traffic in the four townships for the next 10 and 20 years is estimated as follow:

- Kericho town: 22,500 veh/day in 2027 and 34,200 veh/day in 2037, so that's +45% and +120% compared to the current traffic respectively;
- Kapsuser: 10,900 veh/day in 2027 and 16,800 veh/day in 2037, so that's +45% and +125% compared to the current traffic respectively;
- Kapkugerwet: 10,700 veh/day in 2027 and 16,600 veh/day in 2037, so that's +45% and +110% compared to the current traffic respectively;
- Kapsoit: 9,000 veh/day in 2027 and 13,800 veh/day in 2037, so that's +35% and +110% compared to the current traffic respectively.

5.6.6 Level of service of the road network

The B1 road in Kericho town it's a dual carriage road with three lanes each direction. As the third lane is not used for the traffic flow, the road capacity considered for the calculation is about 2,200 veh/h for each direction. The roads in the secondary centers are standard two lanes road, one each direction. The capacity for these roads is 1,000 veh/hour for each direction.

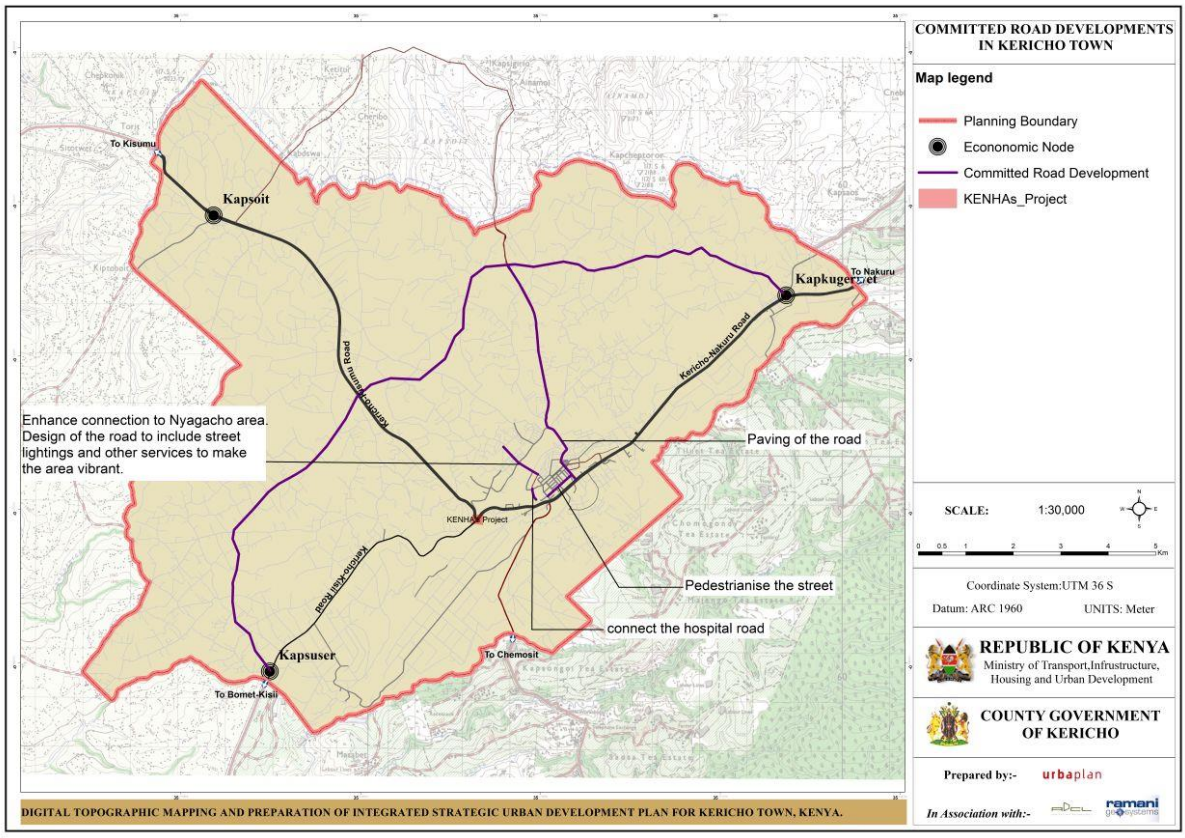


Figure 5-30: Committed Road Developemnt

The level of service is calculated during the peak hour on the busiest lane based on the peak hour factor measured during the traffic counts.
The traffic flow during the peak hour for each town is represented in the follow table.

Table 5-19: Peak hour traffic in 2027 and 2037

Location	Peak hour traffic 2027 (both direction)	Peak hour traffic 2027 (one direction)	Peak hour traffic 2037 (both direction)	Peak hour traffic 2037 (one direction)
	[veh/h]	[veh/h]	[veh/h]	[veh/h]
Kericho	1650	900	2500	1400
Kapsuser	850	450	1300	700
Brooke	800	450	1250	700
Kapsoit	800	450	1200	650

The road occupancy calculated during the peak hour is very low in each town for the mid-term planning period between 40% and 45%. In the long term planning period the road occupancy is higher but it's still acceptable everywhere (65%-70%).

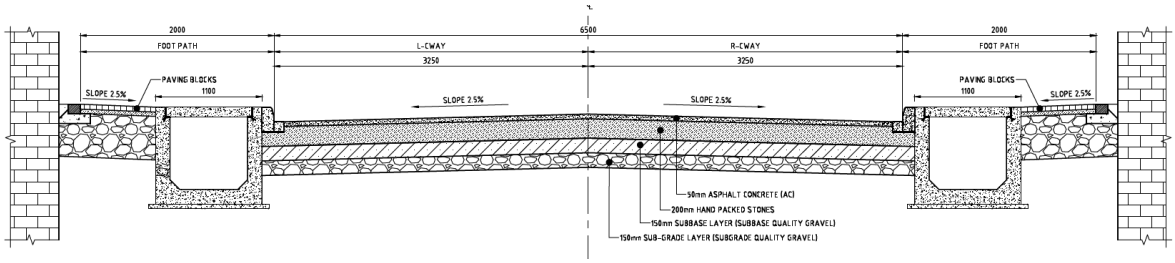
This means that the theoretical capacity of the current road network is more than sufficient to absorb the expected traffic in 2027 and 2037. Nevertheless the road usage awareness must be improved in order to assure a smooth and safe traffic flow.

5.6.7 Cross-sections and Junctions

5.6.7.1 Proposed typical cross-sections

1. Roads in built-up areas and with a right of way of less than 12m wide

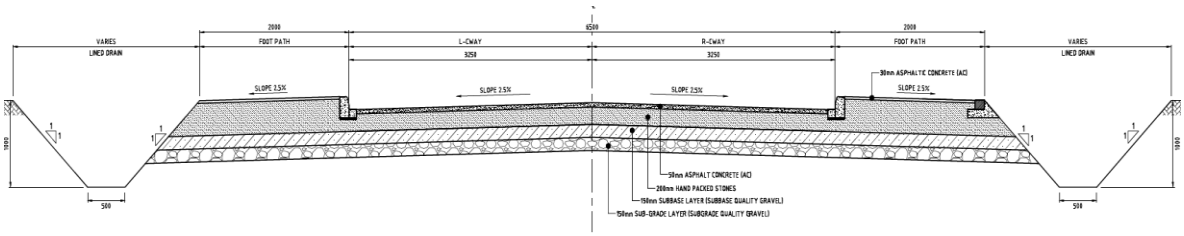
Figure below shows a typical cross-section that is proposed for the roads within the already built-up areas of the satellite centres which have a road right of way of less than 12m width between building lines namely Kapsuser, Kapkugerwet and Kapsoit in Kericho. These centres currently do not have paved roads and drainage is poor. A covered road side drain is proposed so as to provide the pedestrians more room for walking. Traffic calming measures such as speed bumps and raised pedestrian crossings are proposed.



TYPICAL PAVEMENT CROSS-SECTION
THROUGH BUILT UP AREAS
SCALE (A1) 1:20

2. Access roads with right of way of 15m width

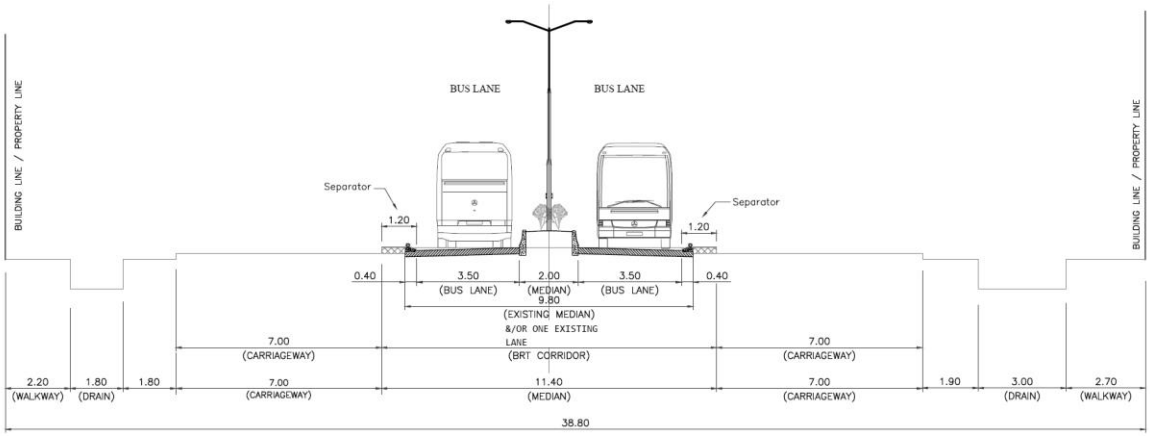
These are roads on areas that are not built-up, with a RoW of 15m width. They comprise two pedestrian footpaths (2m wide on each side) and two side drains whose size varies depending on capacity required. Traffic calming to reduce vehicular speeds are proposed to ensure the safety of the roads.



TYPICAL PAVEMENT CROSS-SECTION
THROUGH UN-BUILTUP AREAS
SCALE (A3) 1:20

3. Retrofitting current carriageway

A cross-section for retrofitting the current carriageways to accommodate short haul high occupancy passenger vehicles is presented below. This is applicable in Kericho. In Kericho, it is applicable from Kapkugerwet to junction with former C23. These corridors are proposed as pilots for transit oriented development and are scalable should they be successful.

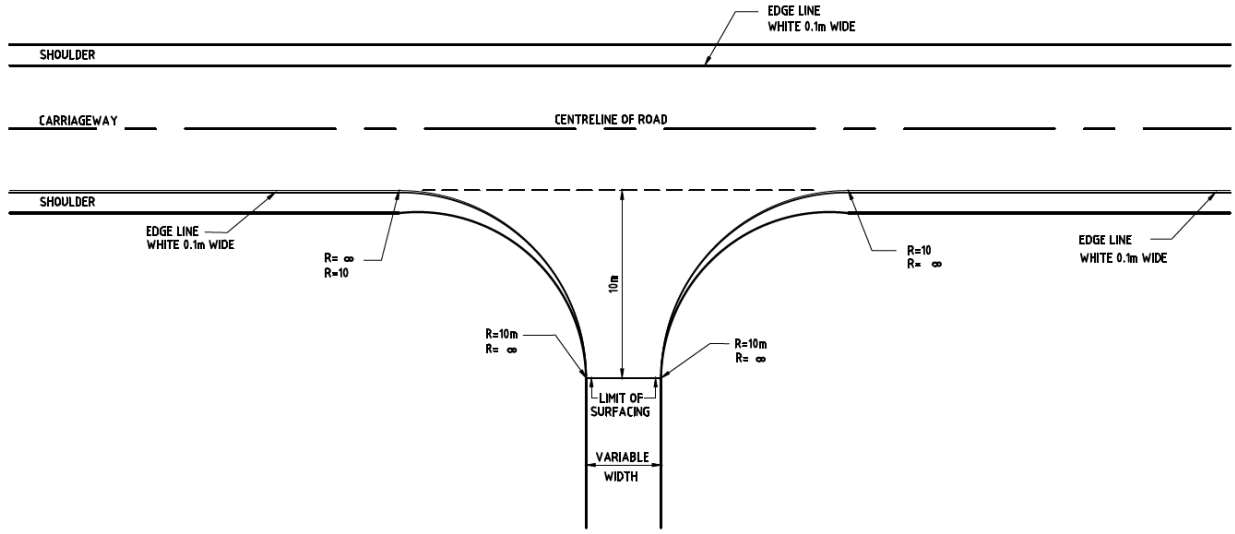


5.6.7.2 Proposed junction types

The traffic analysis shows that the roadways have enough capacity to handle traffic during the peak times. This will however only be possible with junction improvements. The following are typical junction layout that have been proposed to reduce conflicts at junctions.

a) Private accesses' junctions

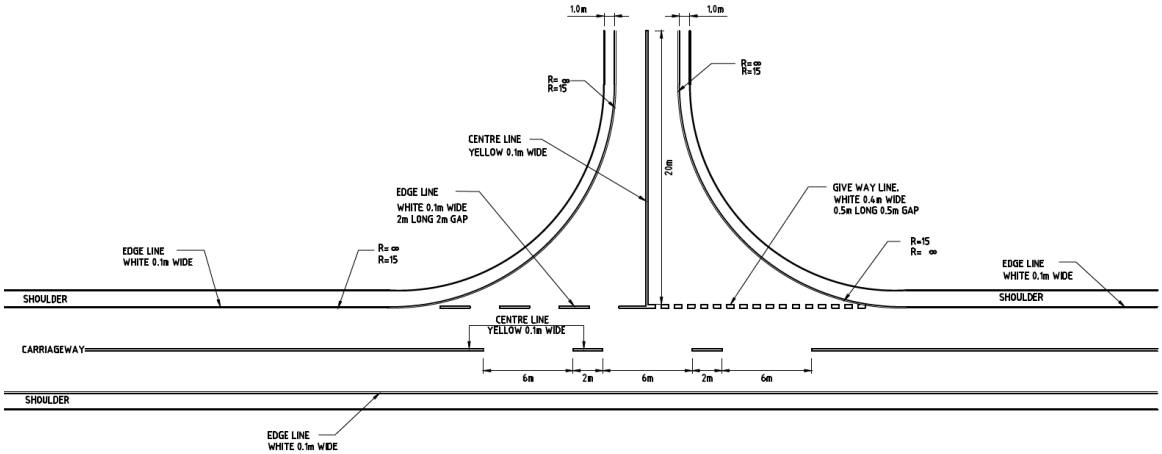
The roads in the planning areas are primarily for accessibility. As such, most of the properties have frontage to the roads. The junction below is proposed to ensure safety due to the ample visibility splays. This will reduce traffic accidents as traffic enters or exits from the main carriageway of the access road.



PRIVATE ACCESS DETAILS
SCALE 1:200

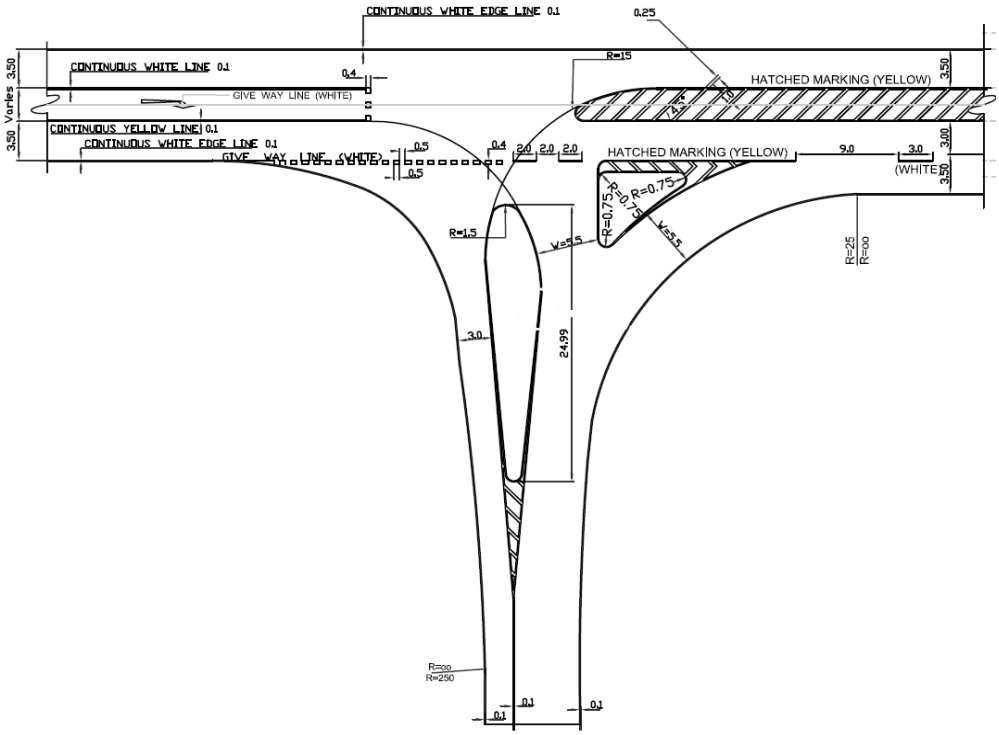
b) Minor T-junction

This is proposed where a minor road with less traffic meets a major road. There is no channelization and simple give way signs are adequate at these junctions.



c) Major T-junction

This junction is proposed where two major roads meet. It is provided with full channelization and vehicle storage lanes. The radii shown are the minimum and are based on the Kenya Road Design Manual Part III.



5.6.8 Challenges and opportunities

5.6.8.1 Emerging urban sprawl along the main roads

Urban sprawl increases the commuting distances and makes the provision of transportation systems unnecessarily expensive. Moreover, it robs the urban areas the benefits of diversity of services, housing, medical care, schools, recreational facilities and other interests.

The issue of urban sprawl is evident as more developments are coming up along the two major highways – the B1road and C23 road. This trend will be controlled with emphasis on densification and development of the Nodes stemming the desire for sprawl. Development Control regulations shall also be put in place to reduce change of use from agricultural to residential.

Opportunities

- There is still space in the Kericho core to promote NMT
- Densification of the secondary nodes
- Public transit oriented development

5.6.8.2 Inadequate public transit system

The elementary public transit system can hardly be termed efficient. The PSVs operate in an unregulated manner and also contribute to the high number of road fatalities. The lack of a transit system also leads to a high number of personal vehicles on the roads in these towns.

The facilities provided for the public transit are in a poor state or have gone into obsolescence due to the high number of PSVs and the increases in sizes of the specific vehicles e.g. the larger buses of the today as compared with those of the past. This means that PSVs pick and drop passengers in undesignated areas further increasing congestion and endangering the lives of other road users.

The use of small passenger cars as PSVs is prevalent in all the four project towns despite a crackdown by NTSA and the traffic police. These lack capacity to ferry many passengers and they

have to operate in large numbers to meet demand. Their high numbers further worsens the congestion above all in Kericho.

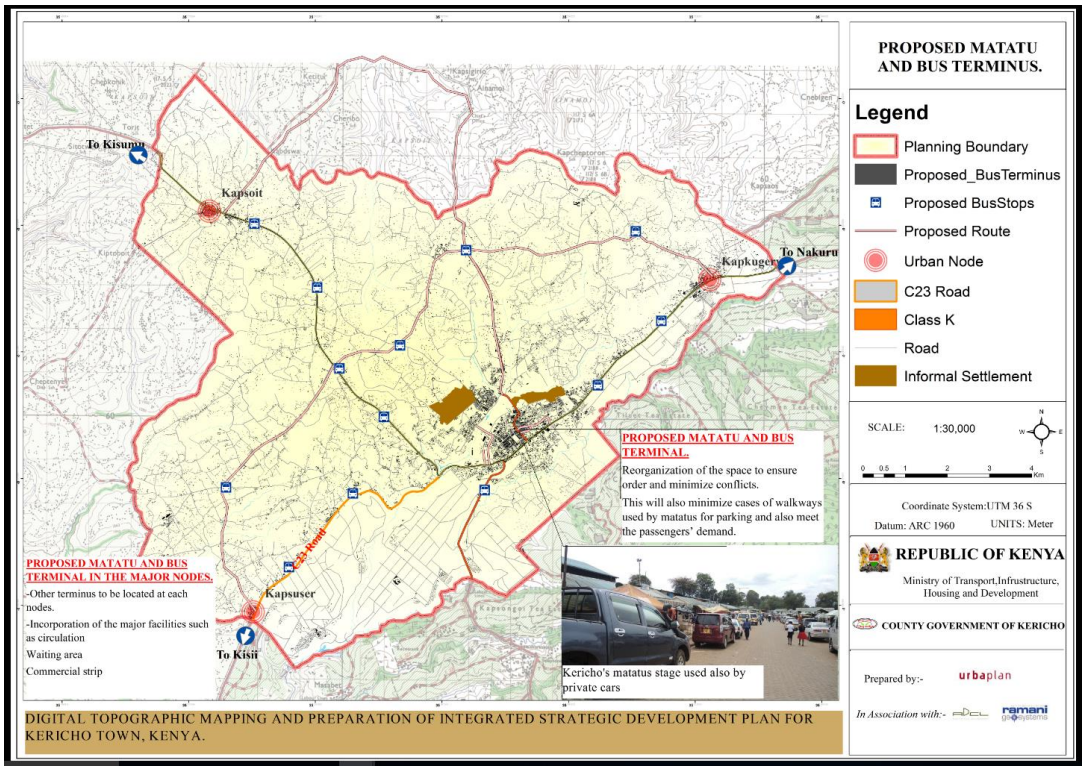


Figure 5-31: Proposed matatu and bus terminus

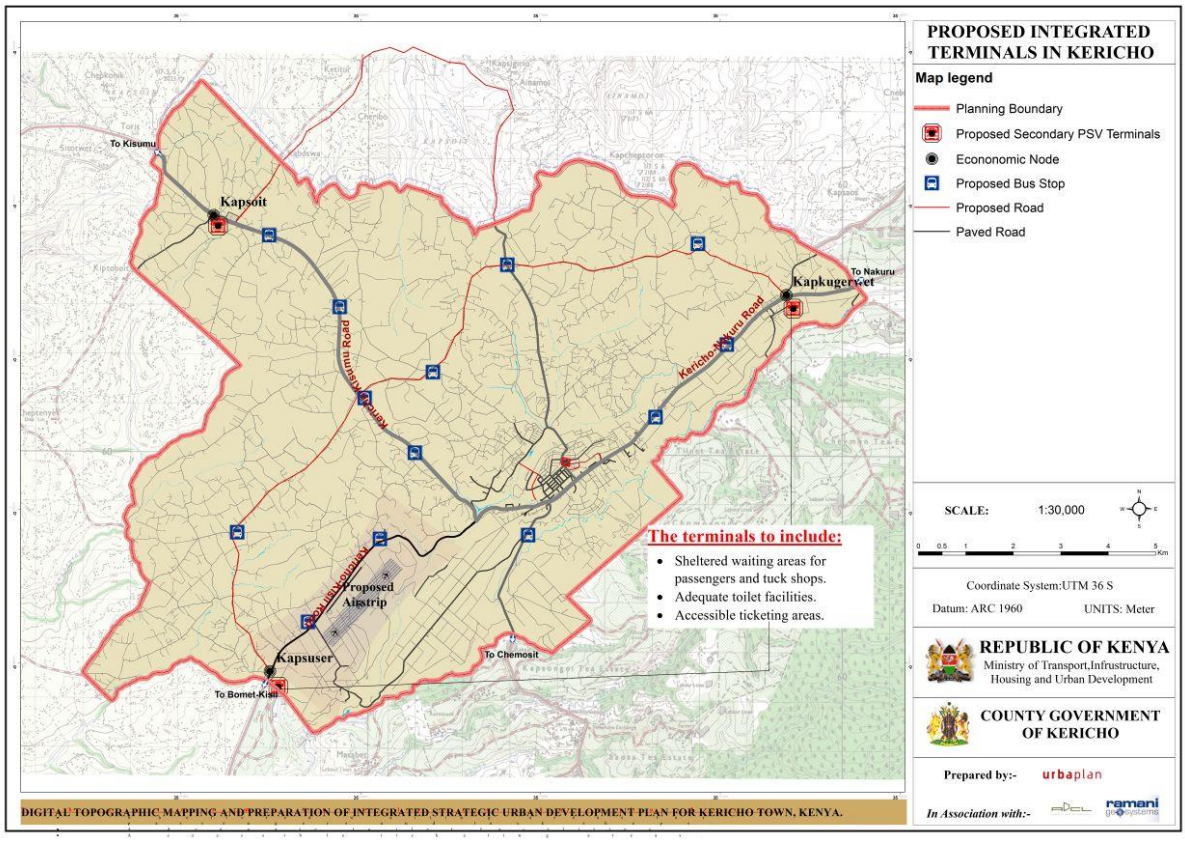


Figure 5-32: Proposed Integrated Terminals

The comfort and the safety of the public service vehicles are very low reducing the attractive of the public transit system.

Opportunities

- Room for provision of better service
- Increasing the people using public transport
- Potential for new investments and economic growth

5.6.8.3 Inadequate local road network

- Access roads are narrow and there is heavy encroachment on the right of way of most of them. This hampers their expansion
- Have poor drainage and are thus not accessible throughout the rainy seasons
- Lack traffic signs, road markings, street lights and traffic control devices thus making the roads unsafe and it also contributes to congestion
- Parking facilities have not been provided to cater for the high levels of motorization that are expected as the towns grow.
- Most sections of the towns have no provisions for NMT
- Existing NMT facilities are sometimes in disrepair and there is not a continuous network of infrastructures for pedestrians

***O*pportunities**

- Room to provide higher accessibility
- Raising land value
- Improve road safety
- Potential for new investments
- Increasing the environmental friendly means of transport (cyclists and pedestrians)

5.6.8.4 Crowed central business district

Kericho's central business district is used by many different kinds of vehicles, from bicycles to matatus and heavy vehicles. This affects the public space allocated to the pedestrians and the quality of the town's core and of course the level of congestion where the space is limited and there is the highest density of people and vehicles.

Opportunities

- Potential of high quality public spaces
- Economic and trade development
- Increases the quality of life for the people frequenting the business district
- Increases the viability for commercial multilevel parking near the CBD

5.6.8.5 Poor condition of Kerenga airstrip

The Kerenga aerodrome, located 6 kilometres from Kericho town, off the road to Kapsuser, is disused and requires rehabilitation.

Opportunities

- Improve long distance accessibility
- Spur economic development

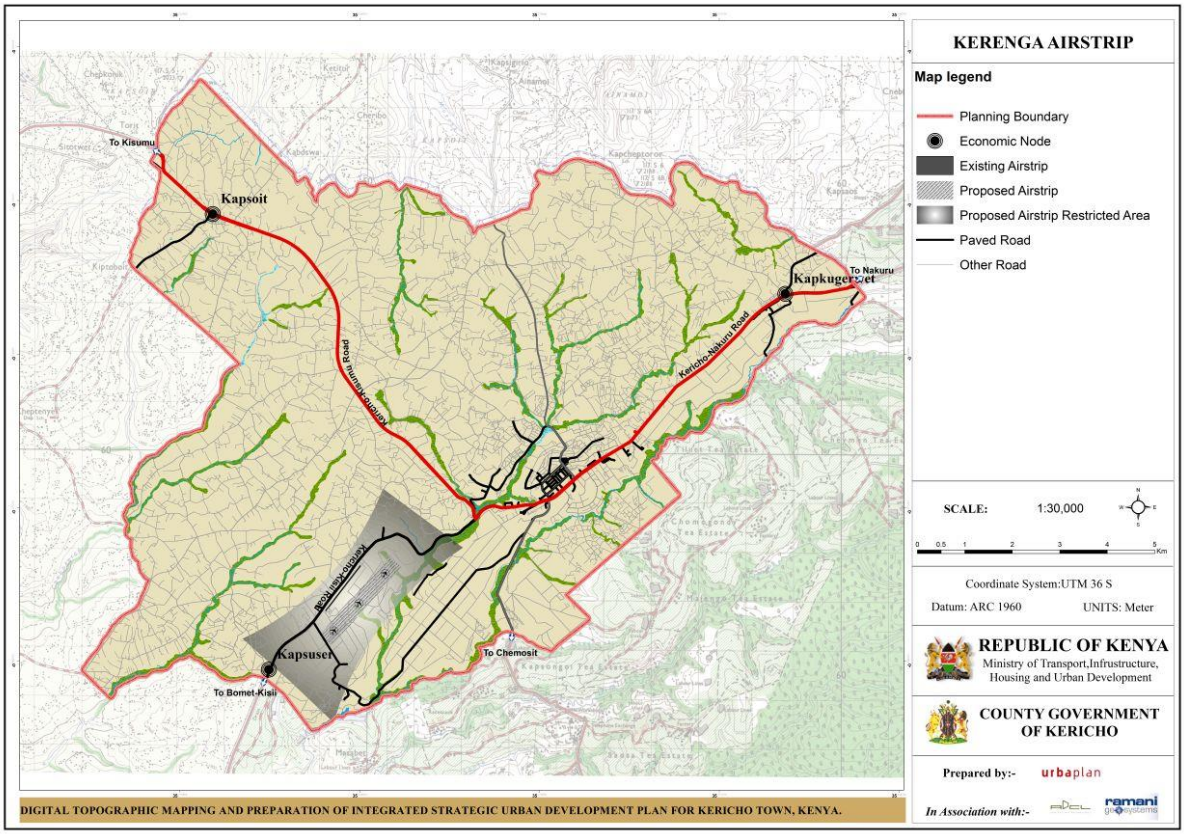


Figure 5-33: Karenga airstrip and the restricted area

5.6.8.6 Road Accidents

The towns are as affected by a high number of fatalities from accidents as the rest of the country. The rates of fatalities and permanent injuries are highest for pedestrians, motorcycles and cyclists as they compete for road space with vehicular traffic.

Opportunities

- Economic benefit to reduction of accidents
- Improving people health

5.6.8.7 Lack of road usage awareness

The way of driving of the all motorized users is aggressive and don't respect the weakest users of the road. Pedestrians have never the priority to cross the roads so they cross anywhere creating more danger.

The way of driving the PSVs is dangerous with unexpected stops and maneuvers and blocks the traffic flow.

Opportunities

- Improve road safety
- Room to provide smooth traffic flow

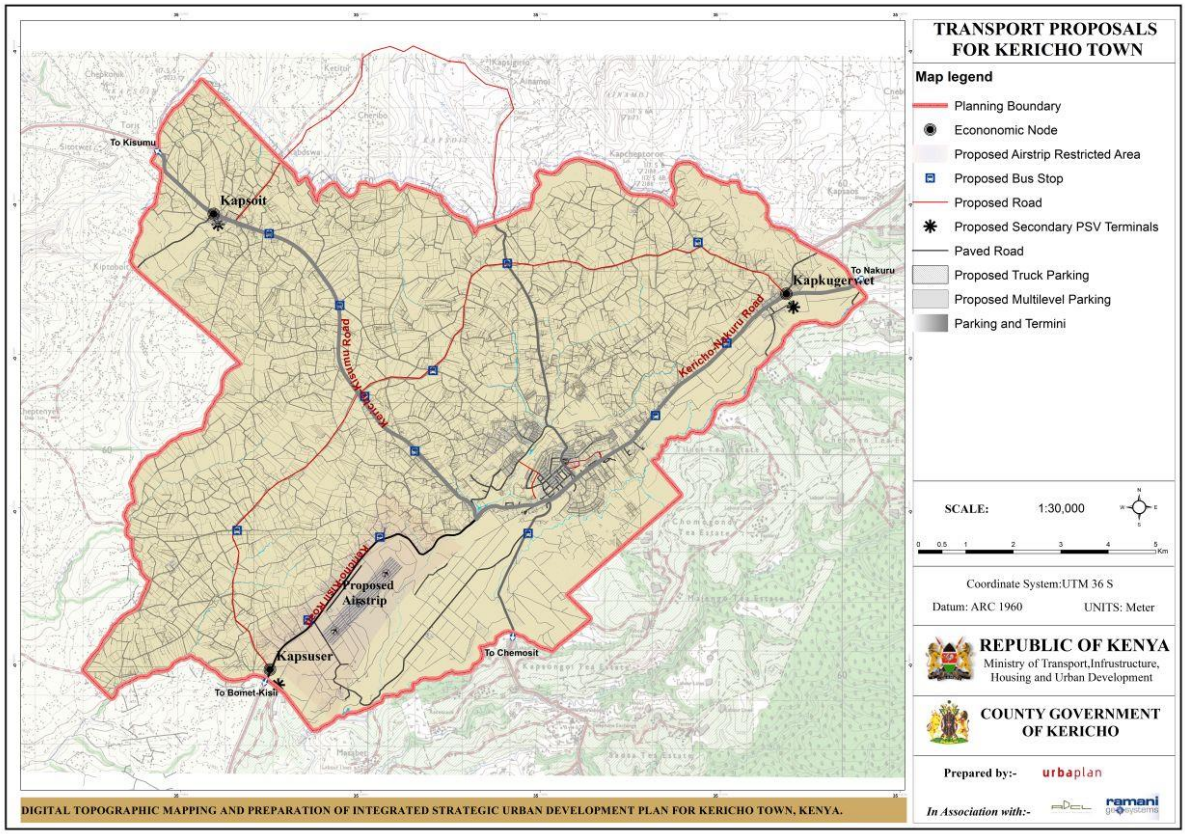


Figure 5-349: Transport Proposals for Kericho

5.7 The goal and objectives

The general goal is ***providing sustainable, integrated and accessible urban transportation for all residents of the towns.***

To this end, the multimodal concept of the ISUD is aimed at achievement of the following objectives:

- Reducing and/or halting urban sprawl
- Provision of multimodal accessibility to the territory including people living with disabilities
- Minimizing of noise and environmental pollution
- Enhancing the quality of life
- Promotion of short distance towns supporting NMT
- Promotion of transit oriented development
- Provision of safe and secure transportation systems above all for NMT
- Provision of efficient public transport systems for all towns
- Reduction of the barrier effects of the road infrastructure
- Provision of efficient interconnectivity between the various zoned areas
- Reduction of fatalities for road users

5.8 Multimodal accessibility concept

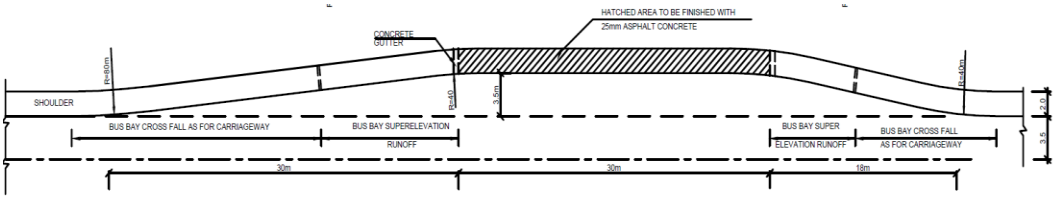
The most important principles of the multimodal accessibility concept for Kericho town are the following:

- the cross-section of the B1 road in Kericho must have only 4 lanes in total, the two excedent lanes will be allocated to the bus stop and to the non-motorized transport;

- the Motobo and Nyagacho accessibility is improved by two measures:
    - pavement of the existing road linking them by the B1 road. This road is strategically very important to ensure the accessibility to these districts from the west side and avoid to pass through the CBD;
    - a new non-motorized transport path creating a short-cut to reach the CBD through the Doinyosoiyet swamp;

- building a multilevel parking near the CBD in place of the prison, in order to provide the necessary parking places;
- no parking places will be provided in the CBD and the priority will be given to pedestrians and bicycles in order to improve the quality of life of the people frequenting the CBD;
- the matatus informal stage in Hospital road is removed but the current formal stage must be extended as the main PSV's hub of the County and used correctly;
- the matatus are not allowed to pass through the CBD, they must reach and leave the main PSV's hub via John Kerich road;
- a system of bus stop (one each 300 m in the urban area) ensure to cover all the main point of interest of the town and increase to efficiency of the road network;

  The typical PSV stop is indicated in the figure below. These are to have a shed to protect waiting passengers from inclement weather. PSV stops have been provided for at areas expected to have high numbers of passengers.



- the pedestrian connections between the bus stop and the main points of interest must be designed with care;
- at least the main roads must be provided with bicycle paths (B1 and C23 road);
- the local access road in the residential areas and the public service area must have the sidewalks in each side. Measures of traffic calming must be included in order to increase the safety for the weaker users of the road and to reduce noise and pollution.
- The typical cross-section for the built-up areas is the minimum cross-section applicable in industrial areas.
- The road designs are applicable on roads as specified in *Table 5-20: Proposed sustainable, integrated and accessible urban transportation system.*

The 25m right of way is proposed for the higher classes of roads that are to serve as alternative routes for Kericho town. In proposing this right of way, the roads will be promoted to Class D which will ensure they get the necessary funding from the national government for construction and maintenance through KeRRA or KeNHA.

The 25m right of way is to be acquired through the legal process of land acquisition for infrastructure projects after resettlement action plans have been carried out. The 25m road reserve will accommodate two 3.5m traffic lanes, two 2m shoulders on either side of the carriageway, two side drains that will vary in width from 1.75m to 2.5m on each side of road. It will also allow for the provision of two 2m wide pedestrian walkways and cycle lanes on either side of road. Due to higher

motorized traffic speeds that are expected on these roads (design speed of 80-100kph), it is necessary to separate NMT from motorized traffic using the side drains. In addition, the 25m right of way will allow for infrastructure such as road signs, transmission and distribution power lines, water supply and sewer lines to be installed.

Table 5-20: Proposed sustainable, integrated and accessible urban transportation system

Goal	Strategies	Projects			
Providing sustainable, integrated and accessible urban transportation for all residents of the towns.	**Improve movement and connectivity**	**ROADS**			
		Current Road Name/Number	**Average Current Right of Way (m)**	**Proposed Right of Way (m)**	**Length (km)**
		John Kerich – B1 Loop Road (unclassified)	6	15	1.5
		Kapkugerwet – Kaptebeswet	18	25	12.0
		Kaptebeswet – Kapsuser	12	25	7.5
		All streets within Kapkugerwet	4 – 6	10	1.8
		All streets within Kapsuser	4 – 6	10	1.5
		All streets within Kapsoit	4 – 6	10	2.2
		Nyagacho – Ainamoi – Kapsoit road	12	25	15.6
		Motobo/Nyagacho – Isaac Salat Road	3	15	2.1
		Missing Link B1 to Dumpsite	3	15	2
		NMT FOOTPATHS			
		Description		**Length (km)**	
		Motobo/Nyagacho – Isaac Salat Road		2.1	
		Current PSV terminal to proposed Loop Road along proposed PSV Terminal		1.0	
		Pedestrianised streets within the CBD		0.9	
		NMT walkways/foot paths along all new proposed roads		42.1	
		Rehabilitation of existing walkways along the CBD's boulevards		3.0	
		A truck parking area be provided in Kapsoit. This will have a concrete pavement and all necessary amenities that will include restaurants, rest rooms, garages, fueling areas and parking areas.			
	Access to CBD by pedestrians and park-and-walk	• A multi-level parking at the location currently occupied by the Kericho prison. • Pedestrianize 30% of CBD roads			
	Improve functionality of PSV	• 13 PSV stops to be provided within the planning area • Primary terminal is proposed on the location currently occupied by the Kericho Prison • The secondary terminals are to be provide in all the nodes			

Goal	Strategies	Projects
		included in the planning area (Kapkugerwet, Kapsoit and Kapsuser). These will have sheltered waiting areas for passengers and tuck shops, adequate toilet facilities and accessible ticketing areas.
	Improve air transport	• Kerenga Airstrip runway be extended to approximately 2.2km to handle larger planes. • Be equipped adequately with all facilities required for full operation including night operations. • Have terminal buildings and all instrumentation. • A radius of 2.5km restricted development area should be set to ensure safety of aircraft.

5.9 ENVIRONMENT AND DISASTER MANAGEMENT PLAN

5.9.1 Introduction

Social and economic developments in Kenya have varying implications on the environment and social settings through specific direct and indirect interactions. Urban development world over has the highest level of interactions with the environment due to its land-intensive nature. In addition to land requirements, urban existence is dependent on natural resources to sustain the people living there. Interactions of urban development and operations with the environment could be perceived in either of the following;

5.9.2 Major Environmental Issues

Land use planning has not been fully considered an integral component of infrastructure development in Urban Development in Kenya. This has led to a serious conflicts of social and economic development (residential areas, commercial premises, markets, public service areas, etc.) in connection with the services and amenities provision (access roads, drainage, water supplies, sanitation, schools, recreation areas and play grounds, etc.). Implications on the environment and social wellbeing are significant.

Most towns in the country including Kericho Town were initiated on the basis of their strategic locations and had an initial physical layout plans. The towns, however, are faced with serious challenge of uncontrolled mixed land use practices. Land use development is also more rapid than the provision of matching appropriate public amenities and services.

Overall, there is notable failure to embrace land use planning as a basis for decision making in the development of land in the plan towns leading to a mixture of land use activities that make it difficult to determine the level and nature of services to be provided effectively undermining environmental quality. The mixed land developments have also resulted into the emergent of incompatible economic activities in residential suburbs, competition of services and amenities as well as undesirable human living standards. This is evident in all the plan towns.

It is common for residents to consider these facilities as nuisance as opposed to important amenities and hence no one wants them within their localities. Without plan considerations dedicating suitable land zones for these amenities, it becomes major challenges in provisions thereafter.

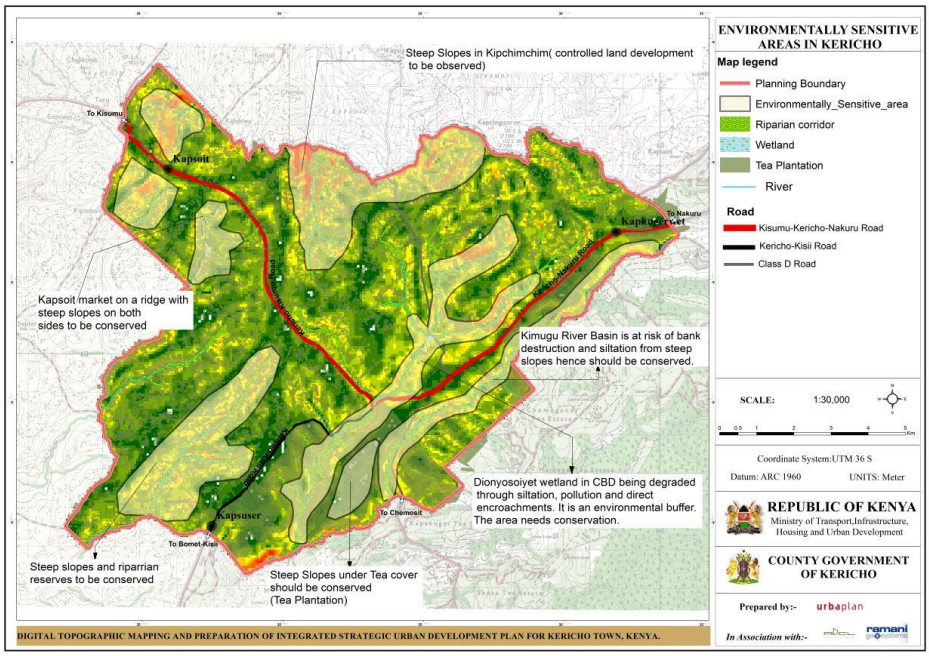


Figure 5-35: Environmentally sensitive area

5.9.3 Goal

Improving Urban Environment through Integrated Land Use Planning

5.9.4 Proposed Environment Management Strategy

In view of the above, the following considerations would be necessary to check development conflicts on the environment;

(i) Map out the sensitive area and delineate their boundaries with other land use features in Kericho town. These include wetlands, river flood plains, forested zones and steep slopes,

(ii) Identify threats to sensitive areas from the land use practices for consideration in the harmonized integrated mitigation measures in the planning process,

(iii) Establish landownership, social and economic activities for purposes of compensation where necessary if land use change will be found appropriate for the plan implementation. In this regard, the affected persons should be involved through the process,

(iv) Control strip development to check on expanded environmental damage. This may be done through ensuring appropriate land parceling and strict land use control measures,

(v) Land use plans should always be subjected to Strategic Environmental Assessments (SEA) before approval and implementation. It will be necessary, therefore, to undertake a Strategic Environment (and Social) Assessment for the ISUD in Kericho town for compliance as well as establishing key environmental planning issues and long term recommendations,

(vi) Land use plans are prepared for land alienation as Part Development Plans (PDPs) but should be guided by comprehensive Land Use Planning that is essential for a wider focus on environmental safeguards.

(vii) In addition to (v) and (vi) above, the Integrated Strategic Urban Development Plans for Kericho Town should be pegged on the whole County Land Use Plans as well as the National Land Use Guidelines (if available). This is to ensure that associated

environmental integration is takes into consideration cross-County boarders issues (remember environmental resources have no boundaries),

(viii) Put in place mechanisms for the environmental practitioners to appreciate the role played in the planning process to segregate the various land use features as basis for mitigating negative impacts at the macro-level for effective enforcement of environmental safeguards on development activities,

(ix) Landowners and developers do not appreciate the overriding interests associated with their developments vis-à-vis land use plans for the common good such as public hygiene and sanitation. Land use plans, therefore, should be readily available to the landowners and developers and infrastructural providers.

Following are brief descriptions of environmental aspects for integration in the urban development.

5.9.4.1 Conservation Area KR1 (Wetlands)

Dionyosoiyet Wetland system is a major feature running through the immediate northern edge of the CBD in a valley between the CBD and a highly populated informal estate of Nyagacho (Motobio). This wetland system and others in the area serves the town as follows and illustrated in the figure below

(i) Storm water retention for flood control being the lowest point of the town. All surface runoff from the CBD, the eastern agricultural and settlements as well as Nyagacho (Motobio area) discharging at the northern end of the system,

(ii) The wetland is also a waste sink and a pollution buffer system. Surface runoff and direct discharges of wastewater from sources around the wetland system brings with it high levels of pollutants into the system. The wetlands retains permanently or slow release pollutants to the water bodies downstream including controlled pollutant transportation into Sondu River far downstream,

(iii) It is a source of water for a section of the immediate residents (the wetland is a host of fresh water springs, at least some of them protected),

(iv) Wetlands, including this one, acts as climate moderation through carbon absorption and humidity control.

5.9.4.2 Conservation Area KR2 (River Basins)

Kimugu River system flows east – west along the immediate southern edge of the CBD. With its source in the Mau Hills, the river is a source of water for high populations within and downstream of Kericho Town. While appreciating that it has not been adversely affected by urban development, it is at risk in future growth of the town compromising its suitability for social and economic use. Kimugu River also contributes to the water supply of Kericho town. The river basin should, therefore, conserved. This attention should also be applied to other riverine and wetland zones within the plan area including the closed wetlands in Kapsoit and Kapsuser markets.

5.9.4.3 Conservation Area KR4 (Steep Slopes)

There are limited valleys with steep to mild slopes with potential for soil erosion. Among the slopes are gradually getting habited for settlements while others are used as transit routes by the local residents. These areas are sensitive and may require attention to ensure they are conserved through organized use. These slopes include the eroded sections along Dionyosoiyet wetland (with upto 15% incline), steep slopes along Kimugu River (with between 7 – 10%), habited slopes on both sides of

Kapsoit market (mild slopes of between 5 – 7% and the western side of Kapsuser market (with the steepest sections being upto 15%).

5.9.4.4 Conservation Area KR5 (Green Areas)

Kericho Town has public green areas set out for public recreation and rest places. Among them include Uhuru and Kenyatta Gardens (shown on the map). The areas provided social values to the residents as well as climate and aesthetic moderations of the town as opposed to Concrete Features" all around. These areas should be enhanced as well consider creating the same in the satellite towns (Kapkugerwet, Kapsuser and Kapsoit markets). This will of course require appropriate land identified and delineated by Kericho County Government.

Tea Estates within and around Kericho Town are not only commercial land use but may also be viewed as a landscape feature unique with the town (and the county in general) that should be conserved. This is constituted by the expansive Unilever and James Tea Finley plantations as well as notable sections the out growers. The features may also have a touristic value for the town and the county in general and appropriate initiatives should be integrated into the land use plan.

5.9.4.5 Conservation Area KR6 (Waste Disposal Sites)

Waste management and disposal sites (including solid waste disposal locations and wastewater treatment plants) are sensitive zones due to the associated environmental and public health linkages. While the sewage treatment works are define, it is not clear what ultimate locations are currently earmarked for solid waste disposal. Once identified and confirmed, the location(s) will need to be delineated as sensitive areas for appropriate management with respect to neighbouring land use features, environmental features and overall people welfare.

5.10 Specific Environmental Integration Actions

Following the situational analysis, Focus Group Discussions and professional observations, specific aspects of environmental integration have been established. It is also appreciated that environmental aspects are of cross cutting nature, implying every other component in the strategic planning process is required to tie with the conservation principles.

Table 5-21: Specific environmental integration actions

Goal: Improving Urban Environment through Integrated Land Use Planning		
Sub sector	**Strategies**	**Projects**
Legislative	Supportive legislative framework	By laws for EIA
Conservation	Conservation strategies for current and future development	Conservation area management plans (CBD, Tea Plantations & Forest, Doinyosioyet Wetland, Kapsoit, Kapsuser, Kapkugerwet)
		Conserve the Forest areas around Tea Plantations
		Conserve the riparian areas for the entire Doinyosioyet wetland system,
		Conserve riparian areas along the wetlands at Kaposit and Kapsuser markets
		Conserve riparian area along from the banks of Kimugu

Goal: Improving Urban Environment through Integrated Land Use Planning		
Sub sector	**Strategies**	**Projects**
		River banks along the entire river basin
		Conserve Public parks (existing Uhuru Gardens and Moi Gardens in the CBD)

5.10.1 Disaster Management

Disaster means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area;

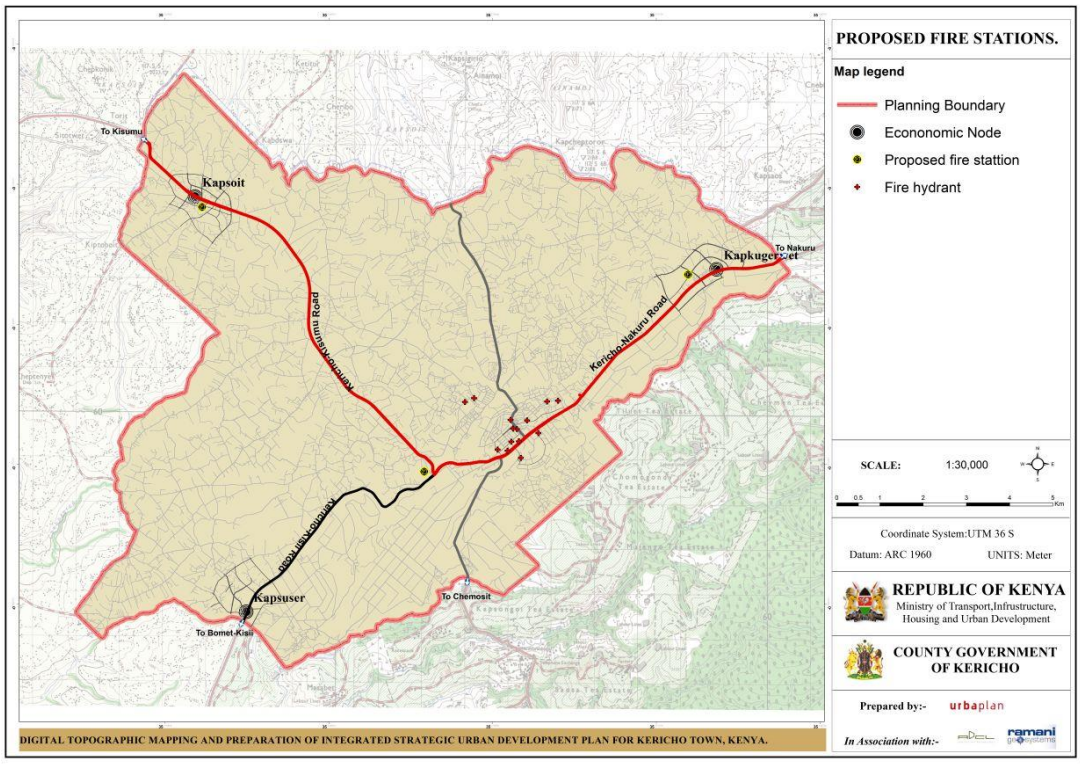


Figure 5-36: Existing and proposed fire station and disaster management centers

Disaster management‖ means a continuous and integrated process of planning, organising, coordinating and implementing measures which are necessary or expedient for:

(a) prevention of danger or threat of any disaster;
(b) mitigation or reduction of risk of any disaster or its severity or consequences;
(c) capacity-building;
(d) preparedness to deal with any disaster;
(e) prompt response to any threatening disaster situation or disaster;
(f) assessing the severity or magnitude of effects of any disaster;
(g) evacuation, rescue and relief;
(h) rehabilitation and reconstruction;

Kerichocounty has no legislation that will guide the process and institutions of disaster management.

The infrastructure to support the process of disaster management are provided in this ISUDP. These include establishing and distribution health, fire brigade and police facilities. These are provided for in all the nodes. These units will be accessed through link to the key arterials in the town. Fire hydrants shall be provided in assessed strategic locations.

Table 5-22: Disaster management strategies

Goal				
Sub Sector	**Strategies**	**Projects**	**Quantity**	**Units**
Disaster Management Committees	Operationalize disaster management framework	Disaster Management Committee	1	No
		Disaster Management Sub-Committee in Kapkugerwet, Kapsoit, Kapsuser	3	No
		Disaster Management By-Law	1	No

5.11TOURISM MANAGEMENT PLAN

5.11.1 Introduction

The tourism sector in the town is poorly developed. The bulk of the visitors are domestic tourists of people making day excursions. This is attributed to the underdeveloped hotel sectors and inadequate packaging of tourist attractions. The main gem in Kericho is the Tea Plantations and Mau Forest. These sites have inadequate support facilities, signage or even marketing.

5.11.2 Challenges In Tourism Industry

The tourism sector is sensitive to tourist perception about the trip destination. These include transport, security and related services. The County needs to provide a picture that is attractive to the potential tourist; be it domestic or international. The functionality of the Shinyalu Airstrip becomes critical because it provides an indication of the level of accessibility.

5.11.3 Assessment Of Tourism Potential

There is a lot of potential which has been identified by the County Ministry for Trade, Tourism, Cooperative and Wildlife Services. This includes:

- Packaging the Western Tourism Circuit would need to be properly anchored in the County Tourism strategy
- Value addition to tourist attractions would involve building on the cultural uniqueness of Kericho people
- Kericho Tea Plantations and the forest is a resource whose full potential is yet to be achieved
- Ecotourism is a nascent area that can be developed and anchored on Mau Forest
- Hospitality sector has yet to grow creating enough bed capacity within the town

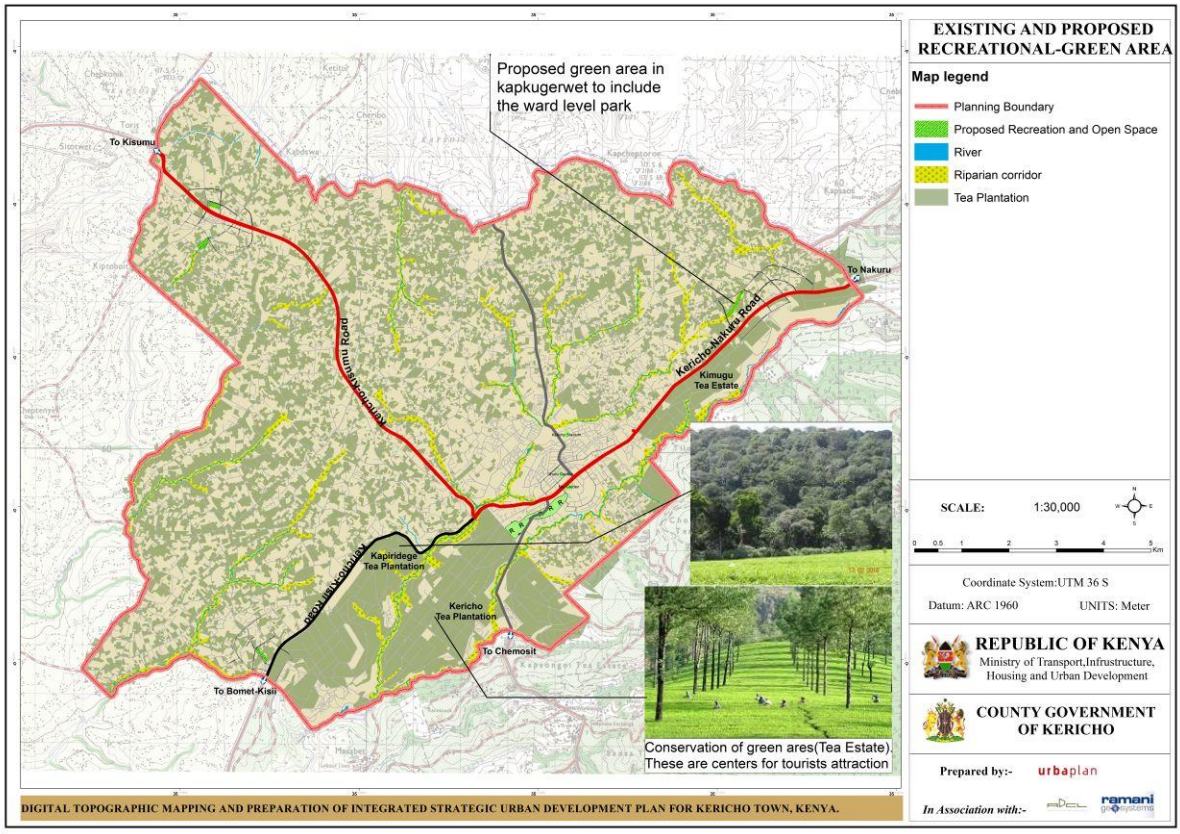


Figure 5-107: Proposed recreation green areas Kericho town

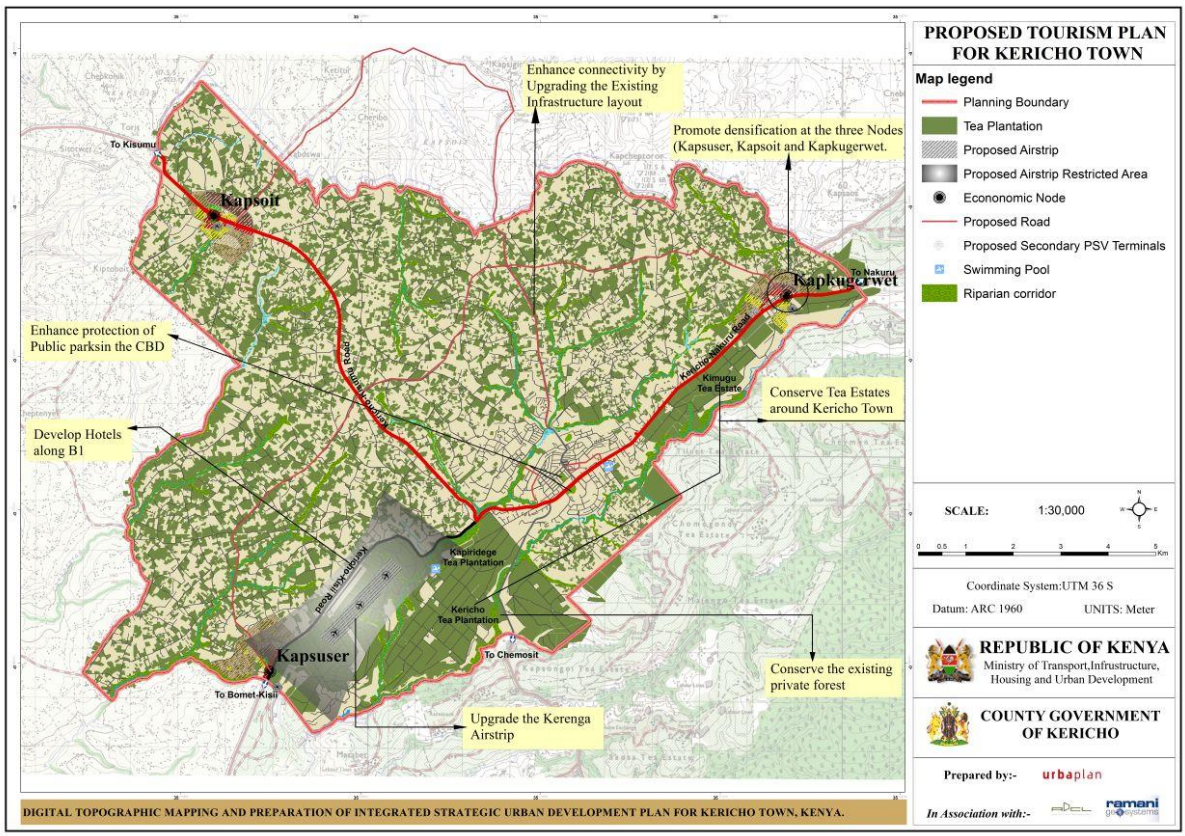


Figure 5-37: Proposed tourism plan for Kericho town

5.11.4 The Goal

To enhance the income from tourism in Kericho

5.11.5 Strategies for Tourism Development

- Packaging the Western Tourism Circuit in partnership with neighboring counties.
- Value addition to tourist attractions to give visitors the best experience including possibilities of introducing new animal species such as Gorillas.
- Marketing of the only tropical rain forest in Kenya with hundreds of monkey, snakes and bird species .
- Partnering with Private Sector in putting up an ecotourism center near the forest.

Table 5-23: Strategies for tourism development

Goal	Strategies	Projects
To Enhance the income from tourism in Kericho	Packaging the Western Tourism Circuit in partnership with neighboring counties.	• Tourism Liason Office • Profiling attractions in the Circuit in Kericho • Support development of hotels through planning incentives
	Value addition to tourist attractions to give visitors the best experience	• Establishment of Animal Sanctuary in Kapkugerwet • Establish a Cultural Centre at Kapsuser
	Marketing of theTea Plantations and Forest.	• Brand the Airport as part of the Tea Farm tour package • Create trails into the forest with attractions
	Putting up an ecotourism center in the forest/Tea Plantation towards Kapsuser.	• Develop a full investment proposal for Eco Lodge • Provide infrastructure to support the Eco lodge and Information centre

6 ACTION AREA PLAN

6.1 INTRODUCTION

Specific areas have been identified that required a detailed intervention proposal based on the assessed priorities and overall vision of the town. This ISUDP has prioritized 5 issues/areas for action planning. These are accompanied by urban design to illustrate the options and are anchored within the framework of the Structure Plan.

Table 6-1: Proposed action area plan and urban design

Subject	**Action Area Plan and Urban Design**
CBD functionality	Design plan for CBD,
Transport Efficiency	Arterial Reticulation and KerengaAerodrome
Recreation and Environment	Tea Plantation and Forest
Nodal Development	Kapsoit Kapsuser Kapkugerwet

6.2 ACTION AREA PLAN 1: CENTRAL BUSINESS DISTRICT

6.2.1 Existing Situation

This is the area that forms the core of the city located in the old Municipal boundary. The buildings are narrow plots of approximately 10 by 20 meters arranged in a rectilinear pattern. The building is small structures of single or double story with small frontages due to the narrow plots. The CBD is not geared for its position as the hub of a modern city.

6.2.2 Issues and Challenges

The following are issues and challenges in the CBD

- Decay of buildings and infrastructure
- Congestion on the narrow roads by competing traffic
- Inadequate parking on-street and off-street
- Narrow plot sizes

6.2.3 Opportunities

The biggest opportunity is the desire by the County Government to create a whole new beautiful town. There are investors who could maximize returns on investment in an attractive new CBD

6.2.4 Objectives of the Action Area Plan

- To create a post-modern nucleus that would position Kericho town as a key urban centre in the region
- To provide support infrastructure and services that would stimulate the renewal of the CBD

6.2.5 Proposed Interventions

- Create pedestrian only streets with enhanced street furniture
- Create routes for NMT
- Encourage amalgamation of plots to allow for more functional building designs
- Upgrade the service infrastructure (water, sewer, electricity)

- Provide for public spaces
- Provide multi-level parking able to accommodate off-street parking within walking distance to CBD
- Legislate by-laws that would guide the urban renewal, Formulate and enact a by-law requiring a full Transportation Impact Assessment to be undertaken for all new developments with a Gross Floor Area of 500 square metres within the planning area.

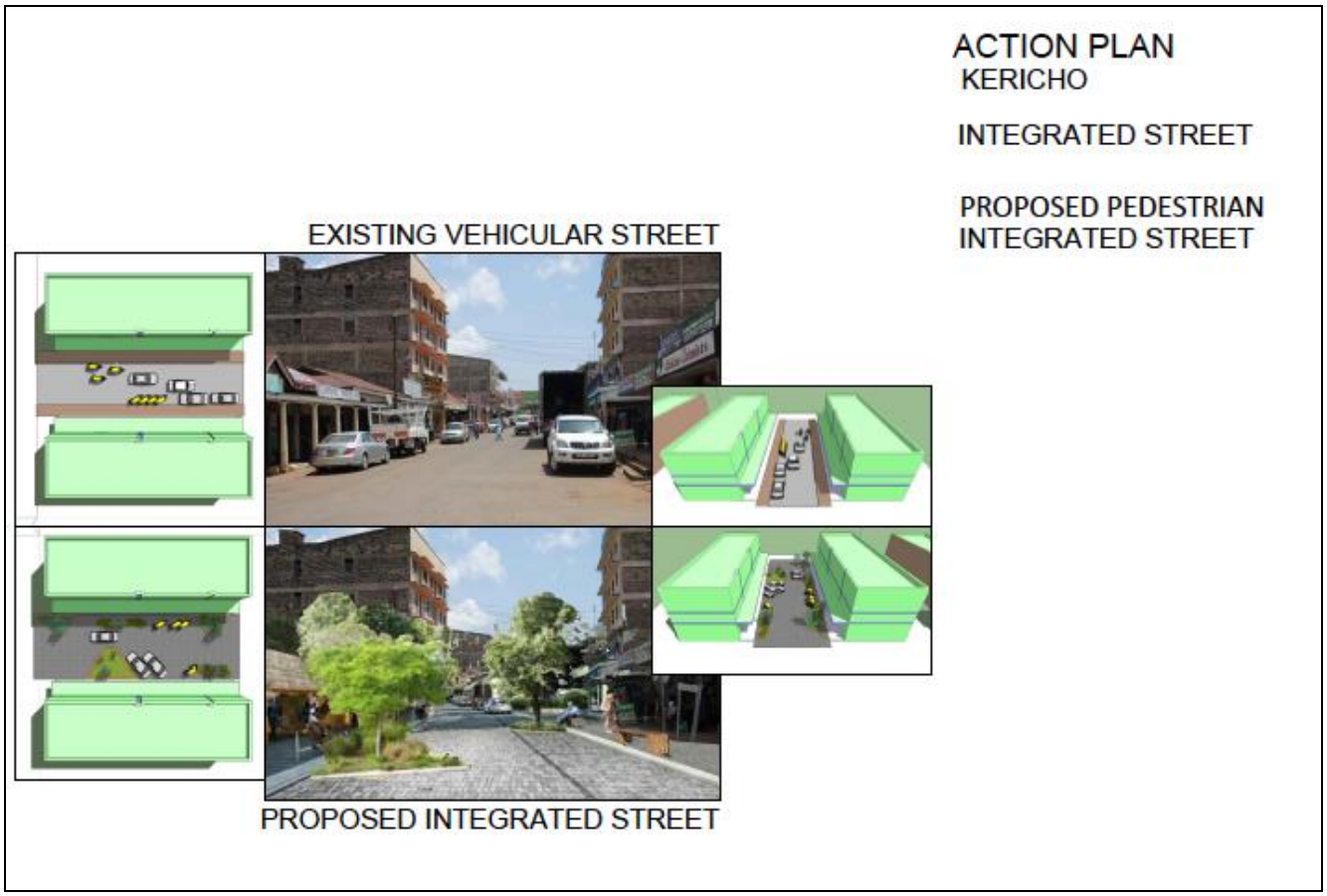


Figure 6-1: Pedestrianization of streets

A. Proposed junction improvements

No.	Junction Description	Existing Situation	Proposed Improvements
1	B1 Road – Hospital Road	Non-channelized T-junction	-Signalization -Introduction of two small and/or ghost roundabouts -Formulation of by-laws prohibiting stopping of PSVs at undesignated areas and strict enforcement of the same
2	B1 Road – John Kerich Road	Non-channelized T-junction	Signalization
3	B1 Road – Kenyatta Road	Non-channelized T-junction	Signalization
4	Hospital Road/Isaac Salat/Guru Nanak Temple junction	Simple cross junction	Channelization to reduce points of conflict
5	Isaac Salat – Uhuru Road	Non-channelized T-junction	Channelization to reduce points of conflict

6	Isaac Salat – Moi Road	Non-channelized T-junction	Channelization to reduce points of conflict
7	All cross junctions along Harambee Road	Simple cross junctions	-Provision of pedestrian raised crossings to allow access (and right of way) for pedestrians -Pedestrian crossing signs
8	All T-junctions within the CBD (e.g. along Tengecha Road)	Simple T-junctions	'STOP' signs to be installed on the minor streets
9	Temple Road – Kalenjin Road	Non-channelized T-junction	Channelization to reduce points of conflict
10	Temple Road – Uhuru Road	Non-channelized T-junction	Channelization to reduce points of conflict
11	Temple Road – John Kerich Road	Non-channelized T-junction	Channelization to reduce points of conflict
12	Cross junctions between existing roads and proposed Missing Links 1, 2 & 3	N/A	Mini-roundabouts

B. Proposed Pedestrianized streets

(a) Harambee Road

(b) The lanes connecting Temple Road and Harambee Road

(c) Other proposed NMT facilities

(a) All streets within the CBD to have provisions for NMT paths.

(b) B1 Road currently has raised pedestrian crossings provisions. These should be maintained by proper marking and signage.

(c) The study on NMT for Kericho Town by MoTIH&UD has proposed a pedestrian footbridge around Moi Garden.

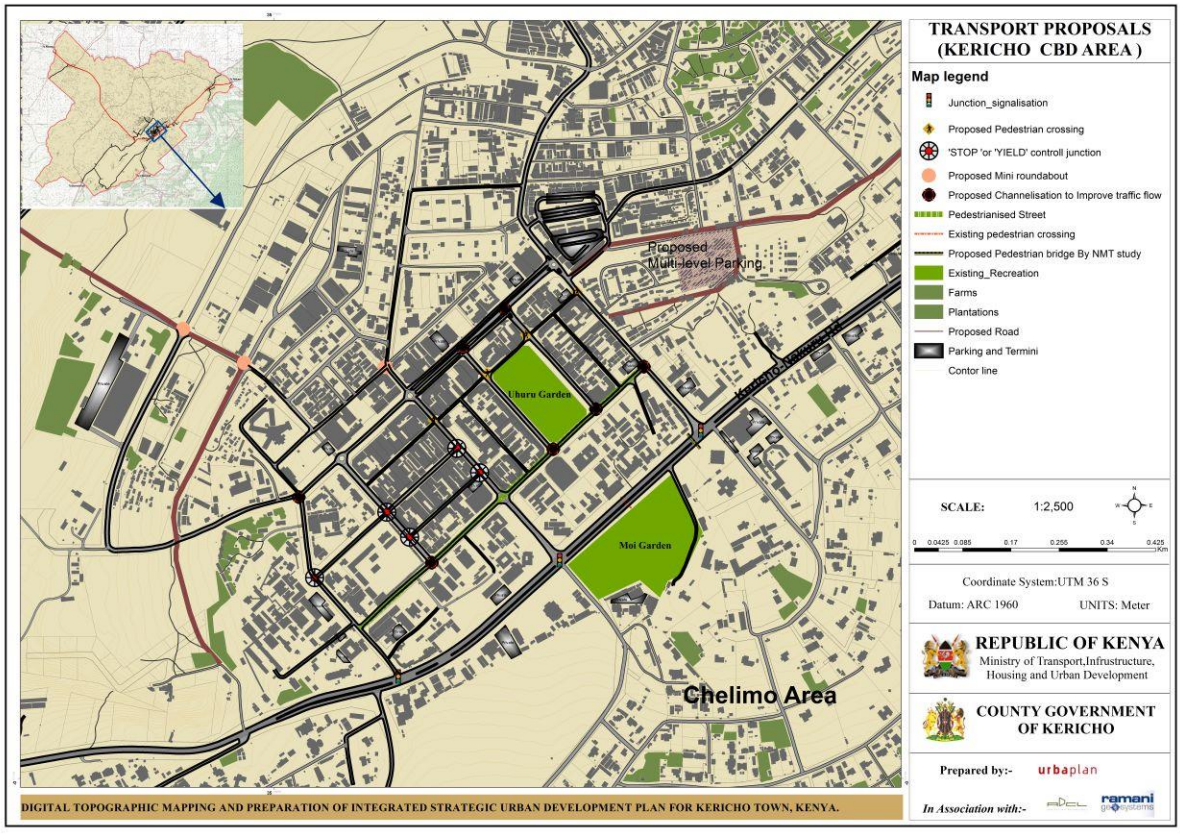


Figure 6-2: Proposed Improvement in Kericho CBD

6.3 ACTION AREA PLAN 2: TEA PLANTATIONS AND FOREST

6.3.1 Existing Situation

Tea has been grown on the Kericho Estates since 1924, first by the British company Kapkugerwet Bond, and then by Unilever since 1984, mainly under the **Lipton brand**. The estates are close to the equator and at 2,000 metres above sea level – the ideal climate for cultivating high-quality tea

Kericho Estate extends more than fifty miles in length, and covers about 8,250 acres. With 16,000 employees providing for roughly 65,000 dependants, the estate is an important source of jobs in a region where unemployment rates are high.

The company aims to continue reducing its dependence on grid electricity. To further its goal of restoring indigenous forests, Unilever Tea Kenya has a dedicated nursery for the cultivation of forest trees, and has planted and distributed three-quarters of a million indigenous trees for reforestation since the year 2000.

The Tea Estate within Kericho town provides a unique opportunity for development even though some people think that it is a constraint because the multinationals have refused to cede land for urban development.

6.3.2 Issues And Challenges

- Competing needs for urban land
- Poor internal roads in the forest
- Inadequate attractions especially for domestic tourists

6.3.3 Opportunities

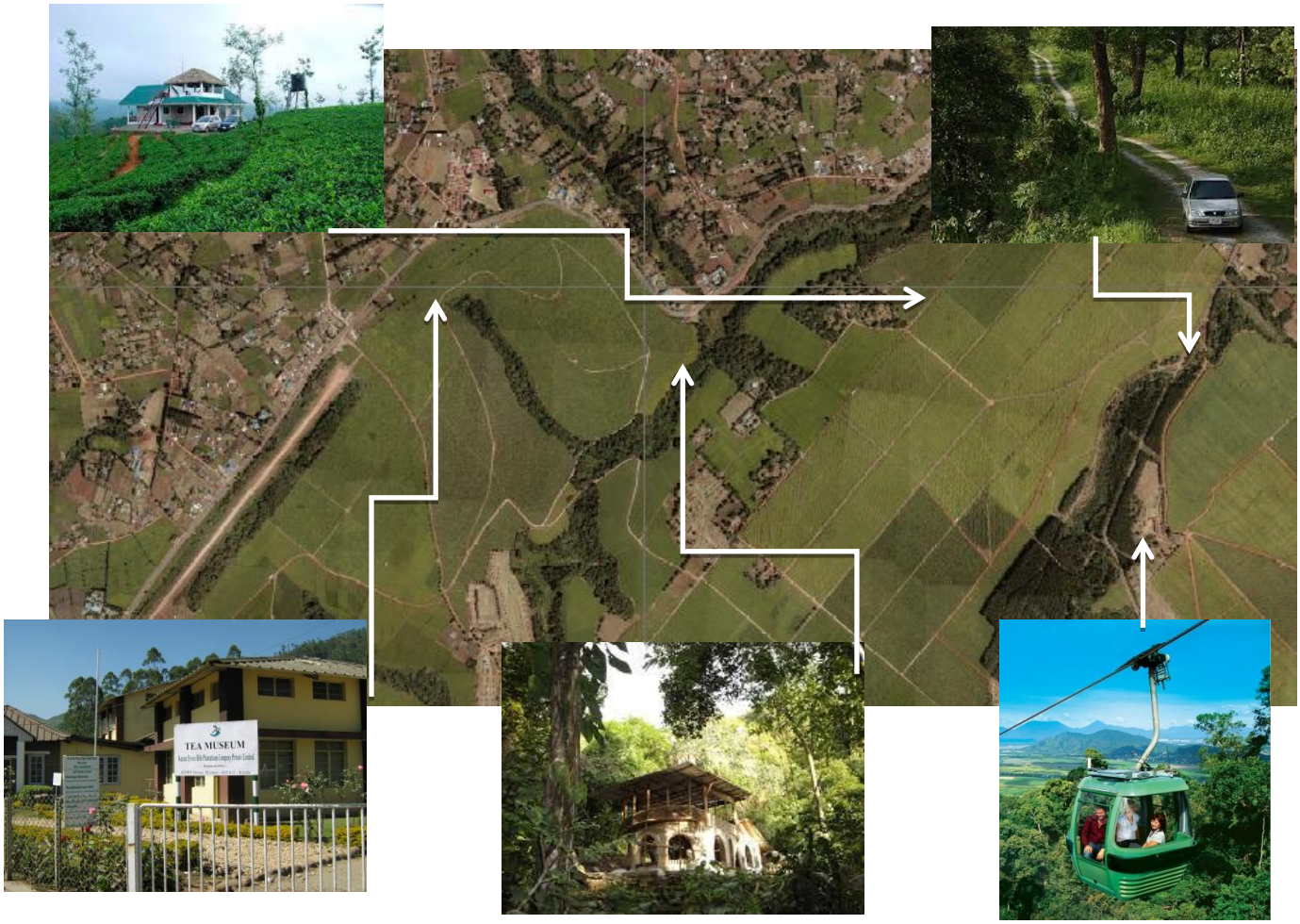
The Tea Plantations and Forest has a lot of potential for development as tourism site in terms of the facilities that can be added in the forest to enhance its attractivity

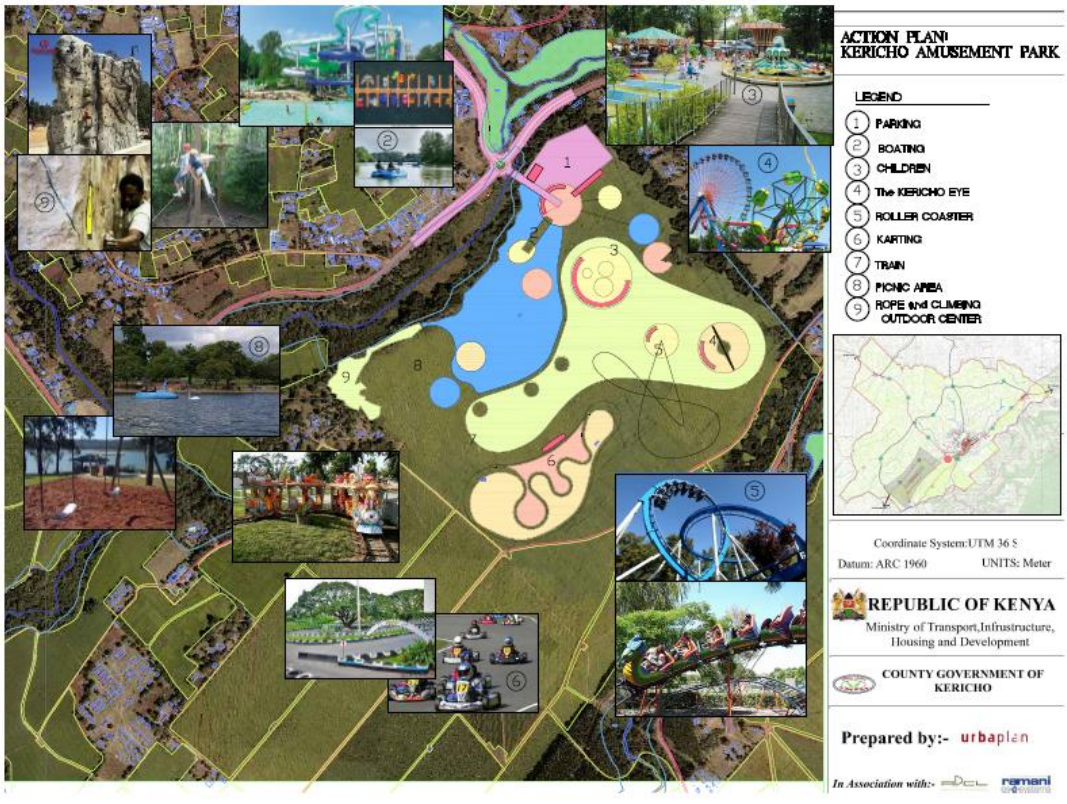
6.3.4 Objectives Of The Action Area Plan

- To enhance the Tea Plantations and forest as a tourism destination of choice in the region

6.3.5 Proposed Interventions

- Create a gate to the forest near the Kerenga aerodrome
- Gravel the key roads to make them all weather
- Create an animal sanctuary to attract more visitor
- Create a “Tea House” as a tourist information centre
- Develop an Eco-lodge in the Plantation
- Legislate by-laws to address encroachment and illegal logging
- Acquire Chelimo Area for development of County Complex to include Executive, Legislature and Judiciary. Other facilities to include Level 6 County Hospital and other priority public service facilities


TEA MUSEUM


ACTION PLAN:
KERICHO AMUSEMENT PARK
LEGEND
1 PARKING
2 BOATING
3 CHILDREN
4 The KERICHO EYE
5 ROLLER COASTER
6 KARTING
7 TRAIN
8 PICNIC AREA
9 ROPE and CLIMBING OUTDOOR CENTER
Coordinate System:UTM 36 S
Datum: ARC 1960
UNITS: Meter
REPUBLIC OF KENYA
Ministry of Transport,Infrastructure, Housing and Development
COUNTY GOVERNMENT OF KERICHO
Prepared by:- urbaplan
In Association with:-

6.4 ACTION AREA PLAN 3: KERENGA AERODROME

6.4.1 Existing Situation

There Kerenga Aerodrom located about 6 km from the CBD is not functional for scheduled flights due to the short and narrow runway. The road to the airstrip is a gravel road linking the highway from Kericho to Sotik. As part of the multimodal concept of transport development the air transport needs to be addressed as a special area.

6.4.2 Issues and Challenges

- Poor road access
- Short runway (1.2km)
- Poor condition of runway
- Inadequate support infrastructure

6.4.3 Opportunities

The airstrip is a potential gateway for tourists/travelers wanting to reach Kericho and its hinterland quickly and efficiently

6.4.4 Objectives Of The Action Area Plan

- To provide air mode of transport as a driver of the town's economy

6.4.5 Proposed Interventions

- Extend the runway to a length of 2 km as well as widen the runway strip by 50m and 90m to the North and South respectively.
- Develop a terminal building for passengers
- Upgrade the service road from the aerodrome to bitumen standards
- Provide street lighting on the road

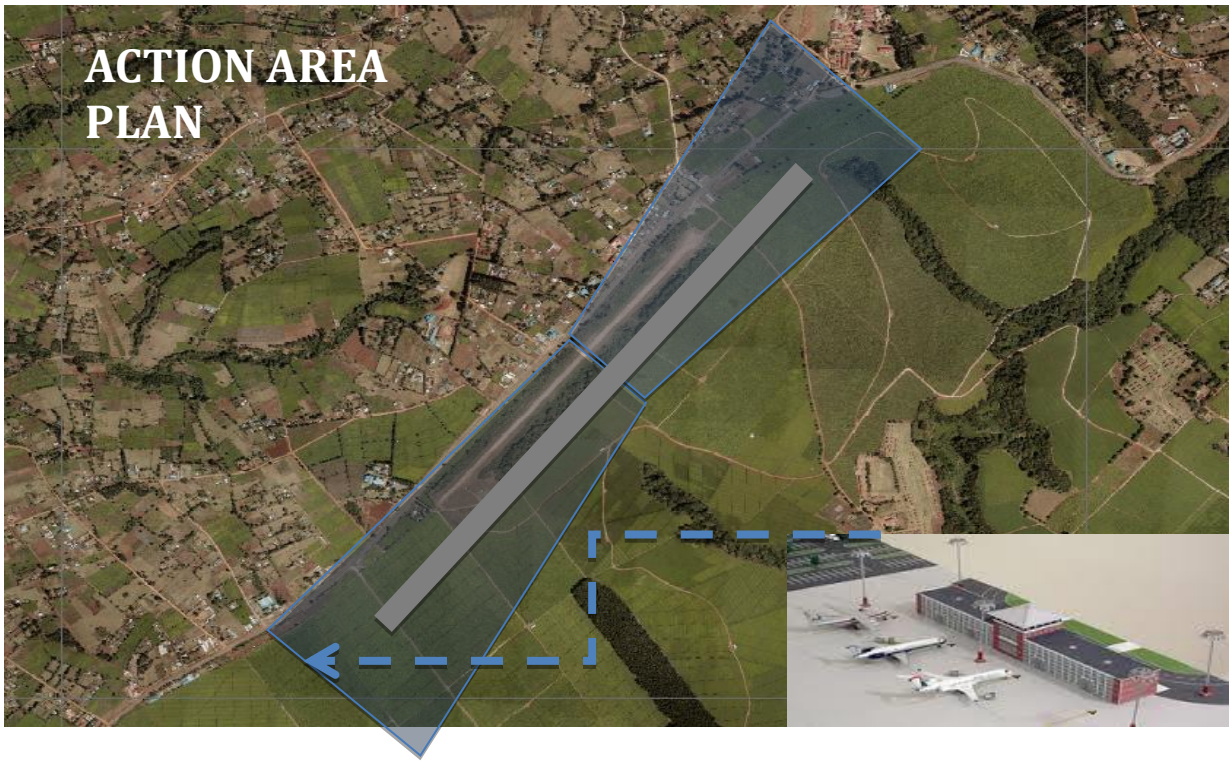


Figure 6-2: Proposed Development Kerenga Airodrome

6.5 ACTION AREA PLAN 4: KAPKUGERWET,KAPSUSER AND KAPSOIT

6.5.1 Existing Situation

The planning area has three nodes located on the arterials linking Kericho to towns in the region. These nodes have grown as commercial centres driving the local economy. They are growth centres that provide alternative central place function within the planning area. However there is poor integration of these centres within the economy of Kericho town.

6.5.2 Issues And Challenges

- Lack of specialized services like police, fire brigade, public park
- Spontaneous growth along the highway creating unplanned sprawl
- Unclear factors that would drive future growth

6.5.3 Opportunities

To reduce the urban sprawl focus in development of the fringe areas of the town focus shall be in the nodes of Kapkugerwet, Kapsuser, and Kapsoit. These are being developed as Special Planning Areas with specific functions in each node to attract development.

6.5.4 Objectives Of The Action Area Plan

Develop the nodes as nucleus for Sub-Business Districts of Kericho Municipality

6.5.5 Proposed Interventions

- Transport terminus
- Public park
- Police Station
- Covered Market with services
- Commercial Buildings with harmonious design
- Light industrial parks for SMEs
- Residential Designed Neighborhoods

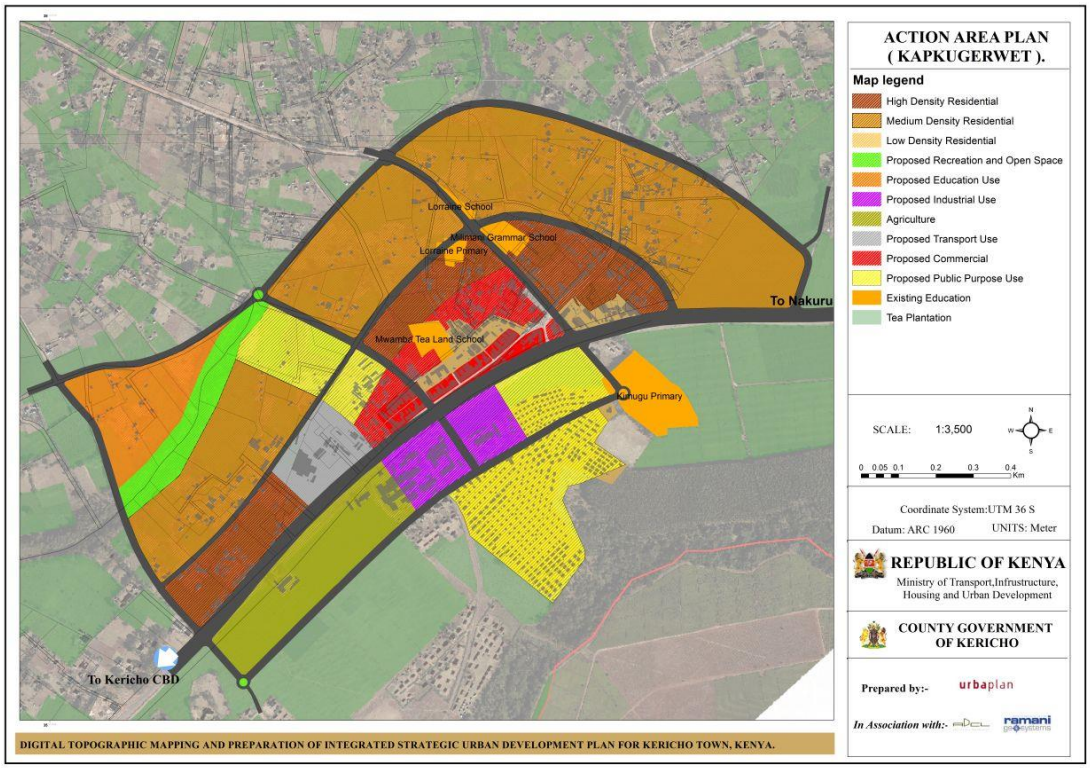


Figure 6-3: Proposed Development Kapkugerwet (Brooke)

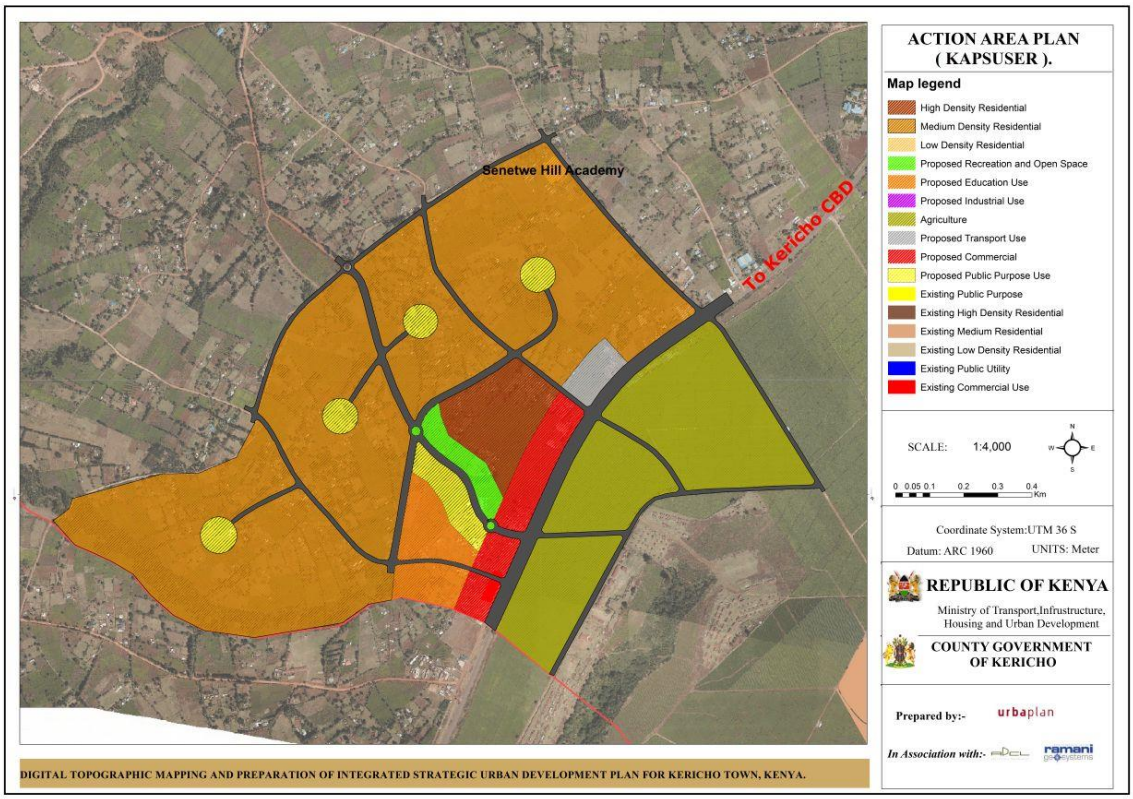


Figure 6-4: Proposed Development Kapssuser

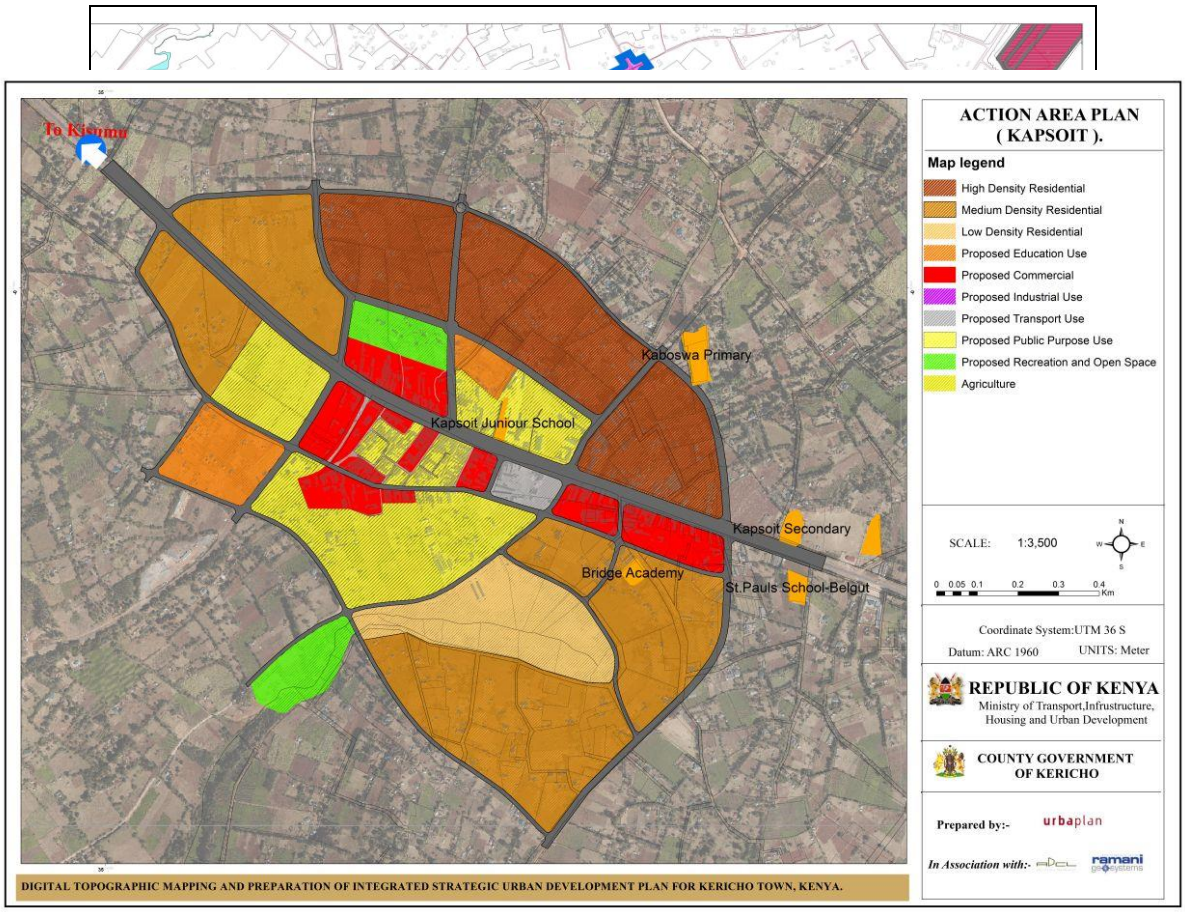


Figure 6-5: Proposed Development Kapsoit

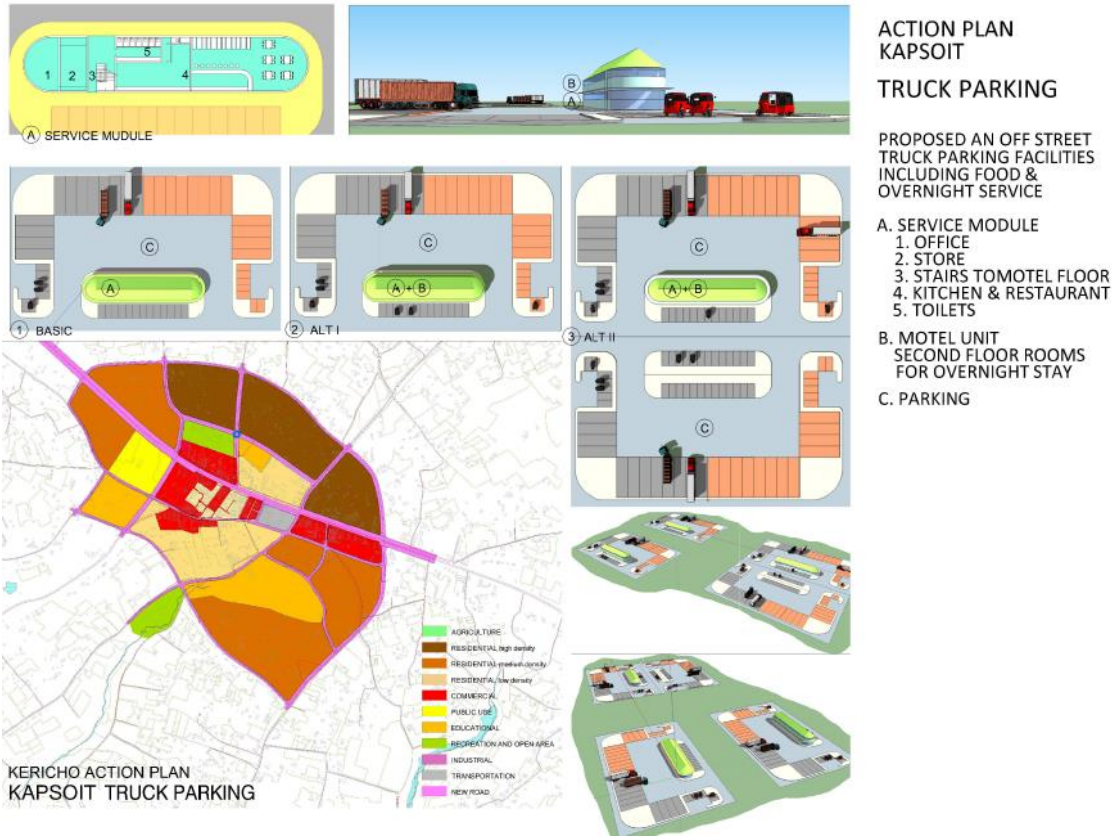


Figure 6-6: Truck Parking Facility in Kapsoit

7 DEVELOPMENT CONTROL AND ZONING REGULATIONS

(Note: Adapted from UDD Documents)

7.1 INTRODUCTION

7.1.1 Development Control

Development controls have been defined as the mechanism through which entire process of urban development is regulated to achieve the objective of promoting overall benefit of the society and creating a distinct image of the town. It includes guiding the development and use of land, curbing misuse of land and promoting rational and orderly development of built environment. Development controls are required to meet situations and contexts which are generally static. In this context they tend to become too rigid and complex.

Looking at the far reaching impact and implications of the development controls on the growth and development, character, fabric and personality of an urban area, they need to be framed with great care and abundant caution. Considering the larger public interest and general welfare of the community, formulation of the development control should satisfy the basic requirements of the health, safety, convenience, economy and amenity.

7.2 BUILDING CONTROL STANDARDS

All the buildings are subjected to different development controls for regulating their design and construction. The application of the development controls have been largely dictated by the category of buildings, location of the site, size of the site and need to regulate the building design/architecture etc.

7.2.1 Residential Use

Categorization of the residential land use should be based on development density and level of services (to avoid segregation of people)

Table 7-1: Residential use

	Minimum Land Size	Maximum Plot Size	Plot Ratio
Low density	0.2		
Bungalow		50%	
Maisonette		50%	1.3
Medium density	0.045		
Bungalow		65%	1.4
Maisonette		65%	1.4
Multi-familydwelling		65%	1.4
High density	0.03		
Row housing		70%	1.6
Detached		70%	1.4
Semi-detached		70%	

7.2.2 Mixed Use Regulations

Mixed-use development is a type of urban development that blends residential, commercial, cultural, institutional, or industrial uses, where those functions are physically and functionally integrated, and that provides pedestrian connections.Mixed-use development can take the form of a single building, a city block, or entire neighborhoods. The term may also be used more specifically to refer to a mixed-use real estate development project—a building, complex of buildings, or district of a town or city that is developed for mixed-use by a private developer, (quasi-) governmental agency, or a combination thereof.

However there are no clear regulations to control such development. It is appropriate therefore to provide guidance on such use. In areas with mixed use the predominant use (occupying 50%) shall determine the regulation applicable, in so far as heavy industrial use shall not be allowed in mixed-use area. Efforts should be made to enhance mixed use in the Central Business District and the Nodes to make them active areas during day and night.

7.2.3 Commercial Streets And Areas

The business districts offers commercial and other related services that are used by the population of the town or urban area as a whole including the inhabitants of its hinterland. The most important requirements for a town centre are geographical centrality, accessibility to vehicles and pedestrians, ample parking space and have four different degrees of completeness in separating pedestrians from vehicles in a town centre:-

a) remove through traffic by constructing a by-pass or relief road;
b) interrupt continuity of streets within the centre by bollards or other means;
c) remove vehicles from street and provide vehicular access and parking at rear of buildings;
d) Provide vertical separation of vehicles and pedestrians by constructing roads and pedestrians ways at different levels.

The minimum size for a commercial plot should be 0.045 hectares.Plot length versus the width should not be more than 1:3. Building lines should be observed where roads range between 6-18 meters wide. The building line shall be 6 m.

7.2.4 Industrial Development

Consideration include

- excellent national/ international communication network;
- links with other firms e.g. those firms which produce component parts for the same product or those involved in separate stages of the same industrial process.
- Accessibility to labour, communication routes, and ample supplies of power and water and sewage disposal facilities
- Separation from residential areas through buffer zones for heavy industries

Land Requirements

The total site area for a major industrial area would therefore probably lie between 500-1200 acres for a town with a population of 200,000 and 5000,000. It will provide between 20,000 and 50,000 jobs, based on an average industrial density of 40 workers per acre.

For light industrial area the probable total area of each estate would range from 10-50 hectares, which would be sufficient to cater for 1500-7500 workers ata density of 60 workers per acre. An area of 10-20 small firms without creating congestion in the residential areas.

A ratio of 1:3 should be maintained for light and heavy industry.

7.2.5 Educational Use

7.2.5.1 Pre-Schools

These should be established in residential areas or within existing primary schools and within walking distances for all pre-school pupils.

It is desirable that a pre-primary school is attached to every primary school. These schools will therefore follow the same distribution pattern as primary school at 3500 catchment population. In addition, a kindergarten independent of primary school should be provided for 2500 catchment population.

7.2.5.2 Primary School

The idea here is to provide the neighborhoods with adequate land for primary schools with the future requirements being taken into account. It is recommended that one school would be required for a population of 3,500. It is suggested that an area of at least 3.25 ha should be set aside, for every 3,500 population in urban areas and 4000 population in rural areas. Include an area of about 0.25 ha for a nursery school.

7.2.5.3 Secondary School

One school of 480 pupils would be required for a population of 8000. The distribution of secondary schools should therefore be on the basis of school/population ration of 1:8000. Unlike a primary school, a secondary school needs more land for laboratories (chemistry, physics and biology), workshops, and assembly hall and playground for varied games. The land provided, at a minimum of 4.5ha, should therefore be used economically so as to leave room for future expansion.

Secondary schools require location within residential areas related to principle pedestrian networks. At gross densities of 50 persons per hectare and above, each secondary school should be within an easy walking distance i.e. relative to pupils' ages of 500 – 600 meters. At gross densities lower than 50 persons per hectare pupils will probably be taken to school by car or by public transport and facilities for safe collection and parking should be available

7.2.5.4 Colleges and University

These should be located in central location that would allow them be accessible to to a wide catchment. Although located in the town they serves a regional catchment. Location should also consider expansion and provision of accommodation and services to the student community.

A master plan should be prepared in accordance with these standards and all applicable laws and designs in such a way that all including facilities and proposed developments are functionally related and compatible and all academic buildings, classrooms and other facilities are in close proximity to one another.

7.2.6 Health Facilities

Kenya's healthcare system is structured in a hierarchical manner that begins with primary healthcare, with the lowest unit being the community, and then graduates, with complicated cases being referred to higher levels of healthcare.

Primary care units consist of dispensaries and health centres. The current structure consists of the following six levels:

- Level 1: Community
- Level 2: Dispensaries
- Level 3: Health centres
- Level 4: Primary referral facilities
- Level 5: Secondary referral facilities
- Level 6: Tertiary referral facilities

The town shall provide health care services up to Level 5. The County referral should operate at Level 5 by year 2027. Each Sub-county shall have a Level 4 hospital and the Wards will have Level 2 and 3.

7.2.7 Public Purpose

The size of plots, plot ratio and setbacks permissible in plots under public purpose shall be determined by the specific nature of the public purpose. As a guide however up to 10% of the developable land shall be allocated for public purpose. This should be distributed in Central locations depending on the nature of the activity.

7.2.8 Recreational Facilities

These include such facilities as major open spaces (parks and buffer zones), stadia, sports complexes, theatre, cinemas, restaurants, etc.

These demand the market of a total urban population including local and foreign tourists. It is not possible to fix standards for open spaces at the urban level as these essentially develop from opportunities in the environment. However, specific recreational spaces are preferred to mere open spaces.

(a) Major Parks

Although each park will have its own special character as determined by its topography, historical associations and immediate surroundings, it should however be able to provide a wide range of recreational opportunities from among the following:-

(i) Areas of visual relief screened from surroundings:

(ii) Areas for setting in quietly with scented gardens, colour gardens, flower and shrub displays, small enclosures, etc:

(a) Neighborhood Parks

These should be provided at best in association with Community Social Hall within residential neighborhoods

7.2.9 Standard/ Norms For Fire Safety

The National Planning and Building Code 2009 provides for what is required for fire safety at different sites and situations.

7.2.9.1 Building material

Type of building materials or methods used should be in a position to resist in order to minimize the spread and intensity of fire. This shall range from 60 minutesfire for some minutes

7.2.9.2 Emergency Routes

Any building of a height more than three storey should be provided with not less than two escape

routes as long as the exit is more than 30 meters. The route can up to a maximum of 1900mm for 200 people but not less than 1100mm

7.2.9.3 Fire Hydrants

These should be provided within the various locations in the town. Hydrants should not be used for any other purpose other than fire protection without express permission from the Fire Department. Public fire hydrants should be located in streets or roads dedicated to public use, in any permanent amusement park or exhibition ground, shopping centre or group housing, cluster housing, or town house complex ground or raised hydrants. They should be placed at a distance not greater than 90m from these facilities.

7.2.10 Standard/ Norms For Electricity Connections And Street Light

7.2.10.1Power Connection

Kenya Power and Lighting Company (KPLC) has the responsibility of providing electricity connection to users. This is done on application and approval. Connections are effected on payment of necessary fees. The procedures are controlled by KPLC.

Way-leave for transmission lines regulations are also provided as follows:

Table 7-2: Way-leave transformation lines regulations

Capacity of Line	Way Leave
11KV	10m
33KV	20m
40KV	20m
66KV	30m
132KV Single Circuit Towers	50m
132KV Double Circuit Towers	60m

7.2.10.2Street Lighting

Street lighting steel poles are placed at an interval distance of between 30m – 35m depending on the wattage used and height of the poles. The higher the wattage the greater the interval distance between the poles.

The height of the poles depends on the design but average 8m from the ground. Flood lights have mast that go as high as 20 meters.

7.3 LAND USE ZONING REGULATIONS

Zoning is an exercise of a municipality's "police powers" to protect the public health, safety, and welfare. These powers are granted to municipalities by the State as an extension of its powers. It is this same set of powers that allow government to set speed limits on highways, require drivers of automobiles to be licensed and prohibit the use of flammable, celluloid film in movie theaters. As described below, the concept of the public's health, safety, and general welfare has expanded since the adoption of early zoning ordinances. Conventional zoning is the division of a municipality into districts for the purpose of regulating the use of private land. A zoning by-law consists of a text and a map or a series of maps. The map establishes the districts; the text, the land uses allowed in each

district, and the standards that are applicable to each of the districts. Administration, enforcement, and appeal procedures, as well as procedures that govern proposals for changes to both the text and the map are established by the by-laws. The differences between the standards established for each zone should reflect the decisions of the community with regard to land use and will resultantly affect the way land is used and how the community grows.

7.3.1 Residential Use Zone

Activities allowed in Residential Zones:

i. Residences – Bungalows, multi-family dwellings (multi-storey flats/apartments), rowhousing, detached, semi-detached, residential-cum-work
ii. Hostels, rental houses, old age homes, community halls, police posts, guest houses(not exceeding 200 sq.m in floor area),
iii. Day care centres and kindergartens
iv. Corner shops, small shopping centres, health facilities (dispensaries, nursing home,etc.)
v. Educational buildings, religious premises, library, gymnasium, park, technical training
vi. Centres, exhibition and art galleries, clubs, banks/ ATM, matatu stops/boda bodastands (not exceeding 100 sq.m in floor area), post offices, hostels of noncommercialnature

7.3.2 Commercial Use Zone

Activities allowed in Commercial Zones:

In the Commercial Zone, building or premises shall normally be permitted only for the following purposes and accessory uses:

i. Cinema Theatres subject to Cinema Rules issued from time to time, Assembly Halls, Colleges, Reading rooms, Higher Educational Technical and Research Institutions, Petrol Filling Stations, Automobile Show Rooms, Service Stations and Automobile Workshops with permission of parking vehicles occupying a site area not exceeding 200 sq.m. with installation not exceeding 10 H.P. All uses permitted with the special sanction of the Authority of Town Management Board.
ii. Commercial and business uses including all shops, stores, markets and uses connected with the display and sale of merchandise, either wholesale or retail excluding explosive obnoxious products and other materials likely to cause health hazards not exceeding an area of 1000 sq.m.
iii. Business Offices, Banks and other commercial and financial institutions occupying a floor area not exceeding 1000 sq.m.
iv. Warehouses, repositories and other uses connecting with storage or wholesale trade occupying a floor area not exceeding 1000 sq.m but excluding storage of explosive or products which are either obnoxious or likely to cause health hazards.
v. Manufacturing and service establishments and commercial uses using electric motors not exceeding 20 H.P. and/or employing not more than 20 workers excluding those that are obnoxious or hazardous nature by reason or odor, effluent, dust smoke, gas, vibration, noise etc. or otherwise likely to cause danger or nuisance to public health or amenity.
vi. All uses permissible in residential zone are permissible in this zone.

7.3.3 Industrial Zone

Activities allowed in Industrial Zones:

In Industrial Zone, buildings or premises shall be normally permitted for the followingpurposes and accessory uses:

i. All uses permissible in the Commercial Use Zone with the special sanction ofthe Town Management Board, except residential uses.
ii. Residential buildings for security and other essential staff required to bemaintained in the premises.
iii. All industries using electrical power utilizing machinery not exceeding 100H.P. or with employees not exceeding 100 number, but excluding allindustries of obnoxious and hazardous nature by reasons or odor, effluent,dust, smoke, gas, vibration etc. or otherwise likely to cause danger ornuisance to public health or amenity.

7.3.4 Institutional Area

Activities allowed in InstitutionalAreas:

In the Institutional Area buildings and premises shall be normally permitted for the following purposes and accessory uses, where the site area does not exceed 5 Ha.

i. Government and Semi-government Offices, Professional Offices
ii. Art Galleries, Museums, Aquarium, Public Libraries, Social and CulturalInstitutions and Religious Buildings.
iii. Hospitals, Sanatorium and other Medical and Public Health Institutions.
iv. Parks, Play Grounds, Swimming Pools and other Public and Semi-publicopen spaces.
v. Broadcasting Installations and Weather Station.
vi. Public Utilities, Storage and Public Yards, Municipal and CommunityFacilities.
vii. Installation of Electric Motors upto 20 H.P. may be permitted for the usesincidental to the uses mentioned in items (i) to (iv) above.
viii. Incidental residential uses for essential staff required to be maintained in thearea.
ix. Hospitals, Laboratories, Social and Cultural Conference Hall, ReligiousCenters, Guest Houses, Museum, Auditorium, Police Station, Jail, FireStation.

7.3.5 Open Space and Recreational Zone

Activities allowed in Recreational Zones:

In the Open Space and Recreational Zone, buildings or premises shall be normallypermitted for the following purposes and accessory uses:

1) All Public and Semi-public, Townand Neighborhood Parks, Open Spaces, Play grounds, Zoological and Botanical gardens, Nurseries, Museums

2) Installation of Electric Motors not exceeding 5 H.P. may be permitted for pumping water for gardening purposes.

7.3.6 Transportation Zone

Activities allowed in Transportation Zones:

In the Transportation Zone buildings or premises shall be normally permitted only forthe following purposes:

Roads, Goods Shed Terminals, bus stops, Bus Depot, Bus Terminals, TruckTerminals, Air Strip, Helipad, Warehouses, Storage, Container Freight Stations, Petrol Filling and ServiceStation.

7.3.7 Agricultural Zone

Activities allowed in Agricultural Zones:

In the Agricultural Zone buildings or premises shall be normally permitted only for the following purposes:

i. All agriculture uses.
ii. Farm-House, Building for Agricultural activities subject
iii. Diary and Cattle Farms, Fish Farms.
iv. Poultry Farms, Stud Farms.
v. Forestry.
vi. Storing and Drying of Fertilizers incidental to the agricultural activities.
vii. Petrol Pumps.
viii.

7.3.8 Airstrip Zone

Activities allowed in Airstrip Zone:

In the airstrip area the following considerations shall guide the development within the area and shall include the following;

i. Offensive Uses: Use or development for the purposes of noxious or hazardous Industry or of dangerous goods stores shall not be located within 300 metres of landzoned for residential or special use such as a hospital or school.

ii. Building heights: maximum height of buildings that are nearest to the airport shallbe determined by the Obstacle Limitation Surfaces requirements and shall be up toabout 9 metres on condition that the Obstacle Limitation Surfaces are notcompromised and about 15 metres for those outside the obstacle limitation surface.

iii. Compatibility of Land Uses: Ensure that generally any proposed use ordevelopment:
    - Will not affect airport operations through nuisance including birds, vermin, air pollution;
    - Will not breach aircraft and airport operations safety and security requirements;
    - Are compatible with and related to aircraft operations ;
    - Are uses that require separation from settled areas due to potential impact on an amenity;
    - Give preference to public and government uses and activities over private interests; and
    - Are, in the case of private uses and activities, leased at commercial rates.

8 IMPLEMENTATION PLAN

8.1 INTRODUCTION

The Implementation Plan for ISUDP indicates how the plan will be implemented over the next twenty years. This is designed to ensure that the vision of the town will be met through a systematized process that has clear timelines and auctioning.

8.2 PHYSICAL IMPLEMENTATION PLAN

The implementation plan indicates the time frame for implementing the various activities.
The implementation plan shows the sectoral projects, management structures and institutional responsibilities and how the implementation will be guided. It includes stakeholder roles and responsibilities in plan implementation.

8.2.1 Phasing

The prioritization of the projects are based on stakeholder prioritization. The projects are spread out in the 20 years in batches of five years for ease of management running up to year 2037. The proposed projects for implementation are presented in the table below.

IMPLEMENTATION MATRIX

Table 8-1Economic development implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Allocate land for new industrial areas	2.5	Ha																				
Notification of the land demarcated for industrial development	1	No																				
Allocate land for new commercial districts (Kapkugerwet, Kapsoit & Kapsuser)	55	Ha																				
Notification of the land demarcated for commercial development	1	No																				
Electricity Supply in the proposed commercial and industrial area	5	km																				
Construct motorable Roads within proposed Industrial area	5	km																				
Construct truck terminals	5	ha																				
Formulate county led SMEs policies	1	No																				
Lower transaction costs (Policy)	1	No																				
Policy on cottage industries and value chain development	1	No																				
Establish County led SMEs oriented financial institution	1	No																				
Establish water harvesting technologies,	3	No																				
Promotion of organic manure and high yield seeds	1	No																				
Dams for surface runoff for irrigation (Peri-urban areas)	5	No																				
Promote soil conservation and soil fertility	1	Town																				
Establish County funding for agricultural based activities	1	No																				

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Allocate Juakali traders designated areas in Kapkugerwet, Kapsoit & Kapsuser and urban core	0.5	ha																				
Training & capacity building on products improvement through County Trade Ministry (2 per annum)	40	No																				
Develop a Town Investment Policy	1	No																				
Develop Investment Information Centre	1	No																				
Give incentives to investors including serviced land and tax holidays (Policy)	1	No																				

Table 8-2: Environmental project implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
By laws for EIA	1	No																				
Conservation area management plans (CBD, Tea Plantations & Forest, Doinyosioyet Wetland, Kapsoit, Kapsuser, Kapkugerwet)	6	No																				
Conserve the Forest areas around Tea Plantations	10	Sq km																				
Conserve the riparian areas for the entire Doinyosioyet wetland system,	10	Sq km																				
Conserve riparian areas along the wetlands at Kaposit and Kapsuser markets	5	Sq km																				
Conserve riparian area along from the banks of Kimugu River banks along the entire river basin	5	Sq km																				

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Conserve Public parks (existing Uhuru Gardens and Moi Gardens in the CBD)	2	Sq km																				

Table 8-3: Recreation projects implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Neighborhood Park	20	1ha																				
Ward Level Park	2	1ha																				
Neighbourhood Playground	20	1ha																				
Stadium	1	5ha																				
Amusement park	1	30ha																				
Social Halls/ and Community Centres	12	0.25ha																				

Table 8-4: Disaster management implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Disaster Management Committee	1	No																				
Disaster Management Sub-Committee in Kapkugerwet, Kapsoit, Kapsuser	3	No																				
Disaster Management By-Law	1	No																				

Table 8-5: Water supply implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Increase water reticulation coverage to households in the built up areas	76,000	No																				
Increase tank storage capacity	4	No																				
Upgrade the water treatment works	100,000cm/day	1																				

Table 8-6: Sewerage and sanitation implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Increase sewerage coverage and capacity to households in the built up areas	76,000	No																				
Upgrade the sewer reticulation in the CBD	10	Km sq																				
Stop drainage of sewer into rivers and drainages	1	Town																				

Table 8-7: Stormwater drainage implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Establish surface runoff catchments for integration into the land use plan	1	Town																				
Drainage channels and outfalls integration from the CDB into the rivers'	10	Km sq																				

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Confine drains to natural drainage system to the extent possible.	1	Town																				
Land acquisition plan development for necessary compensation where necessary in CBD, Kapsoit, Kapsuser and Kapkugerwet	15	Km sq																				

Table 8-8: Solid waste management implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
A landfill site be identified and developed	1	No																				
A comprehensive study on solid waste management be undertaken to work out the best strategy for waste management in the town.	1	NO																				
Waste transfer stations in CBD (main commercial area, bus stage, market, stadium and hospital)	4	No																				
Waste transfer stations in Kapsoit Market	2	No																				
Waste transfer stations at Kapkugerwet market	2	No																				
Waste transfer station Kapsuser market	1	No																				

Table 8-9: Fire safety implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Sub-Fire station (Kapsuser, Kapsoit)	2	No																				
Fire Station Headquarters 9Upgrade)	1	No																				
Fire Hydrant (every neighborhood)	500	No																				

Table 8-10: Electricity and street light implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Grid network Coverage	100	%																				
Street Lighting	30	km																				

Table 8-11: Housing and informal settlement implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
Municipal Housing (low cost)	7,000	No																				
Road improvement to bitumen in residential areas (include Informal settlements)	40	km																				
By laws for affordable building material																						
By laws on tenure in Informal settlements																						

Table 8-12: Transportation implementation plan

Projects	Quantity	Units	YEARS																				
			Phase I					Phase II					Phase III					Phase IV				
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37				
The B1 road in Kericho shall have only 4 lanes in total; the two extra lanes will be allocated to bus stops and non-motorized transport;																							
Connection to Motobo and Nyagacho improved by two measures: o pavement of the existing road linking them to the B1 road after the Kisumu-Bomet roads junction o a new road creating a short-cut to reach the CBD through the Doinyosoiyet swamp near the County Referral Hospital;																							
Building a multilevel parking near the CBD																							
Prison relocated to Kapsoit land to be converted into buspark and multilevel parking																							
A system of bus stop on key arterials (one each 300 m in the urban area) ensure to cover all the main point of interest of the town	40	No																					
NMT lanes in all key roads	25	km																					
Pedestrianize 30% of roads in	3	km																					

CBD																							

Table 8-13: Tourism management implementation plan

Projects	Quantity	Units	YEARS																				
			Phase I					Phase II					Phase III					Phase IV						
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37						
Tourism Liason Office	1	No																					
Profiling attractions in the Circuit in Kericho (Consultancy)	1	No																					
Strategy to Support development of hotels through planning incentives	1	No																					
Establishment of Animal Sanctuary in Kapkugerwet	1	No																					
Establish a Cultural Centre at Kapsuser	1	No																					
Brand the Airport as part of the Tea Farm tour package	1	No																					
Create trails into the forest with attractions	20	Km																					
Develop an Eco Lodge	1	No																					

Table 8-14: Socio-cultural development implementation plan

Projects	Quantity	Units	YEARS																				
			Phase I					Phase II					Phase III					Phase IV						
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37						
ECD	46	No																					
Primary School	46	No																					
Secondary School	20	No																					
Level 5: Secondary referral facilities	3	No																					
Level 4: Primary referral facilities	10	No																					
Cemetery	1	No																					
Crematorium	1	No																					
Town Library	1	No																					
Community Library (Kapsoit, Kapkugerwet, Kapsuser)	3	No																					
Community Centre (Kapsoit, Kapkugerwet, Kapsuser)	3	No																					

Orphanage	1	No																				
Sub-Post Office in Kapsoit and Kapsuser	2	No																				

Table 8-15: Security project

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV					
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37					
Police Post (In neighborhoods)	6	No																				
Police Station 9Kapsoit, Kapsuser, Kapkugerwet)	3	No																				
Police County Headquarters (upgrade)	1	No																				
Prison (relocate to Kapsoit)	1	No																				
Juvenile Home (In Kapkugerwet)	1	No																				

Table 8-16: Institutional development implementation plan

Projects	Quantity	Units	YEARS																			
			Phase I					Phase II					Phase III					Phase IV					
			2017/18-2021/22					2022/23-2026/27					2027/28-2031/32					2032/33-2036/37					
Develop a full Planning Department to include Forward Planning, Development Control and Research	1	NO																				
Develop a GIS Unit	1	No																				
Establish a Towm Management Board																						
Establish ISUD Plan Monitoring Units																						

8.3 FINANCIAL AND HUMAN RESOURCE FRAMEWORK

8.3.1 Financial Resource Mobilization Framework

This section presents financial and human resource management proposal based on assessment of revenue and expenditure performance upto2012/2013 to 2014/15 and existing human resources. The objective of developing the resource mobilization framework is to create a financially viable, productive and responsive County.

The Physical Planning Act of 1996 (Cap 286, 1996) provides for the formulation of National, Regional and Local physical planning guidelines, policies and strategies. It further provides for the preparation of regional and local physical development plans in its section 16 and 24 respectively. The key areas targeted during the FY year 2013-2014 comprise of: a) Refurbishment of Residential buildings owned by the County b) Rehabilitation of County headquarter parking yard. The gross estimates of Ksh.58.4million was allocated which represents 2% of the total county budget for both recurrent and development expenditure. The sector received total exchequer issue of Ksh.15 million which included Ksh.5 million for development activities during the quarter. The total issue represented only 0.4% of the total county budget estimates. A transfer of Ksh.8.5 million to Public Administration sector was made to facilitate purchase of assets which took 80% of the recurrent issue. From the remnant, 46% was utilized on fuels, oils and lubricants, 15% on hospitality supplies, 4% on Domestic travels and subsistence and 1% on routine maintenance of assets to achieve net absorption of 66% over the period. Out of the development issue, Ksh.2 million representing 39% of the amount was reimbursed to National Ministry as partial repayment for devolved staff salaries working within the county under the sector .No tangible development activity was undertaken during this review period. One sees a paucity of resources allocated to the department and this will curtail its capacity to facilitate the implementation of the plan.

In an endeavour to make funds available for implementing development projects the County government is forging a new engagement with the business sector and development partners through which it will mobilize resources to build a better Kericho that meets the aspirations of the people. However, there is need for structured engagement to enhance the volume of capital being injected into the County. The County Government commits to spur the local economy, by creating a business climate that encourages innovation, investment and growth through urban physical planning. It anticipates to seal leakages in revenue collection while at the same time extend the revenue sources while ensuring efficiency in budget expenditure.

Budget execution at the county level can be achieved through rigorous capacity building, automated financial management systems and processes, prioritization and reprioritization budgetary provisions, close monitoring, evaluation and enforcement of performance contracting by the County Government.

Resource mobilization will be undertaken through various strategies:

- The largest source of revenue is from the National Exchequer accounting for 85% of the total.In FY 2015/16 it had 4,505,064,038 and in FY 2016/17 was increased to 4,861,021,577
- The county currently collects approximately KShs 70 million per annum in rates and rent. It is projected that upon completion of thepreparation of the roll, the revenue over the next five years will double to reach KShs 140M
- The current market in Kericho Town is small and congested. It has only 104 stalls

with a potential collection of Kshs 299,520 per month. It is therefore not possible to accommodate all the traders who are approximately 1200 within it and some of them end up hawking on streetpavements and thus evade paying market fees. Construction of an oriental market will promotebusiness environment for traders as well as increased revenue for the current amount toKshs.450,000 per month

- The county has several housing estates namely Moi estate, Belgut estate and Mama Ngina estate. The monthly rent currently being levied is too low compared to the existing market rates on similar houses. Review of the rents should see an increase in revenue
- Parking fees, Single Business Permits, advertisements, bus park fees, market fees, sale yard fees, boost the County's revenue. The county collects an estimate total from these sources kshs 106 Million
- Operationalization of the Public Private Partnership Act 2012 has been considered as a key strategy for infrastructure development
- Grants and loans will further boost the County's revenue

8.3.2 Human Resource Mobilization Framework

Forces at various levels influence changes in human resources strategies and directions. Those with the most direct effect include changes in the nature of the organization's mission, work and overall policy direction. Other forces are internal to the organization itself (its culture, work organization and management style), while still others originate outside the organization and are related to the global economy and other changes in society.

Above all, human resources management strategies are affected most directly by the changing nature of the organization's mission, work and overall strategy. A human resources management framework does not exist in a vacuum but is interconnected with the organization's mission and is subject to a number of forces, both internal and external.

The devolved government structure provides for a major rethink of the human resources necessary to effect the proposals in the ISUDP. The policy levelsrequires the operationalization of the Town Management Board. This shall be supported by a well structured team of officers in various departments who shall be charged with specific responsibilities for various sectors in the plan. The establishment of a fully fledges Planning Department is a prerequisite for effective planning. Such a department shall have Forward Planning, Research and Development Control Sections as a bare minimum.

Currently the County has two planner , one is the Chief Officer Planning. The Department of Lands, Housing, and Physical Planning has eight Land Surveyor.

The County has absorbed about 2,506 staff working on various devolved units with a wage bill approximating Ksh.1.02 billion annually

Staff capacity building is envisages as part of the plan implementation. A staff capacity assessment will help determine the gaps that need to be addressed to provide capacity for plan implementation. This is over and above what has been achieved with the staff members who were part of the planning process.

8.3.1 Environmental Implementation Framework

Phases of Implementation

The proposed ISUD is designed to achieve exactly this objective for sustainable land use plan. The ISUD develops a global policy for the land use aspects of the plan area and also guide sub-projects for implementation towards a harmonized land management systems and logical cost effective improvement and operations of the associated infrastructure. Key objective aspect of the ISUD is ensuring strategic activities that will not compromise on environmental quality and people's health and safety. Implementation of the ISUD is expected to follow the following general phases in addressing environmental and social aspects in the process of the plan implementation.

Phase 1: **The Plan Rollout –** Completion and adoption of the plan. It is noteworthy that the overall objective of environmental components the ISUD implementation is to achieve minimal impacts to the physical and biological environment. The policy and the intervention sub-projects in the short and long term will be designed to ensure compliance with established environmental standards and the carrying capacity of the environments as well as acceptance by the affected communities. Any review of the final policy focuses on this objective.

Phase 2: Plan Integration (including Environment and Social Aspects) – The ISUD should be subjected to a Strategic Environmental Assessment (SEA) process at this stage. This is a legal requirement that evaluates the plan with respect to its environment compliance and social linkages. Among the objectives of SEA is to guide investment plans, programs and projects involving related sub-projects with respect to environmental linkages. The SEA becomes the reference tool in environmental and social considerations throughout the ISUD implementation and particularly in regard to undertaking specific environment and social impact assessments for the short and long term sub-projects. Specific principles of SEA include sustainable use of natural resources, enhanced protection and conservation of biodiversity and inter linkage of social-economic and environmental factors. SEA is submitted to NEMA for review and approval.

The SEA process identifies environmental and social impacts and opportunities of mitigation measures into the plans implementation. The process also ensures that significant environmental effects arising from the plans are identified, assessed, mitigated, communicated to decision-makers, monitored and that opportunities for public involvement are provided." Once SEA is completed, each of the downstream developments related to the ISUD will individually be subjected to EIA requirements.

Phase 3: **Integration in the Plan Implementation Process** – This is the progress phase for environment and social integration through the plan implementation. It will involve four key aspects namely;

(i) Monitoring of the SEA,
(ii) Undertaking ESIA studies for specific plan projects when formulated and ready for implementation
(iii) Environment and social audits for social and economic activities for improvement opportunities as required by law
(iv) Decommissioning audits in the event of full or part removals of the any social or economic feature

Areas of Potential Impacts

The implementation phases of the ISUD may have impacts to the environment and social settings. The anticipated impacts for each phase are outlined below;

Source and Type of Impacts

Phase 1: ISUD Rollout
Rollout of the ISUD will give prospects of improved environment and social wellbeing. Interventions towards sustainable land use is a positive impact to the plan areas with benefits including reduced risks to conservation of sensitive areas, public health, reduced land degradation, improved environmental quality and quality of life to the residents. The current land use practices in the plan area of the town has contributed to degradation of land values and poses challenges on provision of services and amenities.

Negative impacts will, however, be felt on the social level as part of the ISUD implementation may involve low level social disruptions. Among the disruptions will be associated with land take in the preparation for expansions, new provisions and re-reorientation of public utilities and infrastructure. Among the areas of impacts will include the following;

(i) Improved services and amenities (access roads, sanitation, markets, schools, health centers, water supplies, cemeteries, etc.) that calls for expansion will be among with notable social impacts through potential loss of land and developments,
(ii) There are possibilities of new utilities and amenities, especially for the satellite towns where additional land may be acquired from the neighbourhoods.
(iii) Land will also be required for collective on-site sanitation facilities in areas not served with sewerage systems. This implies while a majority of residents in such areas will benefit, a few will have to give up land for the construction of the collective facilities including sewer pipeline way-leaves and septic tank locations.

Phase 2: ISUD Integration
This phase may involve the plan review and implementation strategies with respect to emerging environmental scenarios within and around the plan town and the whole County. Appropriate players will be called upon to own the respective responsibilities and integrate into their sectoral strategies for harmony. Among these will include;

(i) The Water Sector,
(ii) Land Use Sub-Sectors,
(iii) Environmental Conservation sector,
(iv) The Health Sector
(v) Agricultural Sector
(vi) Transport Sector
(vii) The County Development Planners.

It is during this stage that environment and social integration will be designed to provide a tool for environmental protection. This is the Strategic Environment Assessment. No impacts, therefore, are anticipated during this phase. However, intensive consultations will be undertaken to inform all relevant Sectors in their roles and expectations.

Phase 3: ISUD Implementation
ISUD implementation will involve a series of sub-projects towards realizing the plan objectives. The projects will be implemented to facilitate improved land use across the town and the satellite towns with specific focus on protection of environmentally sensitive areas. Positive impacts include the following;

(i) Improved land use practices
(ii) Enhanced enforcement initiatives on environmental standards, especially on industrial operations,
(iii) Improved efficient wastes and wastewater treatment and disposal
(iv) Formulation of intervention projects by the private and public sectors.

These are among the plan objectives with huge positive implications across the plan areas. The implementation sub-projects will be categorized as immediate/short term project, medium-term projects and long-term projects. The plan sub-projects will be physical activities with impacts such as follows;

(i) Waste generation (including spoil earth from construction sites)
(ii) Aerial emissions from construction equipment and dust,
(iii) Noise and vibrations from construction equipment, especially for works within habited and commercial areas,
(iv) Potential disruption of access roads and other amenities (water pipes and communication cables) from sewer pipelines,

Possible Mitigation of Impacts

Phase 1: Plan Rollout
This is more of the preparatory stage and the impacts above will be addressed before the actual implementation of the plan. In order to enhance the great positive impacts of the plan, the following actions will be required among others;

(i) Develop a forum for sensitization and awareness creation for the public in order to enhance ownership and participation during the implementation,

(ii) The social elements reflected in the plan will require to be provided with a special forum for implementation. These may include employment during the sub-projects, CSR initiatives, low priced connectivity, value addition to livelihoods,
(iii) Involvement in decision making on the proposed interventions

The mitigation measures for the social and environmental impacts in this phase will be on land take and potential social and economic disruptions. It will be necessary to identify the potential land requirements and areas of disruptions for necessary engagements and negotiations. Specific actions will include;

(i) Work out land required for the long-term expansions and/or provision of new sanitation facilities early and establish a **Land Bank** in this regard for across the entire plan area.
(ii) Undertake appropriate Resettlement Action Plans (RAP) studies for land identified and prepare necessary land acquisition strategies and compensation progarmmes. This will also be accompanied with securing the acquired land awaiting implementation of the sub-projects,
(iii) Sensitize affected landowners and the communities instilling a sense of ownership for protection.

Phase 2: Plan Integration
Ensuring strategic environmental principles have been integrated across through the plan and adopted by all players.

Phase 3: Plan Implementation
Following are mitigation measures

(i) All sub-project shall undergo individual and specific Environment and Social Impact Assessments and submitted to NEMA for issuance of License,
(ii) License conditions shall be integrated into the project implementation,
(iii) Appropriate environment professional support will be sought for all intervention plan sub-projects
(iv) Environmental and Social Management Plan (ESMP) for the intervention sub-projects shall be aligned to the Strategic Environment Assessment (SEA) developed for this plan. The following are the key management aspects;
    - ✓ Management Plan Principles
    - ✓ Management Responsibilities
    - ✓ Environmental Management Guidelines
    - ✓ Environmental Education and Awareness Raising
    - ✓ Decommissioning Process

8.4 ACTORS AND FRAMEWORK FOR IMPLEMENTATION

The County Government Act 2012 provides the legal framework for plan implementation. This is vested in the Town Management Board.

8.4.1 Town Management Board

The management of Kericho municipality shall be vested in the county government and administered on its behalf by—

(a) a board constituted in accordance with section 13 or 14 of the Urban Areas and Cities Act

(b) a manager appointed as per the act

(c) such other staff or officers as a the county public service may determine.

8.4.1.1 Functions of a board

(1) Subject to the provisions of this Act a board of a city or municipality shall—

a) oversee the affairs of the city or municipality;
b) develop and adopt policies, plans, strategies and programmes, and may set targets for delivery of services;
c) formulate and implement an integrated development plan;
d) control land use, land sub-division, land development and zoning by public and private sectors for any purpose, including industry, commerce, markets, shopping and other employment centres, residential areas, recreational areas, parks, entertainment, passenger transport, agriculture, and freight and transit stations within the framework of the spatial and master plans for the city or municipality
e) as may be delegated by the county government;
f) as may be delegated by the county government, promote and undertake infrastructural development and services within the city or municipality;
g) develop and manage schemes, including site development in collaboration with the relevant national and county agencies;
h) maintain a comprehensive database and information system of the administration and provide public access thereto upon payment of a nominal fee to be determined by the board;
i) administer and regulate its internal affairs;
j) implement applicable national and county legislation;
k) enter into such contracts, partnerships or joint ventures as it may consider necessary for the discharge of its functions under this Act or other written law;
l) monitor and, where appropriate, regulate city and municipal services where those services are provided by service providers other than the board of the city or municipality;
m) prepare and submit its annual budget estimates to the relevant County Treasury for consideration and submission to the County Assembly for approval as part of the annual County Appropriation Bill;
n) as may be delegated by the county government, collect rates, taxes levies, duties, fees and surcharges on fees;
o) settle and implement tariff, rates and tax and debt collection policies as delegated by the county government;
p) monitor the impact and effectiveness of any services, policies, programmes or plans;
q) establish, implement and monitor performance management systems;
r) promote a safe and healthy environment;
s) facilitate and regulate public transport; and
t) perform such other functions as may be delegated to it by the county government or as may be provided for by any written law.

Steering Committee:ISUDP proposes formation of a permanent Steering Committee of the Town Management Board headed by the Town Manager, to have meetings monthly to oversee implementation of ISUDP and all development works within the town. The membership of the Committee shall include all the heads of the Municipal Departments

Citizen Ward Committees for Plan Implementation: The involvement of community members in the plan implementation process will ensure fulfillment of legal requirements of citizen participation in implementation of plan. Therefore, ISUDP proposes a Citizen Ward Committee coordinated by the Ward Administrator, whose members will either be elected or nominated byresidents' associations. These Committees willwork with the Steering Committee in ensuring plan implementation.

9 PLAN MONITORING AND REVIEW

9.1 INTRODUCTION

What gets monitored gets done. This is the principle under which the monitoring and review plan is developed. The regular monitoring will make the projects more responsive to emerging needs of the town's residents. Long range plan needs to be reviewed every five years as there are likely to be many unforeseen changes during implementation. The monitoring and review plan are meant to ensure:

- Effective implementation of the plan within the plan period
- Timely response to the changing socio-economic needs of the people of the city
- Checking unintended growth outside the framework of the ISUDP
- Review of the appropriateness of the plan policies and the proposals.

9.2 PROCEDURE FOR MONITORING

9.2.1 Monitoring Unit

A dedicated Monitoring Unit with modern data processing facilities should be set up in the County Planning Department which would be responsible for collection and analysis of monitoring data and preparing regular briefs for sharing with the CEC in charge of Planning and the Town Management Board through the Town Manager.

9.2.2 Steering Committee

A high-level Steering committee under the Town Manager is also proposed to be set up for periodic review and monitoring of the plan. The committee would be responsible to the Town Management Board and provide quarterly reports to the Executive Committee of the County. To enable this support systems will be established by the Town Management Board to facilitate access to information and resources for effective monitoring.

9.2.3 Citizen Ward Committeefor Plan Implementation

It is proposed that for follow up planning and integrated implementation of the ISUDP, the Citizen Ward Committee are formed to work with Ward Administrators in following planning indicators set out in this ISUDP

9.2.4 Planning Indicators

The following would be the indicators of physical and socio-economic changes to be monitored periodically.

1. Demographic changes
2. Land use pattern, and Development
3. Housing increase, distribution and actors:
4. Social Infrastructure and services in terms of quantity and quality
5. Transport Provision in terms of modes, infrastructure, use and access
6. 6.Economic Aspects focusing on change in households by income, expenditure,
7. employment, development of new employment areas and enhanced informal sector

8. Environment quality, conservation and management
9. Natural Disastersprevention and mitigation

9.2.5 Spatial Monitoring

A GIS database built from the mapping exercise has been created as part of the ISUD Plan. The GIS is to be used as a monitoring tool for ISUD-Plan. A GIS Unit shall be set up in the County Planning Department to manage the database which it shall regularly update to track project implementation.Links shall be created between the spatial components and the revenue data base for purposes on also monitoring spatial development and finance.

9.2.6 Financial Monitoring

The Steering Committee will prepare an Annual Financial Report anchored on the Capital Investment Plan. The report shall be presented as part of the Project Reporting structure to the County Government. The Town Management Board shall strengthen the Town Finance Department with a clear mandate on monitoring ISUDP financial implementation.

9.2.7 Public Participation

Citizen participation shall be an integral part of monitoring. The Citizen Ward Committee will provide a regular briefing at each ward level and get feedback to help monitor implementation of the ISUDP. This will include the various stages of designing, implementing and maintaining any project.

9.2.8 Review

A midterm review of the ISUD plan shallensure adjustments if needed in the Plan implementation. This would address unforeseen events or policy changes that have direct effect on the Plan. The Steering Committee will drive this process with participation of the Citizen Ward Committees

9.2.9 Implementation Direction

Kericho ISUDP sets the direction for the development for the next 20 years. After approval and adoption of the ISUDP the subsequent phase will include the following key tasks:

- Prepare Strategic Environment Assessment Plan for Kericho ISUDP
- Strengthen the Planning Department in terms of human resources, resources, and logistics
- Establish Land Bank and develop measures to manage it.
- Implement priority projects after securing funds
- Prescribe Urban Design By-laws to guide and oversee physical developments.