Government of Kenya

Ministry of Land, Housing and Urban Development

Nakuru County Government

NAIVASHA TOWN INTEGRATED STRATEGIC URBAN DEVELOPMENT PLAN

(2014-2034)

FINAL REPORT

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LIST OF ACRONYMS

AFD:	Agence Francaise de Development
BCR:	Business cum Residential
CBD:	Central Business District
CBO:	Community Based Organizations
CIP:	Capital Investment Plan
EMP:	Environmental Management Plan
ESA:	Environmental Significant Area
GoK:	Government of Kenya
IDA:	International Development Association
ISUDP:	Integrated strategic urban development plan
KeNHA:	Kenya National Highway Authority
KERRA:	Kenya Rural Roads Authority
KFS:	Kenya Forest Service
KISIP:	Kenya Informal Settlements Improvement Project
KMP:	Kenya Municipal Programme
KURA:	Kenya Urban Roads Association
KWS:	Kenya Wildlife Service
LAC:	Lake Access Corridors
LNRA:	Lake Naivasha Riparian Authority
LPG:	Liquefied petroleum gas
N/A:	Not Applicable
NAIVAWASS:	Naivasha Water and Sewerage Company
NCG:	Nakuru County Government
NEMA:	National Environment Management Authority
NMT:	Non-Motorised Transport
NTSA:	National Transport and Safety Authority
SGR:	Standard Gauge Railway
SIDA:	Swedish International Development Agency
WRMA:	Water Resources Management Authority

EXECUTIVE SUMMARY

This report presents the final Integrated Strategic Urban Development Plan (2014 -2035) for Naivasha, a product of a process undertaken by the Ministry of Lands, housing and urban development, Nakuru County Government and other stakeholders. The process was executed by a consortium led by Real Plan Consultants in consultation with the stakeholders. The project is part of the Kenya Municipal Programme (KMP) that is being implemented by the Government of Kenya (GoK) with the assistance from international Development Association (IDA), Swedish International Development Agency (SIDA), Agence Francaise de Development (AFD) and Italian Government.

The main purpose of the strategic urban development plan is to formulate a framework to guide the development of Naivasha to 2034. The plan strives to contribute towards achieving the national and local development aspirations as enshrined in the Sustainable Development Goals (post 2015) and also elaborated in the Kenya Vision 2030. This is Kenya's current development blue print that seeks to transform Kenya to a medium income country providing a high quality life to all its citizens by the year 2030.

Naivasha is arguably one of the fastest growing urban centres in Kenya. One of the main obstacles to the development of Naivasha is the lack of a physical development plan. This is manifested by the increasing land use conflicts, narrow roads, poor drainage, inadequate public amenities, overcrowding, depreciation of investments, environmental degradation, loss of aesthetics and the general lack of spatial order.

The strategic planning process involved an assessment of the development constraints, potentials and an envisioning process. The methodology took into account the wishes and aspirations of the stakeholders. It was an all-inclusive process that saw active participation by the consultants and stakeholders including NCG and GoK agencies, NGOs, CBOs, international agencies and local communities. The stakeholders fully participated data collection stage, verification of situational analysis and draft plan proposals.

Following this process, it was established that planning for Naivasha would require critical focus on its opportunities and competitiveness. Critical development factors that required considerations included the rich agricultural hinterland, proximity to Nairobi, the diverse tourism potential, the emerging industrial, conferencing and commercial activities, the dynamic and cosmopolitan outlook and the need for the sustainability of the environment.

The outputs of the strategic urban planning process are multifaceted and include Digital Maps, Structure Plan, Action Area Plans, Detailed Area Plans, and sector plans. The sector plans comprised of transportation strategy, Environment management plan, culture and heritage conservation plan and disaster management plan. Besides these, other project outputs were the formulation of various Planning Policies.

The structure plan delineates Naivasha into 28 broad zones. It is further delineated in 155 zones by the detailed land use plan. For each zone, planning regulations are specified indicating

guidelines such as permitted land use, types of dwelling units, and the number of dwelling units, minimum plot sizes, ground coverage, plot ratios and parking areas among others. They will be critical in the consideration of development applications that will be submitted to the county for approval such as building plans, changes of use, extensions of use, extension of leases, subdivisions and amalgamations of land among others.

The preparation of the plan also required formulation of a number of planning policies intended to guide the development of various sectors. Policies are essentially subject plans and affect specific planning issues. They include outdoor advertisements, parking, landscaping and greening, change of use, extension of use and urban agriculture policies.

Implementation of the ISUDP is expected to provide solutions to most of the concerns critical to development in Naivasha. It is anticipated that the plan will be a significant step towards achieving the development vision of Naivasha: to be a *Well-planned Lake City*, providing high quality tourism experiences and world class conference facilities, leading in geothermal energy production and being a centre of excellence for horticulture farming.

PART ONE
BACKGROUND

This part gives a brief discussion on the project background, policy legal and administrative framework and finally the existing situation of Naivasha Town.

CHAPTER ONE
INTRODUCTION

This report presents the final Integrated Strategic Urban Development Plan for Naivasha Town. The ISUDP is a framework to guide the town's development up to 2034. It presents the proposed planning interventions to address challenges identified during the situational analysis and gives direction for future development scenario. Naivasha Town has developed without an integrated development plan which may be attributed to the challenges experienced. This this plan has been formulated to close this gap.

The plans have been prepared with reference to the situational analysis conducted in 2014 and inspired by various global, regional and local policy provisions and visions. The draft plan proposals have been presented to the stakeholders, thematic, focus groups in stakeholder and technical workshops. Therefore, this is the final output after the consultations and revisions.

It presents a background of the project, planning framework, summary of the situational analysis and project outputs. This is followed by the Structure, detailed land use and local area plans. Sector plans, planning policies, development applications and controls are also provided.

1.1 KENYA MUNICIPAL PROGRAMME (KMP)

The project is part of KMP being implemented by the Government of Kenya (GoK) with the assistance from international Development Association (IDA), Swedish International Development Agency (SIDA), Agence Francaise de Development (AFD) and Italian Government.

The objective of KMP is to strengthen local governance and improve urban service delivery. The programme has four components as listed below.

- Institutional restructuring and empowering local governments;
- Participatory strategic planning for urban development;
- Investment in infrastructure and service delivery that will facilitate realization of the Kenya vision 2030 for national transformation; and
- Programme management, monitoring and evaluation system.

The ISUDP falls under component II. The programme entails the preparation of a Physical Structure Plan, Capital Investment Plans, Community Mobilization and Participation in Planning Process, Establishing and Strengthening Municipal Planning and Social Development Services.

1.2 PROJECT OBJECTIVES

The ISUD plan has three main objectives. These are to:

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

The specific objectives are to:

- Produce accurate up-to-date digital topographic maps;
- Prepare digital cadastral layers in the same system as the digital topo-maps;
- Conduct participatory planning exercises in the planning area to identify citizens' priorities;
- Prepare short, medium term plans to guide urban development, including action area plans, subject plans, advisory or zoning plans, regulations and other reference materials;
- Prepare capital investment plans (CIP) for the planning area;
- Prepare strategic SPs, showing current and proposed land use and infrastructure (such as transport, water, drainage, power, etc.), housing settlements and environmental assets (10–20 years);
- Provide hands-on training to key staff of the planning department on plan preparation and implementation; and
- Prepare a monitoring and evaluation strategy to assist the planning department in reviewing and updating the plan in line with the ever-changing trends of the city.

1.3 LOCATION

Naivasha Town is located in the eastern parts of Nakuru County, 91km Northwest of Nairobi within the Rift Valley area as shown in figure 1 below. It is located about 80km west of Nakuru town along the Nairobi - Nakuru highway on the shores of Lake Naivasha, coordinates $0^0$43'S, 36 º 26'E. The town is at the floor of the Rift Valley and extends eastwards to the Escarpment, 2086m above sea level.

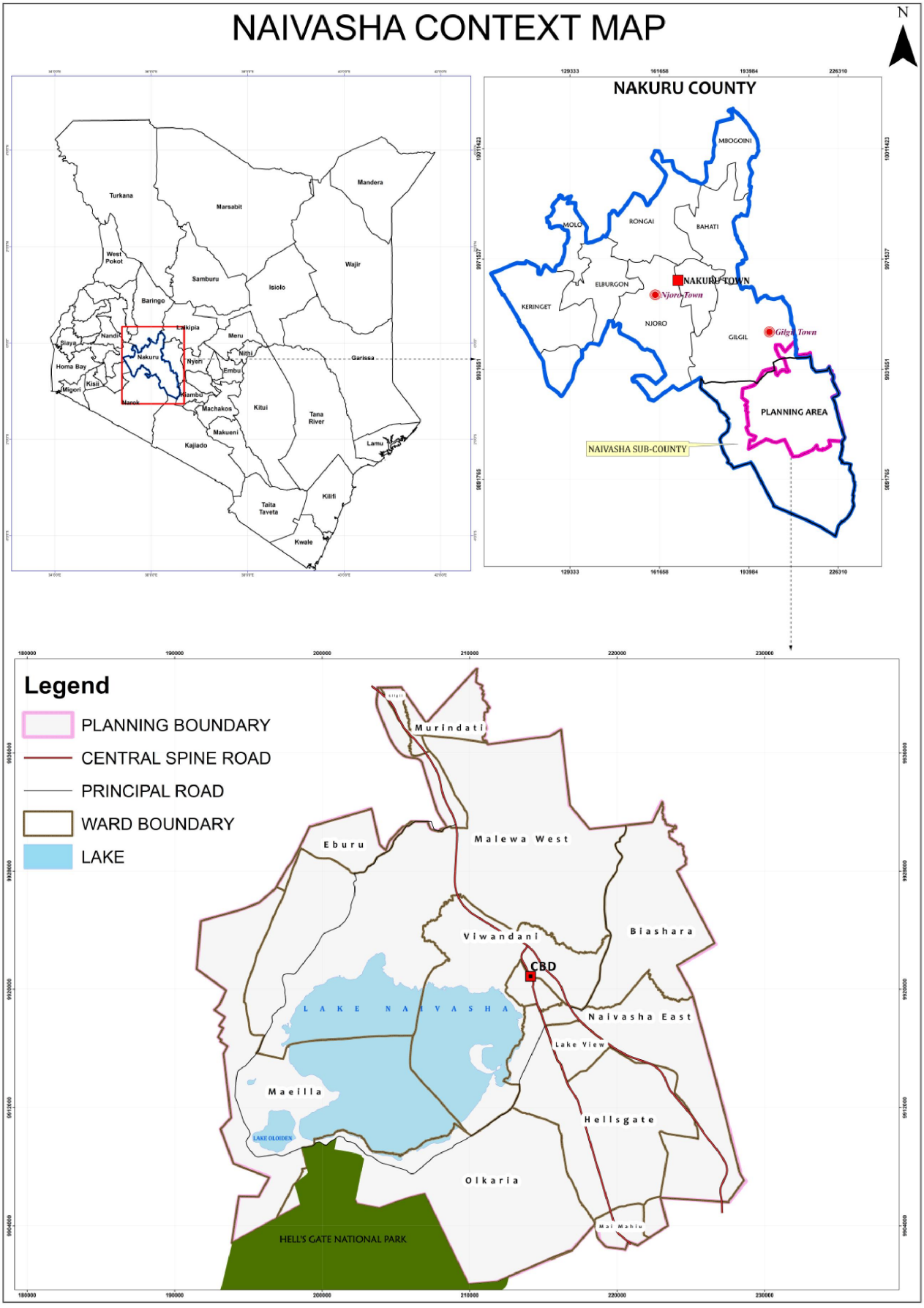


Figure 1: Locational context

1.4 PLANNING AREA

Naivasha is the second largest town in Nakuru County after Nakuru. Nationally, Naivasha leads in the floriculture industry. It is an emerging town for the hospitality industry in special reference to conferencing and tourism. It is also a significant part of the larger Lake Naivasha Basin and leading in the geothermal production. Key features in Naivasha Town include Hell's National Park and Lake Naivasha.

The planning area covers Naivasha and part of Gilgil Sub Counties an area of 951Km^2. It extends 14km from the Naivasha CBD along the A104 to Ihindu area as shown in figure 2 below. The boundary is also marked by the escarpment which forms the border with Nyandarua County. The area stretches along the escarpment up to Ol-Morogoi farm to the north and along the eastern boundary of Ndabibi farm. It also runs easterly cutting through the park and Kedong ranch towards Maraigushu and covers the entire Lake Naivasha. Table 1 below outlines some key facts about the planning area.

Table 1: Facts about the planning area

Planning area	❖ 951 Km^2 ❖ 13% of County Area (7497 Km^2) ❖ 0.2% of the National area (580,367Km^2) ❖ 2086m above sea level ❖ coordinates $0^0$43'S, 36 º 26'E ❖ 91km NW of Nairobi
Population	❖ 272,138 – Year 2015 ❖ 674,290- Year 2034
Sub counties composition	❖ Naivasha 70% ❖ Gilgil 30%
Wards	❖ 8 in Naivasha, ❖ 4 in Gilgil

Figure 2: Planning area

1.5 HISTORICAL DEVELOPMENT

The name Naivasha is a colonial misinterpretation of the Maasai name Nai'posha meaning "rough water" or "rippling water" in reference to many impulsive afternoon storms that frequented the lake. Below are key development periods of the town.

1900's – 1960: Naivasha was established as a railway outpost in the early 1900's. During this period, the town experienced slow growth. It served as divisional headquarters and Lake Naivasha acted as an Airstrip during the 1940-1950's. The settlement patterns during this period were scarce with large European farms. It served as an Industrial centre where farm produce was processed.

1960's & 1970's: Independence was attained during this period and Africans immigrated to the town. Some land was transferred to local communities by some settlers i.e. Kihoto settlement. The town developed within the leasehold land (Old town) set apart for town development.

1980's-1990: In this period, there were major shifts and transfers in land ownership. Land subdivision was undertaken by large company and cooperative farms i.e. Maraigushu, Mwiciringiri area. There was provision of public housing by the then county council through site and service schemes. Emergence of flower farming along the lakeshores occurred during this period. This accelerated immigration due to increased employment opportunities. In addition, there were conservation initiatives and declaration of Lake Naivasha as a protected area (RAMSAR site). During this period, there was inefficient development control.

Post 2000 : Rapid growth of commercialized floriculture was experienced. There was increased urban population growth and accelerated urban expansion. Conference tourism emerged and geothermal exploration initiatives intensified.
Further settlements and urban development was experienced. Gated communities, golf estates and leisure home development emerged. At this period Naivasha emerged as a sub county of Nakuru county.

Future Trends: Current trends indicate that in future, Naivasha will continue to intensify development in Conference Tourism, Specialized horticulture farming and industrialization, real estate development and energy production.

1.6 STATE OF PLANNING

The National Spatial Plan is still at formulation stage and concrete proposals are yet to be finalized. Stakeholders and consultative meetings have already been held. However, the plan will only make broad guidelines unlike the ISUDP, which will formulate detailed plans for Naivasha Town.

At the county level, the process of preparing the Nakuru County Spatial Plan has also commenced. Its objectives are to provide broad planning framework to guide spatial growth, guidelines for local area and detailed plans. Since the ISUDP process is already more advanced, it is expected that the county spatial panning process will be informed significantly by the ISUDP particularly with regard to Naivasha Town.

Naivasha Town

Naivasha Town lacks a comprehensive physical development plan. The old Town which constitutes a small section of the current urbanized area was first planned in the 90's and the

plan has not been updated since. It lacked development guidelines. Most of the previous planning in the old town was by way of PDPs. Development was guided by the special conditions provided in the letter of allotment or on leases.

The former municipality established in 1972 had not developed a physical plan for over 40 years. Within the extended areas, subdivision plans have formed the bulk development planning. Efforts to prepare development guidelines made in the past include strategies to manage developments targeting informal settlements and areas adjacent to the Lake. In this regard, the KISSIP Programme and efforts by Lake Naivasha Riparian Association are notable. Therefore, it is apparent that Naivasha Town lacks a comprehensive development plan to guide development. The ISUDP seeks to bridge this gap.

1.7 METHODOLOGY

The methodology took into account the wishes and aspirations of the stakeholders. It was an all-inclusive process that saw active participation by the consultants and stakeholders including NCG and GoK agencies, NGOs, CBOs, international agencies and local communities. The planning methodology was also in line with the existing regulatory framework.

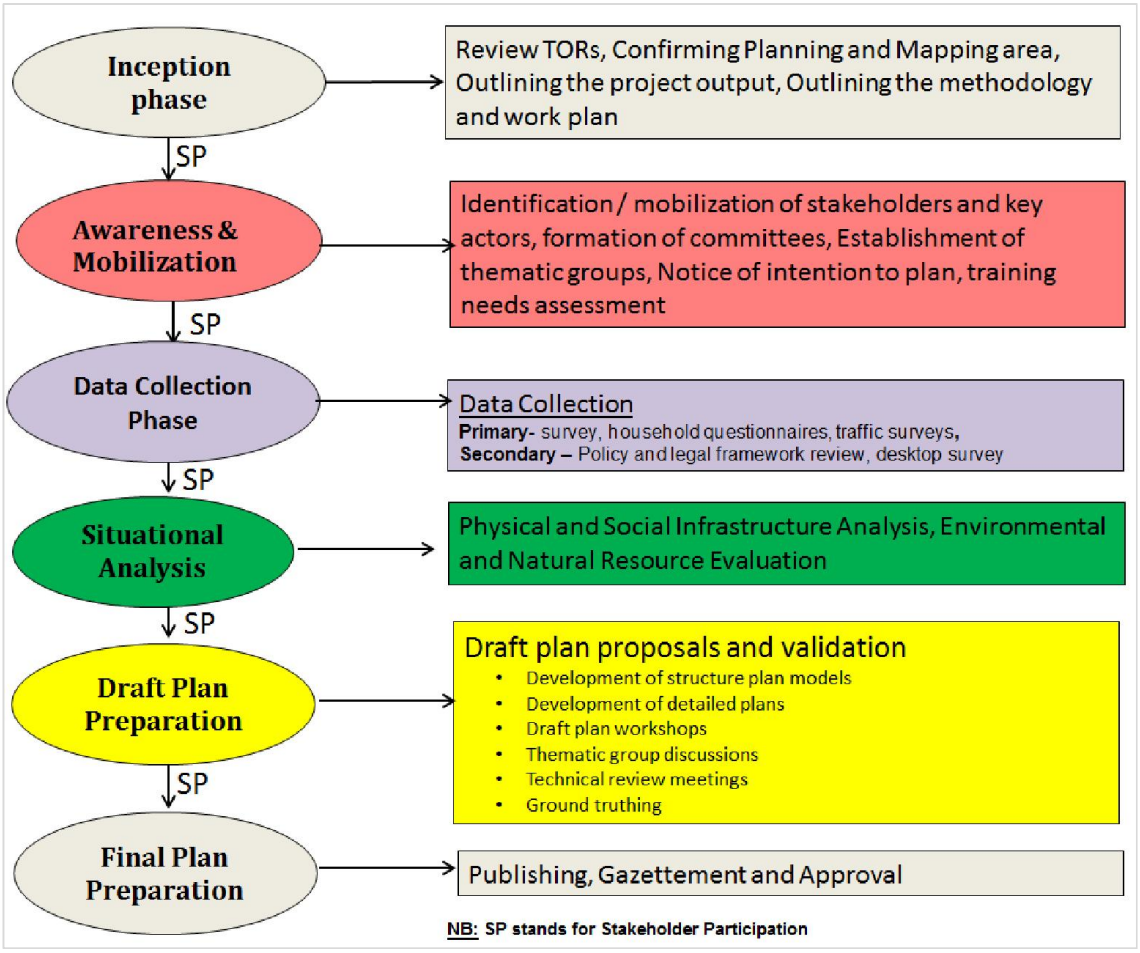


Figure 3: Methodology

The process was in six stages as shown in the table above. The initial stages sought to prepare a profile for Naivasha Town covering socio-economic, environmental and structural aspects. Base, thematic and issue maps were prepared during in this stage. The situational analysis report was compiled to present the same. Consultative workshops involving stakeholders were conducted to evaluate the report and develop a shared vision of Naivasha's future.

The situational analysis report was then review to provide the planners with adequate information to prepare the ISUDP. This helped the planning team develop planning proposals including land use, sector, policies and development control tools. This constituted the Draft Plan Proposal Report that was subjected to consultative meetings (workshops and thematic group discussions) of key stakeholders for comments and suggestions. Based on the comments and suggestions of the ISUDP report was compiled.

1.8 PUBLIC PARTICIPATION

In order to achieve specific objective three, which sought to conduct participatory planning exercises to identify citizen's priorities, several initiatives were undertaken. They include:

1.8.1 Public Notices

To sensitize and attract the involvement of the greater public, notices were published in daily newspapers. This was in the Standard and Taifa Leo dated 30th July, 2015. The notices were also simultaneously placed at strategic notice boards within the local area

1.8.2 Stakeholders involvement

Actors from different agencies were involved as shown in the table below. As evident, actors were drawn from the National Government, the County Government, opinion leaders, Civil society including NGOs, Churches, professional groups, businessmen, farmers, land owners, resident associations and the general public. The actors were identified in collaboration between the County Government, the ministry of Lands and Urban Development and the Consultants.

1. Workshops

Three stakeholder workshops were held and participation was as shown in the table below:

Table 2: Stakeholder workshops

workshop	Date	Attendance	Agencies /participants
Public Awareness and Mobilization workshop (KWS Centre)	20th August 2014	153	Nakuru County, CGG, Kenya Power, KenGen, KWS, UN-Habitat, Flower business, YMCA, PDCL, NLUF, NVS Sport Club, KISSP, KWUA, NSA, NMG Real Plan, Finix Consultant
Situational analysis validation workshop (KWS Training Centre)	28th January 2015	104	Nakuru County Government, NAPAC UN-Habitat, Naivasha LUF Naivasha environmental, Church Karagita water association Young Men Champs Viwandani Plot Owners, Surahi LTD KWS, NPA, , Olkaria, Highland Surveyors RPC and associates , Finix Consultants

Vision Setting Workshop (Panorama Park)	25 March 2015	104	Nakuru County Government, NAPAC UN-Habitat, Naivasha LUF Naivasha environmental, Church Karagita water association,Young Men Champs, Viwandani Plot Owners, Surahi LTD KWS, NPA, Olkaria, Highland Surveyors RPC and associates, Finix Consultants
Draft Plan Proposals Workshop (Panorama Hotel)	19th June 2015	133	NCG, UN-Habitat, KFS, WRMA, National government, KPLC, KWS, Council of Imam, Imarisha Naivasha, NPA, Mwereri Group, Ihindu horticulture farmers association, Naivasha Southlake SACCO, KWUA, NAPAC, LNRA, ERL, Naivasha Coaches Association, Industrial PLO, Highlands, RPC, Finix

Thematic Group Discussions

Three thematic group discussions were conducted as summarized in the table below. The discussions were carried out at the situational analysis and draft proposal stages.

Table 3: Thematic group discussions

Date	Group	Agencies
19th March 2015	Environmental	Public health, Imarisha Naivasha County survey, CGN Environment RPC and associates WARMA
	Socio-economic	LNRA, Enashipia Resort, RPC and associates
	Infrastructure	Fire and emergency response department Town electrician, Kenya Power RPC and associates
28th January	Environmental and socio-economics	Imarisha Naivasha, Nawasco, PDCL Motorbike, Karagita water users association Public health, Naivasha prayer team GBM, RPC and associates, Prayer Intercessory Chief, LNRA, County Government, MECAN
	Infrastructure	FINIX consultant, County government-MCA NCC, Villa View, RPC and associates
2nd -5th June 2015	Land use	County government Surveyor, LNRA, Geo-Ellipse, Subcounty administrator, RPC
	Infrastructure	County government-Ministry of housing, Karagita water users association, bodaboda riders association, Ihindu horticultural farmers association, RPC
	Socio-economic	Social service, Naivasha Coaches association, Karagita Landlords, County Ward administrators, chief, RPC
	Environmental	Imarisha Naivasha, WRMA, Sub-county environmental officer, Ihindu horticulture farmers, RPC

2. Monthly Technical Meetings

A number of monthly technical meetings were held for both Nakuru and Naivasha town. The objective of the technical meetings is to assess the stakeholders' progress in the project.

Table 4: Technical meetings

Date	Venue	Agencies
17 April 2015	Chief officer office ,Ardhi House Nakuru	▪ Nakuru county government ▪ MoLHUD ▪ Real Plan Consultants & Associates
13 March,2015	Chief officer office ,Ardhi House Nakuru	▪ Nakuru county government ▪ MoLHUD & UDD ▪ UN Habitat ▪ Real Plan Consultants & Associates
20th February 2015	Chief officer office ,Ardhi House, Nakuru	▪ Nakuru county government ▪ MoLHUD & UDD ▪ Real Plan Consultants & Associates ▪ Highland Surveyors
23rd January 2015	Naivasha Sub county Hall	▪ Nakuru county government ▪ MoLHUD ▪ UN Habitat ▪ Real Plan Consultants & Associates
17th December 2014	Chief officer office ,Ardhi House ,Nakuru	▪ Nakuru county government ▪ MoLHUD & UDD ▪ UN Habitat ▪ Real Plan Consultants & Associates
15th October 2014	Governor's office boardroom	▪ Nakuru county government ▪ MoLHUD & UDD ▪ UN Habitat ▪ Real Plan Consultants & Associates
18th July 2014	Chief officer office ,Nakuru	▪ Nakuru county government ▪ MoLHUD & UDD ▪ UN Habitat ▪ Real Plan Consultants & Associates
7th August 2014	Governor's office boardroom	▪ Nakuru county government ▪ MoLHUD & UDD ▪ Real Plan Consultants & Associates
25th April 2014	La Belle INN Naivasha	▪ Nakuru county government ▪ MoLHUD ▪ UN Habitat ▪ Real Plan Consultants & Associates

Project Review Meetings

Apart from the technical meeting there were three other technical reviews organized by the client. They include the inception report validation meeting held on 29th May,2015 at Transcom House, Nairobi, the situational and interim report review meeting held at UN Habitat offices held on 7th and 8th April,2015 and Draft plan proposals review held at Voi Safari Lodge on 26th August 2015. The consultants presented their work and received several comments from the client which were to make the final output better.

1.9 JUSTIFICATION OF THE ISUDP

The preparation of the Naivasha Town ISUDP is justified by a number of factors. First, the town lacks a comprehensive plan to guide physical development. This has been attributed to

a number of development challenges that could be resolved comprehensively by planning interventions. Some of the concerns include uncontrolled development, congestion and environmental degradation. It is thus envisaged that the ISUDP will address these challenges and more. It will also provide strategies to sustainably harness the human, natural and man-made resources available in Naivasha.

Secondly, the County Government of Nakuru has a constitutional obligation to prepare land use plans, both for the County and the towns therein and thereafter undertake proper development control. It is in this spirit that the ISUDP has been commissioned. It provides the County government with a framework to guide development and protect natural systems. This supreme law of Kenya provides that citizens have a right to live in well organized, clean, safe and healthy environments. The plan will not only help residents realize this but will as well assist the County government in guiding investments in the town and managing land values. While monitoring the investments, the County government will be able to collect revenue generated from those investments and as a result improve its revenue base.

The ISUDP also identifies catalytic projects that will significantly influence development in the area of focus. Such developments are anticipated to positively impact the living standards by improving the economy of the town. The plan will identify action areas and areas that require detailed planning. Therefore, this plan will act as a basis of future plans.

1.10 CONCLUSION

The project purposes to prepare the ISUDP for Naivasha Town. Its main components include structure, detailed, sector and action plans which are presented in this report. The preparation of the proposals is based on the findings of the situational analysis conducted earlier. Public participation has been crucial towards the formulation of the plan. This has been ensured through workshops, thematic and focus group discussions conducted during planning period.

CHAPTER TWO
POLICY LEGAL & ADMINISTRATIVE FRAMEWORK

The ISUDP has been prepared in fulfilment and in accordance with policy, administrative and statutory requirements. Its formulation has been guided by national, regional and local provisions and visions. The policy, legal and regulatory frameworks have been discussed below.

2.1 POLICY FRAMEWORK

Preparation of the ISUDP considers national policy guidelines that regulate mapping and planning processes. The planning process and outputs seek to integrate numerous sectors and provision of relevant policies. Key policies are discussed below.

2.1.1 The Kenya Vision 2030

The preparation of the ISUDP is in partial fulfillment of the Kenya Vision 2030, the country's economic blueprint. Vision 2030 is a product of highly participatory, consultative, and inclusive stakeholder's process conducted throughout the country and in all sectors of the economy.

The Kenya Vision 2030 is founded on three pillars i.e economic, social and political pillars. The economic pillar aims at raising Kenya's GDP to a sustained growth rate of 10% per annum. The social pillar targets at making a just and cohesive society with social equity, clean and secure environment. The political pillar seeks a democratic political system with a rule of law that protects individuals' rights and freedoms.

The strategy gives priority to investment in infrastructure through establishing a firmly interconnected network of roads, railways, ports, airports, water, sanitation and telecommunication. It seeks to promote environmental conservation to support economic developments.

The Vision 2030 strategy recognizes that 50% of Kenyan population will be urbanized by 2030. Therefore, it sees need to plan for decent and quality urban livelihoods. It advocates for adequate and decently housed citizens in a sustainable environment by way of Kenya's new nationwide urban planning and development campaign. This has already begun by way of the Strategic development plans for towns countrywide. The ISUDP for Naivasha Town represents such efforts.

2.1.2 National Land Policy (Sessional Paper No. 3 of 2009)

The land policy proposes development control as means to promote equitable and sustainable use of land. The preparation of the ISUDP will provide guidelines that responsible agencies can use as required. The policy recognizes land use planning as an important tool in land use management. It can address the current challenges and create new opportunities for sustainable human settlements.

2.1.3 National Housing Policy

The policy promotes planning of human settlements. This includes re-planning and re-development of areas with inadequate infrastructure and services. The ISUDP also takes into account these aspirations especially in the re-planning of the neighborhoods and informal settlements to provide basic services.

2.1.4 Integrated National Transport Policy

The Policy identifies challenges besetting the transport sector in Kenya as evident in Naivasha Town. The project purposes to incorporate the Policy and County vision when preparing the Naivasha's transportation strategy.

2.1.5 Draft National Urban Development Policy

The Policy aims to promote orderly, competitive, and sustainable urban development that enhances physical, social, and local economic development of urban areas. Like other secondary towns in Kenya, Naivasha continues to absorb large numbers of people. The ISUDP will cater for a population greater than what is expected from natural growth.

2.2 LEGAL FRAMEWORK

This refers to all the Acts and Legislative Instruments governing planning activities in Kenya. They include the Constitution, PPA, Urban Areas and Cities Act, EMCA and the County Government Act as highlighted below.

2.2.1 The Constitution of Kenya, 2010

The preparation of the plan recognizes the provisions of the Constitution. Chapter 5 classifies land ownership is public land, private land and community land. These three categories form the basis for administration, management and use of land in Kenya. Article 60(1) stipulates that land should be used equitably, efficiently, productively and sustainably. Article 67 establishes the National Land Commission whose key functions are to monitor and have oversight responsibilities over land use planning countrywide.

Section 15 of the Sixth Schedule provides for devolution of functions from national to county governments. This ensures effective preparation and implementation of the ISUDP to guide the urban development in Naivasha Town. Article 42 provides for the right to a clean and healthy environment. This provides a basis to promote sound conservation and protection of ecologically fragile areas such as Lake Naivasha and Hell's Gate National Park.

2.2.2 Physical Planning Act, Cap 286

The PPA regulates all physical planning activities in Kenya. It gives power to local authorities (currently the County Governments) to regulate development within their areas of Jurisdiction. It also stipulates the planning preparation and approval processes which has been adopted in this project. However, the act is out-dated but measures are in place to harmonize it with the current structure.

2.2.3 Urban Areas and Cities Act, No. 13 of 2011

The Act provides for management of urban areas. It provides for numerous urban areas categories. In reference to this Act, Naivasha Town qualifies to be conferred Municipality status. Less of an integrated development plan, it meets other conditions such as population (at least 250,000 residents as at the time of the last population and housing census). With the completion of this plan, the town can then apply to be conferred to a municipality status.

In accordance with this Act, every city, municipality and town is expected to operate within the framework of an integrated development planning. The plan will provide the basis for provision of infrastructural services. Therefore, the ISUDP is timely since it provides platform for the County Government to use for the aforementioned purposes.

This act has not been fully operationalized. It has been subjected to review guided by the transition authority. As a result, institutions established under the Act are not functional.

2.2.4 County Governments Act, 2012

This Act makes it mandatory for County Governments to plan their areas of jurisdiction for them to be allocated public funds. The plan is supposed to integrate economic, physical, social, environmental and spatial aspects.

The Act establishes the County Executive Committee to monitor the process of planning, formulation and adoption of the integrated development plans. The planning principles and objectives are also laid out. Principles such as effective resource mobilization for sustainable development guide the preparation of the ISUDP.

2.2.5 Environmental Management and Co-ordination Act (EMCA), 1999

The Act governs the management of environment in the country. It establishes NEMA to implement its provisions. Section 58 requires every development likely to impact on the environment to undertake an EIA. The EIA should be submitted to NEMA before project is implemented regardless of other licenses.

The act also provides for public participation in any major development decisions with an environmental bearing. It also establishes tribunal was established to deal with environmental offenses.

2.2.6 National Land Commission Act, 2012

Section 5 (2)e gives the NLC the responsibility of managing and administering all unregistered trust land and unregistered community land on behalf of the County Governments. However, NLC has to register the unregistered land within ten years from the commencement of the Act. The County Land Management Boards (under NLC) will manage public land within the Counties. This means that the NLC will have active presence in every County and is thus an important stakeholder in all land related matters to the ISUDP.

2.2.7 The Water Act, 2002

This Act of Parliament provides for the management, conservation, use and control of water resources and the acquisition and regulation of rights to use water. Further, it provides for the regulation and management of water supply and sewerage services. It also guides the establishment and running of institutions involved in the management and provision of water services.

2.2.8 Public Health Act, Cap 242

The legislation makes provision for securing and maintaining the health of the public. It provides standards and guidelines to clean environment, effective ventilations and liveable developments. Occupational licences are given under the Act.

2.2.9 The Forests Act, No. 7 of 2005

The act provides for the establishment, development and sustainable management, including conservation and rational utilization of forest resources for the socioeconomic development. It recognizes that forests play a vital role in the stabilization of soils and ground water, thereby supporting the conduct of sustainable agricultural activities. The

forests also play a crucial role in protecting water catchments in Kenya and moderating climate by absorbing greenhouse gases. It further recognizes that they provide the main locus of Kenya's biological diversity and a major habitat for wildlife.

The planning area has a small forest cover, which is part of Eburu forest. The provisions of this Act will guide its conservation and utilization by the local community.

2.2.10 Survey Act, Cap 299

The Survey Act makes provision in relation to surveys, geographical names and the licensing of land surveyors. The Department of Surveys, under the Director, provides and maintains plans for property boundaries in support of the Land Registration throughout the country. In preparation of this plan, existing survey data was used to prepare the plans.

The surveying and mapping work done under this project do not override the role of the Director of Surveys. The maps produced during the preparation of the urban strategic plan are not an authority on boundaries.

2.2.11 Land Registration Act (No. 3 of 2012)

This Act gives the process of land registration. It also guides on the process for establishment of land registration units and land registries. Though the survey output of this project will not be regarded as an authority on boundaries, it will yield important data for the community land register.

2.2.12 On-going legislations

It is important to note three key acts whose formulation process is on-going in parliament. They include: The **Physical Planning Bill** (2015) that seeks to align CAP 286 with the provisions of the constitution. It delegates the planning duties initially executed by the local government to the county governments. It also provides for different types of plans to be formulated by the county and national governments. The **Land Amendment Bill (**2014) seeks to provide for minimum and maximum size of land to be owned. The **Community Land Bill** aims at establishing framework to administrate community land. The approval of these legations will impact the implementation of this plan.

2.3 ADMINISTRATIVE STRUCTURE AND FUNCTIONS

Naivasha town is administratively in Nakuru County. The town fall under two sub-counties. It covers Naivasha Sub-county (671 Km^2) and parts of Gilgil sub-county (280 Km^2) amounting to 70 and 30% respectively. Naivasha Town is further demarcated into 12 wards as shown in the table below.

Table 5: Administrative units

Ward Name	**Area (Km^2)**	**(%)**
1. Malewa West	274.30	28.84
2. Maiela	144.25	15.17
3. Olkaria	127.61	13.42

4. Viwandani	106.04	11.15
5. Hell's Gate	91.32	9.60
6. Naivasha East	72.44	7.62
7. Biashara	64.05	6. 74
8. Mbaruk/Eburu	29.12	3.06
9. Lake View	16.28	1.71
10. Murindat	13.86	1.46
11. Mai Mahiu	7.95	0.84
12. Gilgil	3.78	0.39
Total	**951.0 Km** ^{2}	**100**

1.7.1 Functions

Naivasha Town serves local, national and international importance. It is a headquarters for Naivasha Sub-county. The town has a vibrant commercial sector serving its immediate hinterland that stretches into the neighbouring Nyandarua County. It has wholesale, retail, offices and other commercial activities. Most commercial activities are concentrated in the CBD and in the several trading centres within the planning area.

Naivasha town has numerous educational facilities such as middle level colleges, secondary and primary schools. Key examples include Kenya Wildlife Service Training Institute, Laikipia University campus, Naivasha Girls and Boys High Schools.

The town attracts numerous researchers and research institutions due to its rich biodiversity and the Lake. It plays a key role in agriculture particularly floriculture and horticulture in Kenya. It also provides employment opportunities especially in commerce, tourism and energy generation sectors. The industrial sector is also on the rise. The hospitality industry is a key emerging sector. Nationally and internationally, the town is renowned as destination for conference tourism.

1.7.2 The National Structure

Naivasha Town has several National Government departments and agencies. It is the district headquarters for Naivasha district. The Assistant County Commissioner, district officers, chiefs and the National Police Service, represents the administrative set-ups in the town. Besides the Provincial Administration, other national government agencies include the fisheries, judiciary, agriculture and livestock departments. Parastatals operating in Naivasha include Kenya Pipeline Company, KenGen and KWS.

1.7.3 County Structure

Naivasha Town as a sub-county headquarters is headed by a sub-county administrator. The County Public Service Board appoints the sub-county administration. Ward Administrators

assist the Sub-county Administrator. MCAs represent each ward. The NCG has also established departments in Naivasha. They include

1. Lands Housing and Physical Planning.
2. Finance and Economic Planning.
3. Public Service Management.
4. Roads and Public Works.
5. Agriculture, Livestock and Fisheries.
6. Health.
7. Environment, Natural Resources and Energy.
8. Education.
9. ICT, Youth Affairs and Sports.
10. Trade.
11. Disaster management and emergency response

2.4 KEY INSTITUTIONS

Institutions with key roles in preparation and implementation of the ISUDP include the National Government, County Government and local Organizations like CBOs as discussed below.

3.3.1 The Ministry of Land, Housing and Urban Development (MoLHUD)

It is a National Government agency managing the project under the KMP. The Ministry provides the overall supervision function. It particularly represents the GoK component in the project.

3.3.2 The County Government of Nakuru

The CGN has the local jurisdiction over Naivasha town. Naivasha and Gilgil Sub-counties are in Nakuru County. The county government contributes technical officers to the project steering committee to guide in the plan preparation process, provide logistical support and administrative services needed by the project team and consultants.

3.3.3 The County Assembly

It is crucial within the devolution process as they are the lawmakers and legal representatives of the community at the county level. The county assembly approves plans made by the County Executive Committee including the ISUDP.

3.3.4 The County Executive Committee

The committee's duty is to monitor the ISUDP formulation and implementation process. They form the executive arm of County Government charged.

3.3.5 Department of Physical Planning

It is a national government agency domiciled in the Ministry of Lands, Housing and Urban Development. The department is established by the PPA. Headed by the Director, It coordinates and undertakes planning functions. However, following the enactment of the 2010 Constitution and County Government Act, the planning functions have been devolved.

The Director is also the chairperson of the Physical Planners Registration Board. The board regulates the conduct and the practise of physical planners.

3.3.6 Naivasha Land Control Board (LCB)

It is established by the Land Control Act. The LCB is mandated to regulate transaction on agricultural land. Regulated transactions include subdivisions, transfers, sales, leasing, charges, and change of uses. For the ISUDP, the board's role in the regulation of the subdivisions and change of extensions of uses will greatly impact the implementation process.

3.3.7 The Land County Management Board (CLMB)

It is established under the Urban Areas and Cities Act. Although the Act is not operational, NLC has appointed secretaries to the CLMBs and the establishment of the institution is underway.

The Board's responsibilities will include the approval of subdivisions, change of uses and extension of use on land within each County. Devolvement of the functions will speed up the approval processes.

3.3.7 The National Land Commission (NLC)

It is a national government agency established under the NLC Act. Its main responsibility is to manage public land including alienation. The NLC also has oversight responsibility on land management matters such as subdivisions and change of use.

It is also mandated to appoint secretaries to the CLMBs. Among the purposes of the ISUDP is to guide the alienation of public land, hence the importance of the involvement of the NLC the preparation and implementation process.

3.3.8 Professional bodies

Key agencies in the ISUDP process include the Kenya institute of Planners (KIP), the Institute of Surveyors of Kenya (ISK), the Architectural Association of Kenya, (AAK) and the Law Society of Kenya (LSK). The societies are critical in regulating the conduct of their members who undertake vital roles in the ISUDP preparation and implementation. There is need for the County Government to involve the professional societies in decision making particularly in development approval.

3.3.9 Key practitioners

They include registered planners, surveyors, land valuers, architects, engineers and lawyers. The town has such practitioners who are available to provide the necessary service.

The practitioners' responsibility mainly lies in preparing development applications on behalf of the developers. The applications are submitted to the County Government for consideration. These applications should be prepared within the stipulated guidelines and the practitioners have professional responsibility over the same.

3.3.10 Neighborhood associations

Plan preparation and implementation requires greater public participation. The neighborhood associations are major players in the stakeholders' consultative processes. Such associations are in Karagita, Kihoto, Kamere, Lake View and, Villa View.

They play the role of watchdogs to ensure that the plans are implemented as approved. The associations also participate in the review of approved plans that affect their neighborhoods.

2.5 THE VISION

This vision directs the overall development objectives and leads to the establishment of growth trajectories that underpin the planning proposals and interventions outlined in this work. The vision is a result of a highly consultative process guided by vision 2030, Nakuru county vision, and constitution and KMP mantra.

The Kenya Vision 2030 seeks to make Kenya a globally competitive and prosperous middle income nation with a high quality of life by 2030. The County Government of Nakuru on the other hand seeks to make Nakuru a county of diversity which is secure, cohesive and industrialized. Besides the above, the KMP Mantra which seeks to make Kenyan towns work was also a key consideration to the formulation of the planning vision.

The vision statement was achieved through a participative visioning workshop held in Naivasha Town. The stakeholders identified the planning challenges and opportunities and ranked them by priority. From this list the stakeholders drafted several visions and later voted as shown below. This was further analysed by stakeholders in the thematic and focused discussions.

Table 6: Stakeholders visions ranking

Vision	**Votes**
Industrial, agricultural, commercial clean town	**24**
Tourist and conferencing town	**23**
Well integrated planned town-encompassing all resources	**21**
Well planned Naivasha with coordinate development of all sectors	**10**
Clean, well planned commercial and industrial town	**8**
A lake city, tourist town, holiday destination	**8**
Good habitable, food secure town	**4**
Clean Naivasha	**3**
Flood free Naivasha	**3**
Clean environment security for all residents, multi-sectoral economic hub	**2**
Health, secure, beautiful city	**2**
Sports and recreation city	**2**
A green city	**1**

Emerging from the consultative process, the vision for Naivasha is to be a *Well-planned Lake City*, providing high quality tourism experiences and world class conference facilities, leading in geothermal energy production and being a centre of excellence for horticulture farming. This aims to develop Naivasha as a well-planned, compact and integrated city that is socio-economically sustainable and provides for a safe and liveable quality of life for all its citizens. It is to guide the development of the town as a model urban centre with a well-functioning multi-sectoral economy based on horticulture, farming and tourism, working in harmony with its natural environment and sustainably utilising its natural resources.

Presently, Naivasha is second after Mombasa as a Tourist destination. The natural resources, serene environment and tourist infrastructure has great opportunity as the vision foresees. Complimented by the conferencing facilities, Naivasha is among the few lake towns in the world located in the centre of wildlife corridors. It also happens to rank top in the country in horticultural activities. The town exports 70% of flowers products in the country. Therefore, the ISUDP seeks to enhance horticultural activities by proposed strategies to mitigate current problems and harness available opportunities. Naivasha is also leading in production of geothermal energy in Kenya. It supplies up to 20% into the national grid hence the necessity better this undertaking.

2.6 CONCLUSION

From the foregoing, it is evident that the ISUDP has a sound basis considering the variety of policies and statutes. The policies and legislations provide guidance on the importance and order of the planning process. The plan upholds the spirits the Constitution of providing a properly planned nation. It is in line the Vision 2030 as it advocates for sustainable social, political and economic growth of Naivasha Town. This section identifies various stakeholders in the formulation and installation of the plan. Such include private, NGOs, national and county government institutions and the duties bestow up each. Such is important considering that Naivasha does not have a comprehensive plan. The laws and policies herein provides for public participation in the development process an approach fully incorporated in the planning process. Such has been through stakeholder workshops, thematic and focus group discussions conducted.

CHAPTER THREE
EXISTING SITUATION

Naivasha Town faces a unique set of constraints. If not effectively addressed, the challenges could result in unsustainable growth. This chapter briefly presents the current reality in Naivasha Town. It provides an analysis the potentials, opportunities, threats and weakness of plan area. More details on the existing situation are provided in the approved situational analysis report.

3.1 NATURAL ENVIRONMENT

The section focuses on the climatic, hydrology, vegetation and their influence on urban planning. The section also identifies natural hazards and environmentally fragile areas as they control and determine spatial form and growth.

3.1.1 Climate

Naivasha's climate is warm and temperate. The temperatures varies from 25.5^0C to as low as 9.4^0C (mean annual maximum and minimum temperatures). The area experiences bimodal pattern of rainfall with an average of 720 mm yearly. Local relief influences the rainfall regime within the catchment. Naivasha lies on the rain shadow of the Aberdare Mountain to the East and the Mau Escarpment to the West. Long rains occur in the months of March to May and the short rains are experienced between October and November.

3.1.3 Geology

The major soils in the study area are of volcanic origin. The soils found on the mountain and major escarpments of the catchment are developed from olivine basalts and ashes of major older volcanoes. They are generally well drained, very deep (1.2-1.8 m) and vary from dark reddish brown to dark brown, clay loam to loamy soils with thick acid humid topsoil in shallow to moderately deep and rocky places.

3.1.4 Topography

The topography of the area is diverse. It ranges from the low-lying flat area near the lake to the relatively high areas near the Aberdare ranges. The Eburu (2,830m) and Olkaria (2,434m) volcanic complexes and Kipipiri (3,349m), Kinangop (3,906m) and Longonot (2,777m) volcanoes mark the terrain.

3.1.5 Hydrology and drainage

Lake Naivasha receives surface inflow from sub catchments of Malewa, Gilgil and Karati Rivers. The Malewa system is the largest with an estimated annual flow of 153 million m^3. Gilgil River has an estimated average annual flow of 24 million m^3, whereas Karati only flows intermittently during the rainy season. Malewa River originates from the western slopes of the Aberdare Ranges which is a high rainfall regime. The river has a catchment area of approximately 1,428km2. However, the catchment area within the planning area is 118.87 $km^{2.}$

Within the Gilgil system there is a perennial volcanic groundwater input at Chamuka Spring near the settlement of Chokeraria. Lake Naivasha is also fed by other streams including Karati,

Nyamathi and Marmoset. There exist other minor lakes which are part of the lake Naivasha system such as the Crater Lake and Lake Oloiden.

The planning area has a number of aquifers. The largest aquifers are found on the Northern side. It extends continuously to the eastern and the southern parts. Small portions are located on North-western and South-western parts. The figures below illustrate the distribution of hydrological systems and the extent of Lake Naivasha catchment area.

3.1.5 Wildlife

Naivasha is a home to different species of wildlife. Their main habitat is within the parks and game reserves. These include; Hells Gate National Park, L. Naivasha National Park and the Crescent Island sanctuary, Marula, Soi Sambu and Kedong Ranches. The common wildlife species include; hippos, giraffes, buffaloes, impala, zebras, monkeys and different types of birds are just a few of the species that thrive within the planning area.

3.1.1 Natural Hazards

Flooding incidences have been recorded in the areas surrounding the Lake such as Kihoto and Kasarani. Encroachment into the riparian reserve zones has contributed to flooded settlements especially during the rainy season when the lake water levels rise. Droughts and long dry spells occur between the months of May and October. Land and rockslide are common occurrences in the escarpment and the steep slopes. Therefore, measures will be proposed to mitigate such occurrences.

3.1.2 Environmental fragile areas

These include areas of environmental significant that are endangered by human activities and climate change concerns. Such areas include water systems, forests and wildlife habitats as shown on the figure below. These areas ought to be protected, conserved and rehabilitated as provided for by the environmental law.

3.1.3 Environmental sustainability

Lake Naivasha Basin is a fragile ecological zone serving international and local significance. Therefore, measures have been put in place to conserve, protect and rehabilitate the area. This influences the form of the proposed land use activities and sites. The plan also proposes to conserve the national parks, wildlife corridors and other conservation areas for inter and intra-generational sustainability.

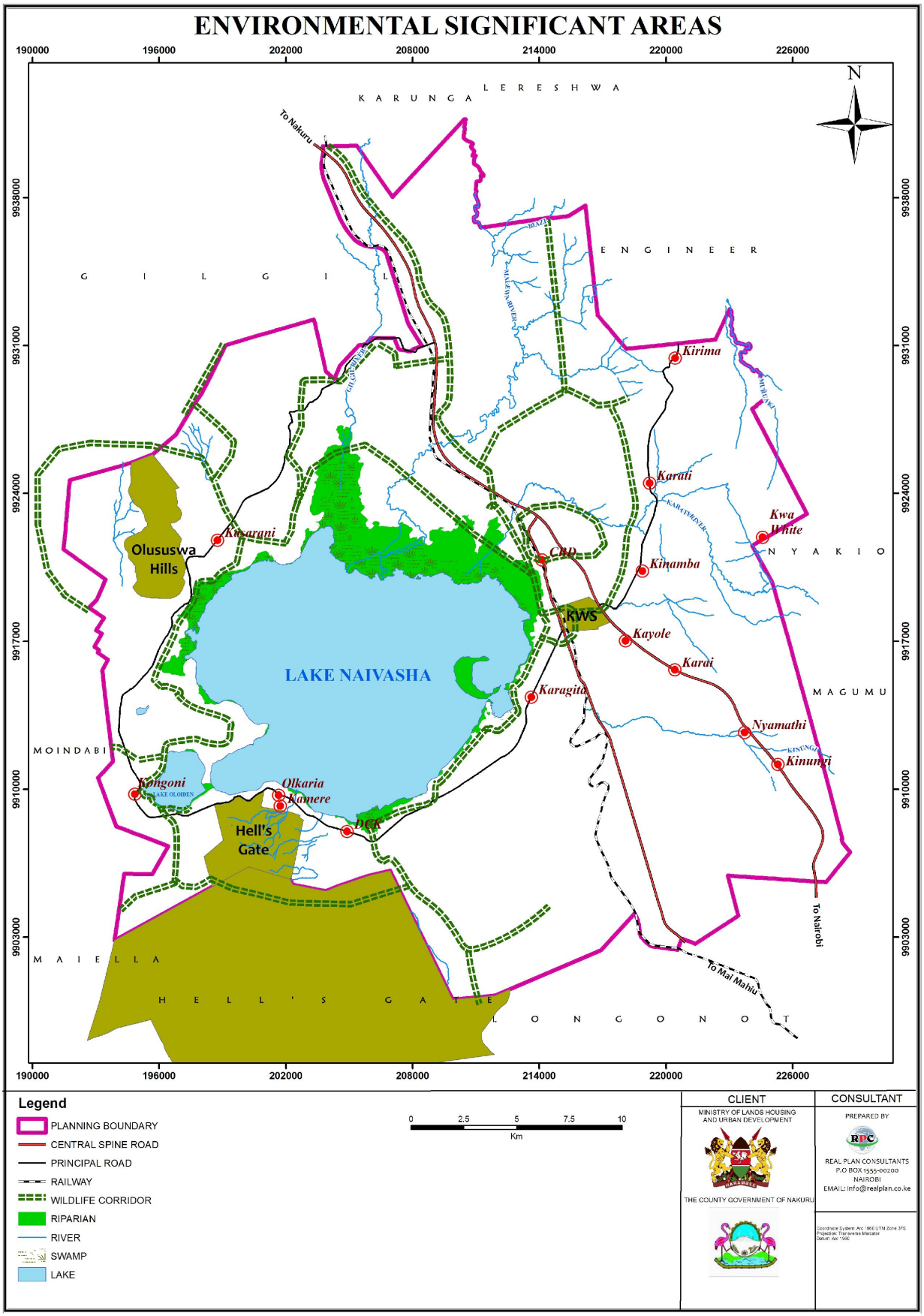


Figure 4: Environmental significant areas

3.2 POPULATION AND DEMOGRAPHIC CHARACTERISTICS

Planning interventions are informed by the population and demographic characteristics. Formulation of the plan has considered current and projected population as discussed below.

3.2.1 Population size and distribution

During the 2009 Census, Naivasha Town had a population of 205,026. Projections show that current population (2015) is 240,565 and is concentrated on the southern eastern region. High densities are also evident along transport corridors.

Using the urban growth rate according to the World Bank indicators 2014 (4%), it is projected at 694,290 by 2034. Concentration in the future is anticipated along main transport routes and expansion is expected towards the north and southern side as shown in the figure below. The number will be 1.65 times more than the current population. The town's population will be 0.6% and 0.13% of the national and county population. This translates to more space for dwelling areas, higher demand for food (agricultural space) and traffic which has been considered in the proposals.

Table 7: Population Projection

Year	2009	2015	2020	2025	2030	2035
Total	205,026	240,565	274843	314,005	358,747	409,865

The plan guides population distribution and settlement patterns. Population distribution and projection have defined the nature and the magnitude of infrastructure and services proposed.

3.2.2 Demographic characteristics

Further, analysis indicates that town's population size decreases continuously with age. It has a high dependency ratio considering that the underage and elderly proportion is bigger compared to the working population. Employment and income level analysis indicates that 87% of the population is employed while 13% remain unemployed. Majority (56.5%) are self-employed in small businesses. The private sector employs 17.8% while the governments employ 7.3% of the working labour force.

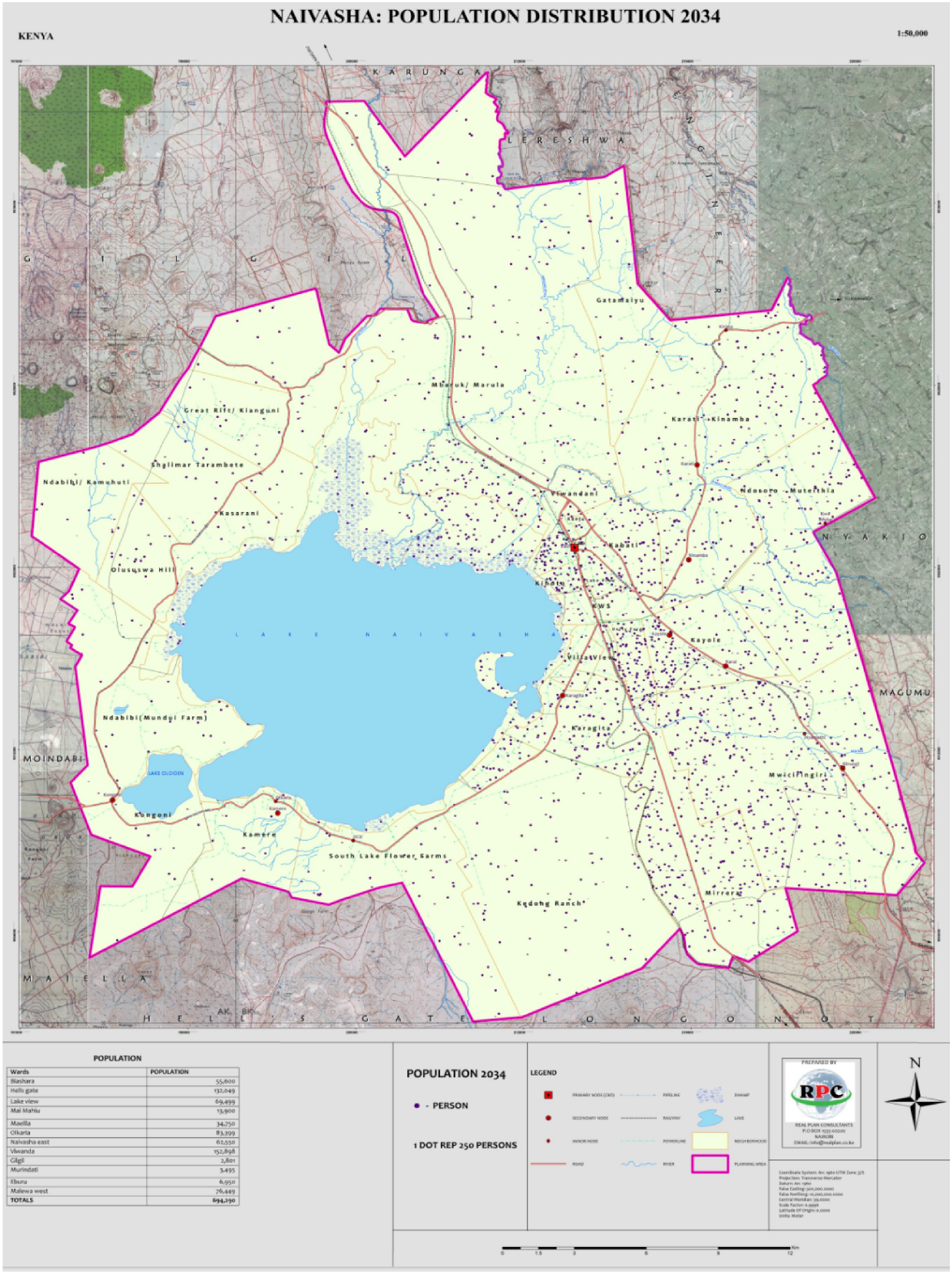


Figure 5: Population 2034

3.3 LAND TENURE

The area is under freehold, leasehold and public land. Majority (34 %) of land in the Town is under free hold tenure. However, the large scale land owners hold large portions of lease hold accounting for 33%. The National park, the lake and other conservancy areas are classified under public land representing 33% as shown on the figure below. The large scale and conservancy land may not be available for urban development.

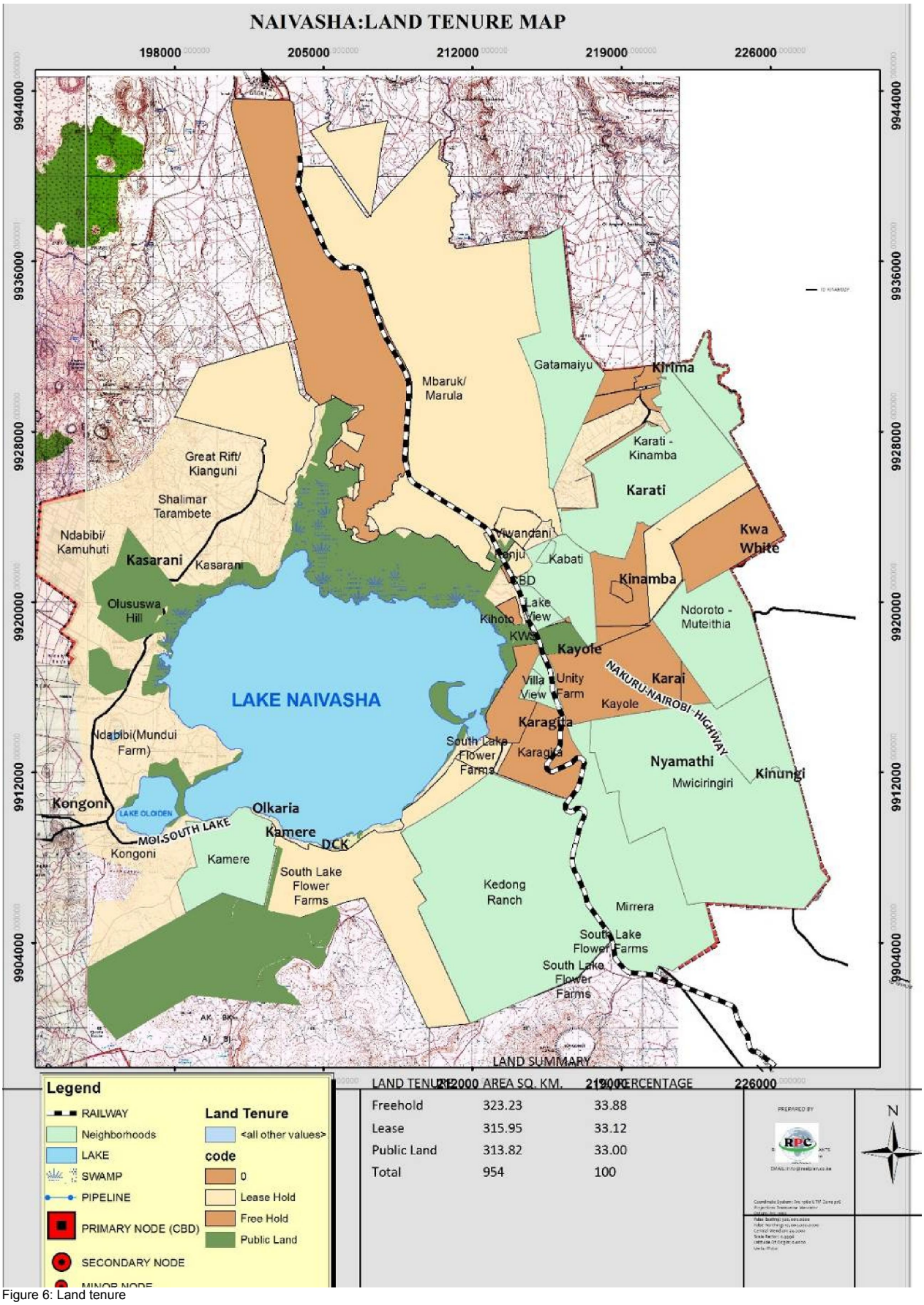


Figure 6: Land tenure

3.4 LAND VALUES

The plan ensures optimal utilization of land with reference to the values. According to the figure below, the most expensive lots are around the CBD and its extensions. The gated estates and recreational areas rank second while the most affordable lands are in the periphery and agricultural areas. The table below shows the land values.

Table 8: Land values by neighbourhood

Neighbourhood	**Price (per acre in millions)**
Lake View	32
Kabati &Villa View	22
Viwandani &Kanju	20
Kamere	12
Kayole	8
Karagita, Kinamba & Kihoto	6
Karati & Kongoni	5
Shalimar & Ndabibi	4
Mirera	3
Customa& Marula	2
Gatamayu	1

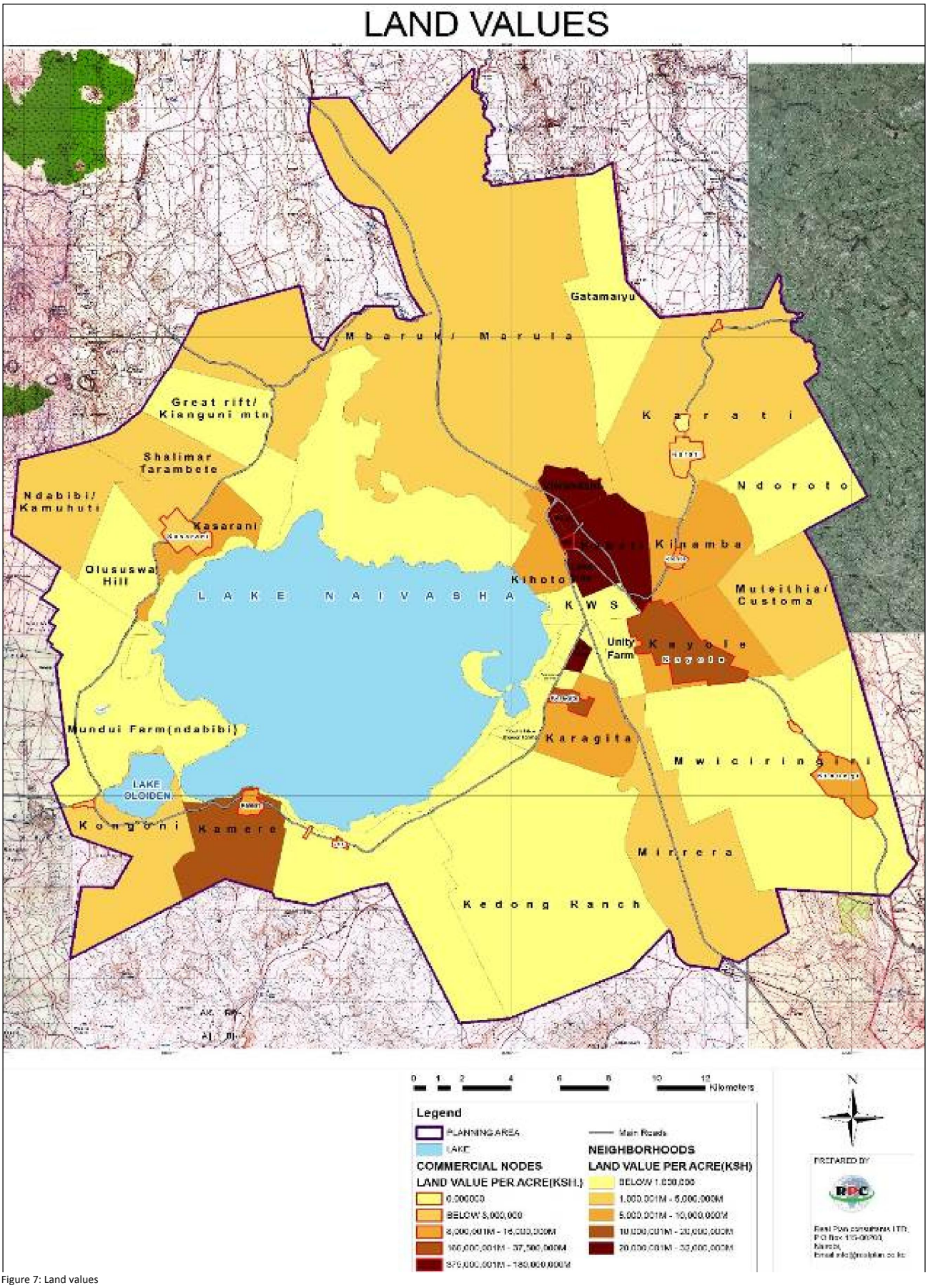


Figure 7: Land values

3.5 LAND USE

The existing land use structure has not been well planned over time nor well laid out thus creating a design challenge. Achieving optimal designs was constrained by the extent of investments. Indeed, this was most challenging in the high density residential areas and informal settlements. This was also a challenge in designing the town core as opposed to the peripheral areas which have less urbanized areas.

Land use trends within the peri-urban areas are rapidly changing from the original agricultural use to urban land uses such as commercial and residential. The unregulated urban growth poses a challenge to development, provision of services and environmental sustainability resulting from phenomena such as urban sprawl. This plan comes in to set area specific standards for the towns neighbourhoods that will guide development and land use.

In the recent years, massive settlements have come up along, Nairobi-Nakuru, Moi South Lake and Kinangop Roads. Naivasha exhibits various settlement patterns with linear settlements being the most dominant. Nucleated pattern of settlement is evident in some parts of the area centred on commercial nodes. Over time however, the influence of the nodes fades away as the urban mass spreading outwards from the urban core enveloping the centres. There are also clustered settlement patterns around the major urban nodes in the planning area including the CBD, Kayole, Karagita, Kinamba and Kamere town.

The settlement pattern influences the proposals by helping predicting of the likely settlement trends. It also helps identify areas that have not been settled and that would be suitable for human settlement. Analysing the settlement pattern also helps identify areas that have been overstretched as a result of rapidly increasing human settlement, as well as critical informal settlements/ squatter land for purposes of proposing resettlement strategies.

The summary chart below summarizes the existing land use sizes in the planning area and their respective percentages

Table 9: Land use distribution

Land Use	Area (Km^2)	%
Agriculture	560	59
Conservation	295	31
Residential	71	7.5
Recreation	12	1.3
Commercial	4	0.4
Public Purpose	3	0.3

BCR	2	0.2
Educational	2	0.2
Industrial	1	0.1
Transportation	1	0.1
Total	951	100

3.5.1 Agriculture

It accounts for 59% of Naivasha Town. It is practiced around Lake Naivasha and in the highland areas of Gatamaiyu, Karati, Kinamba, Ndoroto and Mwiciringiri. Flowers and vegetables are the main crops grown. Flowers from Naivasha contribute up to 70% of the country's flower export. Although agriculture is the most dominant land use, it is threatened by the increased subdivision due rapid rates of urbanization. Urbanization is inevitable hence the need to guide and control it through sustainable urban development. Therefore, a balance between agriculture and urban development can be reached with strategic planning.

3.5.2 Housing

It occupies about 7.5% of Naivasha Town. Residential zones vary from high to low density. High density areas include Kihoto, Viwandani, Kayole, Karagita, Kinamba, Kasarani and settlements along Moi south lake (Karuturi, Kwa Muhia, and Kamere). Lake View is a low density residential zone. Over the years there have been increased densifications of housing settlements within residential estates. For instance the Lake view estate is gradually changing into a medium density zone.

3.5.3 Commerce/urban nodes

The CBD is the main commercial zone. Its activities have developed along key transport corridors. The commercial services it offers include general businesses, entertainment, conferences, finance, insurance and banking, manufacturing and service industries, and small-scale enterprises (juakali). Other commercial areas include Kayole, Karagita, Kinungi, Kinamba, Kamere, DCK, Karati, Karai and Kongoni among others. Challenges facing the commercial zones are poor waste management systems, informal business activities and uncontrolled developments.

3.5.4 Industries

Naivasha has minimal industrial developments the major one being Keroche Breweries. Light industries include furniture workshops, motor vehicle garages, electronics repair shops, tailoring shops and bakeries. The town lacks an industrial zone since Viwandani (industrial Area) has been encroached by residential and commercial developments.

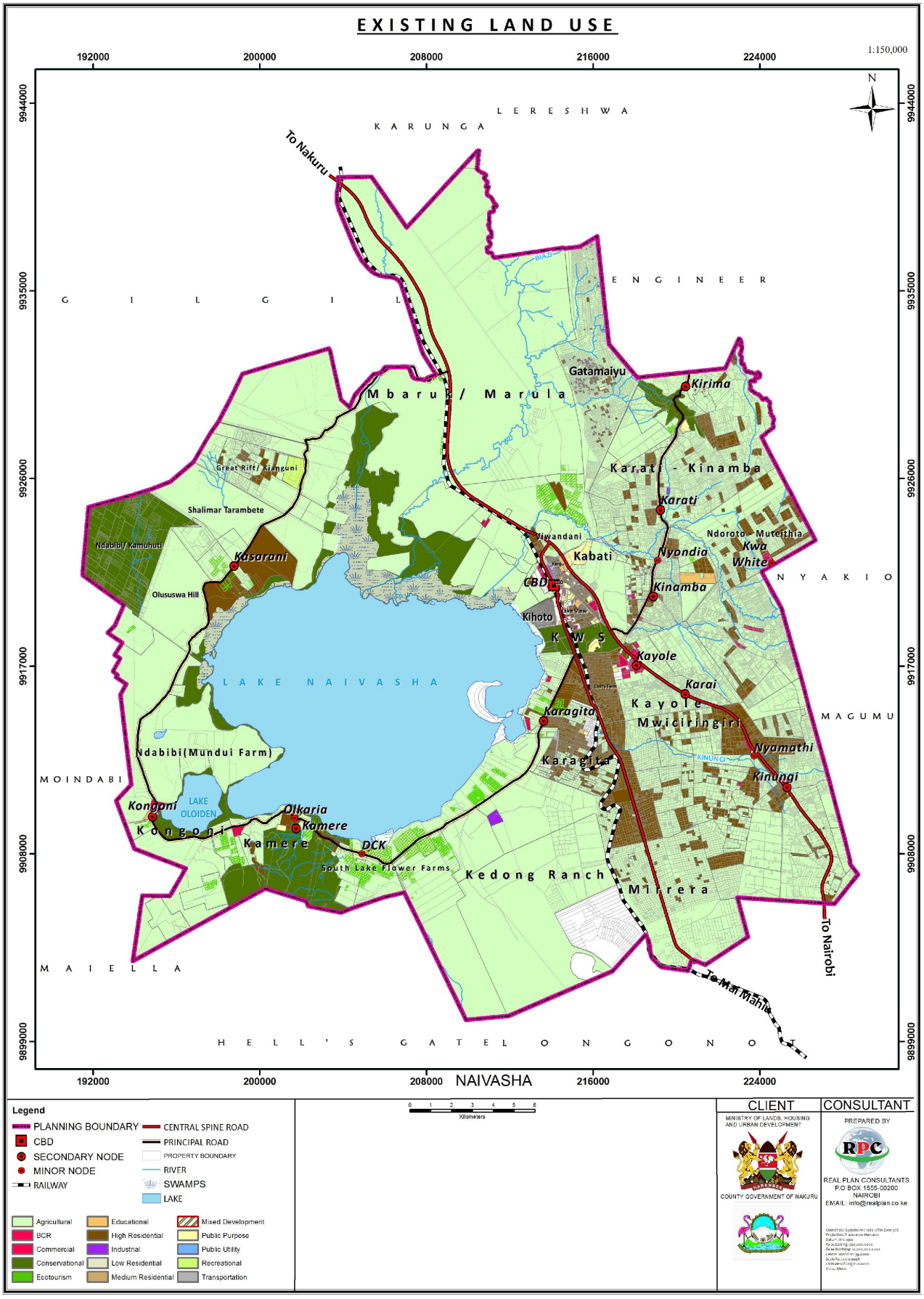


Figure 8: Existing land use

3.6 INFRASTRUCTURE AND SERVICES

The section summarizes the state of transport, energy, water supply, waste management and ICT infrastructure. It outlines the current challenges, potentials and identifies areas of intervention.

3.6.1 Transport

Most common mode of transport is roads used for people and goods transport. Other forms of transport available are rail and air transport.

Roads transport

Roads of various classes (A, B, C, D and unclassified) exist in Naivasha. the 104 is an international trunk road that connects Naivasha to other towns of international importance such as Nairobi, Mombasa and Kisumu. The key roads are shown on the table below. The total length of all classified and unclassified roads is 2000 km.

Table 10: Roads characteristics

Road classification	Road name	Length	Condition
A104	Nakuru Nairobi RD	88.53KM	Tarmac
C67	Kenyatta Avenue	6.21Km	Tarmac
C88	Mai Mahiu Rd	64.91KM	Tarmac
D323	Moi South Road	54.78Km	Loose surface
		54.02Km	Tarmac
E1468A		8.50Km	Motorable Track
E424		5.61Km	Loose Surface
G16		4.26Km	Motorable Tack
G20	Mbaria Kaniu	2.44Km	Tarmac

Most of these roads lack NMT facilities and road furniture hence pedestrians share the roads with motorists. Some roads are congested, narrow impassable during rainy season and dusty in dry periods.

Public road transport is characterized by matatus, buses, taxis, motorcycles and Lorries. The town experiences a lot of transit travel especially by commercial trucks along the A104. The three designated terminal facilities in Naivasha are Nakuru, South Lake and Nairobi. The facilities are poorly planned. One the other hand, there are 100 marked car parking spaces in the CBD hence a deficit of 1250 parking spaces. Commercial trucks' parking is also not provided.

Rail transport

There exists one rail station, which serves the town. Two lines are operational for up train (from Nairobi direction) and down train (from Nakuru) while the other two are reserve rails. Currently, railway serves as freight transport. The challenges facing the railway transport sector include: Poor drainage and floods occurring at the station; inadequate offloading and loading bays for cargo; Buildings and facilities are old, dilapidated and out of service; and Encroachment of the railway land.

The SGR, which will transit Naivasha Town, is anticipated to improve railway transport in the area and the region. Construction of phase one (Mombasa-Naivasha) has already commenced.

Air and water transport

Air travel facility in Naivasha is the Karagita Airstrip. It is currently not operational. Airports serving Naivasha Town are in Nairobi (80km away). The tourism, conferring and agricultural activities in Naivasha there is a need for air transport.

Water transport services are not available. However, it is anticipated that provision of such services in areas linked by Lake Naivasha could ease road traffic.

3.6.2 Energy infrastructure

Naivasha contributes 20% of energy in the country. This is attributed to the presence of Geo-thermal power production at Olkaria. The challenges facing this sector include; Inadequate coverage of electricity in Kongoni, Maeila areas and high cost of electricity installation.

3.6.3 ICT

Naivasha Town is well supplied with ICT infrastructure including telephone and mobile phone networks, television, radio transmission stations, print media, internet and postal service. To better the sector the construction of a comprehensive trunk cable channel is necessary.

3.6.5 Solid waste management

The Kayole dumpsite has inadequate garbage handling equipment and has not been licensed by NEMA. Waste collection is also inefficient. The sub-county's 5 collection vehicles are sub-standard hence not licensed by NEMA.

3.6.6 Water and sanitation

Key water suppliers include NAIVWASCO, private borehole owners and small-scale water vendors. Household questionnaire analysis indicated that 50.58% of the residents who responded have reliable water sources whereas 49.5% is not reliable. Fluoride levels in the groundwater are between 4.5 and 10.3 mg/l (N.E. Morgan 1998). This causes mild dental fluorosis, which can be seen around the Lake.

The table below presents the projected water demands per day. The implication of this demand is need for expansion of infrastructure facilities.

Table 11: water demand

Year	2009	2014	2018	2022	2026	2030
Population projections	205,026	215,277	227,505	234,926	243,389	254,232
Water Demand (m^3/day)	20,502	21,527	22,750	23,492	24,339	25,423

Sewer network covers less than 10% of Naivasha Town. The larger population use septic tanks and latrines often hiring exhauster services. A sewerage treatment plant is located in Kihoto. The facility is currently strained by the population. Therefore, extension of sewer and expansion of the treatment plant is recommendable.

3.6.7 Social facilities

They include educational, security, health and community facilities. Naivasha has 125 primary schools, 55 secondary schools, 325 ECDs; three identified special schools, and 5 private higher education institutions. Areas requiring increased investment in educational facilities by 2034 include Viwandani, Hells Gate, and Olkaria and Naivasha East Wards.

There are 95 health facilities in owned by the government, NGOs and private entities. The Referral Hospital is the largest as it serves the expansive Naivasha Sub-County and beyond.

Security - Naivasha has 5 police stations and 16 police posts. The average distance to the nearest police post is less than 1 km. However, ineffective transport is a challenge to police operations and response to emergencies and crime.

The town also has one **fire station** that serves Naivasha and Gilgil sub Counties. The station is inadequately equipped for search and rescue services in building and excavation. High fire risks due to the high number of trucks, tanker and pipeline transiting Naivasha Town.

Kabati and Site & Service **Cemeteries** are full to capacity hence the need for more cemetery space.

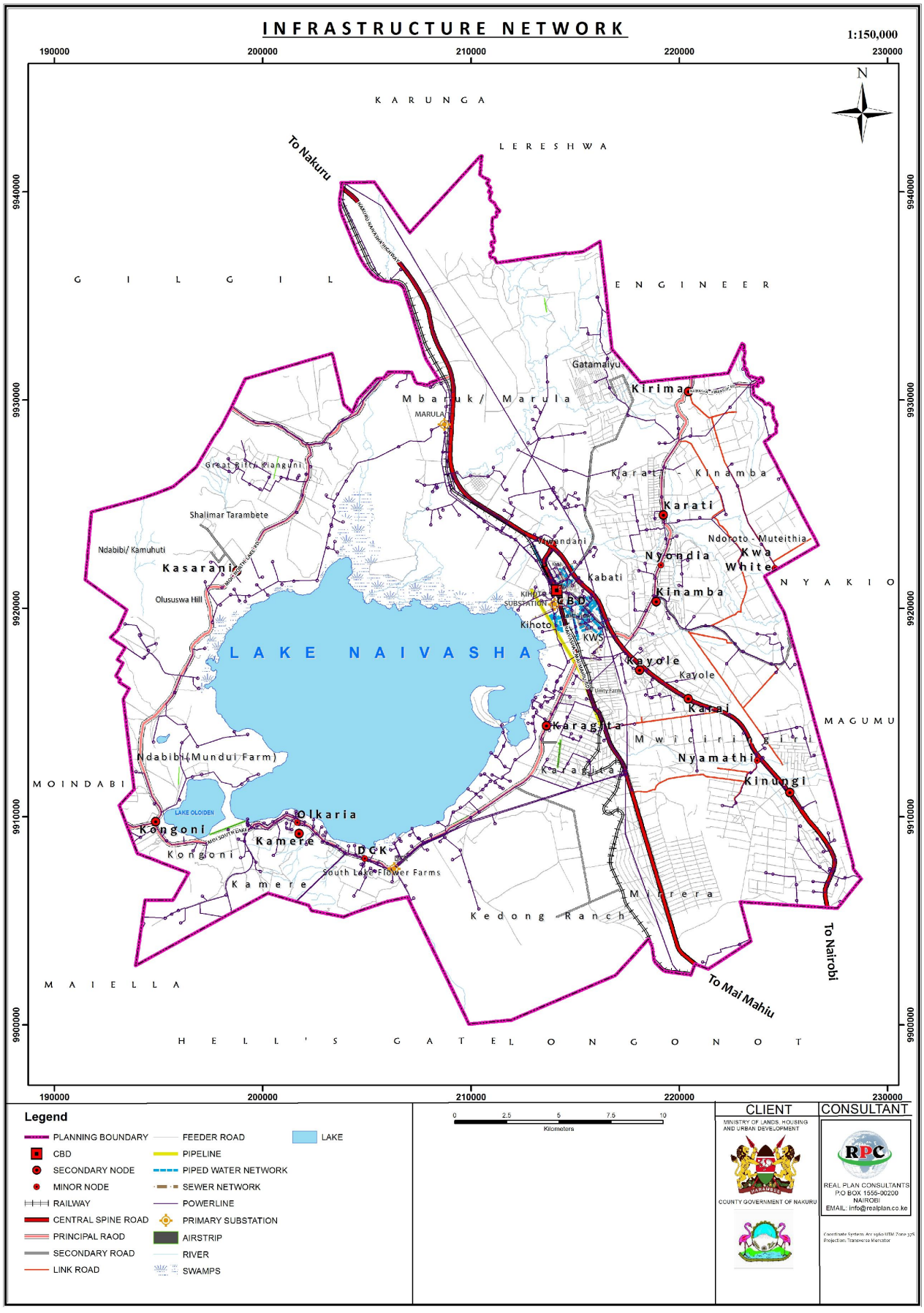


Figure 9: Existing infrastructure

3.7 CONCLUSION

The plan seeks to mitigate effects of the current land use organization as well as explore existing opportunities. The planning approach appreciates that Naivasha has developed organically without guidance of a comprehensive land use plan. Therefore, the plan shall guide future developments based on the shared vision, future needs and development trends. It also seeks to counter current challenges and harness the potentials of Naivasha Town. Identified strengths and opportunities shall be utilized to address threats and weaknesses.

PART II
PLANNING PROPOSALS

The Integrated Strategic Urban Development Plan consists of interrelated components namely a Structure Plan, Sector plans, a Detailed Plan, Action Area Plans, Planning policies and a Capital Investment Plan.

The Structure Plan provides the overall growth strategy outlining the broad pattern and extend of growth. Through the analysis of constraints and opportunities, the plan systematically aligns the overall urban functions to sustainably meet the diverse needs of the city. This is further accentuated by the Sector Plans which pay special focus to key sectors including identification of priorities. The Detail Plan and the Planning Policies elaborate the Structure and Sector Plans to finer details levels to enhance day to day implementation. The Action Plans focus on priority areas that are of special or greater impact in stimulating growth and transformation of the urban landscape. The Capital Investment Plan finally provides an implementation framework stipulating prioritization, phasing, actors and resource mobilization strategy.

Proposals on each of the components are outlined in chapters 4, 5, 6 &7.

CHAPTER FOUR
INTEGRATED STRUCTURE PLAN MODEL

The Structure Plan (SP) discussed in this chapter provides the broad land uses in Naivasha town, indicating the preferred urban growth strategy for the town. The broad categorization of land uses gives the town a definite form and structure. In addition, it informs the set strategic planning policies besides being the basis for further detailed planning of the town. Also, it forms the basis for future decision making in regards to land use planning in Naivasha Town.

The proposal for a new structure plan stemmed from the need to address planning challenges influencing growth and development of the town as well as the need to tap into the available resources and opportunities as established in the preceding chapter of this planning report. The aim is to bring order while minimizing (land use) conflicts in the town.

The structure plan entails the generation of town-wide maps and urban structure plans to guide developers to areas best suited for new physical developments. The method used to prepare the SP included mapping out of the structuring elements, population and other design considerations to inform future development scenarios. The SP made has set out the planning framework for protection of the environment, connectivity of the settlements, and the scale, pattern and broad location of development. It provides planning polices for broad zoning. For instance at the structure plan level, the lake corridors, wildlife corridors are mapped, the lake and the swamp have also been earmarked for conservation and protection

4.1 CONSIDERATIONS

In preparing the structure plan, key design considerations were taken into account including the pre-existing natural resource base, population and human settlement character, land use tenure and patterns. This section consolidates and extends the components and concepts informing the formulation of the preferred development growth strategy.

4.1.1 Growth Systems

The structure plan is built upon layers related to the various systems defining and supporting future growth of the town. These systems have been shaped by history, geographic setting, natural formations and settlement patterns which are discussed extensively in the situation analysis report are unique to Naivasha, defining its character and development opportunities as well as its constraints. These systems are briefly described and illustrated and individually and collectively form the development path that can unfold following the adoption of the proposed growth strategy.

1. Natural system

Lake Naivasha is the most dominant and central natural feature located within the planning area (Figure below). It is of significant socio-economic and natural importance and Naivasha town cannot exist without the lake and the resources it provides. These resources include:

- Water – providing industries and the town with water. Industries particularly reliant on this include the extensive floriculture industry, which for this reason has located along the edge

of the lake and is dominated by this type of farming. The commercial agriculture and smallholder farming are also reliant on the water from the lake and its rivers; as is the town.

- Energy- the lake also serves as a source of geothermal energy production, which is critical for the functioning and development of the town and its industries.
- Food source – the lake provides a source of employment for local fishermen.
- Tourism and conservation – the lake and its environs are also a tourist attraction.
- Bio-diversity – the lake sustains the natural environment and its bio-diversity.

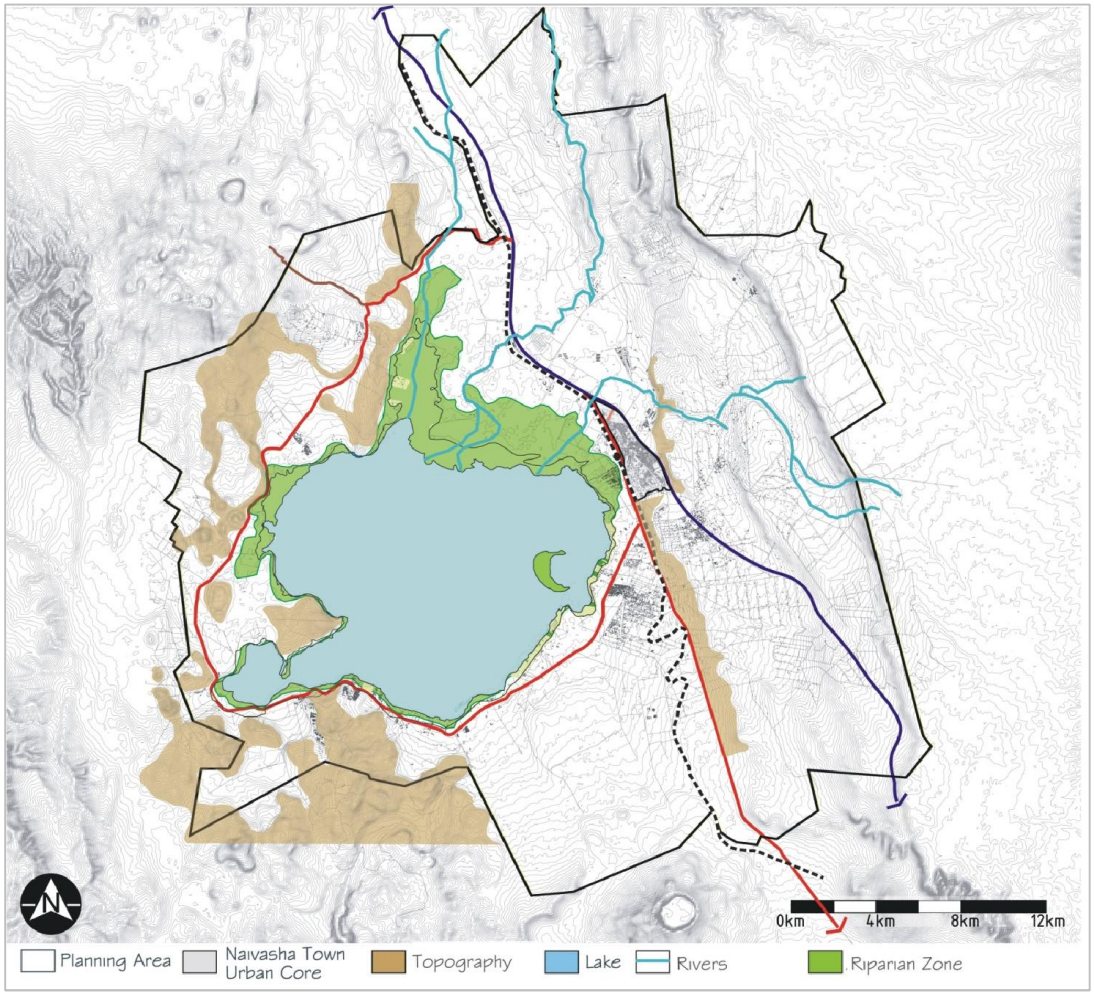


Figure 10: Naivasha Natural System

Considering that the lake performs as a major resource for Naivasha, the following can be observed to protect the lake and simultaneously retain supporting activities and promote economic growth.

- Riparian boundary for preservation of lake edge and prevention of encroachment; retaining the bio-diversity.
- Use of the lake edge and floriculture industry for tourism potential where appropriate; and conservation where required.
- Defined points for local fishing activity (access).

- Concealment of sewerage works from lake.
- Avoiding pollution of the water draining into the lake.
- Appropriate water use to avoid over-exploitation and allowing for replenishment.

2. Movement system

The Naivasha movement system (Figure below) consists of a hierarchy of routes, the proposed upgrading of the railway line and possibly the introduction of a water taxi system.

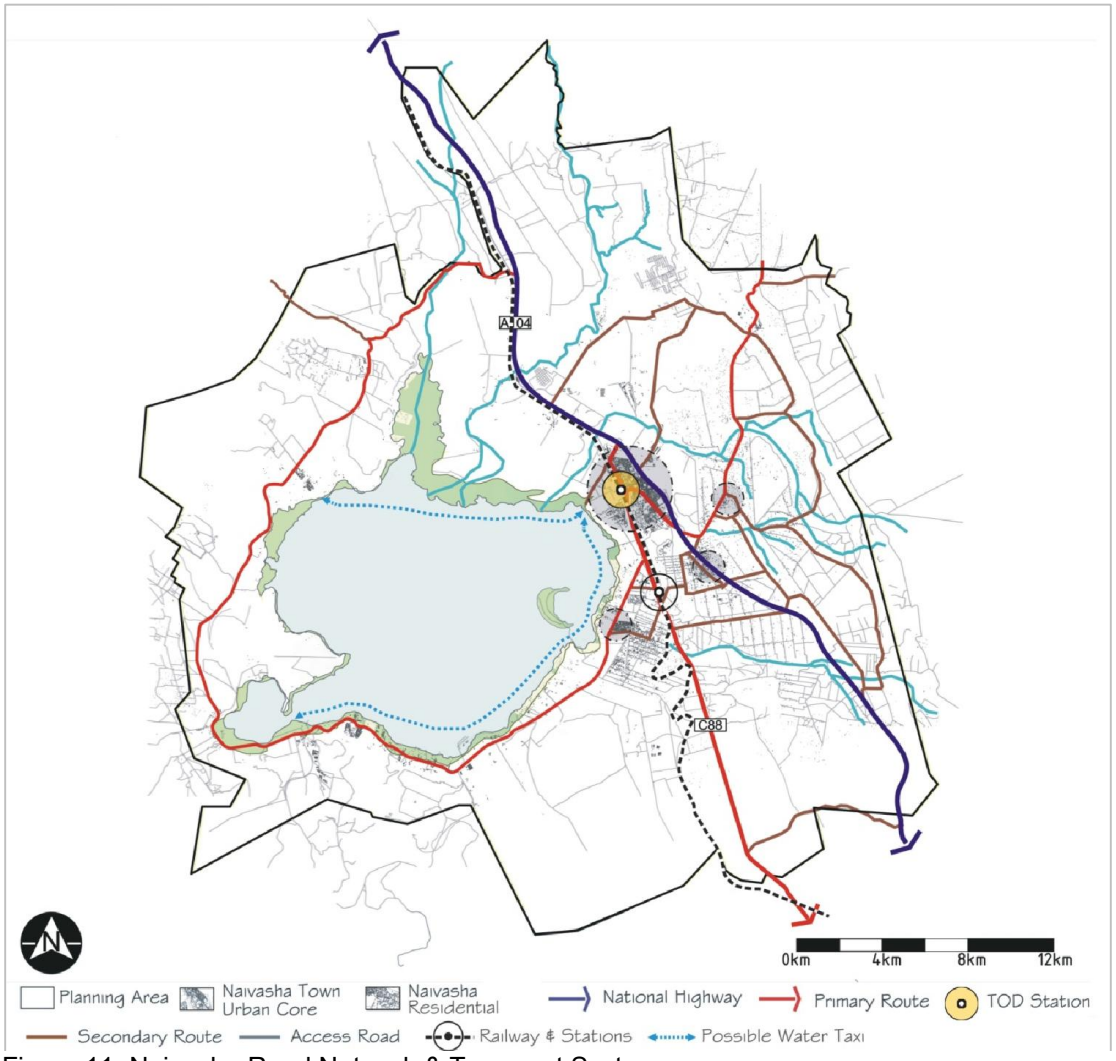


Figure 11: Naivasha Road Network & Transport System

The routes include:

- Enhancement of the national north-west to south-east A108 freeway and the C88 main route, which converge at the urban core, and form the primary development axis for the growth and expansion of the town in a linear fashion.
- The enhancement of the main route around the lake, and the main route to the north-east interior. The former serves the floriculture industry and enables access to the lake. The latter provides access to the smallholder farming areas.

- The development of a series of secondary routes the form cross linkages and connections to the primary routes; improving the access to services and facilities of the urban core and emerging nodes along the primary activity spine. The secondary routes also improve access to and linkages between the envisaged hierarchies of nodes. These being the CBD (Urban Core) and its secondary centres of Karagita, Kayole and Kinamba.

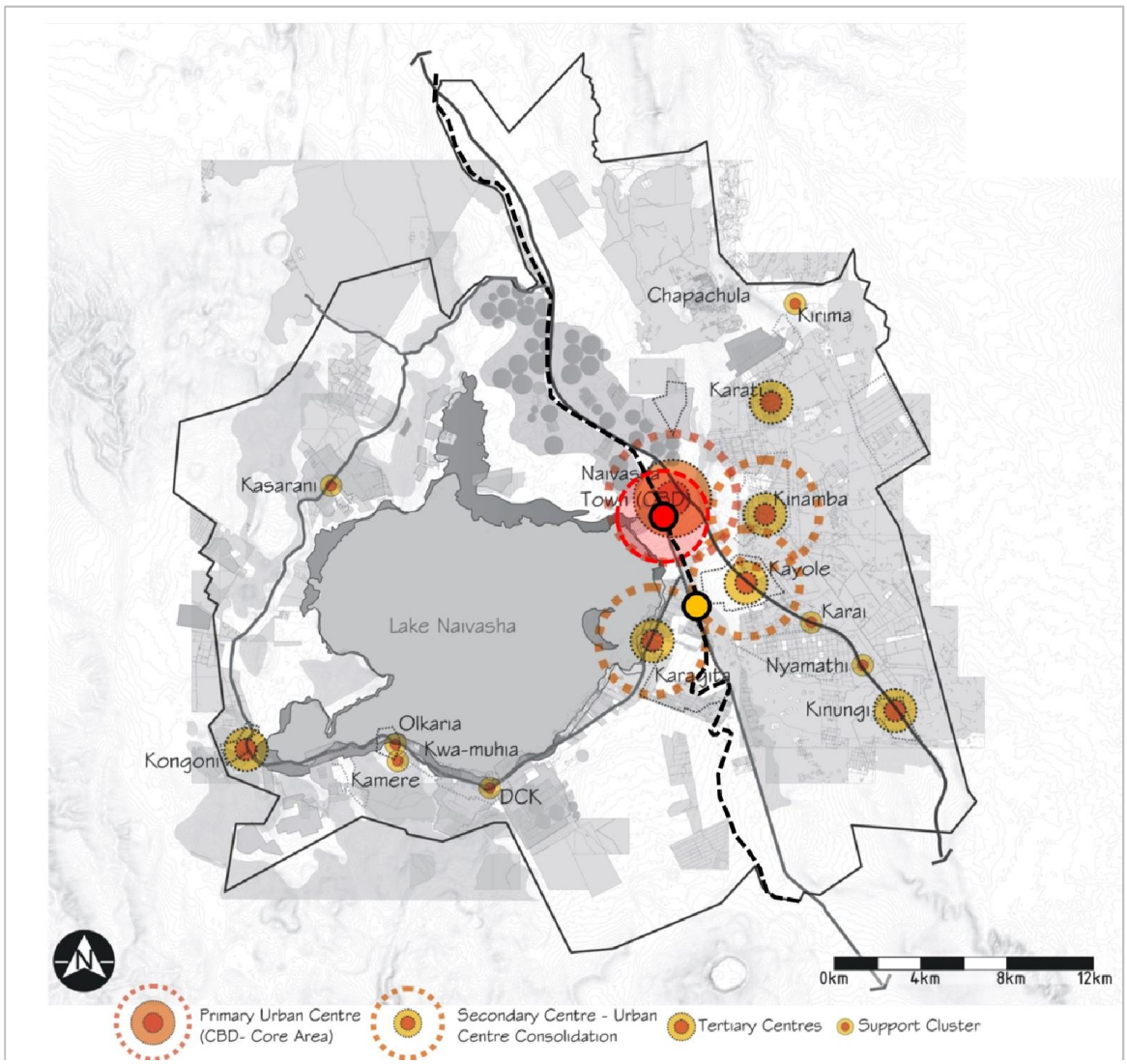


Figure 12: Naivasha Railway Opportunity

- The railway line as well as the major road network running through Naivasha serves as a major opportunity for structuring development. The conversion of the metre gauge railway into a standard gauge railway carrying goods and passengers presents a new opportunity to convert the existing rail station within the CBD into a new transport node - TOD - that could be guided to become a catalyst for the consolidation of tourism and educational uses around the reactivated station (Figure above).
- The railway line also presents the opportunity for the development of a second station that serves as a transport hub serving the wider Karagita and Kayole areas (Figure 6).

- The lake itself could also be utilised for public transport services in the form of water taxi's that provide access to the urban core from Kamere / Olkaria and Kasarani. The feasibility of this opportunity requires further investigation.

3. Residential system

In terms of the neighbourhood structure, a consolidated and connected urban system anchored by the CBD and supported by a hierarchy of centres is proposed (Figure below). This includes:

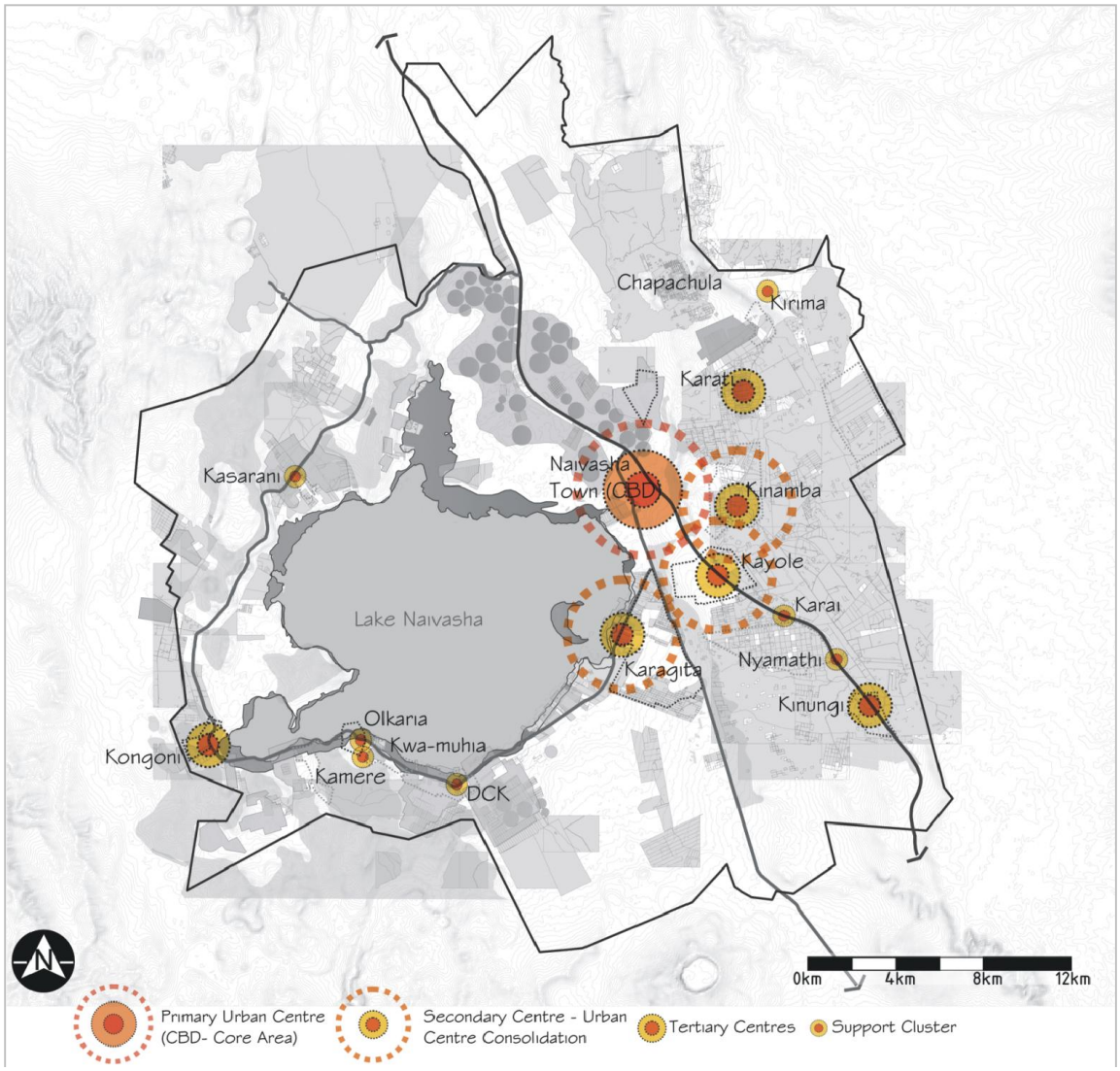


Figure 13: Naivasha Urban Centres Hierarchy

- Primary Urban centre reinforcement: Naivasha CBD (Core Area).
- Secondary Centres: Urban centre consolidation- Karagita, Kayole and Kinamba.
- Tertiary Centres development: Kinungi, Kongoni, Karati (lake and farming hinterland).
- Support Clusters, with support facilities and services that serve a local area, including inland, Karai , Nyamathi, Kirima and around the lake DCK, Kamere / Olkaria & Kasarani.

4. Commerce & market system

Figure 8 below indicates the position of market centres strategically distributed to serve the existing residential and mixed use neighbourhoods within the planning area. The market centres are located in the primary urban centre, the CBD core area, the three secondary centres and in the tertiary centres. More detailed proposals and design will be done through local area planning to ensure that the centres are providing the necessary amenities to support the growing residential population.

The diagram below indicates how the road network directs the access of the commercial agricultural activities, the floriculture and smallholder farming to the market centres. Thus in supporting the economy, a well-established road network is required, enabling producers to bring their product to market within the Naivasha core and secondary centres. From there the product is either consumed or transported regionally and nationally. In addition, the proposed structure of the road network and its links allows for the establishment of an integrated public transport system that is complemented by the new railway system.

Figure 14: Naivasha Commerce and Market Centres

5. Integrated urban system

The proposed urban design strategy concept directs future growth and development dynamics in accordance with the planning direction, as depicted in the figure below.

- The lake environment is protected and utilised as a sustainable resource. Developments and activities around the lake are consolidated into specific locations that are to be developed in an environmentally sustainable manner.
- The urban development and growth of Naivasha town is consolidated within the urban core (including the CBD) and directed into the urban consolidation zone formed by the three secondary urban centres of Karagita, Kayole and Kinamba. Here urban development is to be intensified and residential densities increased to accommodate the growth of Naivasha.
- The remaining growth is to be directed into tertiary centres and support clusters, along the main routes around the lake, into the hinterland and along key routes to the south. These contain residential sprawl, establish more compact residential development, leaving the surrounding land area either for agricultural activities or conservation areas.

Figure 15: Naivasha Consolidated Natural and Urban System

4.1.2 Urban planning and design principles

The established vision, objectives and strategies inform the application of the following urban design principles in development of the structure plan. These include the Compact City, Smart and Eco-Friendly Green City, the Transit Oriented Development City principles.

1. Compact City

In the context of rapidly growing urban population worldwide, well located serviced or buildable land is an immensely valuable resource that should not be underutilised or mismanaged, equally important is the preservation of fertile agricultural land providing food and economic support to urban areas.

The call for a more compact and well managed urban structure is the dominant discourse put forward by development organisations looking at the future of cities and towns. To counter act urban sprawl it is necessary to put in place controls and incentives which do not necessarily have to equate to economic benefits but have to do with providing a better quality of life. This aim is at the core of the proposals and strategies formulated for the planning area.

The following considerations inform the thinking and layers explored with the aim of creating better urban futures, and calling for planned cities extensions at an African and global scale. This draws to great extent on the UN Habitat information, manuals and presentation material which identify the following key elements;

- Movement network and public transport
- Mixed Use
- Urban Form and Buildings
- Quality Public environment
- Public Facilities and services

The UN Habitat documents place special emphasis on the importance of design to achieve good urban planning including, public space layout, street patterns, block typology, plot typology, open spaces and finally protection of the environment.

The figure below indicates the urban sustainability principles considered in the formulation of the development framework and planning strategy some of which will require further refinement for specific application to existing and future development.

URBAN SUSTAINABILITY PRINCIPLES	Social	Infrastructure	Public Space / Pedestrian	Movement Economic	Environmental / Ecological
CROSS-CUTTING PRINCIPLES – PART 1					
1. Movement Network & Public Transport					
• Movement system: A legible street network, with good connections and access (the grid is the most legible type); accommodating a variety of movement types-pedestrian (sidewalk widths), cycling (non-motorised transport), vehicular and public transport.		✓	✓	✓	
• The provision of public transport services & facilities.	✓	✓	✓	✓	✓
• Establishment of a street grid that promotes connectivity and access; linking the local centres.	✓	✓	✓	✓	✓
2. Mixed Use					
• Mixed land use activities; fine grained (expansive / large land uses at the edge), with an urban activity mix: residential, commercial & recreational; includes trading and markets.	✓	✓		✓	
• (Mixed use & residential) Buildings with a range of unit sizes, to provide for a variety of household sizes (for extended families), designed to human scale (3 -4 storey walk-up?).	✓	✓		✓	✓
3. Urban Form & Buildings					
• A compact urban form; density range of 200-400 p/ha (40-80 du/ha) & 50% of built area.	✓	✓		✓	✓
• Sustainable / robust buildings; allowing for incremental development & expansion.	✓	✓	✓	✓	
CROSS-CUTTING PRINCIPLES – PART 2					
4. Quality Public Environment					
• Adequate space for streets & public space: 30-35% streets; 10-15% open space; 50% built area.	✓	✓	✓	✓	✓
• Provision of a variety of a variety of urban spaces and recreation areas- play spaces, parks, sport facilities, squares, natural areas & habitats, rivers & wetlands.	✓	✓	✓		✓
• Active streets: Buildings face the streets with active ground floor uses; this also provides surveillance on to public spaces, streets and parking areas.		✓	✓	✓	
• Development of a quality streetscape; which is tree lined (landscaped) with wide pedestrian sidewalks and cycling lanes.		✓	✓		
5. Public Facilities & Services					
• Provision of community facilities and social services.	✓	✓		✓	
• Urban management: Provision of regular public services to effect urban management and maintenance.	✓	✓	✓	✓	✓

Figure 16: Urban Sustainability Principles

Smart and Eco-Friendly Green City

In addition to qualitative and performance driven principles in the age of technological advancement, it is important to reflect on the role that technology can plan in facilitating growth as well as in improving living conditions. A Smart City (Figure below) uses digital technologies or Information and Communication Technology (ICT) to enhance the quality and performance of urban services, to reduce costs and resource consumption, and to engage more effectively and actively with its citizens. This is critically important. Taking into account that the provision of

adequate and appropriate municipal services is paramount to the creation of sustainable environments, thus the use and introduction of alternative technologies serves to respond in part to this objective.

The second and interrelated concept refers to the need to anchor development on eco-friendly principles, to build cities in balance with nature, protecting and enhancing unique natural features. In the case of Naivasha its distinct natural elements are of such significance in scale and ecological function that it makes them not only worthy of conservation but also as key economic drivers in terms of tourism. The adoption of smart technologies and eco-friendly green city principles are underpinned by the need to structure cities that are:

- Compact in extent (with emphasis on convenient walking distances)
- Complex in activity pattern (mixed-use, intense, dense)
- Structured on social integration (spatially inclusive and democratic)
- Growth of local economies (integration of dual logic economies)
- Public transport based (Mass transport and feeder systems)
- Reducing the need to commute (NMT as a default movement system)
- Incorporation of ecology and bio-diversity
- Energy efficiency (through spatial pattern/ waste-to-energy production)
- Smart cities and smart infrastructure
- Next generation logistics hubs
- Appropriate service infrastructure

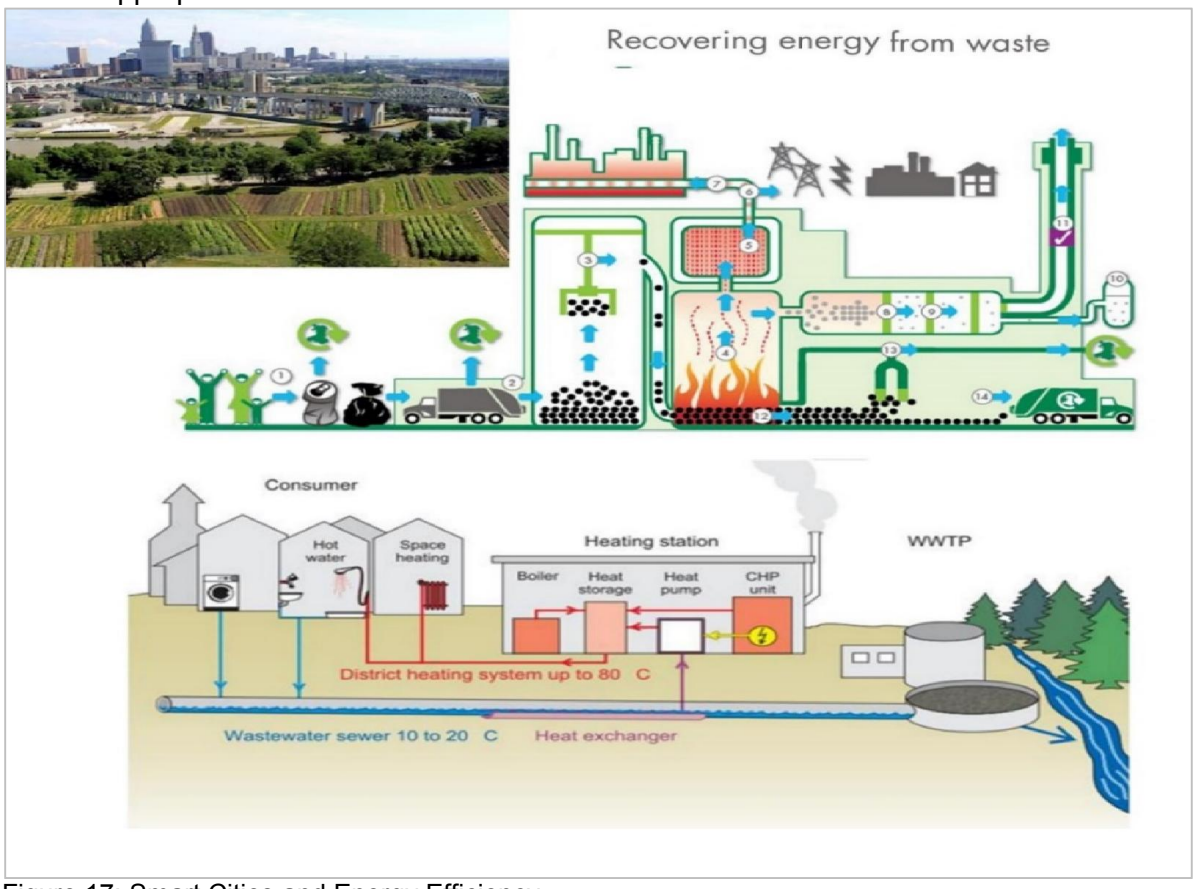


Figure 17: Smart Cities and Energy Efficiency

2. Transit Oriented Development

In the context of expanding cities due to the growth of suburbia, increased numbers of cars causing pollution and congestion and having a negative impact on the environment, the economy and quality of life, the concept of Transport Oriented Developments (TOD) which promote walkable lifestyles away from traffic seem to be a relevant and a worthy concept to follow. The figure below illustrates the conditions that could be created by promoting the consolidation of interconnected mixed use nodes served by well integrated public transport services.

TOD promotes the consolidation of high density and mixed use development in close proximity to integrated transportation hubs. The intention is to intensify and diversify land uses within a 10 minute walking distance (approximately 800 meters radius) from integrated transport stations.

The accessibility lattice should include bicycles, scooters and all relevant forms of transport used in a particular location. The figure below shows the type of development that could be encouraged within TOD areas.

Figure 18: Representation of Transport Oriented Development

Within the TOD's further services needs to be incorporated such as:

- Community / Social facilities
- Health & Welfare
- Safety & Emergency
- Water
- Storm water
- Electricity
- Roads
- Sewerage

4.2 THE STRUCTURE PLAN

The gives the broad picture of the proposed organization of land uses. With the growth systems and planning principles in account, the structure plan is guided by the following principles.

- Containment of the continued urban sprawl and seeks improved urban management.
- Retaining potential land for agricultural development.
- Promoting the sustainable use of the natural environment and all its resources (e.g. the park, wildlife corridors etc.)
- Integration of the various sectors of the economy.
- Positioning Naivasha as globally competitive and cosmopolitan city.
- Promoting industrial development in line with the 2030 vision.
- Building on existing nodes to key commercial and growth nodes.
- Providing an opportunity for accelerated growth in different areas.
- Providing an opportunity for development of an integrated public transport system.

The proposed structure plan takes consideration of the development clusters and uses dispersed centres as points of growth. The growth points are clustered and used as determiners of the surrounding land uses and services as illustrated on the figure below. These growth nodes will acts as secondary commercial nodes while supporting residential, recreational and industrial precincts where possible. The nodes shall be fully serviced with the requisite infrastructure, utilities, public facilities and services.

The cluster nodes shall provide basic and middle levels goods and services as well as employment opportunities while the core town at the CBD shall provide higher order services and goods. The various clusters are linked by transport corridors and take different shapes and specialty. They are considered as development blocks.

The model also promotes compaction of urban developments within a controlled limit i.e. the model envisions densification developments. It ensures optimal land utilisation by establishing the carrying capacities of each zone. The model advances the concept of vertical and high rise development. This would mitigate the need for horizontal urban growth often associated with urban sprawl. It also ensures mix of compatible uses and separation of incompatible uses.

Table 12: Structure plan land budget

Land use	**Area in Km^2**	**%**	**No. of Zones**
Agriculture	490.8	51.5	7
Conservation	217.5	22.9	4
Residential	149.5	15.7	7
Eco tourism	84.2	8.9	1
Commercial	10.4	1.1	8
Recreational	9.5	1	1
Total	951	100	28

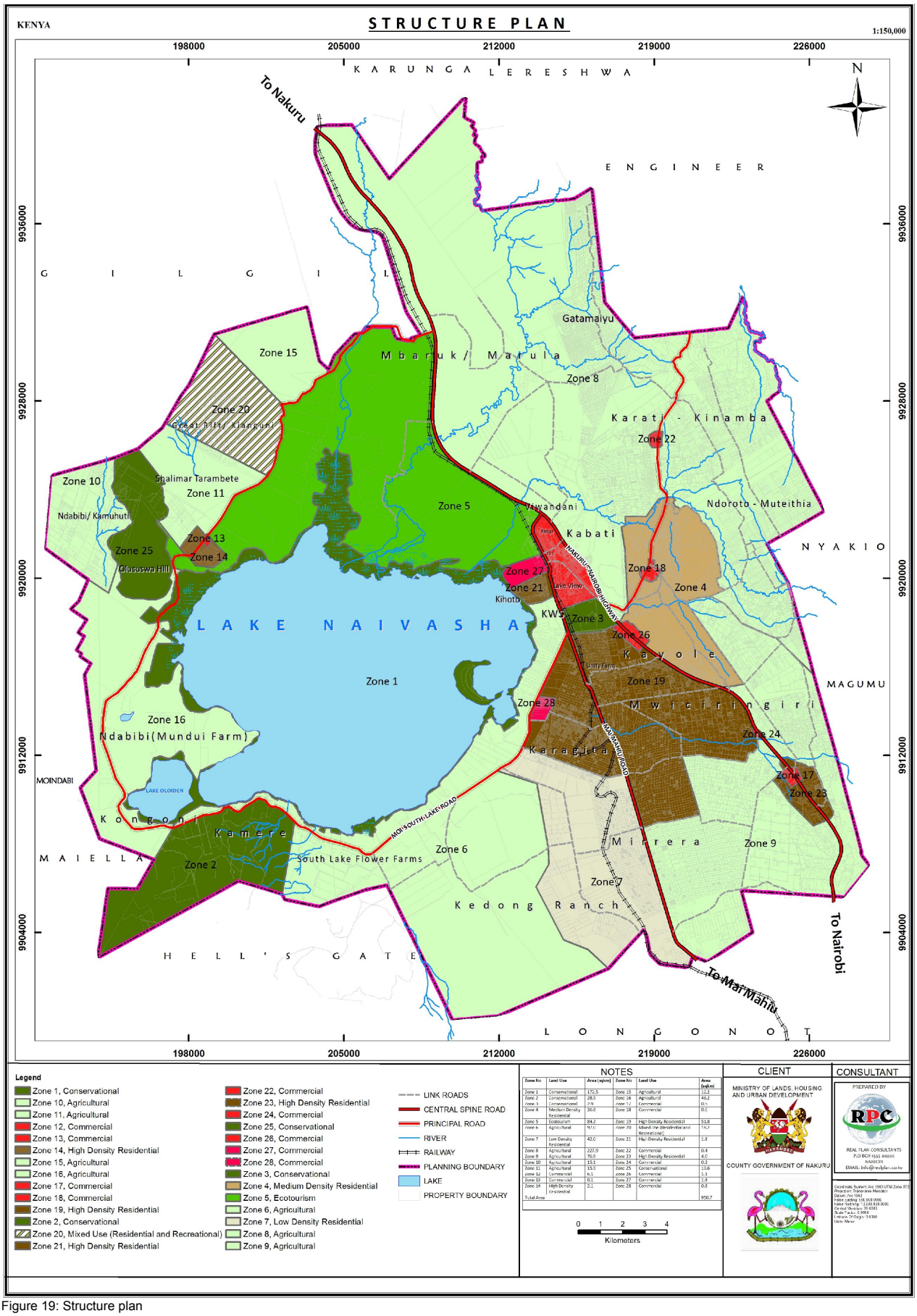


Figure 19: Structure plan

The zones are discussed in details below.

4.2.1 Housing

A total area of 149.5 km^2 of land has been reserved for housing. This represents 15.7% of the Naivasha Town. It is the largest portion of land within the urbanized area dedicated to a single use. The emphasis on residential development is largely driven by the need to sustainably house the ever growing population of the town. Housing has been further categorised into high, medium and low density housing.

High density housing

This will be established in three major areas earmarked as zones 14, 21 and 23 accounting for 46% of the residential space. The strategy here is densification of existing residential neighbourhoods. They located close to the CBD, commercial nodes and the major transportation corridors thus creating opportunity to lower cost of services to the low income residents. The majority of the people are expected to live here thus further benefiting the majority. The zones are in discussed in details.

Zone 14 refers to the current Kasarani area. It is located on the north-western shores of Lake Naivasha. It is approximately 2.1 km^2. It acts as a dormitory zone for flower farms workforce.

Zone 21 is adjacent to the CBD and neighbors KWS the south and Lake Naivasha to the west. The zone represents Kihoto estate covering 1.8 km^2. Currently, Kihoto is an informal settlement but a project to formalize by KISIP is ongoing.

Zone 23 is located to the southeast Naivasha town along the A104. The zone surrounds Kinungi Centre and is 1.8 km^2. The current primary land use is small scale farming but increased subdivision is evident. The zone is proposed to accommodate the population working in Kinungi Centre and neighbouring areas.

Zone 19 is located adjacent to Karagita residential area and extends to the railway line and Mirera area. It borders Mai Mahiu Road to the west and A104 to the east. The zone is 52.6 km^2. Current land use is mix of residential and agricultural.

Medium density

The second major category of housing is medium density housing which is represents 26% of the residential zone. It is dominated by zone 4 located south of CBD along Nakuru-Nairobi road and covers 26.8 km^2. It consists of areas such as Kayole, Maryland, Kinamba Karai and Mwiciringiri. It is close proximity to the CBD which will enhance compaction of developments to the core. The key feature here is the Kayole dump site.

Low density

It is as marked zone 7 covering 33% of the residential space. It is located west of Mai Mahiu road. It covers parts of Kedong, Mirera to the edge of the planning area. Medium and small scale farming is practiced here. The zone is 42 km^2.

4.2.2 Recreational space

Recreation is the sum total of all human, social-cultural and economic activities that enhances the therapeutic status of the mind. It brings a relaxation of the body and mind. The recreational space is marks as **Zone 20.** It is located to the northwest of Lake Naivasha measuring 18.2 km^2. The area is served by the Moi North Lake Road. The zone is an upcoming conferencing facilities area. Agriculture is also a common practice here. The SP proposes it as a mixed use zone (residential and recreational). Key features in the zone include the Great Rift golf course, cottages and airstrip.

4.2.3 Commercial Nodes

A commercial area is any part of a city or town in which the primary land uses is commercial activities (shops, offices, theatres, restaurants and so on). The proposed commercial zone accounts for 1.1% of the planning area and 7.6% of urbanized area, covering 10.4 km^2. The main commercial zone is the CBD located at the convergence of key transport corridors. The plan also proposes several commercial nodes that would form clustered developments around Naivasha. Some of the proposed nodes include Kinungi, Kinamba, Karati, Kayole, Karagita and Kasarani.

Zones **13, 17, 18, 22, 24, 26, 27** and **28** have been dedicated primarily to commercial use in attempt to redistribute economic overreliance on the CBD which has recently caused congestion and traffic impediments in the CBD. They are discussed in details below

Zone 12 covers an approximate area of 6.1km^2. It is proposed to serve as the primary commercial node. The zone consists of the extended CBD and public offices area. The extended CBD covers the Kabati, Kanju, Viwandani, sites and service and Lake View. This zone also consist sub county offices and the Naivasha general hospital.

Zone 13 covers Kasarani shopping centre measuring 0.1 km^2. The zone is located to the northwest of Lake Naivasha along the Moi North Lake Road.

Zone 17 is located along the A104 to the southeast of the plan area. The zone represents the current Kinungi Centre who growth is due to its proximity to A104 and the agricultural hinterland. The zone is intended to serve the population in surrounding agricultural zone and locals as well. The zone is 0.5 km^2.

Zone 18 is located to the east of the CBD along Kinangop Road. The zone represents the current Kinamba Centre. The nodes growth has been influenced by its proximity to the CBD, Kinangop Road and land availability. The zone occupies 0.6 km^2.

Zone 22 is situated to the northeast of the CBD along Kinangop Road. It covers Karati Centre covering 0.4 km^2. Karati's growth has significantly been influenced by its location with regards to Kinangop and the agricultural hinterland. The node is proposed to serve Karati, Ndoroto-Muteithia areas.

Zone 26 is adjacent to KWS land along the A104. It covers Kayole a satellite town of the CBD measuring 1.1 km^2. Kayole's growth has been influenced by the A104, proximity to the CBD and the surrounding flower farms.

Zone 27 is located adjacent to CBD, north of Kihoto and to the eastern shows of Lake Naivasha. The zone is served the Mai Mahiu Road and it covers 1.8 km^2.

4.2.4 Agriculture areas

The planning area encompassed areas of significant agricultural activity. The town has been expanding outwards into agricultural land hence the need to set limits for urban growth so as to protect agricultural land. Most agricultural land is lost through creation of residential and commercial plots. For that reason, some parts are proposed to remain predominantly agricultural to avoid unwarranted and speculative subdivisions of high potential agricultural land. This is also premised on the fact that the land earmarked for residential development is adequate to cater for the expected population without having to require further loss of agricultural. This also calls for simultaneous densification of existing residential areas.

Seven major areas have been identified for agricultural use. This covers **zones 6, 8, 9, 10, 11, 15 and 16** covering an area of 490.8km^2. It accounts for 51.5% of the planning area. The proposed zones are discussed in details below.

Zone 6 is located along Moi South Lake Road. It consist of part of Kedong ranch and Sher Karuturi farms. It also covers the section off Lake Naivasha, on the North side of Moi south road that extends from Kihoto to Kamere. The zone mainly consists of flower farms, conferencing facilities, hotels and tourist facilities. These include Crayfish camp, Simba lodge, Sawela lodge and Naivasha Country Club. Other key features in the zone include Oserian Airstrip and Finlay's farm. Ranching is also practiced in some section of Kedong ranch. The zone measures 97 km^2l.

Zone 8 is located north and northwest of the CBD. It measures approximately 227.9 km^2. It consists of area of Morendati, Gatamayu, Marula, Mbaruk, Karati, Ndoroto and Mutethia areas.

Zone 10 is located on the western side of Naivasha town in Ndabibi-Kamuhuti area. It is approximately 15.1 km^2.

Zone 11 is 15.5 km^2 in size located off Moi North Lake road North of Kasarani. It covers Shalimar Tarambete area and borders Olususwa Hills to the west. Key feature in the area is the Kongoni game ranch.

Zone 15 is located to the north of Lake Naivasha along the Moi North Lake Road. The zone represents the upper part of Great Rift/Kianguni area measuring 12.2 km^2.

Zone 16 is situated to the west of Lake Naivasha covering Ndabibi (Mundui Farm area) and Kongoni. Large scale farming is most common in the area. Crater Lake, Hotel and conference facilities are also key features here. Zone 16 occupies 46.2 km^2.

4.2.5 Ecotourism

The proposed ecotourism zone is proposed along Lake Naivasha Riparian and marked as **zone 5**. It occupies 8.9% of Naivasha Town with an area of 84.2 km^2. The zone combines tourism, regulated agriculture and conservation activities. It covers areas on north shores of Lake Naivasha covering Malewa, Marula and Mario farm. It also extends northwest from CBD to Kasarani area occupying 84.2 km^2. It is located in environmental sensitive area hence only activities that are eco-friendly shall be allowed in this zone.

4.2.6 Conservancy areas

The plan foresees a town with ample conservation areas occupying 217.5km^2. This represents 22.9% of the total land. The plan purposes to preserve and protect the natural resources, habitats and wildlife dispersal area for inter and intra-generational benefits. This covers zones **1, 2, 3** and **25** that are described below.

Zone 1 refers to the current lake Naivasha and the riparian. The zone is 172.5 km^2 in Size. The zone is a gazzeted conserved Ramsar site. It currently used for recreational and occasional fishing. The zone is a key driver in Naivasha economy. Key features include Lake Naivasha, the crescent islands and 8 public access corridors.

Zone 2 is located south west of Naivasha Town around Oserian Farms area. Land uses in the area include large scale farming which is integrated with wildlife and Olkaria geothermal activities. This zone is 28.5 km^2.

Zone 3 is 2.9 km^2. It is the current Kenya Wildlife service training Institute located to the south of the CBD. The zones consist of the training institute with conference facilities and conservancy with a variety of wild animals.

Zone 25 is located to the northwest of Lake Naivasha. It borders Shalimar Tarambete to the east and Ndabibi/Kamuhuti to the west. The zone represents Olususwa hill covering 13.6 km^2. The forest is an environmental significant area hence a proposed conservancy zone to eliminate degradation.

4.3 CONCLUSION

The physical, policy and socio-economic factors highlighted herein determine the form the SP and DPs adopt. The design factors determine the types of development in particular areas such as the lake edges. The structure plan shows the Town-wide structure and form. It also illustrates the proposed broad land uses zones that will guide the detailed land uses discussed in the next chapter. The SP promotes development by addressing the existing challenges and harnessing the Town's potentials. The proposed model aims to limit horizontal growth of commercial and residential zones rather propose vertical growth. It advocates for high density residential and limits urban development to their current extent. This will protect agricultural, conservancy and ecotourism zones to ensure environmental sustainability for the current and future generations.

CHAPTER FIVE
DETAILED LAND USE PLAN

The detailed land use plan elaborates the proposed land uses proposed in the structure plan. It details out the density, minimum plot size, permitted developments, plot ratio, plot coverage and other relevant details per zone. This helps to address the inadequate development regulation that has been afflicting the town for a long time. This has led to land use conflicts with many already before Courts of Law. Conflicting land use has also led to loss of land values, privacy, social conflicts and spatial disorder. To address this problem, the detailed planning process has identified distinct land use zones and provided development regulations for each.

The proposals focus in more detail on the following components, interventions and proposals:

- The local/precinct balanced development catering for a diversity of activities and functions, built on environmental sustainability and community safety.
- The street environment- its design and character, accompanying functions, and associated linkages and connections.
- The built form and appropriate building typologies- directing the physical development of the urban environment that is human-scaled, compact, public space orientated, walkable and convenient.
- The public spaces and markets by developing a quality public environment, improving their performance, providing a variety of spaces and optimising the use of public land.
- Public transport related multi-functional and integrated land use activities developing a working synergy.
- Mixed use activities promoting vertical and horizontal mix of land use activities, with higher residential facilities and supporting infrastructure and public facilities.
- Environmental sustainability and smart technologies which incorporates the natural systems as well as the utilisation of information and communication technology to improve the performance and quality of urban services and consumption, to reduce, reuse and recycle.

5.1 LAND USE PROPOSALS

Guided by these principles (TOD, compact, smart and green city), the planning area is delineated into 10 broad land use zones namely residential, industrial, educational, recreational, public purpose, commercial, transport, public utilities, agricultural, eco-tourism and conservancy as shown in the figure below. Of the land uses earmarked, agriculture is assigned the largest proportion at 57.79% of the land while public utilities have the smallest at 0.01% as shown in the table below. The other major land uses are conservancy and ecotourism.

Table 13: Proposed land use budget

Permitted Land Use	No. of Zones	Area km^2	% by Area
Residential	32	66.42	6.99
Agricultural	23	549.46	57.79
Public purpose	22	7.19	0.76
Educational	29	4.08	0.43
Commercial	19	5.07	0.53

Ecotourism	5	81.30	8.55
Conservancy	6	205.71	21.64
Recreational	11	4.74	0.50
Transport	4	25.23	2.65
Industrial	3	1.44	0.15
Public utilities	2	0.10	0.01
Total	**156**	**951**	**100**

From the above it is apparent that the urbanised area will comprise 73 Km^2 accounting for 7.67% of the planning area. This is consistent with the planning vision to be a well-planned lake city leading in tourism, world class conference facilities and horticulture farming.

Table 14: Land use summary

Land Use	**Area (km^2)**	**%**
Public Space	16.01	1.69
Urban Space	72.93	7.67
Green Space	755.17	79.63
Conservancy	81.30	8.55
Transport	25.23	2.65
Total	951	100

Therefore it is expected that the urbanised area will experience more compact development to accommodate the expected population increase, so as to retain large areas for green and public spaces. Within the urbanised area, residential takes the greater proportion at 91% followed by commercial at 7% and industrial at 2%.

Further analysis shows that the area has been delineated into 156 distinct planning zones. This is the lowest level of analysis of the detailed plan. Each zone has specific regulations to guide development.

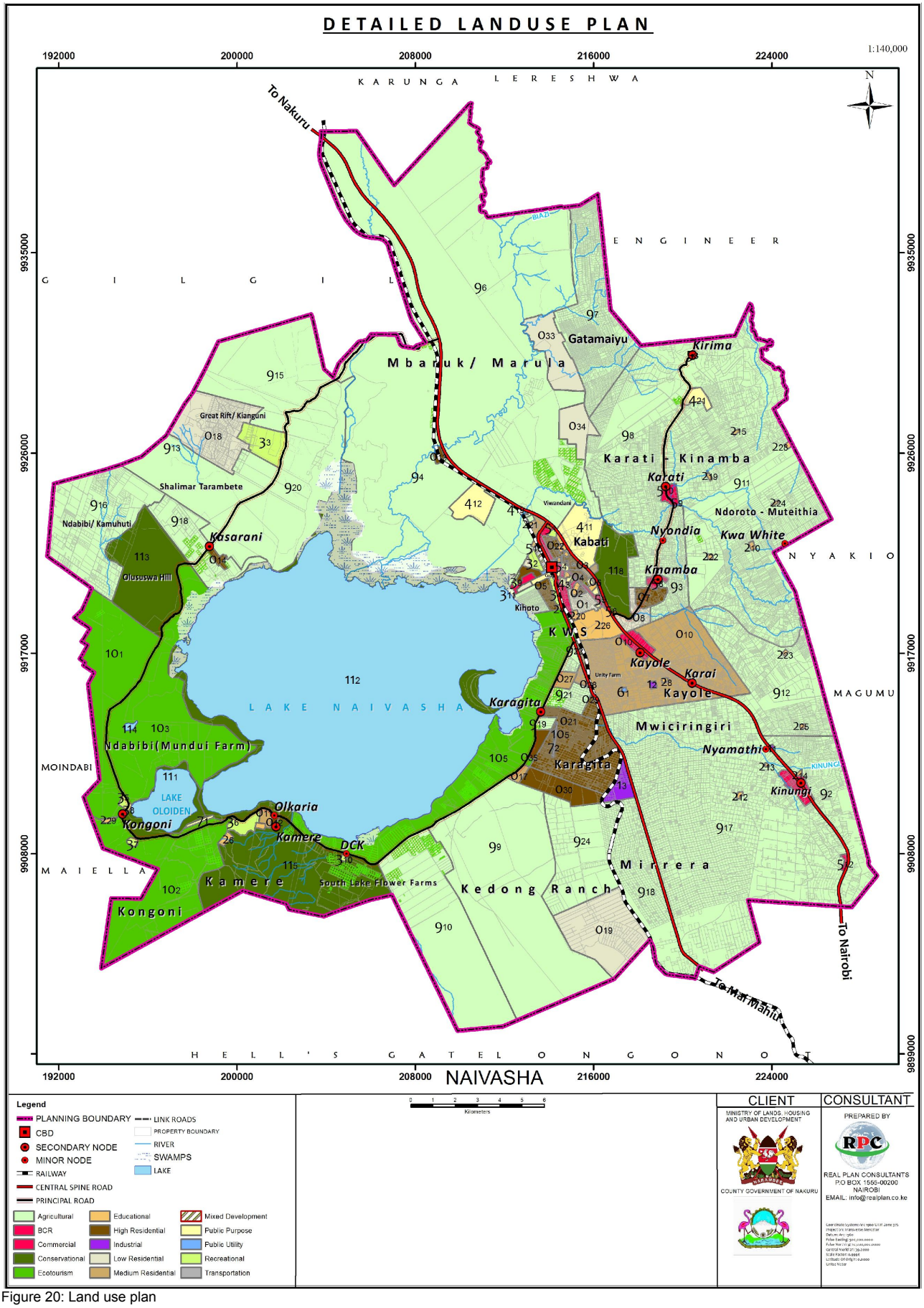


Figure 20: Land use plan

5.1.1 Residential

Residential areas are the main places of habitation for the town residents. However, some residents may be found residing in commercial areas. Residential is normally the highest land use in a town. Residential areas may be made up of organized estates and neighbourhoods. Categorization of the residential land use should be based on development density and level of services (to avoid segregation of people)

It the fourth most dominant land use at 66.42 km^2. It covers 7% of the planning area and 91% of urbanized area. Further, the zone has been delineated into low, medium and high density areas as shown in the table below. Low density housing takes the greater proportion at 40.82% given that most of this development will be single dwelling units on individual plots coupled with the likely increase of demand in the sector. High density housing takes 25.61% given the high population in this sector. The plan promotes development of high-rise structures so as to achieve aforementioned objectives.

Table 15: Residential zone budget

Permitted Land Use	**No. of zones**	**Area in km**	**% by Area**
Low Density Residential	7	27.11	40.82
Medium Density Residential	9	22.30	33.57
High Density Residential	16	17.01	25.61
Total	32	66.42	100

The residential zone has been delineated into 32 unique residential zones as discussed below.

Zone 0_1

Lake View -is located off Kenyatta Avenue. The existing use is residential but has been proposed as residential and BCR (Business cum residential) area. Total area covered is 0.91 km^2.

The plan proposes a mixture of maisonettes, bungalows and town houses. The minimum plot sizes are proposed at 0.1 hectares. Ground coverage proposed at 50% and plot ratio at 75 %. BCR developments are allowed on front row of Kenyatta Avenue.

Zone 0_2

It is a proposed high density residential area located off Kenyatta Avenue adjacent to Lakeview estate. It is locally known as Spherical covering an area of 0.14 hectares. The current housing trend is mixed with flats, bungalows and maisonettes. High densities are desirable due to the zones proximity to the CBD, the land values are high and current land carrying capacities are underutilised.

The plan proposes flats with BCR allowed in the front row on Kenyatta Avenue. The minimum plot sizes are proposed at 0.05. The zone is currently served by the conventional sewer, electricity and piped water system and will therefore accommodate high population densities. Ground coverage and plot ratio are proposed at 75% and 80 % respectively. High rise development may go up to 5 floors.

Zone 0_3

It covers the Site &Service Scheme with a total area of 0.43 hectares. The Site & Service Scheme is located off Mbaria Kanui and Kabati Road. The area is served by conventional sewer, a piped water network and electricity supply. The majority of the housing in the estate are row/ terrace housing that accommodates single and double rooms. An emerging trend of flats is evident.

The plan proposes renewal and densification in the area, desirably with flats of 5 floors. Ground coverage and plot ratio are proposed at 65% and 80 % respectively. The minimum plot size is recommended at 0.125 Acres. High density developments are justifiable since the land is underutilised, proximity to the CBD, the need for renewal in some quarters and emerging development trends.

Zone 0_4

Kabati is located next to Site & Service Scheme and covers a total area of 0.31 hectares. The estate is accessed off Kenyatta Avenue. It has the necessary infrastructure and services including piped water, electricity, sewer and roads. Kabati is an old residential area that has many old structures. The main housing type is terrace housing. This area would be able to accommodate a larger percentage of the growing population if the land carrying capacity is maximised.

The plan proposes high density developments in form of flats up to 5 floors. Ground coverage and plot ratio are proposed at 65% and 80 % respectively. BCR is allowed on the plots fronting Kenyatta Avenue.

Zone 0_5

The zone represents Kihoto area which is considered as an informal settlement covering 0.60 hectares. It is a high density residential area. The area has been proposed as a residential with BCR front row.

The plan proposes a mixture of bungalows and row housing due to high water table. The minimum plot sizes are proposed at 0.05 hectares for both housing. Ground coverage is 65% and plot ratio 80%.

Zone 0_6

It is an extension of Kabati and Site along the A104. It is proposed as a medium density residential with minimum plot sizes at 0.045ha. Maisonettes are allowed while plot ratio and coverage are proposed at 70 and 50% respectively. The zone covers 0.14km^2.

Zone 0_7

The zone covers part of Kinamba area that is located to the west of Kinamba- Karati road behind the commercial zone. The current use existing in the area is residential. The plan proposes high residential developments (flats) with a minimum of 5 floors. The plot coverage recommended is 65%and a plot ratio of 80% with minimum plot sizes of 0.045 Hectares. The zone is approximately 1.06km^2.

Zone 0_8

It represents Kinamba residential area which borders KWS to the South East. It covers an area of 1.35 km sq. Low residential and agricultural are the proposed uses by the plan. Proposed Minimum plot sizes for residential is 0.1 Hectares and 0.2 Hectares for agriculture.

Plot coverage and plot ratio recommended are 35% and 50% respectively. The common housing typologies include bungalows and maisonettes not exceeding 3 floors.

Zone 0_9

It is a proposed medium density residential located at the boundary of Kabati and Site & service Scheme. Currently, the area is residential and agricultural. According to the plan the permitted use is residential with a minimum plot size of 0.045 Hectares. Bungalows and maisonettes are the housing typologies recommended observing plot ratio of 70% and plot coverage of 50%.

Zone 0_{10}

It represents Kayole area which covers 22.80 km sq. Kayole residential area is located off Nairobi-Nakuru Highway. Existing types of structure include terrace housing, maisonettes and a few flats. The area is inadequately served by infrastructure and services. The plan proposes development of Kayole as a medium density area with a minimum plot size of 0.045 Hectares. Plot coverage and ratio are recommended at 50% and 75%. The permitted house types are flats and row housing. High rise developments shall be permitted along the first few rows along the highway. Such developments may be mixed use.

Zone 0_{11}

This represents KenGen housing next to Kamere. The plan proposes it as a medium density residential and institutional. Minimum plots are proposed at 0.045ha, plot ration at 75% and plot coverage at 50%. It covers 0.38km^2.

Zone 0_{12}

Zone 0_{12} is Kamere estate which is located along Moi South Lake Road and covers a total area of 0.13 km sq. The area is inadequately served with sewer and piped water, although electricity supply is available. The plan proposes high density developments of flats up to 5 floors. A commercial zone is proposed along Moi south lake road. The minimum plot size is recommended at 0.045 Hectares while Ground coverage and plot ratio are proposed at 65% and 80 % respectively. Types of houses include flats and row housing.

Zone 0_{13}

It cover KCC slum, located at Malewa farm. The zone is an informal settlement on a private land as serve a residential purpose. The zone is of 0.29km^2 in area.

Zone 0_{14}

The zone covers Kasarani residential along Moi South Lake road; the zone has a high density residential informal settlement. It's permitted for high density residential purpose. The plan proposes a minimum plot size of 0.05hectares row housing and flats. Plot coverage is recommended at 65%. Plot ratio also is recommended at 80%. The developments permit houses up to 5floors. The zone covers an area of 0.38km2.

Zone 0_{15}

It covers Mithuri estate which is located opposite Kabati fly over along Nairobi- Nakuru highway (A104).The existing land use is residential covering an approximate area of 0.12 km^2.

The plan proposes development of the area as medium density residential with minimum plot sizes of 0.045 Hectares. Plot coverage and plot ratios are recommended at 50% and 75% respectively. Maisonettes are the main housing structures in the area. High-rise developments shall only be permitted up to 5 floors.

Zone 0_{15}

This is Mary land estate located along Nairobi-Nakuru highway and covers an area of 0.38 km sq. The main house types are maisonettes and bungalows. The plan proposes the development of the area as a medium density and middle income. The minimum plot sizes are proposed at 0.045 hectares. Plot coverage and plot ratio are recommended at 50% and 75% respectively. High-rise developments shall only be permitted on the front rows close to the highway. Mixed use high-rise developments shall be encouraged. The area also requires improved services as it lacks sewer network, piped water and solid waste disposal.

Zone 0_{17}

It covers South Lake Villas located along the MSL Road. The plan proposes it as a residential zone with minimum plot size at 0.45ha. Housing typologies allowed include maisonettes and town houses. Plot ratio and coverage are proposed at 75 and 50% respectively.

Zone 0_{18}

It represents the undeveloped lands next to Great Rift on the Upper side. It both serves medium and low density purpose. The zone is an agricultural zone. Plan proposes residential and recreation use plus a minimum plot size of 0.1 hectares for the zone. House type recommended remains maisonettes. Plot ratio of 50% is recommended and a ground coverage of 35-50%. The zone covers an area of 8.61km2.

Zone 0_{19}

This zone is Longonot Gate located off Mai Mahiu Road covering a total area of 9.84 km sq. the zone is composed of low and medium residential houses with mixed development. The plan proposes composed of mixed typology houses of a maximum of 3 floors plus minimum development plot size of 0.1 hectares. Plot ratio of 35-50% and plot coverage of 75% is recommended.

Zone 0_{20}

It is a mixed low and medium density residential zone in Lake View Estate fronting Mai Mahiu and Mama Ngina Road. It covers 0.55 Km2. The area is served by sewer system, piped water and is connected to the power grid. Majority of the housing in the estate are low and medium residential houses

The plan allows bungalows, maisonettes and flats, desirably 3 floors high. The minimum plot size here is 0.1 Ha while the plot ratio is 50%. The ground coverage is proposed at 35-50%. BCR is allowed on plots fronting Mama Ngina and Police Line Roads.

Zone 0_{21}

It is a proposed high density residential zone covering Karagita area along the Moi South Lake Road. It occupies 10.16 Km^2. The estate accommodates a large population but lacks sewer, piped water and an effective solid waste management system.

The plan proposes the development of high-rise developments and the provision of appropriate infrastructure and services. Flats are proposed on provision of sewer. The plan allows 5 floors. The recommended minimum plot size is at 0.045 Hectares, Plot coverage at 65% and plot ratio at 80%.

Zone 0_{22}

The zone represents Kanju Estate located next to the Industrial Area. It is a proposed high density residential estate that covers 0.112 Km^2. Although electricity is supplied, the area is inadequately served with sewer and piped water.

The plan proposes development of flats up to 5 floors upon provision of necessary infrastructure. Minimum plot size, plot ratio and ground coverage are proposed at 0.045 Ha, 80% and 65% respectively. BCR developments are allowed on plots fronting the road.

Zone 0_{23}

It covers the industrial (near Kanju Estate) a proposed high density residential zone that occupies 0.28 Km^2. It is also connected to the power grid, the sewer system and piped water.

The plan proposes minimum plot sizes at 0.045 Ha and flats with up to 5 floors. Plot ratio and ground coverage are recommended at 80% and 65% respectively. BCR developments are allowed on plots fronting the road.

Zone 0_{24}

This is a proposed medium density estate next to Naivasha Golf Course. The zone covers 0.112 Km^2. The plan proposes a minimum plot size of 0.045. Recommended housing types are low-rise developments up to 5 floors and maisonettes. The plot ratio is proposed at 75% and ground coverage at 35-50%.

Zone 0_{26}

Hopewell is a proposed medium density residential estate opposite the Buffalo mall. The zone occupies 0.4 Km^2The estate is connected to power. The recommended house types are maisonettes and low rise apartment. Minimum plot sizes and plot ratio are proposed at 0.045 Ha and 75% respectively while ground coverage is recommended at 35-65%. The maximum number of floors is five.

Zone 0_{27}

It covers Villa View area which is a proposed medium density residential estate. It is located off Moi south lake road. The estate is a developing gated community with controlled developments. The minimum plot size in the zone is recommended at 0.045 Ha, permitted buildings include bungalows and maisonettes and ground coverage is proposed at 35-50%. The area is not served by water and sewer networks hence the use of borehole water and septic tanks. The plot ratio is proposed at 50%.

Zone 0_{28}

The zone covers areas adjacent to Villa View estate and s located along Moi south lake road. The area is currently undeveloped and is used for agriculture use. The plan proposes the zone as a medium density residential estate. Minimum plot size is proposed at 0.05 Ha, permitted buildings include bungalows and maisonettes and ground coverage is proposed at

35-50%. The area is not served by water and sewer networks hence the plan proposes provision of these infrastructures in anticipation of future developments. The plot ratio is proposed at 50%.

Zone 0_{29}

It covers parts of Mirera area**.** This is a proposed high density residential estate located off Moi south lake road. The zone accommodates a large population but lacks sewer, piped water and an effective solid waste management system. The plan proposes high-rise developments and the provision of appropriate infrastructure and services. Flats are proposed on provision of sewer. The recommended minimum plot size is at 0.05 Hectares, Plot coverage at 65% and plot ratio at 75%.

Zone 0_{30}

It represents areas adjacent to Karagita**.** This is a proposed high density residential estate located off Moi south lake road. The zone accommodates a large population but lacks sewer, piped water and an effective solid waste management system. The plan proposes high-rise developments and the provision of appropriate infrastructure and services. Flats are proposed on provision of sewer. The recommended minimum plot size is at 0.05 Hectares, Plot coverage at 65% and plot ratio at 75%.

Zone 0_{31}

It is part of LR No. 13209 next to Kihoto Estate and the sewer plant. It is currently agricultural but the plan proposes it as a high density area. The recommended minimum plot size is at 0.05 Hectares, Plot coverage at 65% and plot ratio at 75%.

Zone 0_{32}

The zone is part of LR No. 13209 next to Kihoto Estate. It is proposed as low density residential zone with minimum plot size at 0.05ha. Housing typologies allowed are maisonettes up to one floor. Plot ratio and coverage are proposed at 50 and 35% respectively.

Zone 0_{33}

It represents Aberdare Hills estate located next to Morendati and Gatamaiyu. Currently, there are on-going gated residential developments in the area but most of the land under agricultural use. The plan proposes it as a mixed use area allowing low density residential and golf course. Allowing house types are Maisonettes and town houses with minimum plot size at 0.05ha. Plot coverage is proposed at 50%.

Zone 0_{34}

This is part of Aberdare Hills Estate where mix development including hotel, commercial and residential is allowed. Currently, the area is under agricultural use. House types allowed include maisonettes and flats with up to 3floors. An allowed minimum plot size is 0.05ha. Plot coverage is proposed at 50%.

Zone 0_{35}

This is a future residential area that is part of LR No. 398/12/1 located next Karagita. Currently it is under agricultural use but the plan proposes it as high density area where flats up to five floors will be allow. Minimum plot size is proposed 0.05ha while plot coverage is proposed at 50-65%.

Zone 0_{36}

Represents are proposed medium density area located at DCK/Karuturi. Minimum plot size is proposed at 0.05ha, plot ratio at 75% and coverage at 50-65%. Housing types allowed are flats up to 5floors.

5.1.2 Industrial

The categories of industries are: Heavy, medium, light, small and medium and special industries. The factors used to determine these were: the type of technology used, type of by products produced and the workforce.

Table 16: The 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

For heavy industries the specific land requirement was not placed because it may transcend one town, will depend on the type of technology and the level of services available. **Special industries** are considered for planning when need arises. They are located outside the town because of their special feature.

(i) Quarrying, sand harvesting, brick making, mining – subject to environmental regulation.
(ii) Oil depots

Areas proposed for industrial development are Mai-Mahiu and upper Mwiciringiri. They are desirable due to availability of a good road infrastructure (Mai-Mahiu road), transit vehicle traffic, the existing rail way line and the proposed standard gauge railway, undeveloped land and energy resources (solar, wind and proximity to geothermal plants. The area is suitable and also part of a national strategy to set up warehouses. The proposed area is away from the lake. The topography does not allow direct surface runoff to the lake hence reducing the possibility of contamination of the lake with industrial waste. It is important to note is that the land ownership patterns (Private land) would not allow for the demarcation of specific sites for industrial development. Therefore the plan has not defined a specific location.

Areas around Kengen and other geothermal field would be suitable in line with the creation of special economic zones. However, detailed plans would be required to designate and plan such industrial parks.

Zone 1_1

Zone 1_1 is situated at the junction of Moi south lake and Mai Mahiu Roads. The area has food processing plants. The plan proposes a minimum plot size of 2 hectares and plot coverage of 65%. Permitted buildings include ware houses and high rise developments.

Zone 1_2

Zone 1_2 is located in Karai area and is accessed off Nairobi-Nakuru highway. An industrial site currently exists and the plan provides for guidelines and regulations towards the same. Minimum plot sizes are proposed at 2 Ha and plot coverage at 65%. The permitted buildings include ware houses and high rise developments.

5.1.3 Educational

Various educational facilities have been identified. The plot size of each educational facility varies depending on its location, operator and student capacity. The plan proposes adoption of standards as set out in the physical planning handbook.

A nursery school requires a minimum plot size of 0.15-0.25 Ha and plot coverage at 50%. A primary school requires a minimum plot size of 3.25 hectares. Recommended plot coverage at 50%. A secondary school of three streams requires a minimum plot size of 4.5 hectares. Recommended plot coverage at 50%. A university requires a minimum plot size of 26.3 hectares. Recommended plot coverage at 50%.

However, the changing nature of academic environment may seek for high rise academic blocks especially for secondary and tertiary level, establishment of colleges and specialized universities. Distance learning and the use of Information Technology are changing the academic environment.

5.1.4 Recreational

Recreation is the sum total of all human, social-cultural and economic activities that enhances the therapeutic status of the mind. It brings a relaxation of the body and mind. Recreational areas can be private or public.

The zone provides for hospitality, leisure and recreational service providers. They include public parks, play grounds, stadiums among others. The proposed recreational zones covers 3km^2 representing 0.32% and 1.79% of the planning area and urbanized area respectively. The plan has set aside 8 recreational zones as discussed below.

Zone 3_1

This zone covers the stadium. This is the new stadium next to the Buffalo Mall. The zone is planned for recreational purpose as per the existing use. Development within this zone should comply with the standards as per the National Construction Authority in regards to modern stadium constructions. Zone covers 0.1 km^2.

Zone 3_2

It covers the Naivasha Golf course, the zone is near the sewer treatment plant. The zone is set for recreational purpose as current use, and proposed to be maintained for recreational purpose. The zone is 0.33 km^2 in area.

Zone 3_3

This is the Great Rift resort along Moi North Lake road. The zone is a recreation site as the existing use. The plan proposes further engagement into the recreational purpose. The zone covers 2.61 km^2

Zone 3_4

The zone covers the proposed public park along the C88 in Kihoto area. The zone is under recreation use and is 0.32 km$^{2.}$

Zone 3_5

This covers the Naivasha Kongoni lodge, opposite Kongoni primary school. The zone serves a recreation purpose. The plan proposes an additional eco-tourism purpose that will promote sustainable utilization of resources. Zone covers an area of 0.17 km^2.

Zone 3_6

The zone covers Elsamere resort which is close to Kamere. The zone serves as both recreation and conservancy purposes. The plan will retain the current purposes. The zone is of 0.84 km^2 in area.

Zone 3_7

It covers Kongoni resort, along Moi South Lake road from Karagita. Presently, the area is under recreation use. Its use is expected to be maintained according to the plan. It covers an area of 0.16 km^2.

Zone 3_8

The zone covers the Wileli camp off Moi North Lake road at Kongoni and next to Lake Oloiden. This zone is used for recreation purpose. This is intended to be maintained as per the plan. The zone covers an area of 0.05 km^2.

5.1.5 Public Purpose

These are areas set aside for public uses such as hospitals, administrative offices, police posts and other government institutions. Other facilities in the public purpose areas include social hall, Ministry of Works land, churches, and land for administration and cemetery. There are 21 public purpose zones which covers 0.75% (7.1 km^2) of the planning area. Four zones have been discussed below.

Zone 4_1

The zone covers Naivasha Sub-County offices located along Moi Avenue occupying 0.05 km^2. The plan proposes it as a public purpose (offices) zone. The plot ratio and ground coverage are recommended at 100% and 75% respectively.

Zone 4_2

It represents the ACK Church a proposed public purpose area next to the Sub-County offices. The zone covers 0.01 Km^2. The plot ratio is proposed at 100% and ground coverage at 75%.

Zone 4_3

The zone accounts for 0.08 km^2. The zone covers the new County Government offices in Lake View area. The plan designates as a public purposes zone. Plot ratio and ground coverage is proposed at 150% and 75% respectively.

Zone 4_4

It is proposed public purpose zone located next to the Catholic Church in Lake View area. It occupies 0.06 Km^2. The plan proposes the plot ratio at 150% and ground coverage at 75%.

5.1.6 Commercial

A commercial area is any part of a city or town in which the primary land uses is commercial activities (shops, offices, theatres, restaurants and so on). 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 proposed commercial zone accounts for 0.5% of the planning area and 3% of urbanized area, covering 4.63 km^2. Commercial land use is to be dominated by the CBD and outlying nodes spread throughout the planning area. The CBD is the primary node and a lot of activities will realign with the same. The plan proposes expansion of the CBD to enable high

levels of economic productivity as well as ensure efficiency and proper functionality of the core. The current extents of the CBD are marked by Moi Avenue, Mbaria Kaniu road, Mama Ngina Street and Kenyatta Avenue. This area forms the defined urban core measuring 0.03 km^2. The plan proposes expansion of the CBD along Moi Avenue to Buffalo mall area. The expansion of the CBD is necessary so as to accommodate the growing commercial enterprises.

Eight commercial nodes have been proposed including the expanded CBD which is a major commercial centre. It is primarily reserved for commercial use. The building regulations consider the delicate geological structure of the town and serve to reduce chances of geological disturbances that may result from building beyond the recommended height. Geotechnical studies are recommended for such high rise developments as a perquisite to development approval. This will help ascertain the site conditions of each plot.

Zones 5_1 to 5_{17} have been dedicated primarily to commercial use in attempt to redistribute economic overreliance on the CBD which has recently caused congestion and traffic impediments in the CBD.

Zone 5_1

This is the zone near Moi Avenue and Nairobi Nakuru interchange. It measures approximately 0.21 km^2. The zone represents a key emerging commercial zone in Naivasha town. Key current commercial developments include the Buffalo Mall. The proposed land use is high rise commercial development of in minimum plot sizes of 1/4 acre, ground coverage of 80% and plot ratio of 600%.Other land uses allowed in the zone are offices developments.

Zone5_2

The zone covers the first 3 rows of Viwandani area along Moi Avenue up to area near the Buffalo mall. It extends up to Sam`s Holiday Inn along Mbaria Kaniu road. It is 0.44 km^2 in size. Existing land use in the zone is commercial. This plan proposes to allow commercial and offices developments. Maximum Ground coverage of 75% and plot ratio of 600% are proposed.

Zone 5_3

This refers to the area between County Govt Offices & Kenyatta Av currently under commercial use. It is 0.07 km^2 in size. The proposed permitted use is Commercial/ offices. Maximum Ground coverage of 75% and Plot ratio of 500% are proposed.

Zone 5_4

This is the current Naivasha CBD. It is defined by junction of Moi Avenue and Mbaria Kaniu road, the junction of Mama Ngina Street and Kenyatta Avenue and junction of Kenyatta Avenue and Moi Avenue. It is 0.47 km^2 in size. Currently the zone is a high density commercial area.

This plan proposes to maintain the zone as commercial and promote more vertical developments. It proposes in minimum plot size as ¼ acre with maximum plot Coverage of 80% and plot ratio of 600%.

Zone 5_5

This refers to the 2 front rows of Kabati area towards Kenyatta Avenue. It is 0.29 km^2in size .Existing land use is Commercial and BCR. The plan proposes commercial use as the permitted land use. Minimum plot sizes are proposed to be ¼ acre. The maximum Ground coverage of 75% and maximum Plot ratio of 350% are proposed.

Zone 5_6 accounts for 0.03 km^2. It covers Naivasha Main Junction (Kenyatta Avenue and Nakuru-Nairobi Road) area. The area is proposed as a commercial zone with minimum plot sizes at 0.1 Ha. High-rise commercial buildings will be allowed with ground coverage are recommended at 75%.

The area is served by two key Roads, The A104 (60M) and the Kenyatta Avenue. Several access roads have also been provided including an 18m road that transits the zone.

Zone 5_7

It covers the first row west of Kinamba Centre along the Kinangop Road. It occupies an area of 0.08 km^2. The plan proposes commercial and BCR. The minimum plot size, plot ratio and ground coverage are recommended at 0.1ha, 240% and 75% respectively. High-rise structures up to 3 floors will be permitted. The zone is served by the Kinangop Road (30m).

Zone 5_8

The zone covers the first ten rows South-East of Kinamba-Karati Road in Kinamba. It occupies 0.27 km^2. The plan proposes commercial and BCR. The minimum plot size, plot ratio and ground coverage are recommended at 0.1 Ha, 240% and 75% respectively. High-rise structures up to 9 floors will be permitted.

Zone 5_9

It represents Karati Centre a proposed commercial area along the Kinangop Road. The zone occupies 0.39 km^2. The minimum plot size is recommended at 0.1 Ha and high-rise commercial structures up to 3 floors are allow. Plot ratio and ground coverage are proposed at 240% and 75% respectively.

Zone 5_{10}

The zone covers the first row of Karai Centre along the A104. It accounts for 0.20 km^2 and current developments include BCRs. The plan proposes a commercial zone with high-rise buildings up to 3 floors. The minimum plot size, plot ratio and ground coverage are recommended at 0.1 Ha, 350% and 75% respectively.

Zone 5_{11}

This zone covers Kinungi Centre a proposed commercial area along the A104. The recommended housing types are high-rise commercial buildings up to 3 floors. The minimum plot size is 0.1 Ha. Plot ratio and ground coverage are proposed at 240% and 75% respectively.

Zone 5_{12}

It covers Ihindu a proposed commercial zone located a few kilometres from Kinungi towards Nairobi. The zone occupies 0.13 km^2. The plan proposes minimum plot sizes at 0.1 Ha. The recommended housing types are high-rise up to 6 floors. Plot ratio and ground coverage are proposed at 150% and 75% respectively.

Zone 5_{13}

It covers the first row (both sides of the road) of Nyondia Centre. Nyondia is between Kinamba and Karati along the Kinangop Road. The zone accounts for 0.08 km^2. At Nyondia the plot ratio is 150% and ground coverage is 75%. The minimum plot size is recommended

Zone 5_{14}

It represents Karagita Node located along the MSL Road. BCR and Commercial are the permitted land uses with minimum plot size at 0.05ha. High-rise commercial developments up to 4 floors are proposed. Plot ratio is recommended at 75%.

Zone 5_{15}

The area is located off Moi Avenue to the western side below the railway line and covers an area of 1.64 km sq. The area is adjacent to the sewer treatment, golf course and Kihoto settlement. The zone is currently utilized for small scale agricultural with majority of the land being unutilized. The plan identifies the area as a high potential zone that could accommodate mixed developments that include commercial, residential, recreational and public purposes. The zone is quite large and would be able to accommodate future expansion of the CBD.

The plan also proposes a minimum plots size of 0.2 Hectares, a plot ratio of 150%, ground coverage of 75% and allowable high rise buildings of up to 6 floors. The area is also located close to the lake thus all activities undertake within the zone should be environmentally friendly.

Zone 5_{16}

This is a high potential zone located along Moi Avenue in Naivasha to the left hand side after the train station. The area is adjacent to the golf course and has an area of 0.30 km sq. The area has a blend of retail shops, petrol stations, hotels & boarding facilities. The area opposite the golf course also has some industrial ware houses. Major land uses in the area are commercial and industrial warehouses.

The plan proposes the zone as a commercial zone that would also accommodate warehouse. The minimum plot size is recommended at 0.001 km sq. proposed plot ratio is at 150% while ground coverage is at 75%. Permitted number of floors for commercial developments is up to 6 floors. It is necessary to allow for commercial and ware house developments due to proximity to the currents CBD, Railway line and the availability of undeveloped space to accommodate the expanding CBD.

Zone 5_{17}

The represent Kayole Node located along the A104. BCR and Commercial are the permitted land uses with minimum plot size at 0.05ha. High-rise commercial developments up to 4 floors are proposed. Plot ratio is recommended at 75%.

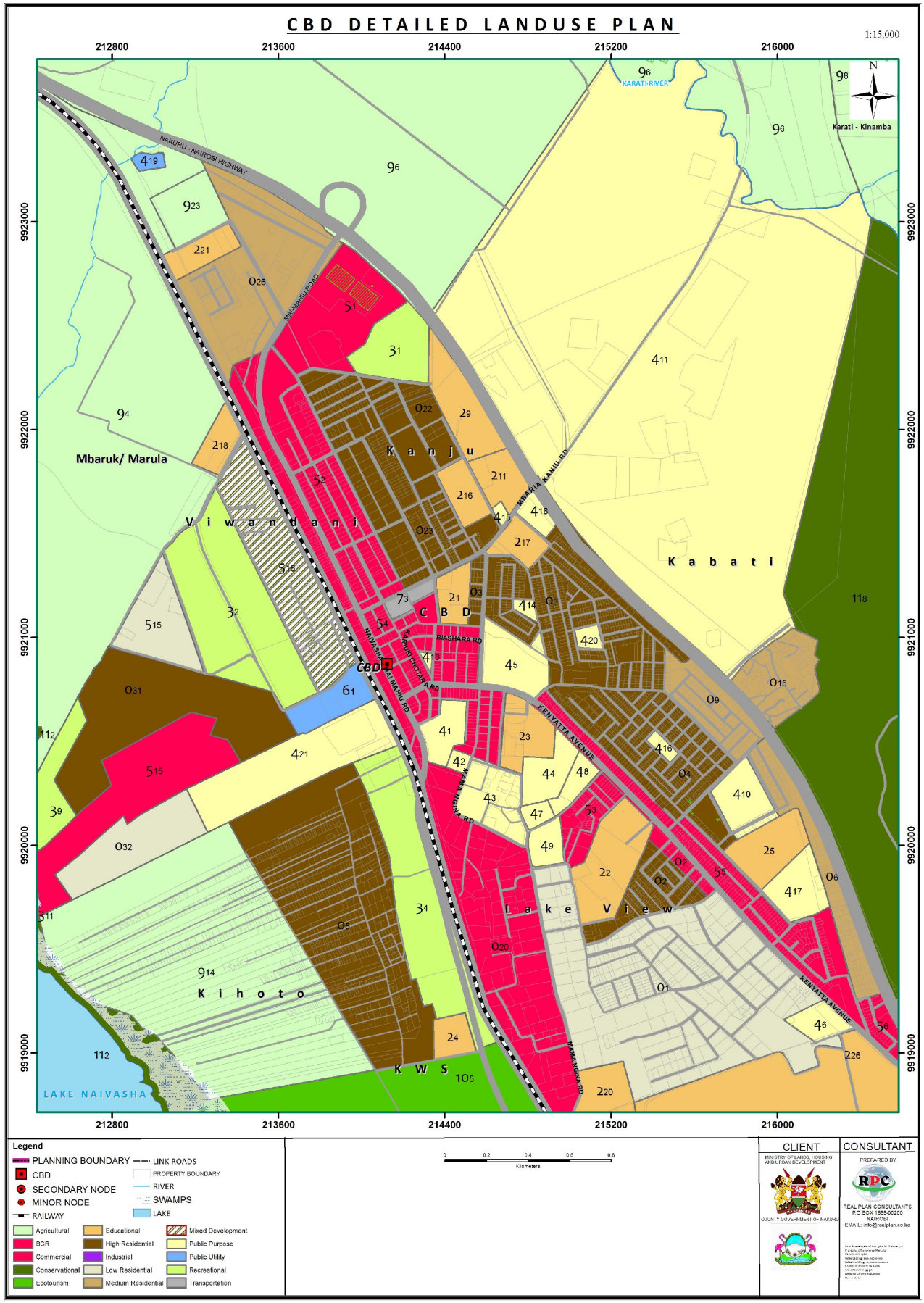


Figure 21: CBD land use plan

5.1.7 Public utility

Public utilities are the facilities that a population needs to function efficiently. They include water treatment facilities, sewer treatment works, power stations and other such facilities

These areas provide the opportunity for a system or utilities that are used to benefit the public, such as water, sewage disposal, electric power, heating, waste management, drainage, public transportation and telecommunications. There various public utilities in Naivasha as discussed below.

Zone 6_1

This zone is located, off Moi Avenue and covers the location of the Naivasha sewer plant. The plan proposes the zone as a public utility area where sewer treatment works and facilities may be developed.

Zone 6_2

This zone is located, off Nakuru Nairobi highway and is in Kayole area. The zone covers a dump site area. The plan proposes the as a public utility area where solid waste management may be undertaken. The zone is subject to guidelines from EMCA and public health regulations.

5.1.8 Transportation

Transportation areas are land designated for the use of transport facilities and its infrastructures. This includes roads, railways and their terminals. The plan has made various transportation proposals in regard to road expansion, provision of link roads and secondary accesses. A transport management strategy has also been developed. A detailed account of the same is explained in the sector plans.

Suitable areas for airport development have been identified as the northern (near Malewa and Manera farms) and the southern parts (Mwiciringiri and Kedong farms) of Naivasha town. The planning exercise also zoned out existing public and private air strips, which are discussed below.

Zone 7_1

Currently the zone is used as the Oserian Airstrip. This is a private airstrip mainly involved in horticulture and floriculture related activities. It is 0.17 km^2 in size. The plan proposes to maintain the zone as air transport zone.

It also recommends strict development control on adjacent and neighbouring land uses. Land uses that attract birds or (and) deter visibility should be restricted in the area. It is proposed that adjacent building heights be restricted to maximum of two floors.

Zone 7_2

This zone represents the current Karagita Airstrip an air transport zone. Currently the airstrip is not in use. It is 0.15 km^2 in size. It is unfenced and does not contain facilities required to support air transport. The plan proposes the zone to remain as air transport zone but to be revitalised. Immediate developments are restricted to maximum of two floors.

Zone 7_3

Measuring 0.0112 km^2, the zone represents Kinangop Bus Park along Mbaria Kaniu. Currently the zone is used as the main transport terminal in Naivasha. This plan proposes to maintain the zone as transportation zone but with redesigned layout

Zone 7_4

This zone is the current Nairobi bus park. It is located off Kenyatta Avenue in the CBD and is approximately 0.0035 km^2. This plan proposes to maintain the zone as transportation zone but with redesigned layout.

5.1.9 Agricultural

This zone provides the opportunity for conserving agricultural and rural land use activities. When subdividing rural agricultural land, the minimum size of land subdivisions should be based on the agro ecological zone. Consideration is given to how much land can support a family before the minimum acreage is determined.

The proposed agricultural land covers 575.5 km^2 comprising 60.5% of the land area. The agricultural land has been delineated into smaller zones based on character. The plan seeks to retain and enhance agriculture hence the proposals. It has delineated agricultural land into 22 zones discussed below.

Zone 9_2

This is an agricultural zone located off Nairobi Nakuru highway. The zone is located at view point area immediately at the entry point to Nakuru County from Kiambu County. The area spreads eastwards towards Nyandarua County and has a total area of 12.44 km sq. The zone is currently used for small scale agriculture. The plan proposes the zone be utilized for agricultural use. The minimum plot size is recommended at 0.4 Hectares. Agricultural homesteads shall be accepted while the housing types shall be limited to bungalows.

Zone 9_3

This is an agricultural zone located along Moi south lake road and is adjacent to Oserian farm. The zone has an area of 5.28 km sq. Major agricultural activities in the zone include horticulture and floriculture. The plan proposes the area be utilized for agriculture. The minimum plot size is recommended at 2 Hectares. The proposal shall ensure protection of agricultural areas and consolidation of agricultural activities in this zone.

Zone 9_4

This is an agriculture zone located along Nakuru Nairobi high way. The zone has a total area of 31.53 km sq. The area accommodates various agricultural estates including KARI, KCC, and Malewa and Manera farms. The plan proposes the zone as a large scale agricultural area where the minimum plot size is recommended at 4 hectares. The proposals were informed by the need to protect agricultural activities in line with the Naivasha vision. Designation of the zone as agricultural will assist in development of commercialized agricultural practice which shall create employment and enable establishment of related industries and sectors.

Zone 9_5

This is an agriculture zone located along Moi south lake road. The zone is referred to as Stockman Roses is located next to Kongoni centre. It has an area of 111.33 km^2. The zone currently accommodates agricultural uses. The plan proposes a mixed agricultural area that would also accommodate eco-tourism activities which include conference facilities, recreational hotels and resorts. Within the agricultural area a minimum plot size is recommended at 2 hectares.

Zone 9 $_6$

This is an agricultural zone referred to as Morendati-flower business park area. The area is located along Nairobi Nakuru highway to the eastern side past Delamere shop/ Kobil petrol station. It has an area of 11.13 km^2. In the area large scale floriculture, horticulture, dairy and cash crop farming is undertaken. The minimum recommended plot size is 2 Hectares. The

Zone 9 $_7$

This is an agricultural zone referred to as Gatamaiyu Morendati-flower Business Park covering an area of 15.79 km sq. The area is located along Nairobi Nakuru highway to the eastern side past Delamere shop/ Kobil petrol station. In the area large scale floriculture, horticulture, dairy and cash crop farming is undertaken. The minimum recommended plot size is 2 Hectares.

Zone 9 $_8$

This is an agricultural zone covering Karati area of 29.30 km^2. The area is located along Kinangop road on the western side. In the area small-scale floriculture, horticulture, dairy and cash crop farming is undertaken. The minimum recommended plot size is 0.4 Hectares.

Zone 9 $_9$

This is an agricultural zone with a total area of 42.09 km^2 covering Kedong area and surrounding farms. The area is located along Moi south lake road. Large-scale agriculture and animal ranches are common in the area. The minimum recommended plot size is 2 Hectares.

Zone 9$_{10}$

This is an agricultural zone covering Karuturi farms area. The area is located along Moi south lake road. Large-scale agriculture which includes floriculture, horticulture and cash crop farming are common in the area. The minimum recommended plot size is 4 Hectares.

Zone 9$_{11}$

This is an agricultural with a total area of 62.82 km^2 covering Kinamba, Ndoroto and Muteithia areas. The zone is located along Kinangop road on the eastern side. In the area small-scale floriculture, horticulture, dairy and cash crop farming is undertaken. The minimum recommended plot size is 0.4 Hectares.

Zone 9$_{12}$

This is an agricultural zone with a total area of 17.77 km^2 covering Karai-line centre areas. The zone is located along Nairobi Nakuru road on the eastern side. In the area small-scale horticulture, dairy and cash crop farming is undertaken. The minimum recommended plot size is 0.4 Hectares.

Zone 9$_{13}$

This is an agricultural zone with a total area of 14.29 km^2 covering Kongoni ranch. The zone is located along Moi north lake road on the eastern side. In the area small-scale horticulture, dairy and cash crop farming is undertaken. The minimum recommended plot size is 0.4 Hectares.

Zone 9$_{14}$

This is an agricultural zone with a total area of 0.90 km^2 covering Shalimar and Tarambete zone. The zone is located along Moi north lake road on the western side. In the area large

and small-scale floriculture, horticulture, dairy and ranching is undertaken. The minimum recommended plot size is 1 Hectares.

Zone 9_{15}

This is an agricultural zone with a total area of 18.46 km^2 covering Mbaruk zone. The zone is located along Moi north lake road on the eastern side. In the area large scale agriculture is undertaken. Conservation activities are also common in the area. The minimum recommended plot size is 1 Hectares.

Zone 9_{16}

This is an agricultural zone with a total area of 17.41 km^2 covering Ndabibi Kamuhuti zone. The zone is located Moi north lake road on the eastern side. In the area small scale agriculture is undertaken. The minimum recommended plot size is 0.4 Hectares.

Zone 9_{17}

This is an agricultural zone with a total area of 72.99 km^2 covering Mwiciringiri area. The zone is located along Nairobi Nakuru highway. In the area small scale agriculture is undertaken. The minimum recommended plot size is 0.4 Hectares.

Zone 9_{18}

This is an agricultural zone located to the eastern side of Mai Mahiu road towards the CBD. Agricultural activities undertaken within the zone are mainly livestock rearing and small scale food crop farming. The plan proposes the zone as an agricultural area where small scale agriculture would be suitable. The minimum recommended plot size is 0.4 Hectares.

Zone 9_{19}

This is an agricultural zone located along Moi South Lake Road and is adjacent to Karagita settlement. Small scale horticulture is undertaken in the area. The plan proposes the zone as an agricultural area where small scale agriculture would be suitable. The minimum recommended plot size is 0.4 Hectares. Residential developments shall not be permitted in the zone which shall also act as a green buffer.

Zone 9_{20}

This is a zone located along Moi north lake road. This is an expansive zone that begins at Kasarani and spreads all the way up to great rift areas. Within the zone a mixture of agricultural activities are carried out including ranching, dairy farming, floriculture and horticulture. Part of the zone also has large farms used for conservation and sanctuaries. The plan proposes an agricultural zone where large scale farming would be suitable. The minimum recommended plot size in the zone is 2 Hectares. Allowed building types would include bungalows while flats are not permitted.

Zone 9_{21}

This is an agricultural zone located along Moi South Lake Road and is adjacent to Karagita settlement and Villa View estate. Small scale agriculture is undertaken mainly for horticulture and floriculture. The zone is responsible for provision of employment to abutting zone. The plan proposed the zone as an agricultural area where minimum recommended plot size are 0.4 Hectares.

Zone 9_{22}

The zone covers an agricultural area located north of the junction of Moi South Lake Road and Mai Mahiu Road. Agricultural activities present include floriculture and horticulture. The plan proposes maintaining the zone as an agricultural area where small scale agriculture shall be allowed. The minimum recommended plot size is 0.4 Hectares.

Zone 9 $_{23}$

This is an agricultural zone located north of the CBD and is near hope well area. Animal rearing is undertaken in the zone. The plan proposes maintaining the zone as an agricultural area where small scale agriculture shall be allowed. The minimum recommended plot size is 0.4 Hectares.

5.1.10 Eco-Tourism

The proposed ecotourism zone is proposed along Lake Naivasha Riparian Zone. It occupies 8.79% of Naivasha Town with an area of 83.5 km^2. The zone combines tourism, regulated agriculture and conservation activities. The five zones include;

Zone 10_1

This zone is Part of Mundui Farm near Kongoni Lodge. The zone is 16.28 km^2. Current land use is Agricultural. This plan permits large scale agriculture and eco-tourism land uses. Minimum plot size is proposed at 5 acres. While no high-rise developments are allowed here, the plan proposes ground coverage of 50% and plot ratio of 35%

Zone 10_2

This is agricultural area next to Kongoni Resort. The zone is 19.90 km^2. Current land uses are Agricultural and tourist resorts. This plan proposes Agriculture and Eco-tourism as the permitted land uses. A minimum plot size of 5 acres is proposed. While No high rises are allowed in this zone, the plan proposes ground coverage of 50% and plot ratio of 35%

Zone 10_3

This zone is located East of North lake road around the Crater Lake. The zone is approximately 25.81 km^2 in size Current land use is large scale agriculture.

This plan proposes Agriculture & Eco-tourism as the allowed land uses at Minimum plot sizes of 5 acres. No high rises will be allowed in this zone. Maximum Ground Coverage of 50% and Plot ratio of 35% is proposed.

Zone 10 $_4$

This is an ecotourism zone which covers Oserian Farm. Large scale agriculture, conferencing and leisure hotels are evident. The plan proposes an eco-tourism zone which will mix the various activities together. The minimum recommended plot size is 2 hectares. Plot ratio is recommended at 50% while ground coverage is 35%. High rise developments beyond 4 floors are not permitted.

Zone 10 $_5$

This is an ecotourism zone with a total area of 21.01 km^2 which covers South lake flower farms. Large scale agriculture and floriculture are most common. The plan proposes a mix of agricultural activities with conferencing, conservation activities and leisure hotels. The minimum recommended plot size is 2 hectares. Plot ratio is recommended at 50% while ground coverage is 35%. High rise developments beyond 4 floors are not permitted.

5.1.11 Conservancy

The plan foresees a town with ample conservation areas occupying 244km^2. This represents 26% of the total land. The plan purposes to preserve and protect the natural resources, habitats and wildlife dispersal area for inter and intra-generational benefits. Seven conservancy zones are discussed below.

Zone 11_1

The zone covers Lake Oloiden. The plan proposes recreational use in addition to the existing conservancy use. The area should therefore be restricted from any form of disruption by the human activities. Polluter pay principle should be emulated to target those who may in any case cause pollution to this zone. The zone covers an area of 7.73 $km^{2.}$

Zone 11_2

The zones cover Lake Naivasha. The zone is permitted to only conservation use. The plan purposes to preserve and protect natural resources, habitats and wildlife dispersal area for inter and intra-generational benefits within these zones. The zones require buffer zone maintenance of 30m to minimize soil erosion, runoff of pesticides and fertilizers. Planting of eucalyptus and invasive species around the Lake riparian is prohibited, preference given to alternative species like bamboo and any other permitted species by the County Environmental Technical Committee. EIA must be carried out for any activity likely to have negative impact within the zone. Therefore, the zone is limited to uses like conservation, compatible recreation such as hiking, fishing and controlled diversion for agricultural purposes. Zone covers an area of 147.9 km^2

Zone 11_3

The zones cover Olesuswa conservancy. The zone is permitted to only conservation use. The plan purposes to preserve and protect natural resources, habitats and wildlife dispersal area for inter and intra-generational benefits within these zones. The zone does not permit any form of development as they are form part environmental significant zones. The zone is 12.56 km^2 in area.

Zone 11_4

It covers Crater Lake; the zone is situated along Moi South Lake road. The Crater Lake is a conservancy area and therefore a significant area. The plan proposes to have an eco-tourism use in addition to the conservancy. The zone is 0.14 km^2 in area.

Zone 11_6

This zone covers the Lake swamp. This is located at Lake Swamp near Marula area. The zone is swampy and not into any use. The plan proposes a conservancy and recreational use of this zone, though this should be done with strict consideration of the rules and regulations governing the riparian and water sources. The area should be promoted and regulated for development of aquaculture centre and nature reserve that may serve as attraction site. Activities like ridging and trenching may be performed as long as water level does not fall below 0.5 m from the top of the ridge. Any drainage, conversion, burning, alteration of this zone or introduction of alien and invasive species will be subjected to approved standard procedures including Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA), Cost Benefit Analysis (CBA), and adequate public participation.

Zone 11_7

It covers the underdeveloped land along road A104, next to KWS. The zone is both agricultural and conservancy. There are no developments in the zone currently and the plan proposes to retain its current use.

5.2 CONCLUSION

This chapter details out the SP presented in chapter four. The Town is delineated in eleven broad planning zones which are further delineated into 137 planning units. The zones presented have unique development regulations that will guide the plan's implementation. Regulations provided include minimum plot size, housing typologies, plot ratio, plot coverage, number of floors, densities and permitted use.

The DP promotes the Town's Vision to be a well-planned Lake City leading in tourism, world class conference facilities, geothermal and horticulture farming. The guidelines protect the vast agricultural, conservancy and eco-tourism lands as they are key contributors to the Town's economy. It proposes a compact city by limiting horizontal developments of commercial and residential uses. A comprehensive land use regulations table is annexed in the report.

CHAPTER SIX
LOCAL AREA PLANS

This section reveals and incorporates various recommendations and proposals related to the specific areas such the CBD, nodes, lake edge and other priority areas. It also seeks to synchronise the components and proposals in the sector and detailed land use plan to ensure coordinated and sustainable growth.

6.1NAIVASHA HIERARCHY OF PLANNING UNITS

The hierarchy of urban planning units for Naivasha are as shown on the table below. The planning area was defined according to the major structuring elements. Within the major structuring elements; a total of 155 neighbourhoods have been delineated, based on homogeneity in terms of land uses, densities, physical features and the intensity of human activities. Some of the neighbourhoods have within them distinct estates or precincts with unique characteristics. The latter include CBD, conservancy areas such as Lake Naivasha National Park and eco-tourism areas. Within the neighbourhoods; the following nodes have been identified:

Table 17: List of nodes

	Node Type	**Node Name**
1.	Primary Urban Node	CBD – Commercial District
2.	Secondary Urban Node (urban consolidation)	Karagita; Kayole; Kinamba
3.	Station Node (TOD)	Integrated within the CBD & Karagita
4.	Service Support Centre Nodes	
4a.	Tertiary Nodes	Kinungi; Kongoni; Karati
4b.	Agricultural Service Centres	Kasarani; Kirima; Nyamathi; Great Rift
4c.	Specialist / other	Industrial Area
4d.	Local Convenience / Service Centres	Karai; DCK; Kamere / Olkaria;

Within the neighbourhoods; the following precincts have been identified: The main station with transport interchanges and markets in the CBD (main transport precinct); government and institutional precinct in the CBD; Moi/Mbaria Kaniu activity spine; Kenyatta mixed use activity spine; Mai Mahiu transport precinct; police station precinct; hospital precinct and stadium precinct.

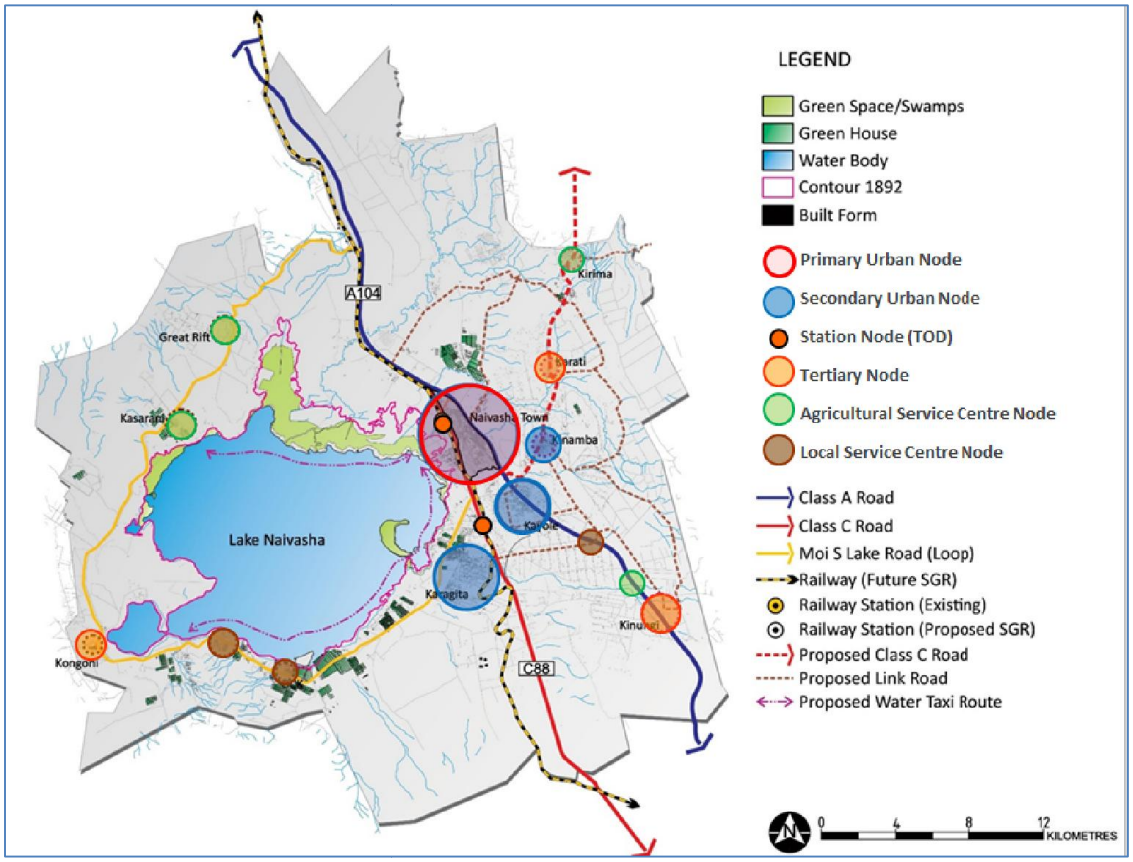


Figure 22: Naivasha Planning Unit Hierarchy

6.2 PRIORITY ACTION AREAS

Within the envisaged urban development strategy, a series of key intervention areas have been identified, for which Action Area Plans have been prepared. This identifies specific proposals and actions for development and implementation, which strategically begin the incremental growth and development process in order to achieve the desired urban development structure (Figure 23).

The focus areas were prioritised for the following reasons:

- They have important function/s within the urban environment; in many instances they have multiple functions and activities.
- Identified as priority to deal with specific needs and / or urgent issues.
- Are catalytic in nature. They will yield a variety of spin-offs across sectors and maximise the utilisation of existing infrastructure.

The priority focus areas include:

1) Naivasha CBD
2) Kinamba
3) Kinungi

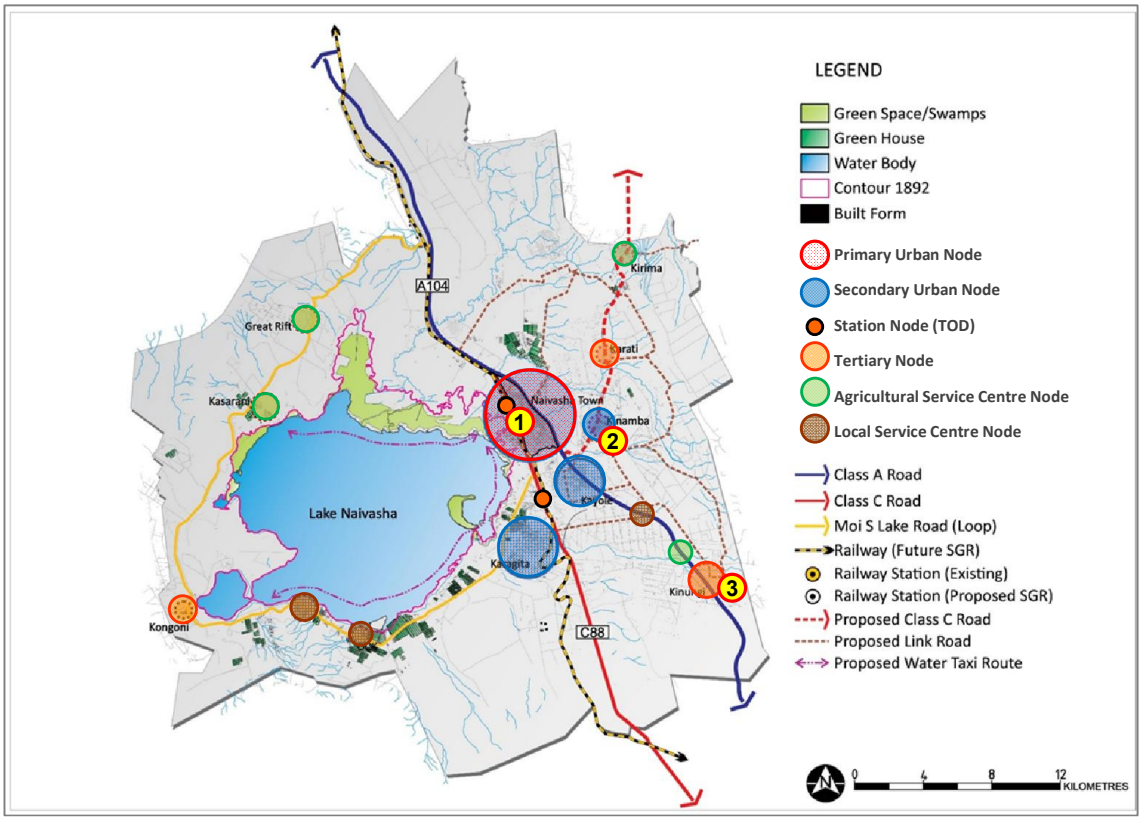


Figure 23: Priority action areas

6.3 NEIGHBOURHOOD ACTION AREA PLANS

6.3.1 Nodal Consolidation

The Residential / Neighbourhood System discussed in the previous section categorise the urban core as a primary node while Karagita, Kayole and Kinamba are being identified as secondary nodes. With this being the case, the promoted concept is to create a connective system between the CBD and other secondary nodes. This will inevitably encourage interaction and movement between these nodes to access the amenities that will be located within them. Similarly, the secondary nodes function as localities, each having their own character and identity. The enhancement of cross linkages and overall consolidation provides room for growth within the secondary nodes (Figure 24).

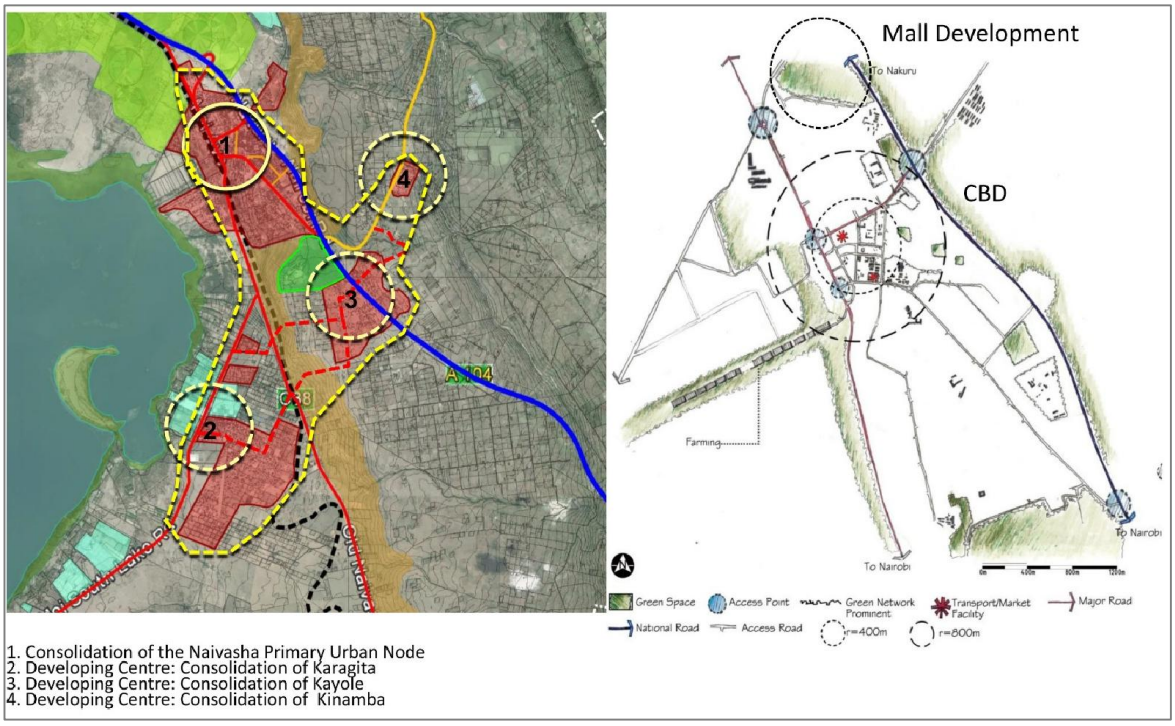


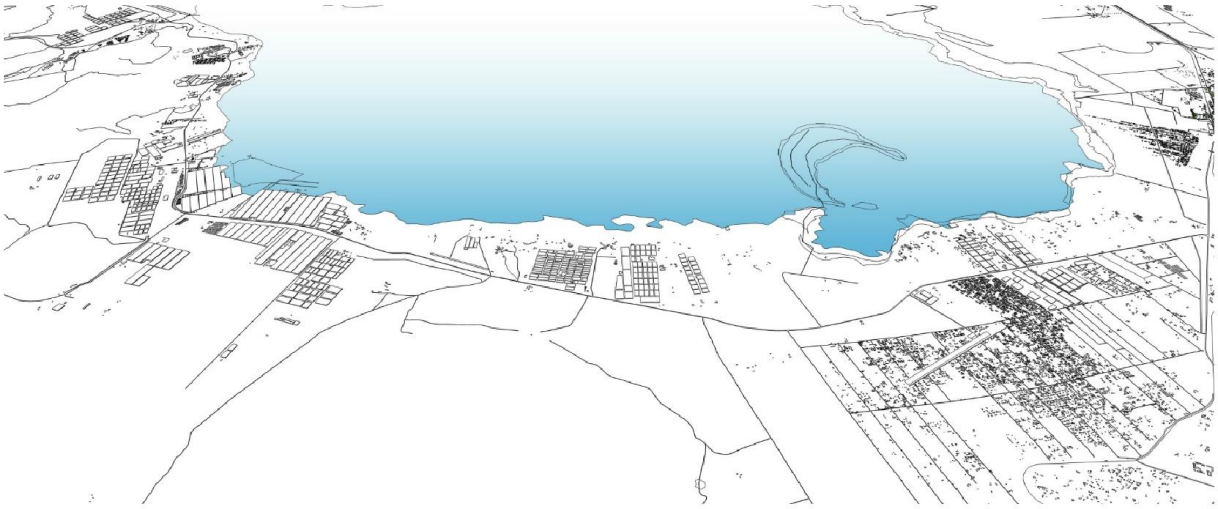
Figure 24: Naivasha Urban Consolidation Zone

6.3.2 Settlement form Relationship with Naivasha Lake

1. Existing Lake Edge condition

Moi South Lake Road is the main access road that loops around Lake Naivasha. The immediate access to water and linkage to the town has resulted in the development of floriculture farms along Moi South Lake Road between the roadway and the lake edge. This has also resulted in the establishment of small scale farming villages associated with the floriculture activity. They are predominantly dormitory residential enclaves in isolated locations. These conditions require careful consideration and negotiation through local area planning. This is to be driven by community and local stakeholders to establish clear guidelines regarding their consolidation, improvement and future development, taking into consideration the environment and the socio-economic needs of the residing population. Further development along the lake edge could be detrimental to the riparian zone and results in the privatisation of the Lake Edge. In addition increased demand on irrigation to support farming critically impacts the lake's water levels and volume. The lake edge is an environmentally sensitive area requiring a special planning intervention to resolve the potential conflicting interests.

The two images below (Figure below) demonstrate the existing movement routes and settlement patterns referred to above indicating the sparse development on the southern edge and the lack of a relationship between Naivasha central area and the lake.



Existing Southern Edge of Lake

Existing relationship between town and lake

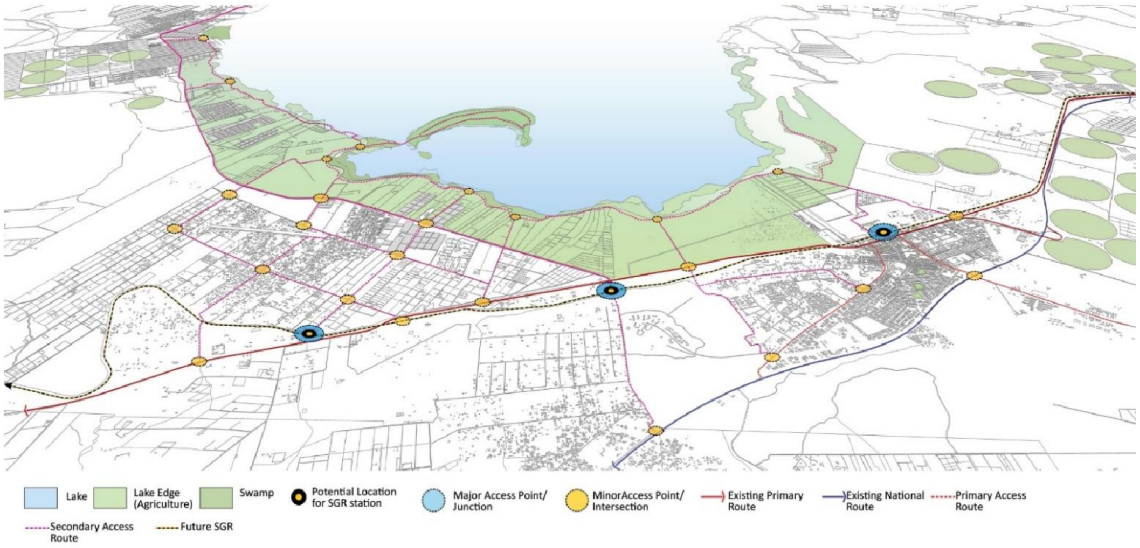
Figure 25: Existing Movement System

2. Proposed Mobility Network between lake and settlements

The proposed strategy defines a legible and integrated movement network connecting existing neighbourhoods around the lake with the urban core and beyond . It also defines the threshold between the lake and surrounding settlements such as Karagita, Kayole and the CBD.

Critical to achieving the vision for Naivasha is to establish well defined access points and routes connecting the CBD to the lake, and expanding the tourism offerings in terms of conferencing facilities, business tourism and other amenities to attract national and international tourism. This includes water related activities, game viewing, etc. Special consideration must be given to accommodate the natural migration routes following responsive and ecologically informed road design to ensure that this unique ecosystem is enhanced and protected.

Lake Edge and urban form



Connective system between lake and town

Figure 26: Extended Movement Network & Road Hierarchy

6.3.3 Urban Core Consolidation

1. Urban Core Structure

As a primary node within the planning area, the consolidating of the urban core is critical in order to perform efficiently for locals and for people commuting towards it from adjacent areas. To achieve the above, the following will be carried out:

- Incorporation of shopping mall proposal and adjoining high density residential support
- Reinforcing lower density neighbourhood residential structure by promoting the development of public facilities and supporting residential infill development
- CBD development

The figure below indicates the proposed structure of interconnected neighbourhoods and precincts including:

- Legibility
- Movement
- TOD Station- based on single gauge railway development
- Public transport (multimodal transport)
- Markets
- Civic spaces (built and parks)
- Enhancement of activity spine
- Potential mixed use western expansion

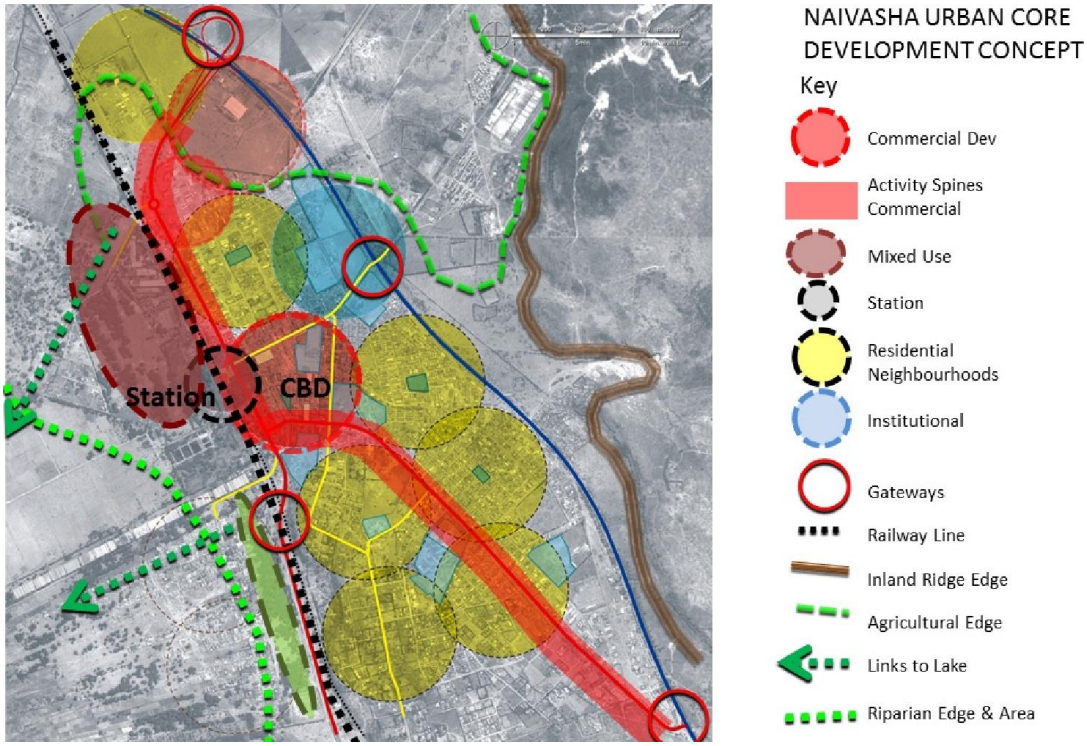


Figure 27: Concept for Urban Core Consolidation

2. Urban Core Legibility

The envisaged structure of the urban core is supported by the establishment of a legible CBD environment (Figure 28), allowing for clear orientation and understanding of the layout and precincts. The elements include:

- Orientation and clarity of structure.
- Establishment of primary gateways into the urban core (point of arrival and identity)
- Main intersections as key access points (specially designed- architectural and landscape accentuation, traffic and road enhancement); these could form smaller landmarks.
- Railway line acting as a physical barrier- ameliorated by new street cross linkages to the west promoting access to the lake. The redevelopment of the station precinct to form a seam between the CBD and the lake area.
- Topography creating linear ridge systems to the east forming a natural edge. The land area to the south-west between the CBD and the lake is environmentally sensitive (riparian), preventing urban development, and establishing a natural edge.

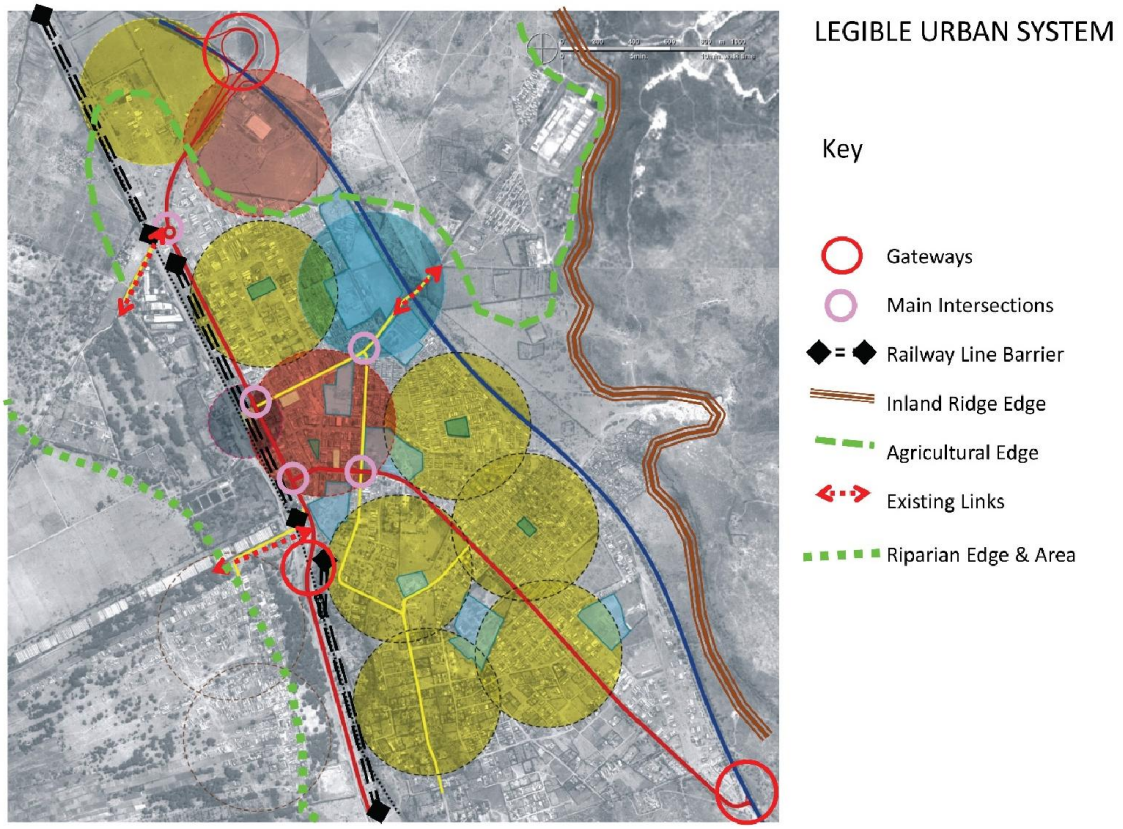


Figure 28: Legible Urban System

6.4 NAIVASHA CBD DESIGN DEVELOPMENT

6.4.1 General development framework

The Naivasha CBD is a well-structured central area with good access and block structure street network. This allows for future growth and expansion of activities. The relatively small urban blocks and land subdivision within them allows for future infill development of mixed use buildings taking advantage of the central location and proximity to the existing and transport facilities.

The general design concept is proposes a hierarchy of six movement and activity routes (figure over the page):

- SGR Movement (railway line)
- Mixed Use Mobility Spines
- Secondary Connectors
- Activity Spines
- Pedestrian Priority routes (between markets and transport facilities)
- Green Civic Extensions (pedestrian links between social facilities and parks)

The hierarchy of routes outlined above achieve the following:

- Rail Station upgrade to form TOD node
- Enhanced connectivity between transport facilities (rail and matatu)
- Integration between transport infrastructure and market spaces
- High intensity mixed use activity and increased accessibility along Mbaria Kaniu Road and Moi Avenue

- Ease of vehicular flow and reduced congestion
- Ease of pedestrian movement and advancement of small scale business opportunities
- Reduction of pedestrian and vehicular conflict
- Added ability for diversification of land use distribution
- Opportunity for densification along major spines
- Intensification of public realm activity
- Facilitated movement towards the lake
- Stronger integration between local nodes and public facilities
- Increase overall functionality and access to local amenities

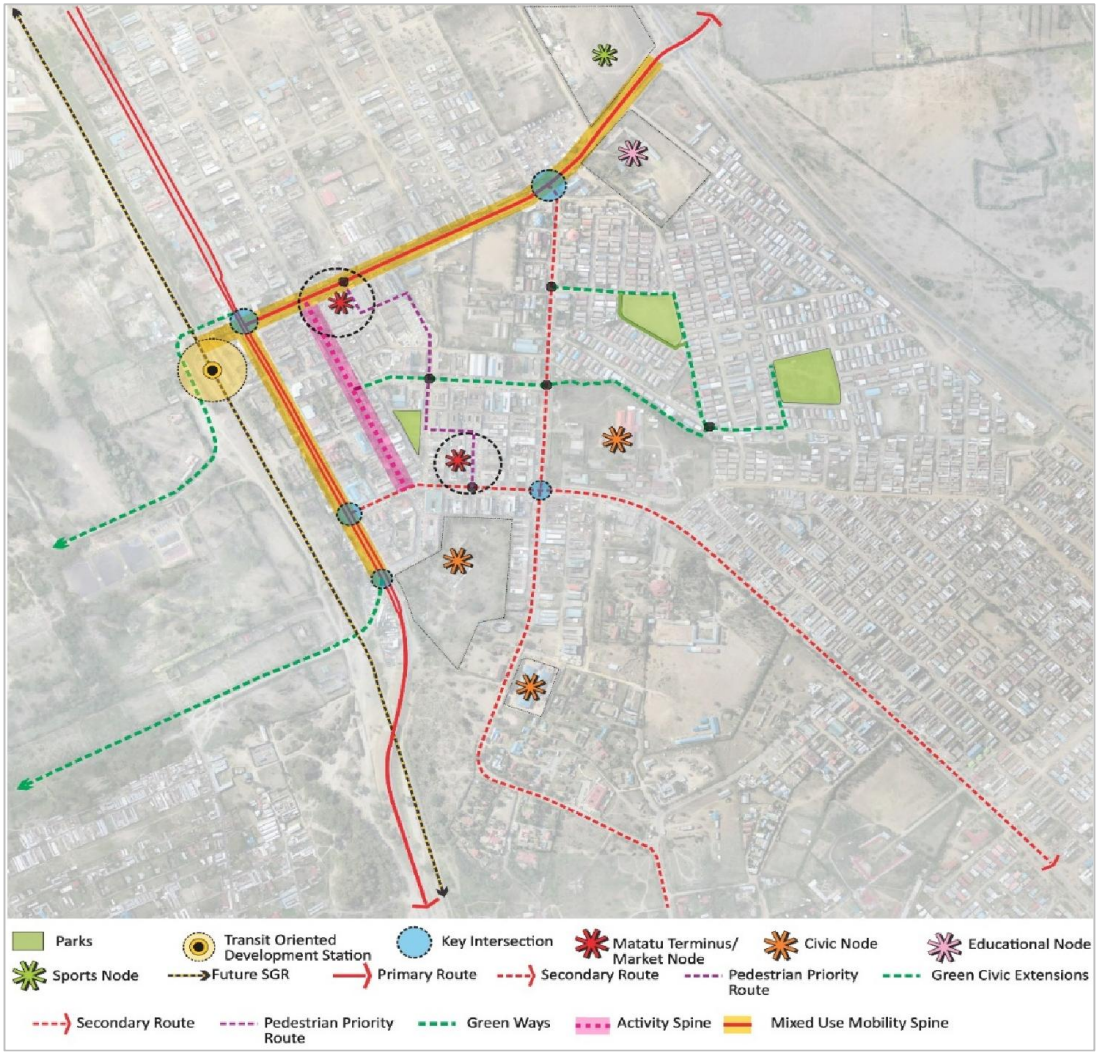


Figure 29: Central Area Movement Hierarchy

6.4.2 Spatial Concept/Scenario

The development concept is translated into a detailed design concept which can also be used as a basis for informing development phasing. The design concept is informed by three strategic movement systems:

- Improvement of the Main Street Connections forming the CBD edge
- Establishing internal Public Transport Connections

- Consolidation of the Pedestrian Network Connections, linking civic and public facilities

a. Improvement of the Main Street Connections forming the CBD edge

The proposed improvement of the main streets of the CBD by tree-lining these and upgrading them to form a primary system of boulevards; reinforces these to form a distinct edge to the CBD core (Figure 30). This complements the existing mixed use activities along Mbaria Kaniu Road and Moi and Kenyatta Avenues, and reinforces the eastern edge formed by Mama Ngina Road. These edge streets are permeable in that they form mixed use activity seams with key facility clusters; such as the station, the hospital and public transport termini. They define the CBD core within which uses and activities can be intensified and the edges along which an appropriate mixed use activity interface must be developed with the adjoining areas.

Figure 30: CBD Edge

b. Establishing internal Public Transport Connections

Public transport access into the CBD is a critical aspect to its functioning. The reinforcement of the local pedestrian movement network that connects the railway station with the upper matatu terminus and the lower matatu terminus is a key intervention (Figure 31). This collectively promotes ease of access and movement within the CBFD. Pedestrian and non-motorised movement between the anchors mentioned above encourages the development of small businesses which are essentially reliant on foot traffic. These movement networks concentrate economic opportunities for locals businesses in a linear fashion, increasing the overall usability and legibility of the CBD.

Figure 31: Local connective system

c. Consolidation of the Pedestrian Network Connections

While the boulevard streets and public transport connections are anchored by mixed use activities, markets and public transport facilities, the pedestrian network is created through encouraging pedestrians to move along tree lined avenues that link with the existing civic and public facilities (built and open space) located within the CBD core (Figure 32). The following civic elements and public facilities are linked to this pedestrian armature:

- Town Hall
- District Hospital
- Police Station
- Law Court
- Mosque
- CBD Park and two suburban park
- Extension to the lake as a tourism feature

Figure 32: Pedestrian Network

d. Consolidated Spatial Design Concept

The three movement systems discussed above work in tandem with each other to form an integrated network, with improves access and connectivity (Figure 33). These enhance the following aspects:

- Legibility
- Character
- Diversity
- Continuity and Enclosure
- Ease of Movement
- Adaptability
- Quality Public Realm
- Economic competitiveness
- Connectivity and walking
- Compact urban form
- Efficient use of municipal infrastructure
- Fostering a distinct community identity

Figure 33: Consolidated Spatial Design Concept

6.5 URBAN DESIGN COMPONENTS / GUIDELINES

6.5.1 Activity Streets

The Design Framework for the CBD (Figure 34) provides a functional and environmental hierarchy of streets. Among these are mixed use mobility spines, activity spines, and pedestrian priority routes. The intended amenities and character for these movement routes and streets should comprise of the following elements:

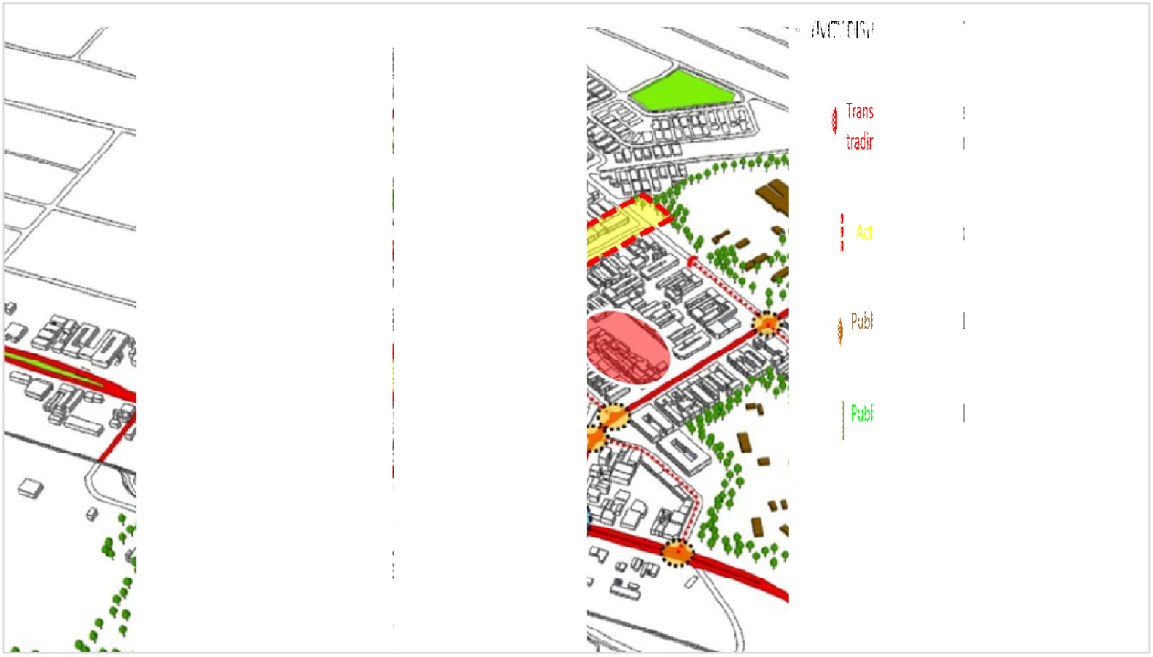


Figure 34: CBD Linkages

- **Accessibility and Movement**
  - Street networks should be permeable to minimize travel distances, provide a choice of routes, maximize access to available facilities and services and assist people to find their way conveniently and easily.
  - The design of the street should consider multiple modes of movement (motorized and non-motorized)
  - Separate cycle paths should be indicated with street markings or by clearly displayed and well-designed signage
  - Pedestrian and bicycle routes should be direct, continuous and well lit
- **Intersections**
  - Control vehicle speeds by extending verges to narrow the carriageway at the intersections (creating 'pinch-points') reducing sight lines with closely spaced trees and using appropriate street markings and signage
  - use differently textured materials to mark crossings and for traffic calming
- **Activity Concentration and Mix**
  - retail
  - office
  - entertainment
  - work
  - service
  - commercial
  - industrial
  - community facilities
  - residential development

- **Topography and views and vistas**
  - Design the street in response to topographical features
  - Terminate streets with views that make the most of the special features of a site or enhance its character (i.e Landmark Features)
- **Edge Condition and Building Frontage**
  - Active edges for development
  - Building corners facing pedestrian paths to be accentuated
  - Urban Perimeter block typologies preserved
  - Reduction of pavilion Architectural Typologies
  - Dense built form with Building heights between 4-5 storeys
- **Street and Public Realm Functionality**
  - Create simplistic yet functional public space
  - Allowing a balance between hard and soft space
  - Public open space to strongly interact with private space
  - Completed network of public space along street
  - Simple, yet functional Street Furniture and lighting design
  - Retaining existing local identity formed by current users
  - Landmark differentiation and typologies marking street
  - Public and Private Realm to serve community needs
  - Building orientation to absorb maximum natural light
  - Setbacks and build to lines principle along entire link

6.5.2 Catalytic projects

a. Overview of Catalytic Projects

The development strategy for the Naivasha CBD encompasses upgrading of existing facilities; development in underutilised areas and through strategic infill developments. This results in a more compact and consolidated urban environment, adding growth and development and maximising existing infrastructure and facilities. Figure 35 gives an overview of the key Catalytic Projects to realise the development direction.

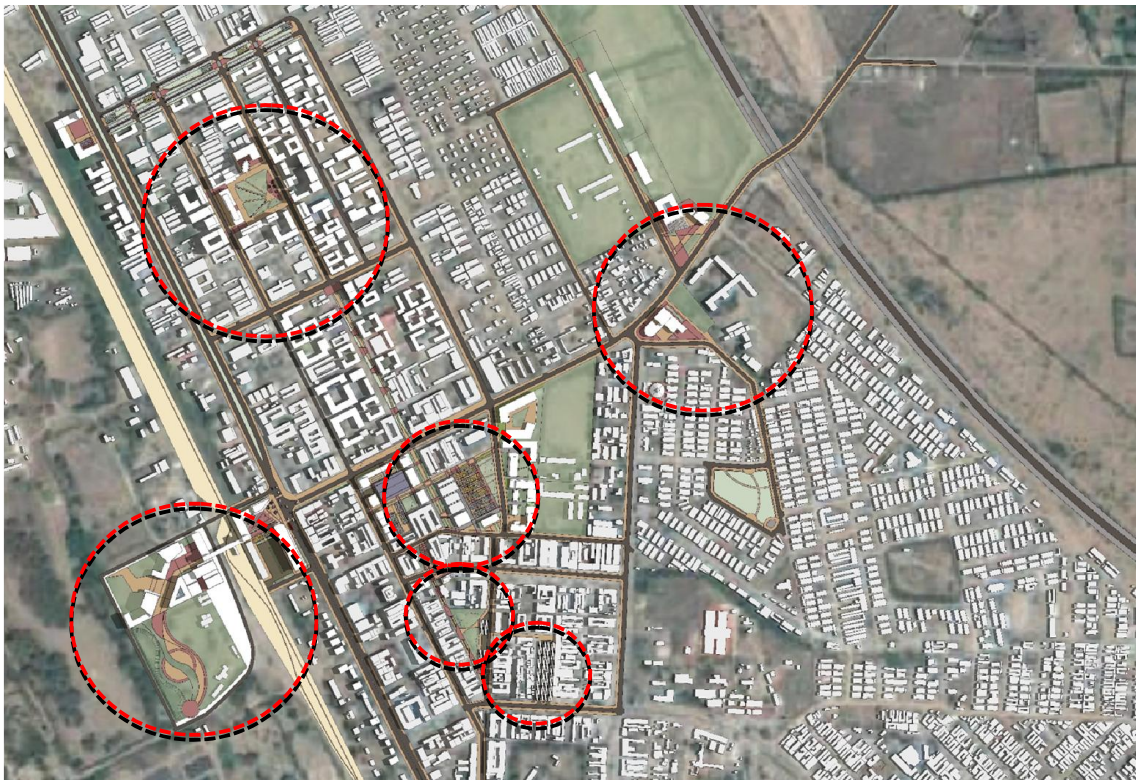


Figure 35: Overview of Catalytic Projects

The projects include:

- Transport termini and associated markets
- Naivasha gateway & community cluster
- Main Matatu Terminus Hub Linked to Station
- Proposed integrated public transport and markets with well-defined connections and pedestrian routes
- Urban parks and pedestrian linkages

b. Markets/ Transport Termini

The urban development framework proposes that the upper and lower matatu termini be linked to each other in order to serve as major anchors for the CBD (Figure 36).

Figure 36: Transport termini and markets

c. Gateway Community Cluster

Figure 37 depicts the development concept for a community facility cluster at the eastern gateway into the CBD. Integrating with existing schools and adding new community facilities on available land.

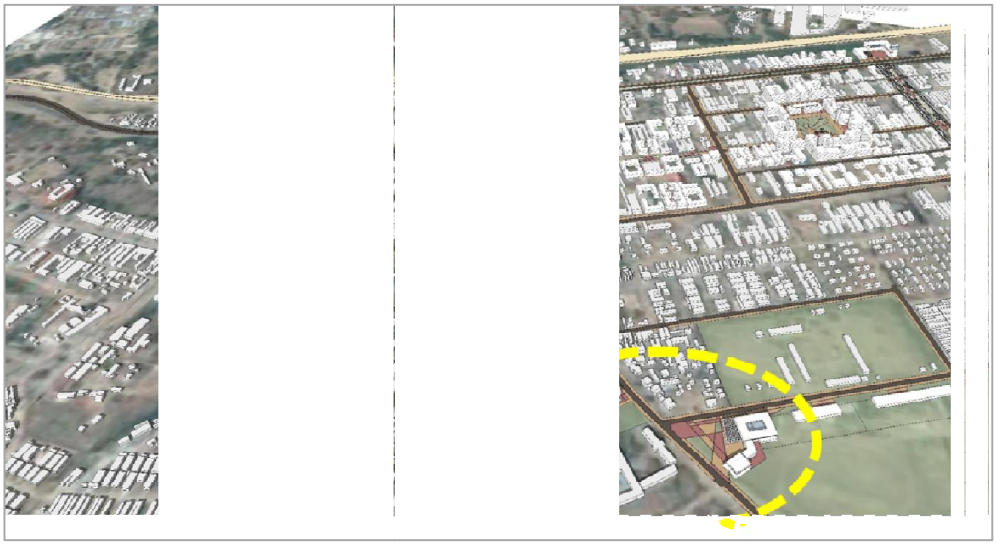


Figure 37: Naivasha Gateway and Community Cluster

d- Main Public Transport Hub

Figure 38 depicts the development concept for the main matatu terminus public transport hub and market. This is linked to the new Station TOD development concept by the upgrading of Mbaria Kaniu Road into a multi-functional boulevard, with mixed use activities, NMT and tree-lined (Figure 39).

Figure 38: Main Matatu Terminus Hub Linked to Station

Figure 39 outlines a closer view of the development concept, showing greater detail of the envisaged public environment upgrade along the upgraded street link to the station.

Figure 39: Proposed integrated public transport & markets with well-defined connections & pedestrian routes

The existing Matatu termini are haphazardly planned requiring further detailed study and planning and in turn restructuring and further upgrade. The principles below are critical to consider for future improvement of these facilities:

Access

- Provide a seamless connection between the public transport facilities and spaces for trading
- Provide legible and well managed pedestrian routes connecting all public facilities
- Accommodate main vehicular movement access points from the access road and not from the mobility spine
- Differentiate pedestrian and vehicular access points
- Encourage the facilitation of easy circulation of vehicles and pedestrians

Land use

- Maximise the opportunities for commercial and retail uses framing the transport facilities
- Accommodate public spaces connecting the different sub-zones within the precinct.
- Encourage the introduction of a range of robust public spaces accommodating other uses and activities such as small events and local entertainment when markets are not in operation.
- Incorporate public facilities such as clinics, libraries, day-care centres and others that can support the daily requirements of commuters and others.

Edge condition

- Allow buildings with active ground floor edges to frame transport and market spaces
- Provide well landscaped edges facing the mobility spine with strategically located vehicular and pedestrian access points.

Massing

- This location presents the opportunity to build a landmark building forming the entrance to the CBD.
- Promote the use of edge buildings rather than pavilion buildings to define the public realm.

The figure below depicts medium scale transport facilities designed to integrate small retail and trading spaces.

Figure 40: Transport Hubs

e. Pedestrian Routes and Urban Parks

Figures 41 & 42 depict the development concept for the pedestrian linkages, public park and dedicated pedestrianised routes between the public transport termini.

Figure 41: Internal linkage between Matatu facilities and urban park, access and connectivity

Figure 42: Proposed Internal linkage between Matatu facilities with public parks and pedestrian only routes

f. Tourism & Conferencing

Tourism Destination and conferencing centre (Figure 43)

Figure 43: Conference and Tourism Facilities

6.2.7 Boulevards and Public Space

The government boulevard proposed in the CBD, aimed at providing a pleasant environment around civic uses. As such, the street and Civic Square character should promote walkability and incorporate the following features (Figures 44 & 45):

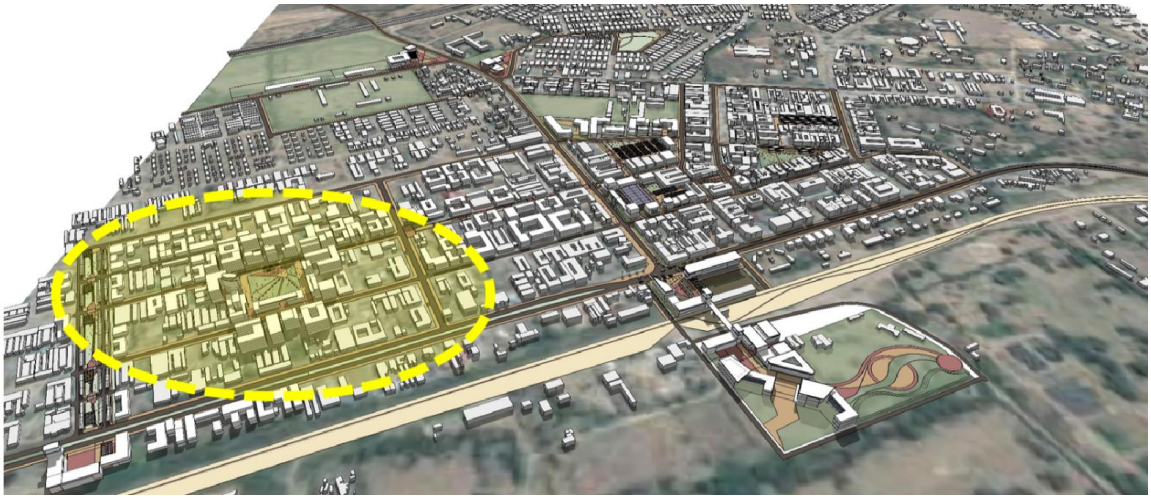


Figure 44: Northward extension of densification area around public space

Figure 45: Proposed densification zone around new public space

. A Street Character

- Streetscapes to achieve a sense of enclosure for the street itself. This could be implemented through tree planting and consistent landscaping which over time will define the street character and define the quality of the environment encouraging civic uses and sociability.
- Achieve visually contained streetscapes by:
    - Spacing trees so that their canopies will meet when mature and read as a continuous linear element of the street.
    - Using a continuous line of landscaped hedging and well-designed transparent fencing (with consistent height) along the front property boundaries. The built form can also be guided to form a more continuous and responsive edge to improve passive surveillance and enhance the urban character and experience.

. Maintain generally consistent build to line or setbacks of buildings where possible.

- Identify heritage buildings and zones that require specific guidelines to retain and reinforce the uniqueness of these places.
- Encourage the use of specific design guidelines regarding the use of fences and walls to maintain visual continuity.
- Provide well define short term street parking specifically to retain activity along the high streets and retail lanes.

6.2.7.b Civic Square Character

- Allow buildings to frame public spaces space
- Position trees strategically promoting pedestrians to pause and engage with the space.
- Promote passive surveillance over squares
- Maintain uniform architectural character language around civic square

6.6 FUTURE OF THE LAKE

Character of lake edge

The plans discussed previously provide connectivity between the vitality of the city and the lake and a continuous, publicly accessible waterfront. The plans express a vision for a lake edge that encourages sustainable, ecologically productive lifestyles for locals while attracting tourists. The development of an active yet preserved lake edge can occur through the implementation of four seemingly simple gestures (Figure 46).

Figure 46: Lake Naivasha Public Park

6.7 KEY PROJECTS / INTERVENTIONS

Additional actions will be incorporated to guide development overtime including the need to introduce dedicated agencies or departments to encourage Private-Public partnerships that can facilitate and better define, implement and maintain these types of interventions. Typically an agency would undertake the co-ordination and project management to effect the implementation of specific projects.

The outcomes of the urban development plan clearly direct the physical programme of the project and development initiatives into the core precinct. Of particular importance is the funding of public infrastructure, public places and facilities that will attract both private and public sector investment, and enable better access to government services and facilities, in a manner that simultaneously addresses local needs and contributes to the social and economic development of the town.

6.8 CONSOLIDATION & DEVELOPMENT OF THE URBAN CORE

A specific focus is on the consolidation and development of the urban core, which serves as the primary urban centre to the area, providing the mixed use commercial and retail activities and the required community and social facilities, as well as supporting employment, leisure and municipal support services. This has been identified as a priority because it is the town's origin; it is a vital hub of existing functions and activities, it has public transport accessibility, it has regional accessibility and is strategically located on the national movement and trade route between Nairobi and Nakuru.

The projects envisaged for the Naivasha urban core include:

- A Waterfront park.
- Public transport hub upgrade.
- Pedestrian orientated streets developments; improvement of sidewalks with street furniture and landscaping; & tree-lined.
- Upgrade and redevelopment of the station heritage node into a TOD (Figures 47& 48).
- Consolidation and upgrading of the civic precinct.
- Development of neighbourhood parks

The proposed projects achieve the following outcomes:

- The clustering of projects, establishing development synergy, and promoting a multi-disciplinary development.
- Increased accessibility by public transport.
- Increasing development and potentially economic thresholds.
- The maximisation of under-utilised infrastructure and services.
- A renewed development impetus; adding additional opportunities, changing and growing land use activities and;
- Increase in land values and rates base.

Figure 47: New Station Node (TOD) with potential conference, hotel and tourism node

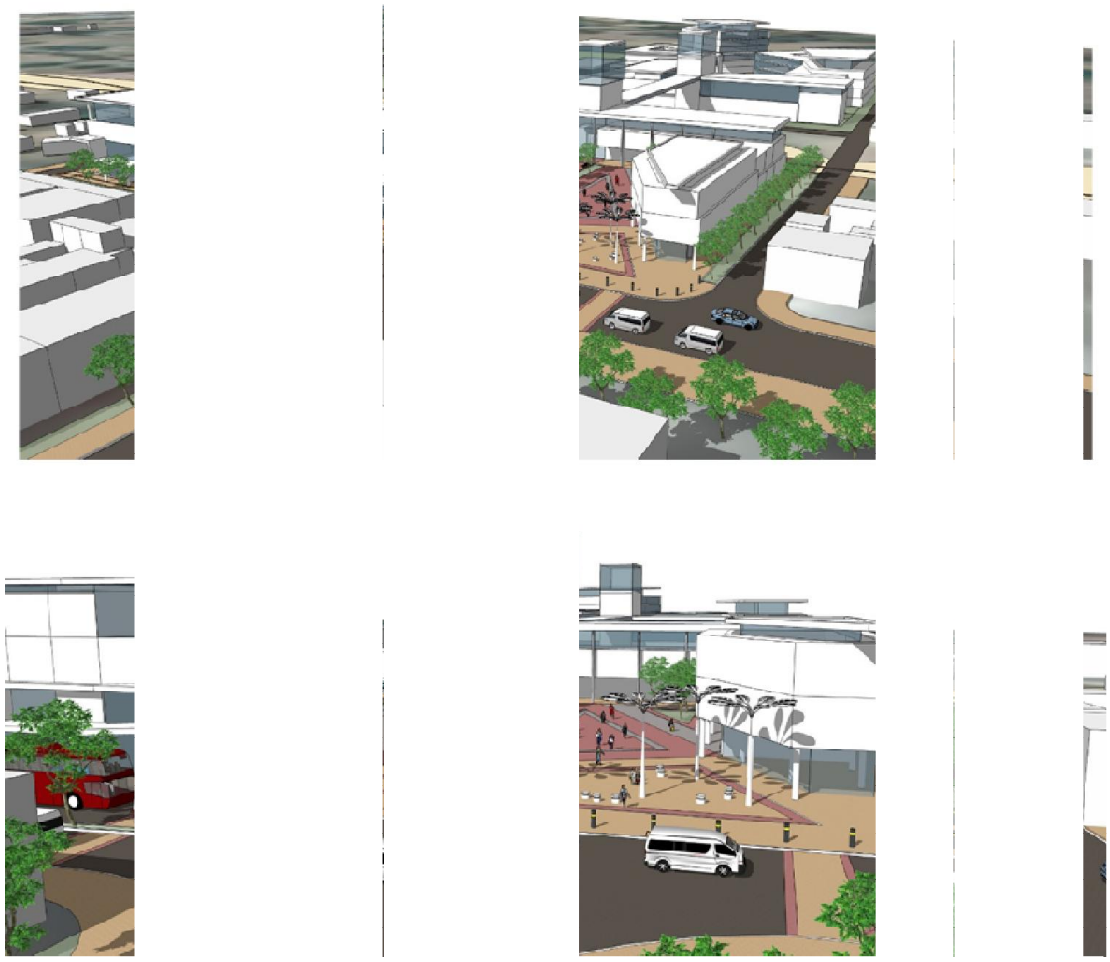


Figure 48: Concept Proposals for Station Node incorporation heritage buildings, markets & information centres

6.9 PUBLIC ENVIRONMENT UPGRADE

Key interventions also include the following actions:

- Street upgrading; forming Complete Streets (Figure 49)
- Development of cycle lanes (Figure 50)
- Incremental Upgrade of Sidewalks and Formalisation of Street Parking (Figure 51)
- Extend Provision of Communal Services (Figure 52)
- Promote Well Defined Private Public Interface (Figure 53)
- Provision of Sites for Markets with Supporting Services (Figure 54)
- Protection of Religious Sites and Buildings (Figure 55)
- Policy By-Laws Control of Building Construction Process (Figure 56)

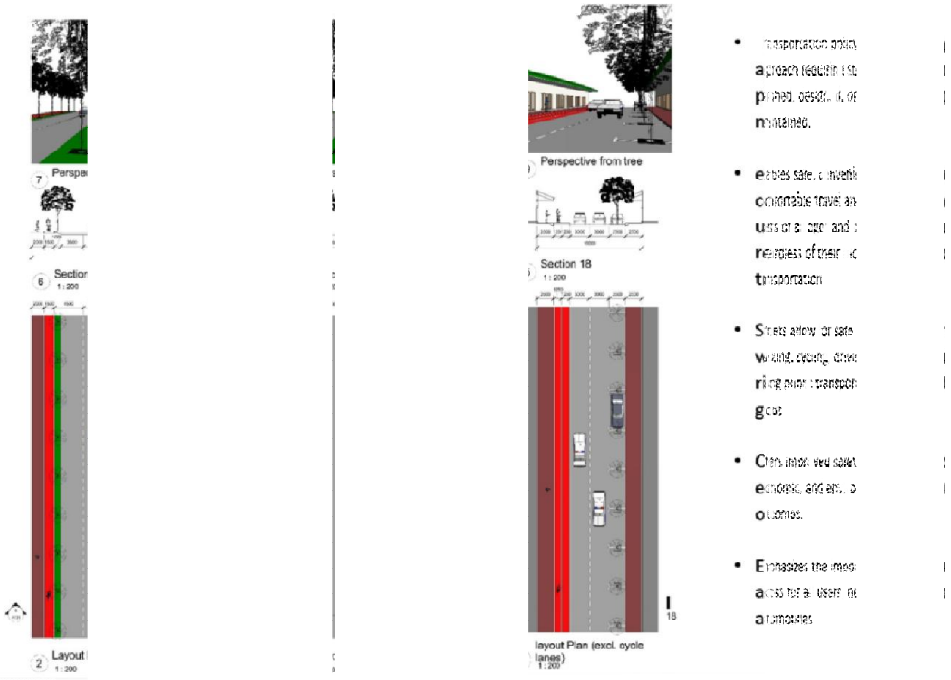
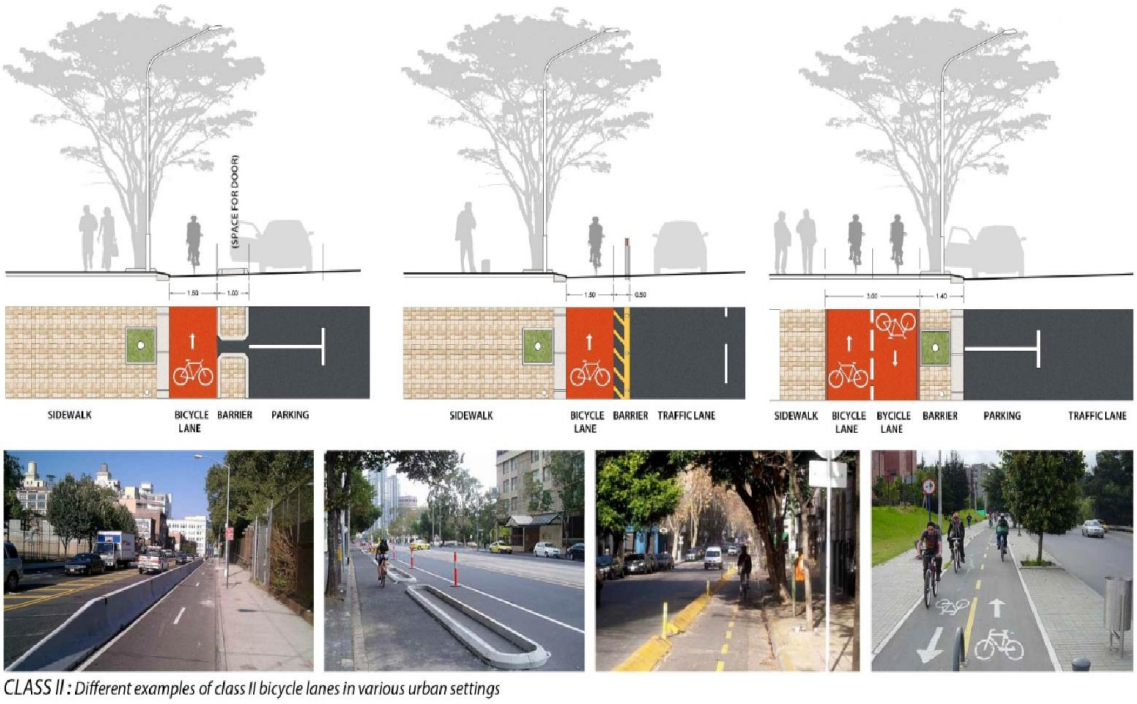


Figure 49: Complete streets



CLASS II : Different examples of class II bicycle lanes in various urban settings

Figure 50: Examples of Bicycle lanes

Figure 51: Incremental Upgrade of Sidewalks and Formalisation of Street Parking

Figure 52: Extend Provision of Communal Services

Figure 53: Promote Well Defined Private Public Interface

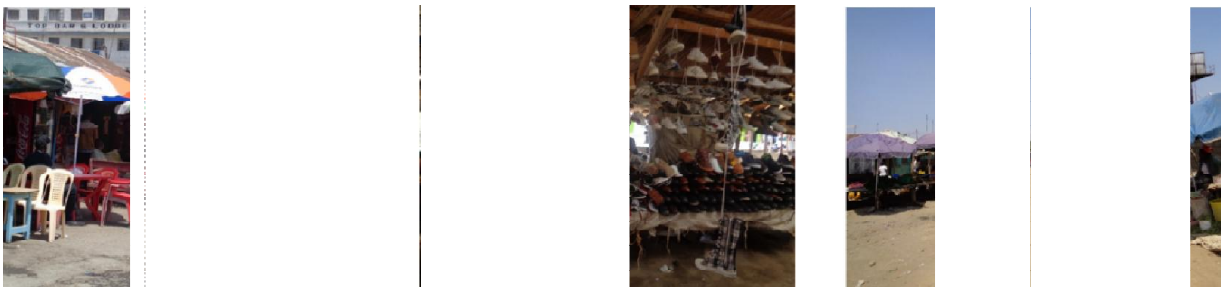


Figure 54: Provision of Sites for Markets with Supporting Services

Figure 55: Protection of Religious Sites and Buildings

Figure 56: Policy By-Laws Control of Building Construction Process

6.10 MIXED USE COMPACT NEIGHBOURHOOD DEVELOPMENT

Figures 57 – 60 depict the proposed development concept for the establishment of more compact neighbourhood development. These include a range of residential densities with supporting public and community facilities. They include mixed use development on their edges for local convenience retail, and include an integrated movement system.

Figure 57: Naivasha Mixed Use Compact Neighbourhood Concept - Movement

Figure 58: Naivasha Mixed Use Compact Neighbourhood Concept – Public Spaces & Facilities

Figure 59: Naivasha Mixed Use Compact Neighbourhood Concept – Land Use

Figure 60: Naivasha Mixed Use Compact Neighbourhood Concept – Mixed Use

6.11 CONCLUSION- IMPLEMENTATION ASPECTS

The outcomes of the development strategy are proposed development interventions that are typically categorised as:

- Physical development projects, primarily referred to as capital and infrastructure projects; and
- Non-spatial interventions that include on the one hand operations, maintenance and administration; and on the other further development and precinct planning and the establishment of supporting urban policy.

The KMP programme has established a comprehensive and integrated planning and development approach that informs and directs both the envisaged physical and capital development actions and the further planning and policy interventions. The latter proposals must also be understood in the context of the urban management and development sequence:

- Getting the basics right, service delivery and improved policing, and overall day to day urban management.
- Establishing strategic partnerships: public sector, private sector and the community.
- Establishing a more area specific (precinct) development programme with identified interventions, both physical and in terms of operations, maintenance and development policy.
- Preparation of business plans.
- Preparation of detailed project plans, programme and securing funding for development.
- Implementation of the projects and plans.
- Monitoring and review.

The Naivasha urban development strategy aims to co-ordinate current project initiatives and developments, by the municipality, by the private sector, as well as parastatals, companies and the NGO sector. The strategy is to ensure that proposed initiatives and projects work in synergy, reinforce one another and are catalysts to further initiatives. In this context a holistic approach underpins development that establishes a project initiative not only for the KMP programme, but establishes a whole range of opportunities, that together direct, consolidate, and integrate development in the core precinct; associated secondary centres and the action area plans for identified areas.

CHAPTER SEVEN
SECTOR PLANS

Key sectors targeted include infrastructure and services, environmental, disaster management, and cultural heritage conservation plans. The section provides strategies to address problems identified in every sector. It identifies the action areas and actors as well. The sector strategies are discussed below.

7.1 INFRASTRUCTURE AND SERVICES

Infrastructure and services are essential to residents and businesses in Naivasha Town. They are critical to the competitiveness of its economy, the quality of life and the delivery of public services. The ability to build and maintain infrastructure assets ensures Naivasha can provide services and remain attractive and cost effective to live and do business.

7.1.1 Transport plan

The situational analysis established that four transport means are used in Naivasha. The main transport mode is road. Water and rail transport are available but currently are at minimal use. Air transport is mainly by private airstrips. The plan seeks to achieve safe, efficient and convenient movement of persons and goods in, out and within the town as well as improve regional connectivity and mobility. The following strategies have been used to address the challenges in transport network:

1. Mode separation;
2. Integration of modes;
3. Road widening and land acquisition;
4. Road upgrading and maintenance;

1. Road transport

Road transport is the leading mode of transport within the planning area. Key issues include:

- Poor conditions of road surfaces
- Destruction/interference of transport systems by storm water
- Inadequate NMT provisions
- Congestion in the transport terminals
- Inadequate parking spaces
- Traffic accidents
- Narrow road

a. Key road structures

Various categories of roads in Naivasha are briefly discussed below.

Main spine roads

Main spines in Naivasha Town are two namely A104 and Mai Mahiu. They are about 66 Kilometres long.

i. Nairobi-Nakuru Road (A104)

This is the main road in the planning area. It is 44.6 Km long and 60m wide. It connects Naivasha Town to both the Western and Eastern regions of the Country. A104 also connects the Naivasha to other countries such as Tanzania, Uganda and South Sudan among others.

The main challenges on A104 are traffic accidents and congestion in some sections especially along highway urban nodes. The following proposals have been made to address them.

1. Modal separation. These include:
   - Physical separation of NMT and MT traffic.
   - Construction of interchanges points in Major intersection points.
   - Construction of Footbridges at all Highway Urban nodes and public facilities such as schools and Hospitals along the highway
2. Maintenance of storm water channels
3. Roads marking and Installation of signage

ii. Mai Mahiu road

This road is 21.7 km long, 30m wide and connects the planning via Longonot, Mai Mahiu to Nairobi. The main users are long distances trucks on transit.

Primary roads

Primary roads connect Towns of national importance. The roads are shown on the table and figure below.

Table 18: Primary roads

Road	Existing Width	Proposed Width	Length
Moi South Lake	30m		27.3 Km
Moi North Lake	15 m	30M	31.3 Km
Kinangop Road	30m		14.8 Km

Link roads

They link two conurbations or other major road transport facilities, and are often added because of increasing road traffic. Twenty nine link roads have been identified as shown on the table below.

Proposed improvements

1. Road reserve expansion
2. Carriage way expansion
3. Inclusion of walkways
4. Overpasses and foot bridges
5. Drainage channels
6. Progressive upgrading to bitumen

Table 19: Link road to be improved

Code	Areas linked	Existing width (Metres)	Proposed width (Metres)	Length km	Upgrade to:
L1	Longonot to A104	9	25	6.4	Bitumen grade
L2	Karagita to Karai	12	25	5.6	Bitumen grade
L3	Mwiciringiri to Nyamathi	9	25	7.4	Bitumen grade
L4	Unity farm to Kayole	9	20	4.3	Bitumen grade
L5	Moi south Lake to Karagita airstrip to Mai-Mahiu	9	15	3.9	Bitumen grade
L7	Kinamba-Ndoroto-Kinangop	12	20	11.9	Bitumen grade
L8	Kayole-Mutethia k17	9	18	6	Bitumen grade
L9	Mwiciringiri-A104	9	18	6.2	Bitumen grade
L10	A104-ndoroto-Kinamba	9	18	8.9	Bitumen grade
L11	A104-Kinamba	12	18	9.5	Bitumen grade
L12	Kinangop-Ndoroto-Kinamba	15	20	6.2	Bitumen grade
L13	Kinangop- through Kwa White	9	20		Bitumen grade
L14	Karati-Prison-Marula	12	20	8.7	Bitumen grade
L15	Gatamayu-Morendati	9	20	9.3	Bitumen grade
L16	Moi South Lake Rd-Longonot Gate-Mai Mahiu Road	12	18	11.3	Bitumen grade
L17	L2-l3-Kayole-Mwiciringiri	9	15		Bitumen grade
L19	Marula Farm-Lake	6	18	7.1	Bitumen grade
L 20	Moi South Lake road via west Karagita up to Mai Mahiu road	9	18	4.9	Bitumen grade
L 21	Moi South Lake-Longonot gate to Mirera	9	20	9.8	Bitumen grade
L22	Moi south lake near DCK - Kedong		20	5.1	Bitumen grade
L23	L2-L3	9	20	4.2	Bitumen grade
L24	Kinamba-Customa-to Njabini	30	30	9.6	Bitumen grade
L25	Karai-Customa		25	2.5	Bitumen grade
L 26			25	3.6	Bitumen grade
L 27	A 104-Morendat		25	7.2	Bitumen grade
L28	L15-L17		25	4.3	Bitumen grade

L 29	Kinamba loop		15	0.8	Bitumen grade
L 30	Kinamba loop 2		25	2	Bitumen grade
CI	Kenyatta avenue	30	30	3.1	Dual carriage
C2	Mbaria Kaniu			1.1	

Other interventions on the link roads are:

1. The construction of a drainage channel along:
   - All CBD roads
   - A104,Moi South Lake, Moi North lake road
   - All link roads

2. The construction of an overpass along:
   - Mai Mahiu road-Moi South lake junction
   - Nyamathi centre
   - Mai Mahiu-Moi South Lake Junction

CBD Transport

Arteries for intervention

Category 1: Primary access streets

- Kenyatta Avenue
- Mbaria Kaniu
- Kariuki Chotara
- Moi avenue

Proposals on category 1 streets

- Restricted access
- No parking spaces

Category 2: Other CBD arteries

- Allow some parking
- Change orientation from Angular to parallel

Proposed Interchanges at:

- A104/Kenyatta Avenue Junction
- A104/Kinangop road junction

Other interventions

- Disallow right turn at Kenyatta Avenue-A104 junction from Nairobi
- Only allow intercity vehicles at the main Bus terminal
- Multi-modal Terminal in Railway station area
- Slip road along railway line for trucks from Kihoto to KCC

b. Transport facilities

Transport facilities are inclusive of terminals, bridges and other facilities enhance the transport network.

Matatu terminals

There are three matatu terminals in the CBD namely, Nakuru, South Lake and Nairobi Stages. Details of the facilities are outlines in table 20 below.

Table 20: Matatu terminals

Name	Area	Proposals
Nakuru stage	1.12 ha	• Construction of shelter /shades • Landscaping • Provision of waste bins
South lake stage	0.061ha	• Relocation of Matatu plying Southlake road to county park at Kihoto • Construction of shelter /shades • Provision of waste bins
Nairobi stage	0.355ha	• Construction of shelter /shades • Landscaping • Provision of waste bins • Entry and exit should not be both from Kenyatta avenue

Proposed terminals at:

- Karagita
- Kayole
- Kinungi
- Kinamba
- Ihindu
- Kihoto

Proposed bus stops at:

- Karai
- Nyamathi
- DCK
- Kamere
- Kasarani
- KCC
- Gatamayu
- Kwa white
- Kirima

Multimodal terminal around railway station area: This will have a bus park, SGR train station, rail station, private car parking, taxi and cycle parking, water transport bay, terminal facility, public park and water front. The minimum land requirement is 2 Ha. The land requirement depends on the level of facilities to be includes market stalls, restaurants, cinemas, offices, commercial and other recreational facilities.

There is need for Multi-storey parking for private vehicles in the CBD. This can be achieved through Land acquisition by County Government or through public-private partnership

A Trailer park is also proposed next to the railway line at Viwandani. Inquiry should be made on the former trailer park at Sweet Banana. In case it is located on public land, it shall be reclaimed and redesigned

From thematic group discussions, members proposed that the County Government should utilize its land off Kariuki Chotara road in a compact manner and allow a section behind the Naivas supermarket to be a matatu terminal to relocate the Southlake Matatu terminal.

Bodaboda stages

Bodaboda services are an integral part of urban transport inadequately provided for in Naivasha. Existing bodaboda shades include at Deliverance, Soko Market and Diplomat areas. The following is proposed to address the inadequacies;

- More sheds for Bodaboda riders to be constructed at the periphery of the CBD
- Integration and designation of bodaboda stages in the 3 public transport terminal

Foot bridges

They ensure safe crossing of road by pedestrians. Major accidents occur along the main highways at Kinungi, Kayole and Mai Mahiu Road. Most casualties are school going children. Therefore, construction of foot bridges next schools along major roads is proposed.

The proposed footbridges include:

- Milimani primary
- Kayole - Maryland
- Lake view - Kabati
- Karai
- Nyamathi
- Kinungi
- Ihindu
- Karagita

Signage

Inadequate signage along the road is a challenge to road users. The following is recommended:

- Clear naming of roads, streets and other land marks
- Marking of road surfaces (Centre line, verges ,zebra crossing)
- Indications of change of directions, slopes and display of accidents black spots
- Removal of inappropriately placed road signage disrupting visibility line.

Pedestrian plans

Roads to provide a 2m walkway, 2.5m storm water channel and a line of Ornamental trees include;

1. Kenyatta Avenue
2. Mbaria Kaniu road
3. Kariuki Chotara
4. Mama Ngina road
5. Kabati road

NMT Provisions

NMT is an effective form of mobility for short trips and connectivity to the mass transportation systems .It provides efficient mobility with low investment, improves access, creates livelihoods and is a low carbon emitter.

NMT users are exposed to fast, aggressive and high MT volumes consequently high number traffic accidents. Encroachment of NMT spaces is rampant and vulnerable road users such women and children experience difficulties travelling without assistance.

A study of Nairobi's Jogoo Road indicated that pedestrians proposed several facilities to be given priority to promote. Key facilities proposed include speed bumps (29%), pedestrian crossing (21.7%), overpass (18.3%), walking paths (12.4%) and street lights (12.1%). The reasons for prioritizing the facilities were given as: need to lower motorized transport speeds (57.9%), blocking encroachment of pedestrian areas(12.5%), reduction of accidents (9.9%) and enhancement of visibility and security (7.9%).Services to be given priority were listed as security (47.2%), shopping (20.8%), and shoe repair services (18.3%).

Past studies show five requirements NMT users provided on the roads. These are:

- Safety and security
- Directness
- Coherency
- Comfort
- Attractiveness

The following is proposed:

- Provide Street trees and sheds with benches at frequent intervals to provide continuous protection of NMT users from sun, rain and wind.
- Progressively remove on-streets parking and give space to cyclists and pedestrians or planted /open public space areas;
- Provision of space for bicycle parking at existing public transit termini.
- Provide crosswalks (raised zebra crossings) of at least 2 m width at all intersections (signalized and uncontrolled) and at frequent intervals in midblock locations. At locations with either high motor vehicle speeds or heavy pedestrian volumes, such crossings will be elevated to the height of the adjacent footpath (100 – 150mm) with ramps for motorized vehicles to mount the crosswalk. Ramps should not be too steep for the disabled
- Maintain landscaping so that vegetation and trees do not block visibility at crossings
- Traffic signs and advert poles should not be located in the middle of NMT lanes
- Traffic signal alert for the blind should be provided an be audible
- Children and other vulnerable road users should be taken into account during design
- Location of footbridges should be secured. Implement and maintain street lighting for NMT paths. Solar panels can be to light the streets.
- Provide Garbage/trash bins and drainage facilities along NMT routes.
- Establish an authority responsible for NMT, known to the community to enable reporting of concerns by residents.

– Provide toilets along NMT route.
– Review existing by-laws to ensure that traders and owners of private properties maintain the property free of litter and prevent litter from getting from his property to the NMT routes. Owners and occupants of private property adjacent to NMT paths will be required to keep the path and adjoining gutter to the centre of the road litter free. NMT users will be made responsible to keep their spaces clean by using trash baskets to be provided.

c. Road widening policy

The road widening policy take into consideration the road reserve and building setback as discussed below.

Road reserves

As discussed earlier, Naivasha has different types of roads. This section provides for different road requirements as illustrated in table 21 below.

Table 21: Road reserves requirements

	Details	**Recommended widths**
1.	Primary distributers	Main spine 60m Important through routes 30-36m
2.	Main Roads in commercial or industrial area	25M
3.	commercial streets zone	15
4.	industrial area streets	15
5.	Major access road exceeding 150m in length	15
6.	Access road not exceeding 150m in length (normal Residential Street)	12
7.	Normal residential street exceeding 150m in length	15
8.	Normal residential street exceeding 500m in length likely to become public transport route	18
9.	Cul-de-sac or short road serving not more than 6 subplots	6
10.	Service Lanes	6
11.	Cyclist Lanes	3
12.	Footpaths	2
	• For Cul-de-sac serving less than 10 plots a single footway is sufficient • Occasional obstructions shall nowhere reduce the footway width below **1.2m.** • Pedestrians shall be physically separated from moving vehicles by a barrier such as an up stand kerb, open drain or wide verge	

Building Lines (set back lines)

The objective of building lines is to achieve a visual effect or reserve a certain access of area. Propose guide for the building line is shown on tables 22 and 23 below.

Table 22: Building lines

	Road	Building line
i.	Major roads including CBD	9
ii.	Roads below 18m and greater than 12m.	6
iii.	District shopping centres and other shopping centres	3
❖ The canopy should be within the plot and not on the road reserve.		
iv.	Roads above 18m. wide	9m
v.	Roads between 6m and 18m.	6m
vi.	Road is less than 6m	Building line should be the width of that road plus the difference between 6m and the road.

Table 23: minimum setback of dwelling from plot lines

Type of residential development	Minimum set-back in meters		
	Front	Side	Rear
1. Normal housing	6	3	4.5
2. Low cost housing	3	1.5	4.5
3. Slum rehabilitation and upgrading schemes	2.5	1.5	3

- No buildings should be constructed on the open space, in front of the building created by the building line.
- Exception is made for a fence or wall which should not exceed 1.4m (4.6 Ft) in height, or a portico, porch, step.

2. Railway transport

The railway transport is underdeveloped and underutilized. However, the2nd phase of SGR is anticipated to pass through. SGR will be a Modern and high-capacity transport system for freight and passengers. It will improve the railway conditions; increase load capacity and increase commuter travel. The plan proposes the following:

- Improve conditions at Naivasha Railway station. They include renovations and maintenance of the facilities, houses, signage, sewer etc.
- Demolition of developments encroaching railway reserve.
- Developments applications on Land fronting railway line to be pended till the County Government acquire/evaluate the SGR layout/route designs.

- It is recommended that the expected SGR rail route take into account proposed land uses and extend a line into proposed industrial area.
- Introduction of commuter train.

3. Air transport

Naivasha hosted the first airport in Kenya in 1930s near the current Lake Naivasha Country club, as a transit point between Europe and Cape Town. However, with decreased use of Amphibian Aircraft the Airport was closed. Existing airstrip in the area include:

- Karagita Airstrip (Inactive and Abandoned)
- Private air strip at Oserian
- Private air strip at Great rift
- Private air strip at Chapachula area

The plan identifies the need for an airport in Naivasha. The airport would assist in servicing:

- Local horticulture and floriculture industry
- Local tourism
- Conferencing sector
- Commerce and industrial development.
- Linkage with the SGR

Possible locations suitable for an airport are Kedong area and Marula –Delamere farm area. A feasibility study needs to be undertaken so as to inform viability of the concept and which ought to inform the design and set up of the facility

4. Water transport

In spite of the presence of extensive Lake Naivasha, water transport is underutilized. Water-ways links are proposed at all public lake access point including Central landing beach, Yellow green corridor, Karagita, Kamere and Kasarani area. These points should be developed to include public amenities and public transport/Motorbikes.

Establish a lake patrol and rescue authority to manage water emergencies. Waste management and water monitoring services be provided at proposed water terminals to reduce pollution.

A detailed design program is required to develop routes, bays and other systems. Within this program feasibility studies, EIA and baselines surveys would be undertaken to inform the design process.

The figures below (61 and 62) the integrated transport network for the CBD and entire planning areas respectively while table 23 summarizes the transport strategies.

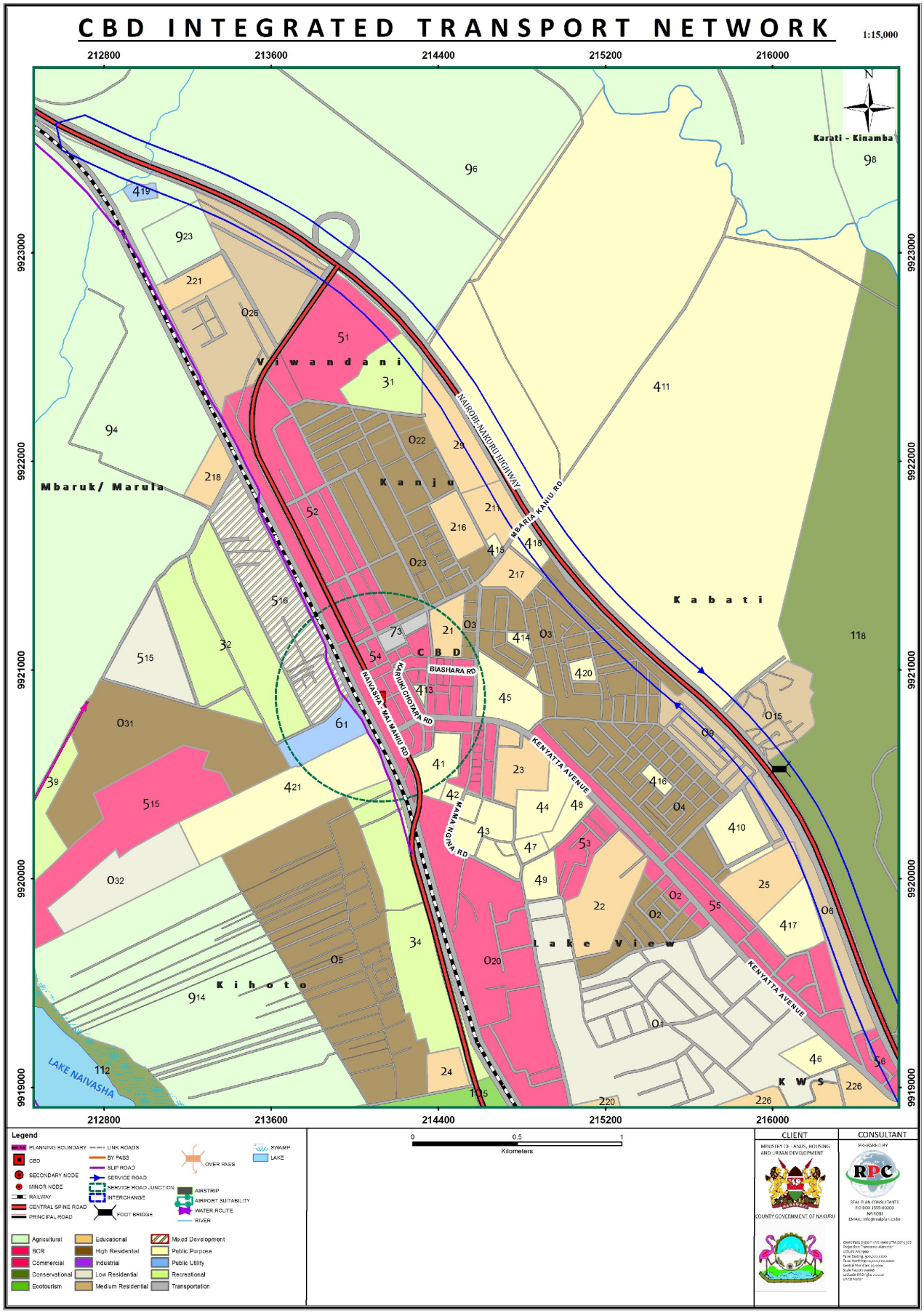


Figure 61: CBD transport facilities

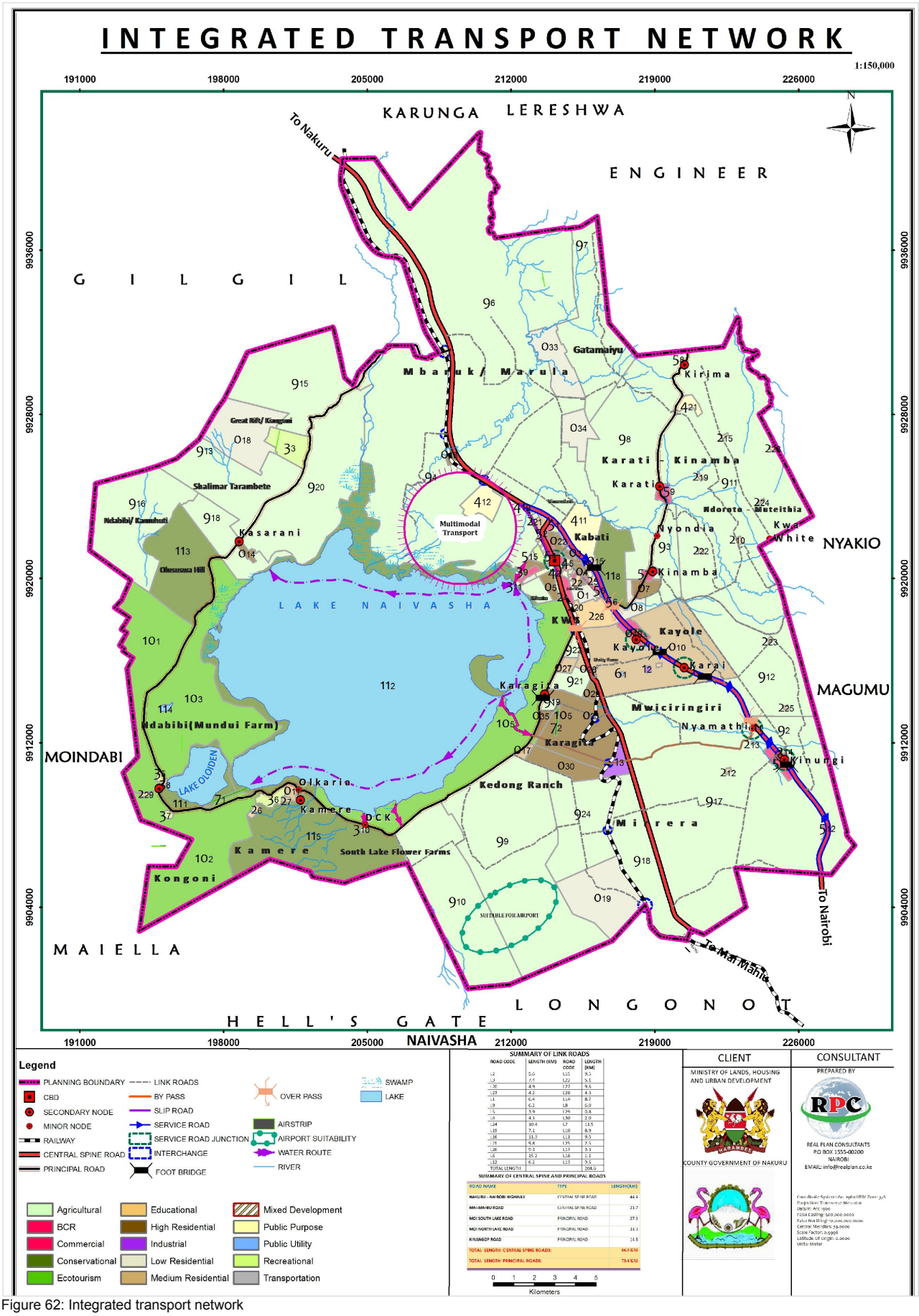


Figure 62: Integrated transport network

Table 24: Transport plan

Neighbourhood	Problem	Proposal /Action plan	Implementers/Actors	Timeframe
CBD	Deteriorating traffic conditions Along Kenya avenue, Kenyatta Avenue /Nairobi-Nakuru junction	Elimination of junctions and replace with interchange at A104/Kenyatta Avenue junction and A104/Kinangop road junction Join at A104/Kenyatta Avenue junction and A104-Kinangop road	KENHA County Government KURA	Medium term Long Term
		Acquire land for the interchanges	KENHA County Government KURA	Short term
		Slip road diverting trucks from Kihoto area behind the railway station to KCC	KENHA County Government KURA	Medium term
		Widening of Kenyatta Avenue	County Government KURA	Medium term
		Disallow right turns from Nakuru direction at A104-Kenyatta Avenue junction	KENHA County Government KURA	Short term
		Reconfigure A104-Kinangop Control of informal street hawking	KENHA County Government KURA	Medium
	Inadequate NMT provision along major CBD roads	Implementation of the proposed Pedestrian walkways & pedestrian plan on Mbaria Kaniu, Kariuki Chotara, Kenyatta avenue ,Moi Avenue, Kabati Widening of the roads to provide for IMT & NMT especially motorcycles and bicycles	KURA County Government NTSA	Short term
	Inadequate terminal facilities	Construction of multimodal terminal near Railway station	County Government KURA	
		Move South Lake Matatu to proposed Kihoto terminal		Medium term

		Main bus park to be used for intercity routes only		
	Inadequate parking spaces	Implementation of the proposed parking policy No parking shall be allowed in major arteries/primary access roads Private-Public venture on Silo parking	County Government KURA	Medium term
	Inadequate/Lack of terminal facilities for Bodaboda within the Town	Designate bodaboda operating spaces near terminal facilities, referral hospital and sub county headquarters Construct bodaboda sheds/shelter	County Government KURA	Short term
	Blocked drainage channels	Widen and Unclog blocked drainage channels	County Government	Short term
Kabati	Poor road condition	Upgrade Kabati road to Bitumen standards Implement proposed walkway from Kabati to CBD	KURA County Government	Medium term
	Storm water menace on roads	Articulate large enough drainage channel along the roads	County Government KURA	Medium term
Lakeview	Poor road Surface	Upgrade earth roads to Bitumen	KURA County Government NTSA	Long term
	Unmarked road surfaces	Mark roads and place signage on the roads		Short term
	Storm water drainage	Construction of adequate drainage channel along roads		Medium term
	Accidents at Milimani primary	Implementation of proposed foot bridge onsite		Short term
Viwandani	Unmarked road	Naming and Marking of all Viwandani roads	KURA County Government	Short term
	Poor roads surface	Upgrade streets into bitumen		Long term
	Storm water menace on roads	Construction of adequate drainage channel along roads		Short term
Kihoto	Narrow roads	Widen the main roads as per KISSIP program		Ongoing
	Dilapidated roads	Upgrade the main Kihoto road to bitumen standard	County Government	Short term
Karagita	Lack of terminal facility	Acquisition of land for the terminal	County Government KURA	Medium term

	Narrow and dilapidated roads	Widen and upgrading of roads as per KISSIP program	Kissip County Government	On-going
	Low interconnectivity	Implement proposed link road via Kayole area to A104	County Government KURA	Medium term
Kinamba – Ndoroto -Karati	Narrow & poor roads	Widen roads as per road widening policy Upgrade main roads into bitumen standard	County Government KURA	Long term
	Storm water problem	Construct adequate storm water channel		Short term
	Insufficient road furniture	Name roads Mark roads Provide bus stop shelters an urban nodes		Short term
Most of Planning zones	Narrow roads	Road widening within neighbourhoods according to traffic demand and road widening policy	County Government KURA KERRA	Medium term
	Poor state of roads	Upgrade loose surface roads to gravel Upgrade identified link roads to bitumen	County Government KURA KERRA	Medium term
	Lack of/Poor drainage in some roads	Unclog blocked drainage channels Construct adequate drainage channels where none exists	County Government KURA KERRA	Short term
	Insufficient road furniture (road signs) in some of the roads	Implement the proposed road furniture project in Urban areas Carry out roads/street naming	County Government KeNHA KURA KERRA	Short term
	Insufficient/Lack of bodaboda sheds	Construction of bodaboda sheds at strategic places within the planning area	County Government	Short term
	Inadequate/Lack of NMT provision along major roads	Widening of the major roads to accommodate walkways Construction of walkways along the major roads Provision of NMT facilities & furniture along the roads	County Government KeNHA KURA KERRA	Medium term
Planning Area	Lack of use of rail transport	Implement the on-going Standard Gauge	Kenya Railways	Long term

	for mass transport		Corporation Ministry of Transport and Infrastructure	
Planning Area	Lack of operating airport/airstrip for public use	Acquire land for proposed international Airport at in Kedong area with 3.5KM Runway	Kenya Airports Authority Ministry of Transport and Infrastructure County Government	Short term
		Construction of the proposed Airport	Kenya Airports Authority Ministry of Transport and Infrastructure County Government	Long term
Planning area	Underutilized water transport	Establish water transport links at Central Landing beach, Karagita, Kamere and Kasarani Establish lake patrol and emergency response unit	Ministry of Transport and Infrastructure County Government NTSA	Medium term

Table 25: Infrastructure land acquisition strategy

Facility	Acquisition method	Strategy
Principal road	Compulsory acquisition	Extension of road reserve
Link roads	Compulsory acquisition	Extension of road reserve and the carriageway
Minor roads /Access roads	Progressive widening	Extension of road reserve
AirPort	Compulsory acquisition	Construction of new Airport in Kedong or Marula area
South Lake terminal	Acquisition	Relocation of Matatu plying along Moi South lake road to Section of County park in Kihoto
Footbridges	Acquisition	Construction within road reserve
Overpass	Acquisition	Construction within road reserve
Multi-storey parking	Acquisition	Construct Silo parking in the CBD Can be; County Government venture, Public –private venture or private
Multi modal terminal	Acquisition	Establish a terminal to be used by multi-modal, rail, matatus, cyclist, bodaboda, carts and pedestrians among others around the current railway station area.

7.1.2 Energy

Naivasha contributes 20% of energy in the country. This is attributed to the presence of Geo-thermal power production at Olkaria.The main energy sources for lighting are electricity 76.1%), kerosene (23.2%), solar energy (5.9%) and biogas at 0.8%. Charcoal is the main type of energy used for cooking at 59% followed by LPG Gas at 40.2% then firewood at (Household Survey, 2015).

Kenya power is the main supplier of electricity in the area. The Town has 3 sub stations at Kihoto, Kamere and at the KCC-Marula region. Largest power consumers in Naivasha are: Hotels, Flower farms, Industries, Commercial entities and Residential Households. The Town has 25,000 electricity connections.

The challenges facing this sector include;

- Inadequate coverage of electricity in Kongoni, Maeila areas.
- High cost of electricity installation.

The following is recommended;

- Harnessing wind power in Mwiciringiri area.
- Installation of solar powered street lights
- Subsidizing power for public purpose facilities from geothermal plant.
- Distribution of electricity to Kongoni Maeila areas at a subsidized rate.

7.1.3 Water and Sanitation

Naivasha is already a net water deficient urban area with the municipal water supply able to meet only 32% of demand currently. Some of the identified future water sources include the construction of Gatiri and Malewa dams which are at the proposal stage.

Water related impacts and risks in Naivasha include; depletion of basin flows; bore holes yield reduction; lake levels reduction due to over-abstraction and drought; water quality deterioration through high nutrient and sediment run-off and pollution from agricultural chemicals and untreated human waste; habitat degradation and riparian encroachment; access conflicts; invasive species and reduction in biodiversity and fishery production. Perhaps the greatest threat is the decline in lake levels which cause widespread ecological degradation and conflict.

During dry spells water use becomes unsustainable when more water is extracted than flows into the lake. Increasing demands for extraction and increasing likelihood of dry and hot periods under climate change mean that Naivasha faces a severe and immediate water management challenge.

Failure to deal with this challenge threatens hydrological and ecological crisis, and social and economic impacts that will be felt nationally. The risks are shared by government, communities, business and environmental concerns and therefore present a shared opportunity for collaborative action.

In view of the increased demand, there is need to adopt a long term strategy toward the financing and implementation of additional water facilities, and to strategically think about the provision of infrastructure services in a gradual and systematic manner so as to meet the future long- term needs of the planning area. The suggested water network extension is shown in the figure below.

As previously noted, the NAIVAWAS sewerage treatment plant in Kihoto has a capacity of treating 2,400m^3 per day, which is inadequate with regard to the sewer network since it was meant to cater for a smaller population than the current one which is about 10 times more.

Therefore, a detailed study is required to establish whether to develop a totally new system or upgrade the current one. The first option can be a longer term option compared to the second option. Figure 64 shows the proposed sewer extensions.

Figure 63: Proposed water network extensions

Figure 64: Proposed Trunk Sewer Network Extensions

Some of the factors which should be considered when locating a sewerage treatment plant are:

- Proximity to a water body for disposing treated sewage.
- Topography: should be able to allow flow of sewage by gravity from the areas served.
- Availability and cost of land.

For sewerage services, required actions include sewer trunk mains construction, sewer line extensions in unserved areas outside CBD and construction of decentralized new treatment works at strategic locations around the lake shores (detailed studies required). The suggested decentralization of the treatment works is due to topographical constraints of the planning area, so as to avoid pumping sewage from low lying areas.

As a short term measure, there is also need to densify the sewer network within the Municipality, and carry out upgrading of the existing sewer treatment works. The proposed densification is shown in the figure below.

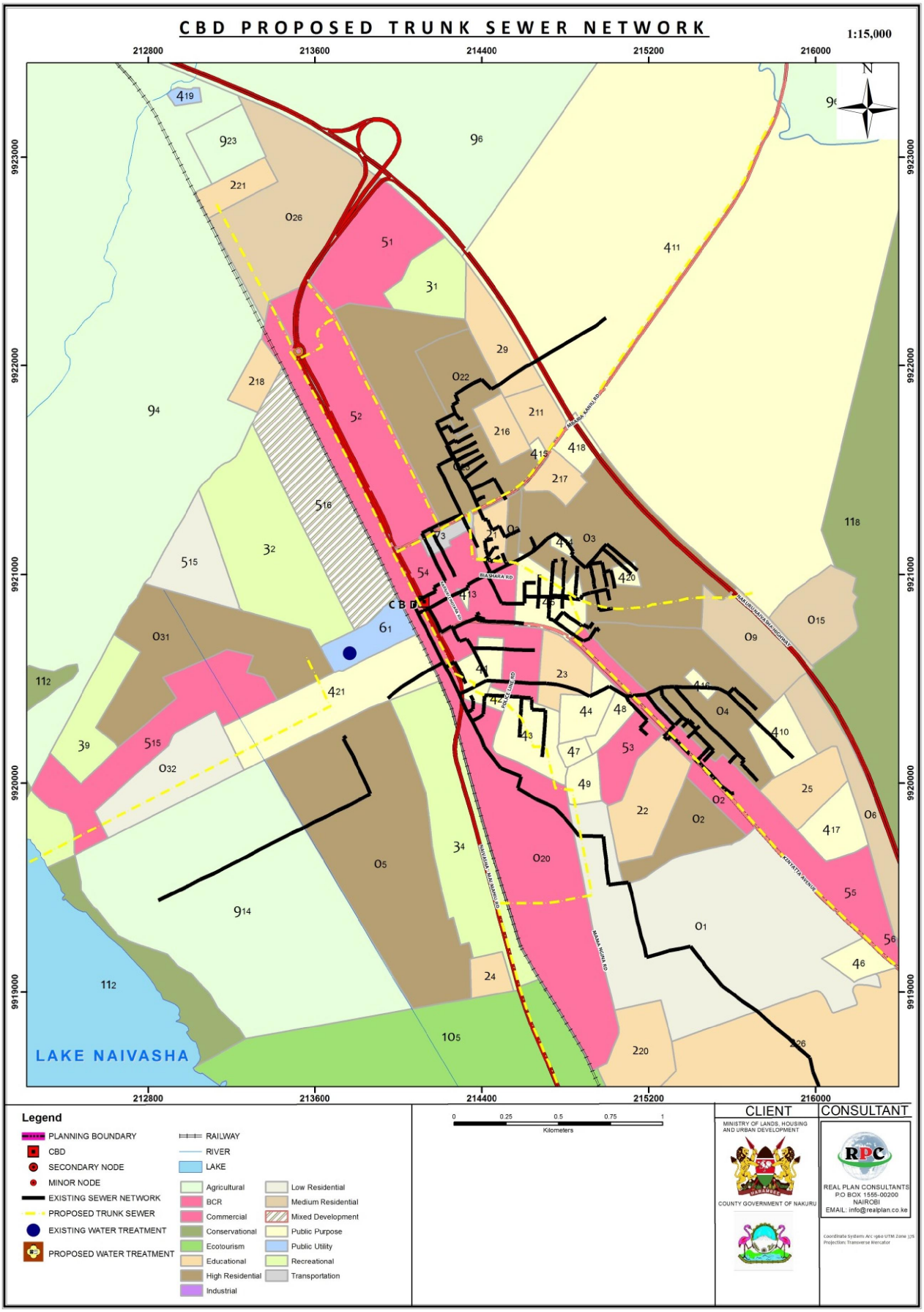


Figure 65: Proposed extension of CBD water and sewer trunk

7.1.4 Solid waste management (storage, collection and disposal)

Crude dumping is common practices in Naivasha. The major dumpsite is off Mai Mahiu road at Kayole/unity farm area. The dump site is not licensed by NEMA and does not meet NEMA standards. The facility lacks garbage handling equipment and a fence. Proposed interventions have been divided into short term and long terms recommendations.

Short-term

- Provision of litter bin in all nodes and other sources areas;
- Provision of standard waste collection and transfer trucks;
- Empowering garbage collection and sorting staff;
- Encourage private solid waste management companies involvement;
- Public awareness on methods of sorting and management of waste; and
- Improve the management of Kayole dumpsite in the following ways:
  - Fencing and planting of tree to aerate the site; and
  - Promoting sorting, recycling and reusing of waste than burning to reduce air pollution

Long-term

1. Relocation of the Kayole dumpsite to a standard landfill to serve Naivasha Town and the surrounding. Factors to consider when locating a landfill site are listed below.
   - Sufficient land:
   - Haul distance have impact on operation cost. Although minimum haul distances are desirable, other factors like collection route location, local traffic patterns and access conditions must be considered (100m from the road);
   - Climate conditions – wind patterns and local surface water hydrology must be observed in relation to other land uses;
   - Slope gradient range from 0-5%;
   - Geologic and hydrologic conditions – it is to be ensured that the movement of leachates and gasses from the site should not contaminate the surface and groundwater aquifer (300-500m from rivers);
   - Compatibility of use of site with present and future uses of adjoining land areas. Distances – Buffer zones distance 1.5 km from urbanized areas and human settlements.

Suitable areas for locating a landfill have been shown on the map below. Development of a cemetery requires that a feasibility study be carried out to select the most appropriate site.

2. Land acquisition – after identifying likely appropriate site locations, the county government should advertise tender on a willing buyer – willing seller basis. In case this fails compulsory acquisition of land is advised;
3. The site should be NEMA approved; and
4. A board to manage the facility should be established.

7.1.5 Information and communication technology

Naivasha Town is well supplied with ICT infrastructure including telephone and mobile phone networks, television, radio transmission stations, print media, internet and postal service. To better the sector, the construction of a comprehensive trunk cable channel in the follow areas;

- all urban nodes
- Public purpose and residential estates
- proposed industrial and conference zone

The trunk channel will reduce incidences of frequent excavations as evident in Kenyan urban areas. The channel can also be leased to ICT service operators**.**

7.1.6 Education facilities

Education empowers the community to perform various duties efficiently and effectively thereby enhancing labour returns. Education enhances human capacity by development of knowledge necessary for production hence influences development. There are 352 early Childhood Development Nursery schools of which 65 are public and 287 are private. There are 128 primary schools, of which 71 are public and 57 are private, 55 secondary schools and several tertiary institutions. The challenges facing these facilities are;

- Inadequate special schools facilities.
- Congestion of classrooms in some institutions.
- Poor designs of classrooms
- High student pupil ratio in some schools

Proposals to address these issues include:

- Upgrade and densify existing facilities especially those in the developed area;
- Acquire additional space in the peri-urban areas;
- Construction of high-rise schools to optimally utilize available land and more schools per ward as shown in the table below;
- Construction of more classrooms, renovations and upgrading of the existing ones in Mirera primary;
- Provide special schools for the deaf, blind and mentally challenged; and
- Facilitate construction of more private schools to bridge the existing gaps.

It is desirable that a nursery school is attached to every primary school hence will follow the pattern of distribution of primary school at 4000 catchment population. The recommended distance is 300-500meters and land requirement of 0.15-0.25hectares. Assuming that there will be 40 pupils per class and the classes will be from standard 1-8 and that the school may want to expand facilities in future, an area of 3.9 ha may be provided as a minimum. However, schools are encouraged to build storied buildings to optimize of land. The requirements are shown below.

Table 26: secondary school provisions

Catchment Population	No. of schools	No. of Streams	Area (Ha)	Walking Distance
8000	1	1	3.4	500m-3km
		2	3.5	
		3	4.5	

With the above in account, the table below shows phased educational facilities proposals per ward. However, a feasibility study should be done to further assess educational facilities' need in details and the possibility of upgrading/expanding the existing ones.

Table 27: Education facilities proposals

Ward	Primary schools		Secondary schools	
	Existing	Proposed	Existing	Proposed
1. Maiela	2	3	3	1
2. Olkaria	3	7	0	4
3. Hell's Gate	13	7	2	5
4. Lake View	20	0	3	2
5. Viwandani	17	7	0	7
6. Naivasha East	3	5	7	3
7. Biashara	6	3	5	2
Total	64	32	20	22

7.1.7 Health facilities

Provision of primary health care to all citizens is one of millennium Development Goals and primary roles of the government. Health sectors core function is to lower morbidity from common diseases such as ;Malaria, acute respiratory infections, diarrhoea, skin infections, reduce the maternal mortality rate, increase deliveries conducted by health personnel, reduce infant mortality, give food supplements to children and educate mothers in infant feeding and immunization. Health services within Naivasha are provided by the government (Ministry of Health), private sectors, Community, non-governmental organizations and faith based organization. Naivasha has 95 health facilities.

Challenges

- Inadequate level 5 hospitals
- Inadequate drug supply to meet increasing demand.
- Inadequate funding due to limited and delayed government allocations
- Failure to afford health services due to prevalent poverty levels
- Inaccessibility of health services due to poor distribution
- Inadequate trained personnel

Proposals

- Additional health centre be provided in areas with deficit such as Maeila and Viwandani;
- Another hospital should be provided within Naivasha to serve other areas that depend on the current level 5 hospital.
- Upgrade and densify existing facilities especially those in the developed area;
- Acquire additional space in the peri-urban areas;
- Educate people on good health practices

- Enhance partnership to construct more dispensaries and fund health services
- Employ more trained personnel
- Allocate more government funding to health sector

The table below show the distribution of existing and proposed health centres per ward. A health centre is provided for every 15,000 persons. However, a feasibility study should be done to further assess health facilities' need in details and the possibility of upgrading/expanding the existing ones.

Table 28: Proposed health facilities

Ward	**Health facilities**	
	Existing	**Proposed**
i. Maiela	3	0
ii. Olkaria	1	5
iii. Hell's Gate	3	6
iv. Lake View	0	5
v. Viwandani	3	3
vi. Naivasha East	0	3
vii. Biashara	2	2
Total	12	24

7.1.8 Firefighting and emergency facilities

Naivasha Town has one fire department that serves Naivasha and Gilgil sub Counties. Assessment done indicates that there is urgent need for an improved fire and emergency department due to the following factors:

Inadequate personnel and equipment: The department has 4 personnel, a Land-Rover with a capacity of 100 litres and limited equipment. The fire station lacks necessary capacity for search and rescue services in building and excavation.

Fire and Emergency risk: Such would be due to the high number of trucks and tanker passing through the Town and the pipeline transiting Naivasha Town. The following is proposed to address the challenges:

- Construction of a fire station at Kihoto with the following facilities.
  - 2 modern fire engines
  - Appliance room and store room for specialised equipment
  - Training area
  - Kitchen
  - Rest &recreational room
  - Equipment room fire engine bay
  - Vehicle and equipment workshop
  - Operations control room.
- Incorporation of fire training school in National Youth Service.

7.1.9 Cemetery and crematorium

There are 2 public cemeteries operated and managed by the sub-county of Naivasha. Kabati cemetery occupies 10 acres and site and service 4 acres. However, the two facilities are full and are poorly managed. To address the challenges, the following is proposed. The existing facilities are full to capacity. Therefore, short-term proposals include;

1. The development of a 12ha cemetery with the following facilities
   - Burial plots - crematorium, ground and above ground interments
   - Service utilities such water sources, sewer, solid waste management, public comfort rooms and inter-domination chapel
   - Administrative offices
   - Parking area
   - A perimeter fence

Factors to consider while locating a cemetery

- Sufficient land to meet the current demand and for future expansion
- The site must be free from urban developments and other conflicting land uses
- It must be easily accessible
- The soils should not be rocky nor unstable
- Water table should be considered (at least 4.5m)
- Slope gradient of the site between 2 and 6% to ensure proper drainage, less erosion and efficient mobility
- A reliable water supply

Suitable areas have been shown on the map below. Development of a cemetery requires that a feasibility study be carried out to select the most appropriate site.

Land acquisition – After identifying likely appropriate site locations, the county government shall advertise tender on a willing land buyer – willing seller basis. In case this fails compulsory acquisition of land is advised.

- The site should be NEMA approved.
- The detailed plans should be done for the cemetery
- A board to manage the facility should be established

2. The existing cemeteries should be fenced and landscaped to enhance aesthetics.

7.1.10 Stadia facilities

There are public and private stadia in Naivasha Town. Among them are the Naivasha sub-county stadium and three private stadiums namely Karuturi, Oserian and YMCA. Sub-county stadium is owned by the NCG, and is about 27 acres large. However, 4 acres is occupied by squatters who claim ownership. The stadium has not been developed and is poorly managed. The following are measures to address the above challenges.

1. The development of a multi-purpose stadium with the following facilities
   - A main stadium;
   - A secondary stadium;
   - Indoor sports arena;

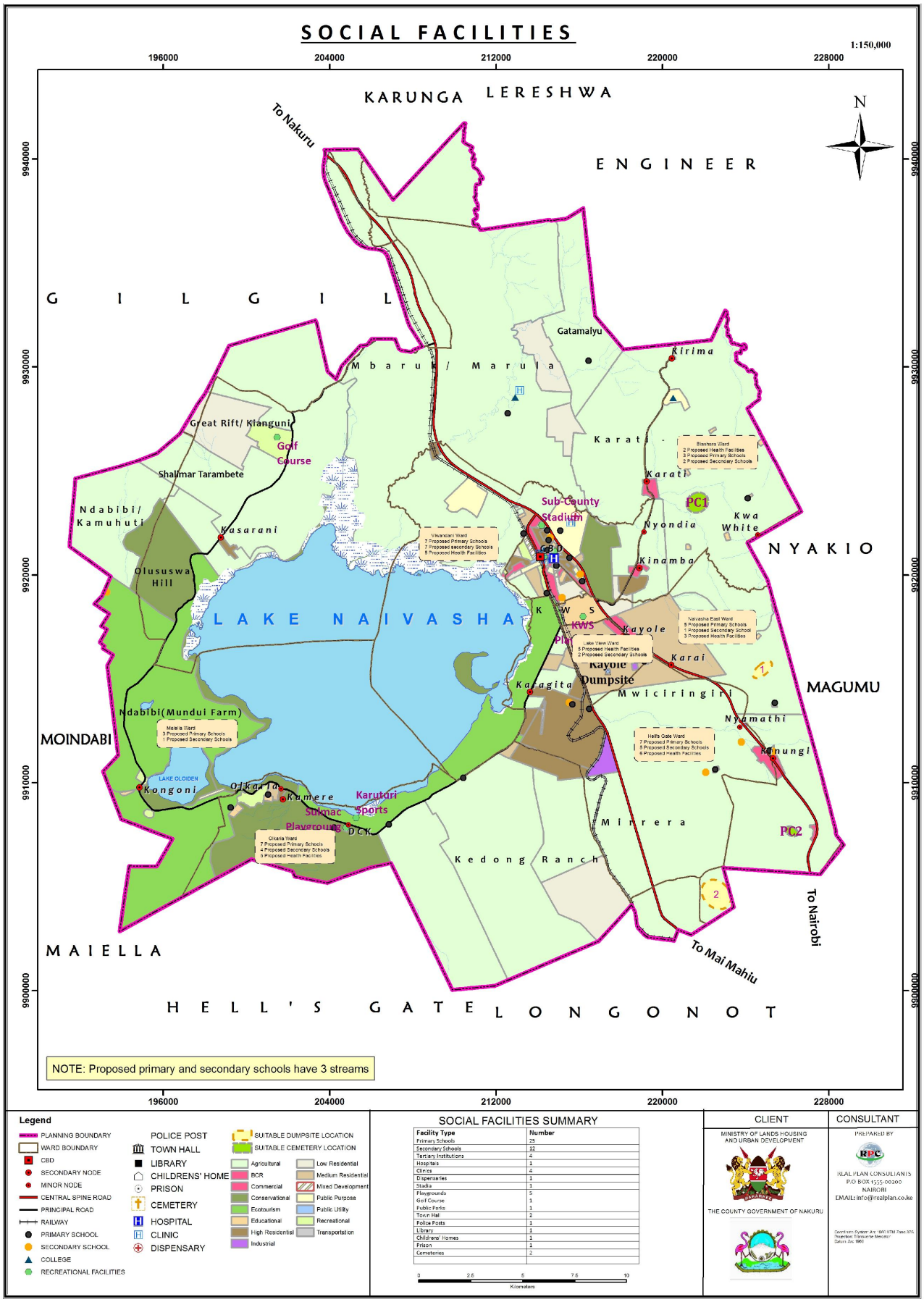
- Ancillary and commercial facilities; and
- Circulation, open spaces, parking and land for future development.

2. Composing a stadium management board/committee.

It is important to note that further detailed planning will be required to execute this proposal.

7.1.11 Library facilities

Naivasha Town has several public and community libraries. Most prominent one is the Kenya National library situated along Mbaria Kaniu road in Kanju estate. The library has limited space and facilities. Others are found within schools and institutions of higher leanings. To effectively provide library services, upgrading of the existing library at Viwandani to accommodate ever-increasing reader population is recommended.


SOCIAL FACILITIES
1:150,000
196000
204000
212000
220000
228000
9940000
9930000
9920000
9910000
9900000
KARUNGA
LERESHWA
ENGINEER
To Nakuru
N
G I L G I L
M b a r u k / M a r u l a
Gatamaiyu
K i r i m a
Great Rift/ Kianguni
Golf Course
Shalimar Tarambete
K a r a t i
Karati
PC1
Sub-County Stadium
N d a b i b i / K a m u h u t i
K a s a r a n i
Nyondia
Kwa White
NYAKIO
K i n a m b a
Olususwa Hill
L A K E N A I V A S H A
KWS Pier
K a y o l e
Karai
Kayole Dumpsite
K a r a g i t a
MAGUMU
M w i c i r i n g i r i
Ndabibi(Mundui Farm)
MOINDABI
N y a m a t h i
K i n u n g i
LAKE OLOIDEN
K o n g o n i
O j k a r i a
K a m e r e
Karuturi Sports
Sukmac Playground
DCK
M i r r e r a
PC2
K e d o n g R a n c h
To Nairobi
To Mai Mahiu
MAIELLA
H E L L ' S G A T E
L O N G O N O T
NOTE: Proposed primary and secondary schools have 3 streams
Legend
PLANNING BOUNDARY
WARD BOUNDARY
CBD
SECONDARY NODE
MINOR NODE
CENTRAL SPINE ROAD
PRINCIPAL ROAD
RAILWAY
PRIMARY SCHOOL
SECONDARY SCHOOL
COLLEGE
RECREATIONAL FACILITIES
POLICE POST
TOWN HALL
LIBRARY
CHILDRENS' HOME
PRISON
CEMETERY
HOSPITAL
CLINIC
DISPENSARY
SUITABLE DUMPSITE LOCATION
SUITABLE CEMETERY LOCATION
Agricultural
BCR
Commercial
Conservational
Ecotourism
Educational
High Residential
Industrial
Low Residential
Medium Residential
Mixed Development
Public Purpose
Public Utility
Recreational
Transportation
SOCIAL FACILITIES SUMMARY
Facility Type | Number
Primary Schools | 25
Secondary Schools | 12
Tertiary Institutions | 4
Hospitals | 1
Clinics | 4
Dispensaries | 1
Stadia | 1
Playgrounds | 5
Golf Course | 1
Public Parks | 1
Town Hall | 2
Police Posts | 1
Library | 1
Childrens' Homes | 1
Prison | 1
Cemeteries | 2
0 2.5 5 7.5 10
Kilometers
CLIENT
MINISTRY OF LANDS HOUSING AND URBAN DEVELOPMENT
THE COUNTY GOVERNMENT OF NAKURU
CONSULTANT
PREPARED BY
REAL PLAN CONSULTANTS
P.O BOX 1525-00200
NAIROBI
EMAIL: info@realplan.co.ke

7.2 CULTURAL HERITAGE CONSERVATION PLAN

According to Article 2 of the 2003 UNESCO Convention on the Safeguarding of Intangible Cultural Heritage, it means the practices, representations, expressions, knowledge, skills - as well as the instruments, objects, artefacts and cultural spaces associated therewith.

The plan seeks to conserve and promote culture in Naivasha Town by conserve historical and cultural sites. It also provides for re-planning, re-development and conservation guidelines that promote local cultures. The challenges in this sector include;

- Poor alignment and integration of heritage and cultural resources into mainstream tourism.
- heritage and cultural tourism products are underrepresented in marketing Naivasha as a tourist destination.
- The resources tend to be misrepresented through uninformed interpretations at tourist venues. Such could compromise the integrity and authenticity of heritage and cultural tourism products.

Cultural and heritage sites

There are eleven cultural and heritage sites in Naivasha as shown on the figure 69 below. Hells gate National Park and Lake Naivasha are the key sites. Other key cultural and heritage areas are also listed in the table below.

Table 29: Cultural and heritage sites

Name of site/monument	Location
Hell's Gate National Park	Around L. Naivasha
Olkaria Hot Springs	Olkaria
L. Naivasha Country club	Around Lake Naivasha
Railway station	CBD
First Prison	DCs Place
KWSTI museum	Near Town
Lake Naivasha	Lake
First prison	
Crescent Island	Around L. Naivasha, Karagita
Elsamere Nature	
Crater Lake Game Sanctuary	L. Naivasha

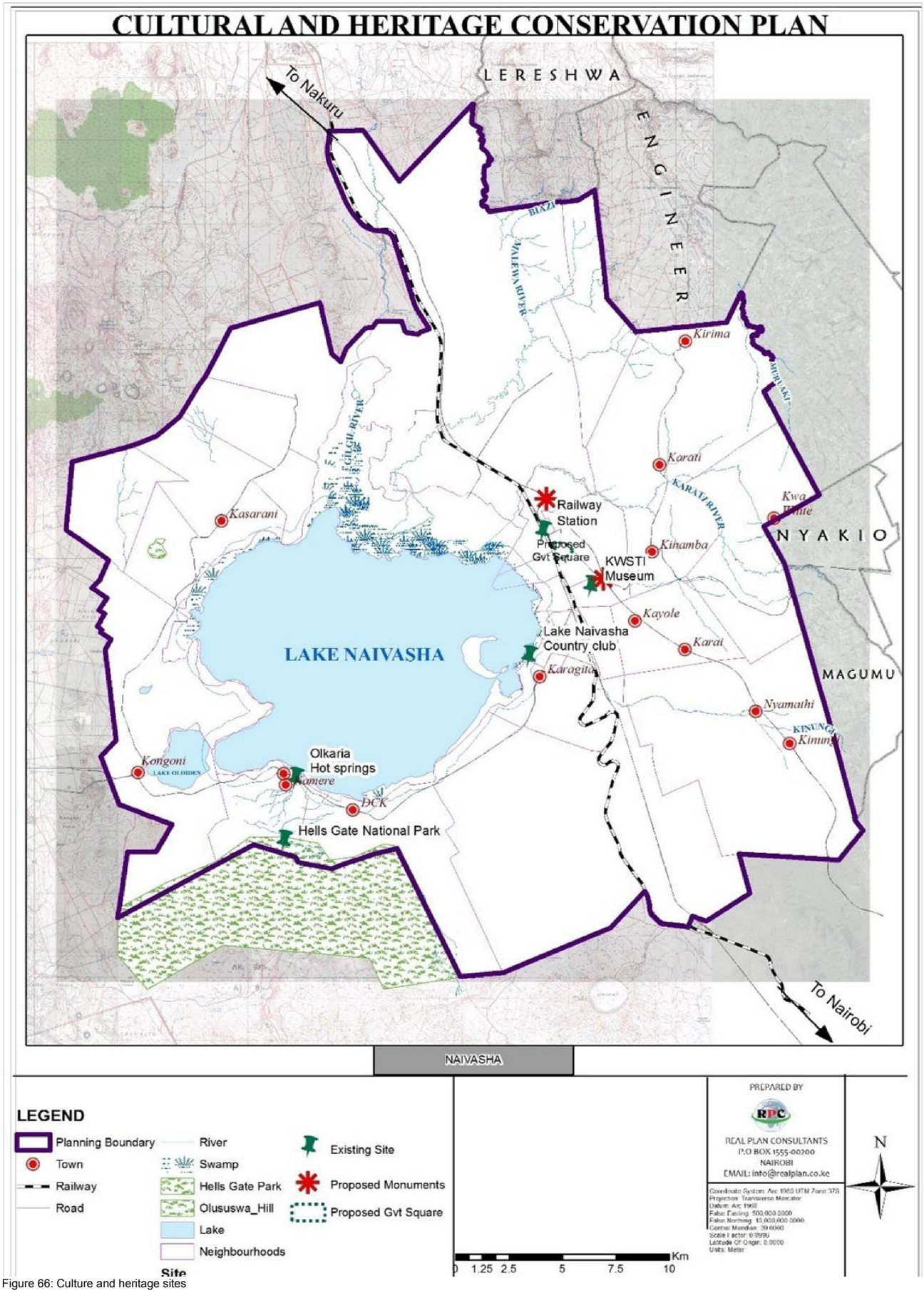


Figure 66: Culture and heritage sites

The matrix below presents proposed measures to mitigate the challenges listed earlier. It also outlines strategies to enhance public participation in the conservation and preservation the identified sites.

Table 30: Cultural and heritage conservation plan

Objectives	Strategies	Action Plans	Location	Actors	Period
To Promote Culture and Heritage	Public awareness creation on the need to conserve the cultural heritage Mobilize the community to embrace their cultural heritage Protection and preservation of the cultural heritage site. Creation of public-private partnership branding of the local culture Promote cultural tourism. Involving the community in activities that benefit them.	Identification of all Cultural sites Protection of existing cultural heritage Conducting of annual cultural shows Establishment of cultural exhibitions Establishment of a cultural centre (s) Acquisition of all cultural sites legal documents. Official gazettement of all cultural sites.	L. Naivasha Hells Gate National Park Olkaria Hot springs Elsamere Nature reserve First prison Kenya Wildlife Service Training Institute (KWSTI) Museum Maasai cultural centre Nyamathi kikuyu cultural centre Kanyiriri waterfall River Karati Gorges and Caves	County Government (CGN) National Government NGO's CBOs	Short term
To promote tourism	Creation of Public-Private partnership (PPP) branding of the local culture Promote cultural tourism. Encourage locals to visit the heritage sites	Allow other activities such as picnics sites Cultural heritage campaign programmes onsite and offsite interpretation to enhance appreciation of these sites	L. Naivasha Hells Gate National Park Olkaria Hot springs Elsamere Nature reserve River Karati Gorges and Caves Kanyiriri waterfall	CGN NGOs Residents CBOs	Short term
To promote culture and heritage	Proposal for Monuments sites	Build the proposed monuments sites.	At the junctions of ; -A104 Rd and Kenyatta Avenue -A104 Rd and Moi Avenue	CGN NGO's Ministry of Sport and Culture	Medium term

To promote conference tourism in Naivasha	Creating an enabling environment for conferencing.	Construction of more conference facilities Improvement of the existing conference facilities. Provision of subsidies especially to locals. Setting affordable prices.	Hotels in Naivasha used for holding conferences	CGN NGO's Ministry of Sports and Culture Private sector	Continuous
To preserve Iconic buildings	Identification of iconic buildings, Mobilize the community on the need to preserve iconic buildings	Protection of built heritage All culture and heritage buildings require Heritage Impact Assessment	All culture and heritage buildings	CGN NGO's Ministry of Sports and Culture	Continuous
To preserve parks/gardens	Identification of parks/gardens	Protection of Kenyatta Gardens	Kenyatta Gardens	CGN NGO's Ministry of Sports and Culture	Continuous
To preserve Naivasha rich culture	Enhancement of culture, art and competition	Construction of a theatre	within CBD	CGN Ministry of Sports and Culture	Medium term
To introduce a Government square	Identification of a suitable site where various activities can be undertaken	Set up the area between Old and new Government offices as a Government square	Within CBD	National Government CGN	Short term
To preserve existing streets	protection of the streets promote the heritage of the heritage of the Town	Plant ornamental trees along Kariuki Chotara street	Kariuki Chotara street within CBD	CGN	Immediate

7.3 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Naivasha Town is part of Lake Naivasha catchment area which is a Ramsar site. Therefore, special consideration is given to the Lake's ecosystem.

The EMP considers environmentally significant areas (ESAs) Vis a Vis the anthropogenic activities for the purpose of protection and sustainable resource utilization. The ESAs are shown in figure 4 (chapter 3) above. They include:

- Lake Naivasha & its riparian
- Rivers Malewa, Gilgil and Karati and their riparian reserves
- Hells Gate National park
- The wildlife corridors

Broad proposals are established to conserve and protect the natural environment with efforts to restore degraded ecosystems. The plan seeks to protect catchment areas, Lake Naivasha, Hells gate National Park, Forests, rivers and green zones. Environmental pollution and waste management are focussed on for the purpose of pollutant load reduction. Polluter pay principle and waste reduction at source are advocated.

The main objectives of the environmental plan are:

- To determine the major environmental challenges.
- To identify environmental management opportunities.
- To create synergy and harmony in environmental planning and management.
- To integrate environmental concerns into social-economic planning and development.
- To formulate appropriate environmental management strategies.

There are various environmental concerns as outlined below.

- Encroachment of lake and rivers riparian reserves
- Disputed and encroached lake access and wildlife corridors
- Deforestation and encroachment of forests and other reserve areas
- Pollution of ground and surface water
- Dust storms, soil erosion, and siltation
- Human-wildlife conflicts
- Insufficient solid and liquid waste management systems
- Poor storm water management
- Inadequate and mismanaged urban spaces

7.3.1 Lake access corridors (LACs)

Lake Naivasha is a significant resource in Naivasha Town. It presents a very diverse habitat with a variety of vegetation species providing habitat to animal, fish and birds. Key resources of Lake Naivasha include:

- Lake water resource used for irrigation, fishing, watering livestock, domestic use, cultural and recreational activities;
- Wildlife including mammals and more than 350 birds species that are important for conservation and tourism
- Wildlife sanctuary and wildlife dispersal areas. The lake is part of larger ecosystem connecting to the park and Eburru forest.

1. Functions

For the lake to effectively execute its functions, it must be accessible. Lake access corridors (LAC) serve this purpose; allow residents and general public to access the resource. As such, there are numerous LACs in Naivasha Town that serve different functions.

1. **Fish landing** – Lake Naivasha is fishing resource. The main type of fish is Tilapia Zilli. Although most of the fish is for domestic consumption, fishing income in 2013 was estimated at 3.9 million. There are 120 boats registered to fish in the lake. Each boat is allocated to four fishermen hence 480 fishermen. They require fish landings by the lake that are accessed via LACs. Some of the landing beaches include Central, Kihoto, Kihoto Main, Karagita Public Beach, Kamere and Oloiden Community.
2. **Livestock watering and grazing** – The corridors are also used by pastoralists. It is estimated that around 10,000 graze and water animals in the lake. Most popular pastoralists' corridor is Sanctuary.
3. **Agriculture** – Irrigated horticulture and flower growing is intensively practiced along the lake. It offers employment to over 30,000 people. Corridors used by large scale farms are restricted (not open for public use).
4. **Recreational/leisure** – Various recreational activities such as boat riding, sport fishing and camping take place around the lake. Public and private corridors are used to access these services. Examples include Hippo Point, Boat Safaris, Fisherman's Camp and Oloiden among others.
5. **Tourism** – The Lake is also a tourist's destination. The corridors connect domestic and international tourist to the Lake or tourist and conference facilities located on the lake shores. Accesses to tourist infrastructure are restricted.

2. Ownership

The Lake area provides an example of a complexity of issues surrounding access to natural resource by the general public. Until 1990s there were multiple open corridors for accessing the lake and were mainly used by pastoralists communities and fishermen. Currently, only a few of the alleged 17 corridors are functional. The rest have been closed private landowners. This has resulted to conflicts and often demonstrations by the local disputing closure and ownership concerns. To mitigate these concerns, the Planning Department mapped six corridors in 2001. These include Karagita, Kamere, Kihoto, Kariuki, Kongoni and one next to Crater Lake. The Imarisha Naivasha group has also undertaken some studies on the same.

By law, an area within seven meters of the lake shore belongs to the state. However, the land is managed by riparian farmers. An MOU was signed between the land owners neighbouring the lake and the government of Kenya was signed allowing the farmers to

conserve and protect the riparian land. Consequently, access to the lake by public is restricted to a few sites that are not always conveniently located.

Different types of corridors in terms of ownership are found around Lake Naivasha. These are public and private LACs. Public corridors represent those that exist on the cadastral layer while private LACs do not exist since they are located on private land. They are discussed below.

a. Public corridors

With reference to the cadastral layer, there are 11 public access corridors around Lake Naivasha. Five among these are located in Kihoto area. Others are located at the KWS Farm, Kamere, DCK, Viwandani and VD Berg. The corridors are briefly discussed below.

1. **The central landing beach –** This a public corridor located in Viwandani area. It main destination is The Central Landing Beach that is used by about 130 fishermen as a fish landing point. Boat riding services are also offered here. The corridor connects the beach (lake) to Mai Mahiu Road as shown on the cadastral layer image below. It is an earth road and is currently functional.

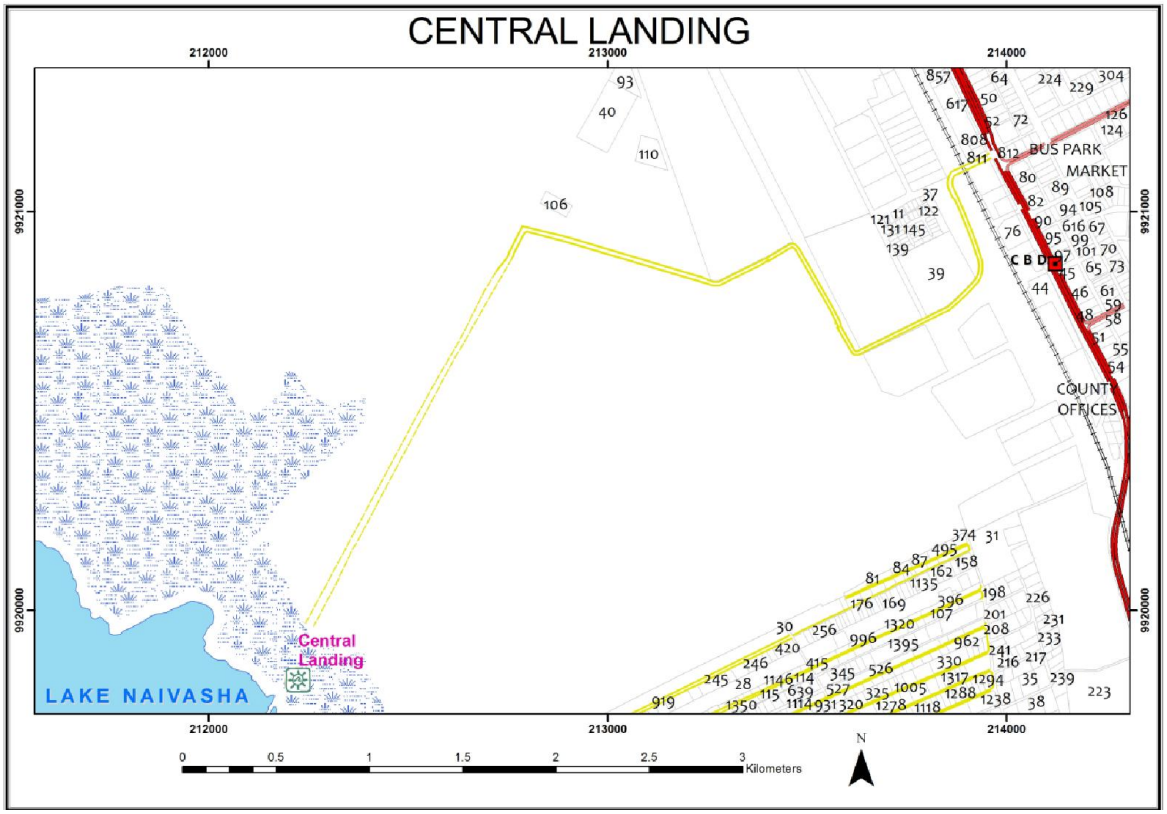


Figure 67: Central landing beach corridor

2. **Kihoto corridors -** There are six public LACs in Kihoto area as shown in the cadastral image below. Kihoto Beach corridor is the main one. The corridors connect the lake to Mai Mahiu Road. They also link to fish landing points in Kihoto area such as Kihoto Landing beach. All these corridors are earth roads.

   Some of the corridors that have been closed in Kihoto are Kihoto Main and Lake Flower. Both corridors are located on private land hence the conflict.

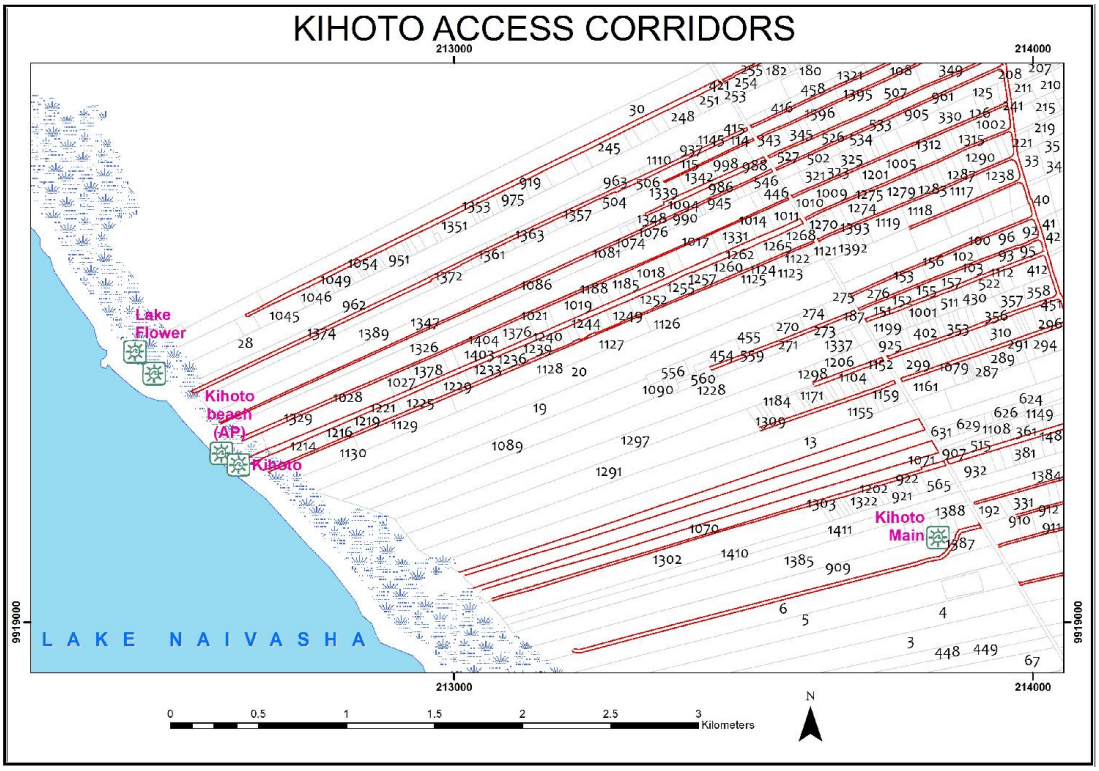


Figure 68: Kihoto Beach and closed Kihoto Main Corridor

3. **KWS -** The corridor is located on KWS Farm adjacent to the CBD. Its location on public land makes it a public access. It links the lake to Mai Mahiu Road. Access to the lake via this corridor is restricted by the KWS guards. A fee of KShs. 250 per person is paid at the gate. It is mainly used by local and international tourists.

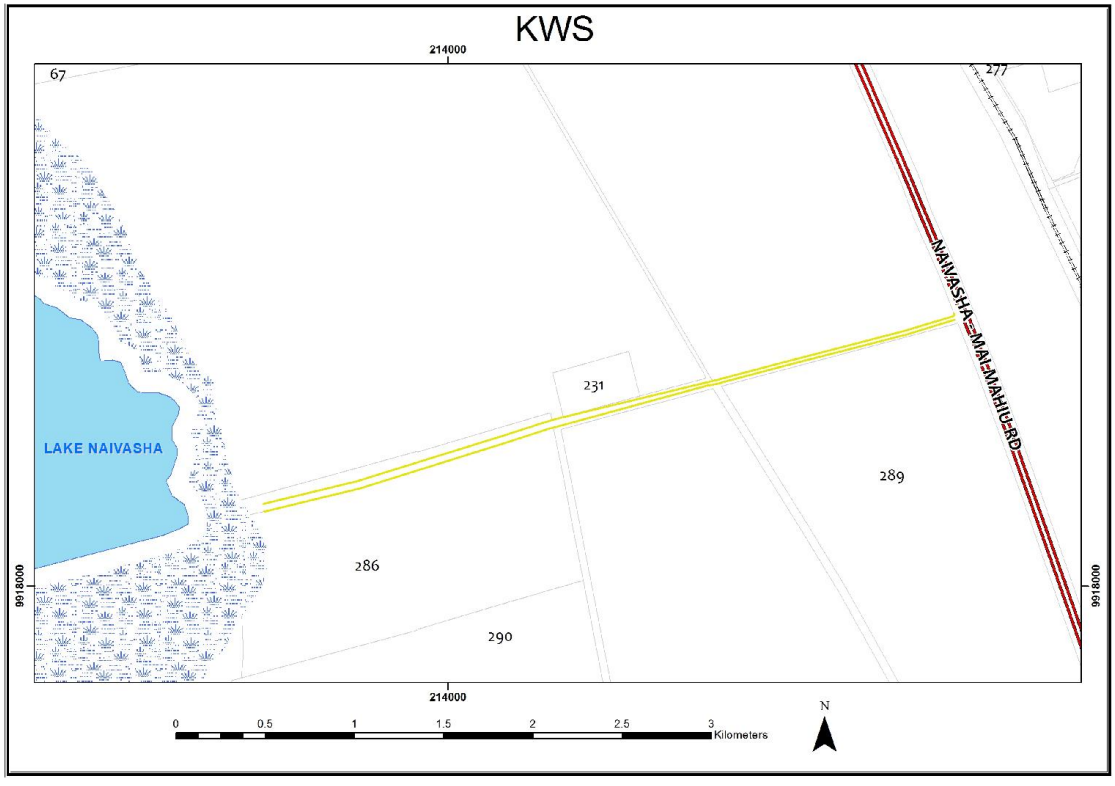


Figure 69: KWS corridor

4. **VD Berg -** The corridor is located next to the VD Berg Flower Farm close Shermoi Southlake Primary School. It links the lake to Moi South Lake Road. The corridor is currently murramed but has been closed by the adjacent VD Berg farm. According to the cadastral layer the corridor is public property.

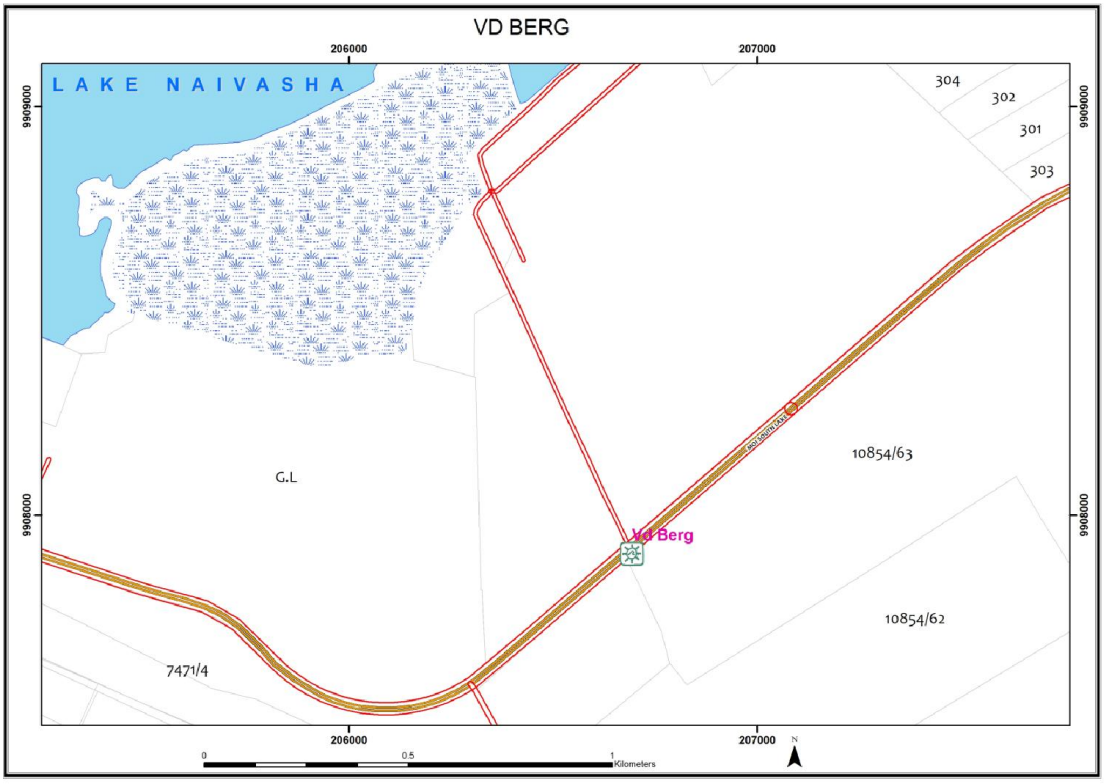


Figure 70: Closed VD Berg corridor

5. **DCK -** The corridor links DCK Centre (Located along the Moi South Lake Road) to the Lake. With reference to the cadastral layer, DCK Corridor is public way that leads to the lake.

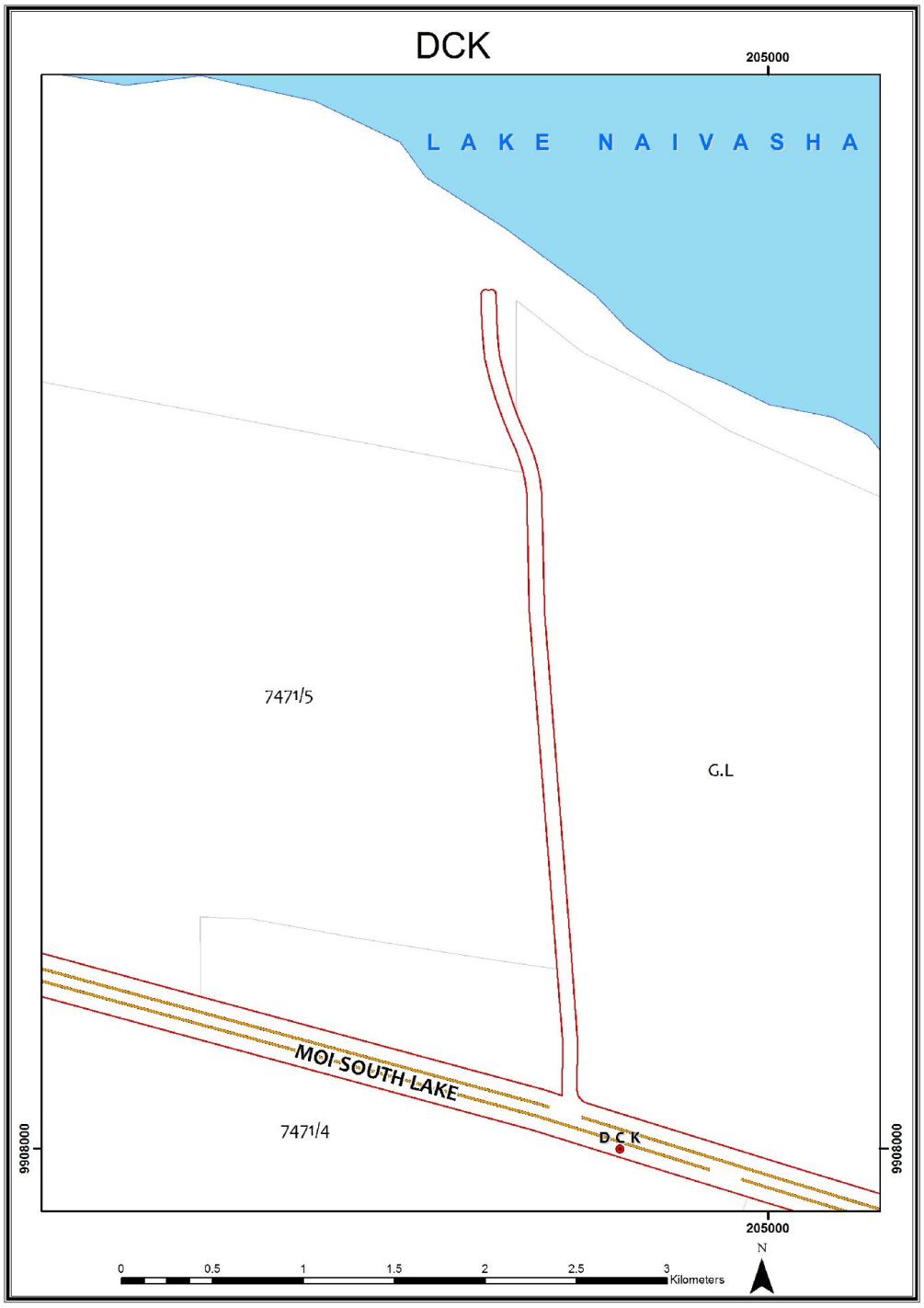


Figure 71: DCK corridor

6. **Sanctuary -** The corridor is located in Karagita and it connects the Crescent Island to Moi South Lake Road. According to the cadastral layer, this is a public access and is currently functional. The corridor is in murram condition. It is used by pastoralist communities for watering livestock and grazing in the lake area.

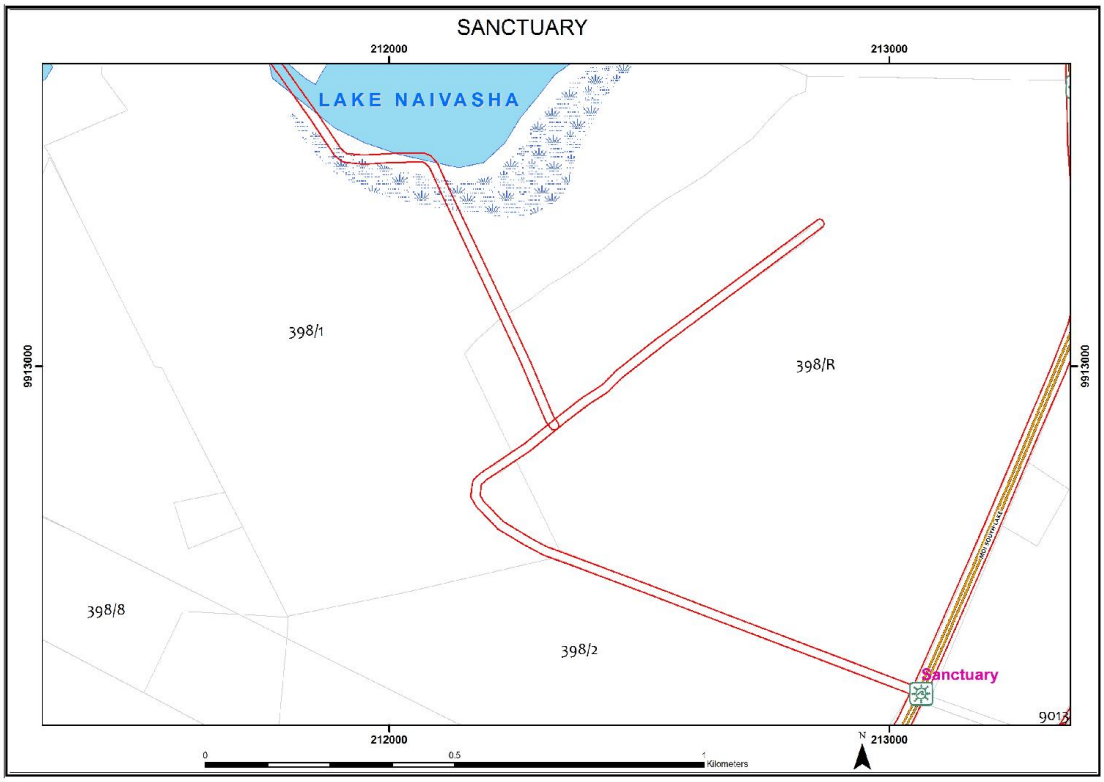


Figure 72: Sanctuary corridor

7. **Kamere fish landing -** It is located in Kamere Centre (along Moi South Lake Road). The corridor links the center to the lake (landing beach). Like the name suggests, the beach is used as a fish landing by local fishermen. Recreational activities such as boat riding services are also provided. It is a public access that is currently functional. The LAC is in murram condition. The image below shows its location on the cadastral layer.

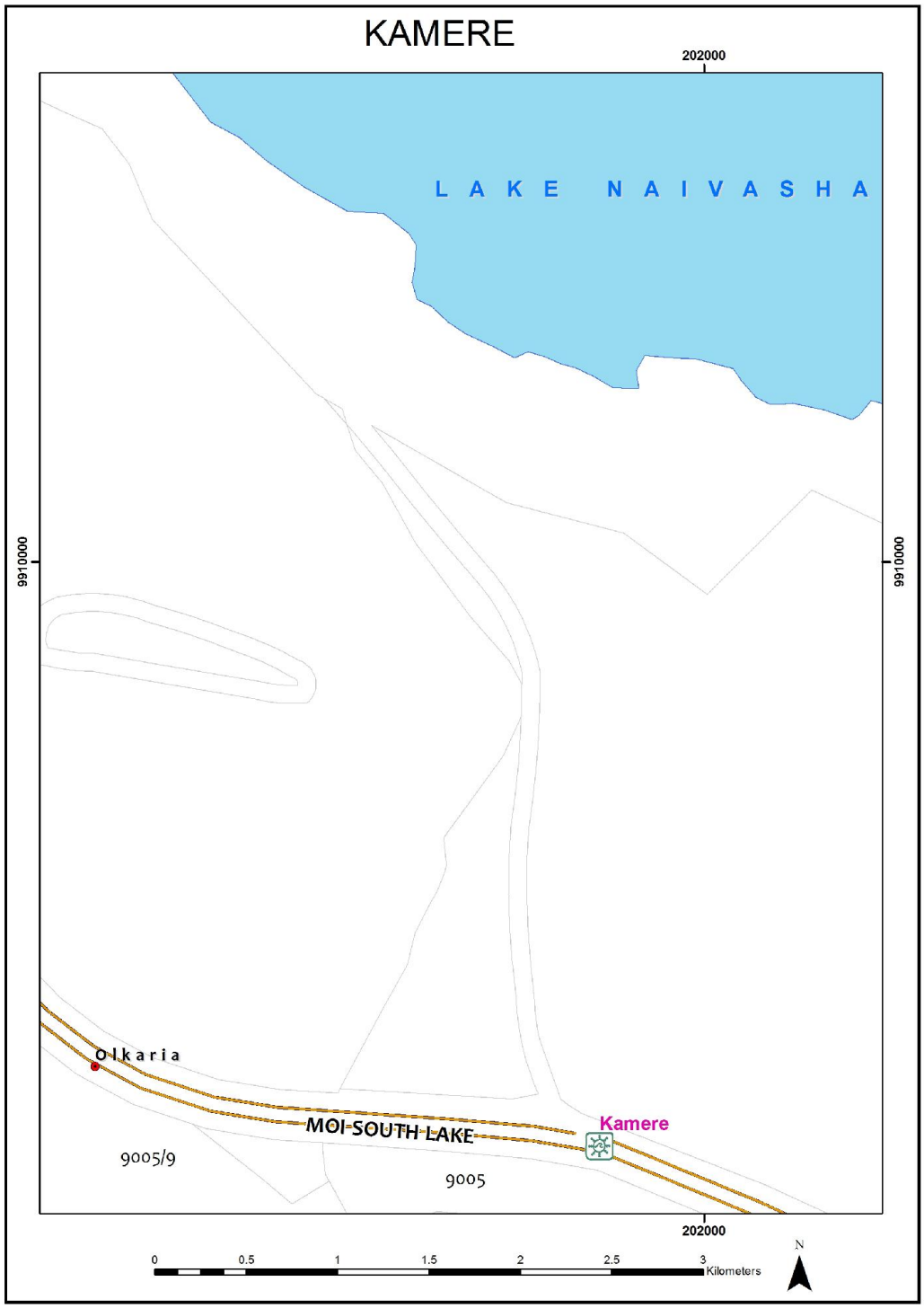


Figure 73: Kamere corridor

b. Private corridors

These include corridors located on private land therefore their use is restricted. Most private corridors access recreational sites. The recreational sites have services such as boat riding, camping, resorts and conference facilities, bird and wildlife watching.

1. Karagita public beach

As the name suggest the corridor leads to Karagita public beach located in Karagita. It connects the lake to Moi South Lake Road. It is predominantly a fish landing point but recreational activities such as boat riding is practiced. Although it is claimed to be public corridor, on the cadastral layer it is located on private property LR No.396/6 as shown on the figure below. It is murram and currently opens. It ownership is controversial.

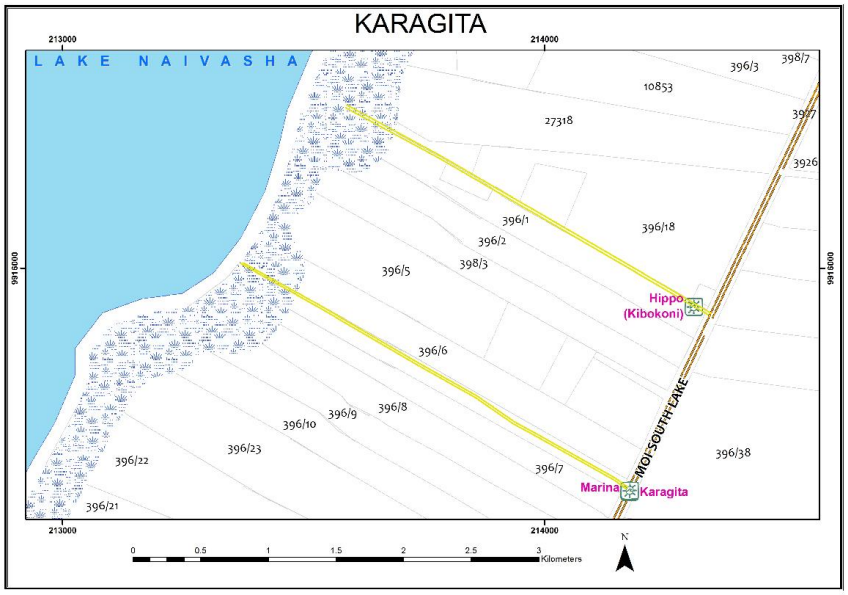


Figure 74: Karagita public beach

2. Oloiden community

The corridor links Kongoni Centre to Lake Oloiden. Although the residents claim that it is a public access, it is located on a public land as shown on the cadastral layer image below. The corridor ownership is contested by the Maasai pastoralists who use it for animal watering. The Oloiden community beach served by the corridor is used as a fish landing point and boat riding service. The beach is strategically located and good conditions for a public recreational beach that can be used for swimming among other sports and recreational activities. Its shores are well-drain and gently sloping as shown on the image below.

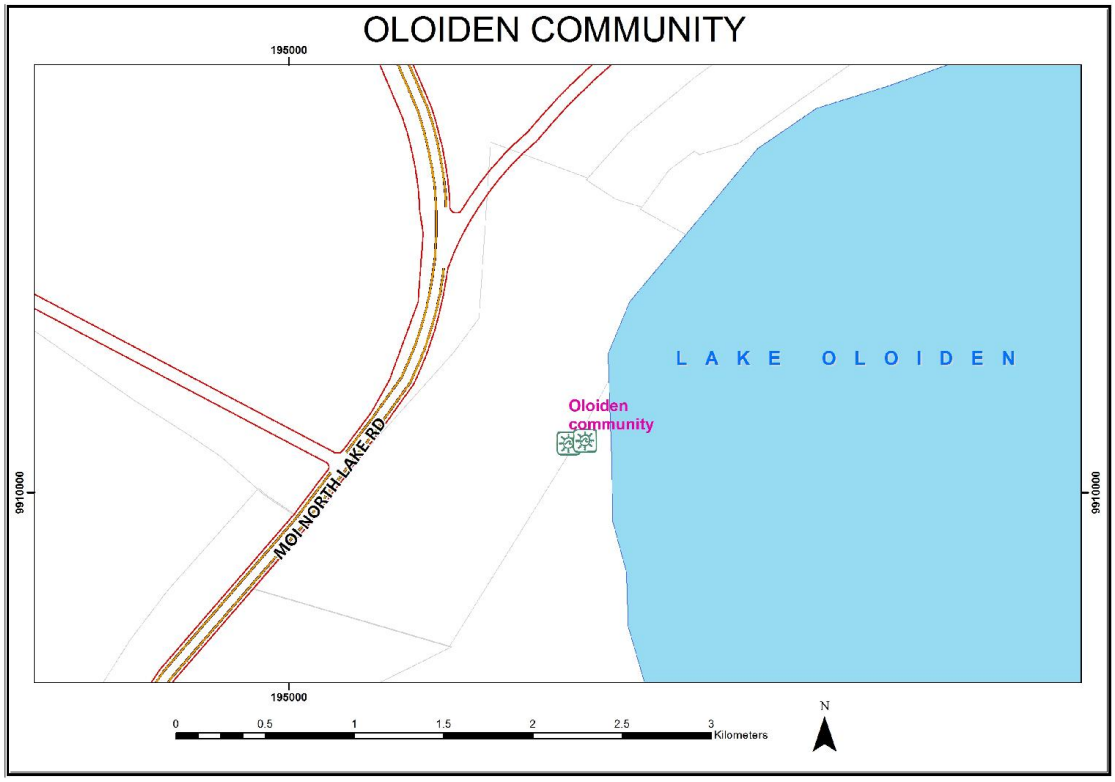


Figure 75: Oloiden community boating

3. Kwa Wambui

This is a private corridor located on Parcel Number Mwiciringiri block 4 (Mirera) 129 and between parcel numbers Mwiciringiri block 4 (Mirera) 3964 and 3962/3. It is located within South Lake Flower Farms and links the Moi South Lake Road to the lake. Activities accessed include boat-riding and hospitality services. The corridor is murramed and currently functional.

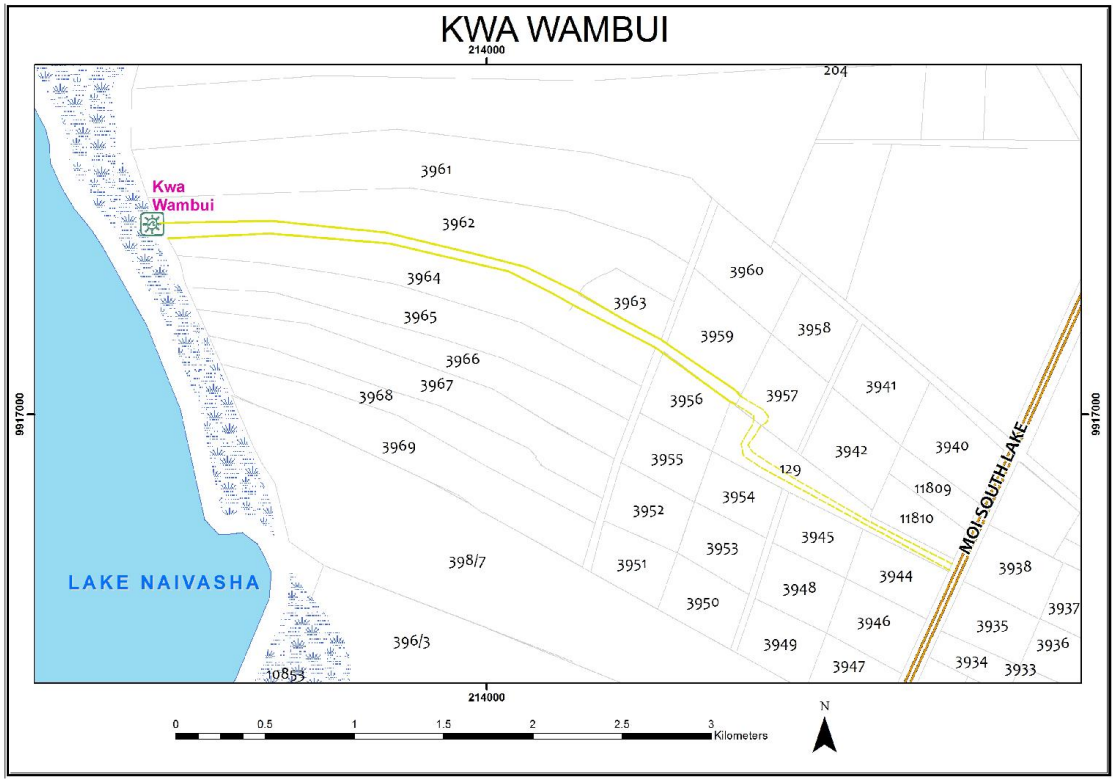


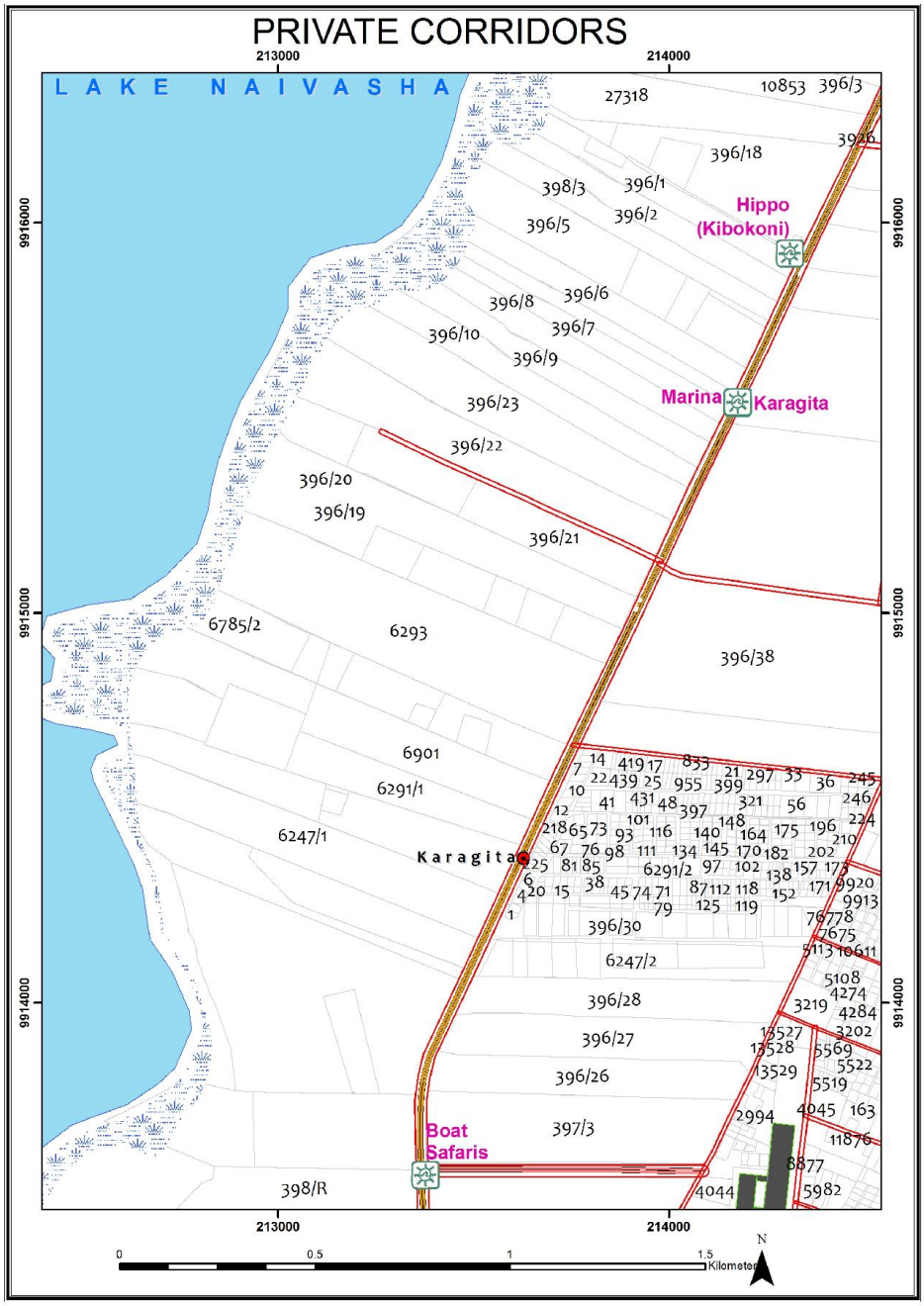
Figure 76: Kwa Wambui

4. Hippo/Kibokoni

It is a private corridor located LR No. 396/1 and 396/18. The public access road on the cadastral layer is 510m long and 6m long. The remaining part connecting to the lake is still located between the two plots. The corridor links the lake (Hippo Safaris Resort) to Mai Mahiu Road. Services offered include accommodation, restaurant, conferencing facilities and boat riding. It is murramed and currently functional.

5. Marina

The corridor's entrance is adjacent to Karagita public beach entrance. The private access is located on LR No. 396/8. It is murramed and currently opened.



6. Boat safaris

It is located opposite Karagita airstrip on LR No. 398/R. It allows access to the lake (Boat Safaris) from Mai Mahiu Road. Activities available here include sports fishing, hippo and bird watching. The corridor is murramed and functional.

7. Crayfish camp

The corridor allows access to the Crayfish Campsite located along the shores of Lake Naivasha. It is located along MSL Road, 200m from DCK Centre. The private corridor is murramed and currently functional.

8. Kwa Muhia

It connects Kwa Muhia Centre (located along Moi South Lake Road) to the lake. It is located on LR No. 404/5. The corridor is currently closed.

9. Camp Carnelly's and Fisherman's Camp

They are located along MSL Road on LR No. 404/2. Camp Carnelly's is about 400m east of Kwa Muhia Centre while Fisherman's Camp is 800m east of the centre. The corridors allow access to the above named campsites. They are murramed.

10. Oserian Development Company

Like the name suggest the corridor is located in Oserian Area on LR No. 10999. It allows access to the lake from MSL Road. The corridor is currently open and is murramed.

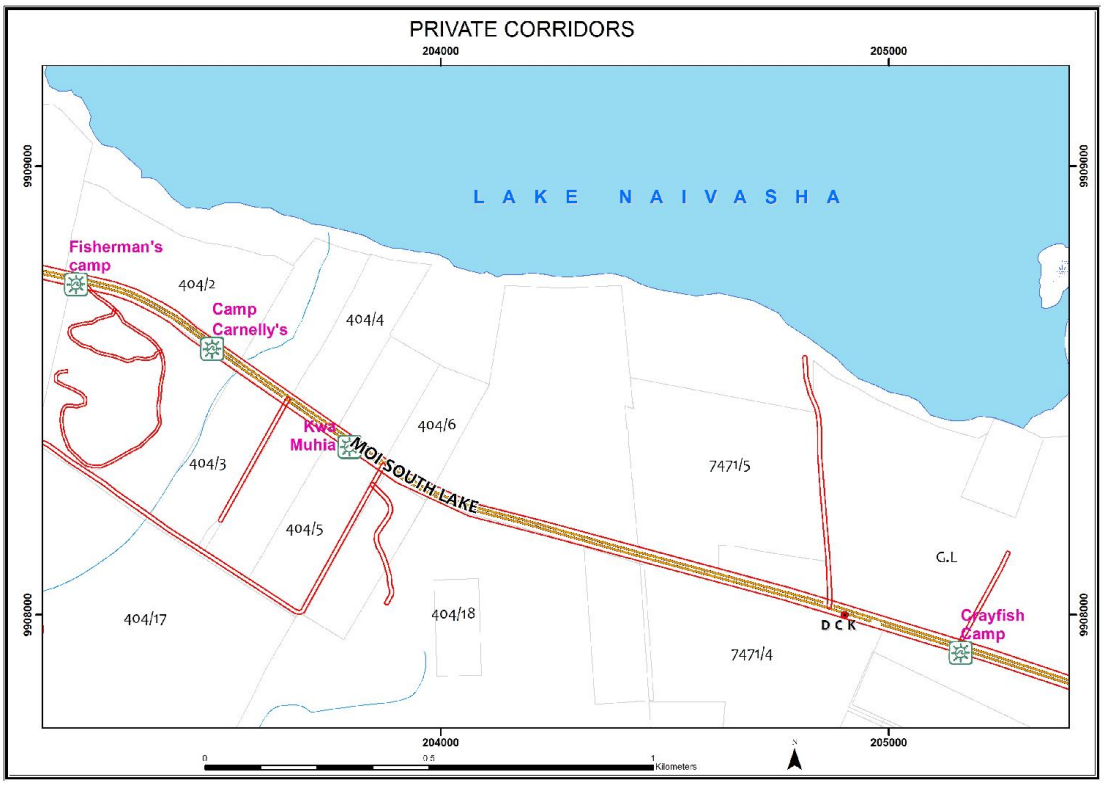


Figure 77: Oserian Development Company

Twenty nine LACs have been identified, mapped and functions defined. The corridors ownership has been defined using the cadastral layer. However, this has been identified as an area requiring detailed plans. Therefore, the following recommendations have been made:

- The establishment of a committee to manage the LACs. It will constitute of land owners and key stakeholders. Mandates of the committee will include;
  - Facilitating detailed planning of the corridors that will include further mapping other than what has been currently done;
  - Acquisition / purchasing of land where necessary;
  - Management and improvement of the LACs for instance installation of street furniture;
  - Forging private public partnership in enhancing access to the lake. For instance negotiating use of private corridors by the general public; and
  - Opening of the closed public corridors and resolving conflicts related to corridors

LACs are significant elements in ensuring the lakes potentials are fully and equitably exploited and accessed by residents of Naivasha Town and the general public. According to the cadastral layer, there are 11 public access corridors. Although Karagita Public Beach and Oloiden Community corridors are currently claimed as public, the layer shows them as public. To fully resolve such conflicts, it is recommendable that detailed planning for all lake access corridors be carried out.

Table 31: Lake Access corridors

Corridor	Location description	LR. No	Coordinates		Function	Condition	Status	Owner ship
			Easting	Northing				
1. Central landing beach	Viwandani		212224	9919826	Fish landing beach Boat ride	earth road	Open	Public
2. Lake flower	**Kihoto**	Naivasha Town block (Kihoto) (NTBK) 30 and 421	212449	9919468	-	earth road	Closed	Private
3. Kihoto 1		NTBK 28 and 415			-	earth road		Public
4. Kihoto 2		NTBK 988 and 546			-	earth road		Public
5. Kihoto beach (AP)	Kihoto	NTBK 446 and 1011	212598	9919292	-	earth road	Open	Public
6. Kihoto	Kihoto	NTBK 1011 and 1268	212628	9919272	Fish landing	earth road	Open	Public
7. Kihoto 3		NTBK 1267 and 1122				earth road		Public
8. Kihoto 4		NTBK 1077 and 1410				earth road		Public
9. Kihoto main	Kihoto	NTBK 1387	213836	9919146	Fish landing		Closed	Private
10. KWS	KWS		213183	9917974	Leisure	Murram	Open	Public
11. Kwa Wambui	SL flowers farms	Mwiciringiri block 4/129	213474	9917299	Leisure Boat ride	Murram	Open	Private
12. Hippo/Kibokoni	Vila view	Between 396/1 and 396/8	214310	9915921	Accommodation and conferencing Boat ride	Murram	Open	Private
13. Karagita public beach	Karagita	396/6	214176	9915538	Fish landing Boat ride	Murram	Open	**Public**
14. Marina	Karagita	396/8	214177	9915540		Murram	Open	Private
15. Naivasha country club	Karagita market	-	-	-		Murram		Private
16. Boat safaris	Opposite airstrip	398/R	213377	9913559	Hippo and bird watch Sport-fishing	Murram	Open	Private
17. Sanctuary	Karagita/ Crescent	Between 398/2 and 398/R	213064	9912346	Animal watering		Open	

	island							
18. Natures camp		-	-	-			Open	Private
19. Lake Naivasha safari Lodge		-	-	-				
20. VD Berg	Close to Shermoi SL primary		206693	9907906		Murram	Closed	
21. Crayfish Camp	DCK	G.L	205160	9907916	Camp site	Murram	Open	Private
22. Kwa Muhia	Kwa Muhia	404/5	203797	9908375		Murram	Closed	
23. Camp Carnelly's	Camp Carnelly's	404/2	203490	9908593	camping and picnics	Murram	Open	Private
24. Fisherman's camp	Kamere	404/2	203187	9908736	Camp site	Murram	Open	Private
25. Kamere fish landing	Kamere centre		201942	9909676	Fish landing Boat ride	Murram	Open	Public
26. Hippo Point		-	-	-	Boat riding			
27. Oserian development company	Oserian	10999	199083	9909357		Murram	Open	Private
28. Oloiden Community	Kongoni		195220	9910039	Fish landing Boat ride	Earth road	Open	Public
29. DCK	DCK	7471/5 and G.L	-	-				Public

7.3.2 Wildlife corridors

There are five wildlife corridors as shown in figure 78 below. Some corridors are threatened since they are located on private land whose sub-division may compromise their functionality. The plan proposes restriction of development in these areas. As such, the detailed land use plan proposes compatible land uses along these corridors. The land uses include conservancy, eco-tourism and large-scale agriculture.

Considering the ownership pattern along these corridors, the plan proposed incentives to private land who maintains and protect these areas by not subdividing and fencing.

7.3.3 Lake Riparian reserve

The riparian should be strictly protected and conserved so that it act as a buffer zone to shield water from pollution and other threats arising from unsustainable land use practices. They include all areas on either side of a river, stream and water reservoir as described in the EMCA (1999), Water and Agriculture Acts. Natural riparian habitat provides important ecosystems services and is rich in biodiversity. It hosts thousands of flora and fauna species, it is a wildlife corridors, hosts fish landing points and public beaches. Therefore, its conservation and protection has an impact on the lake's potential.

Towards achieving this, the plan proposes delineation of the riparian areas. Methods identified to mark the riparian boundary include the cadastral layer, 1906m contour, 1892.8m contour and highest watermark. The 1892m contour was found most appropriate as it has already been gazetted, it observes the highest watermark and is not discriminatory in anyway. The cadastral boundary has been proposed to correct the controversial areas.

The riparian reserve has been identified as an area requiring further detailed planning. Therefore, the following has been proposed.

- The delineating of the Lake Naivasha riparian reserve using the 1892.8m above sea level that was gazetted in 2013 as shown on figure 79 below;
- The riparian should be marked using beacons to avoid encroachment and grabbing;
- The development of public recreational beach and fish landing points to ensure optimal benefits;
- These areas have been zoned in the land use plans as a conservancy and ecotourism zones; and
- Provide incentives to farmers and other owners located adjacent to reserve to promote reclamation, protection and conservation.

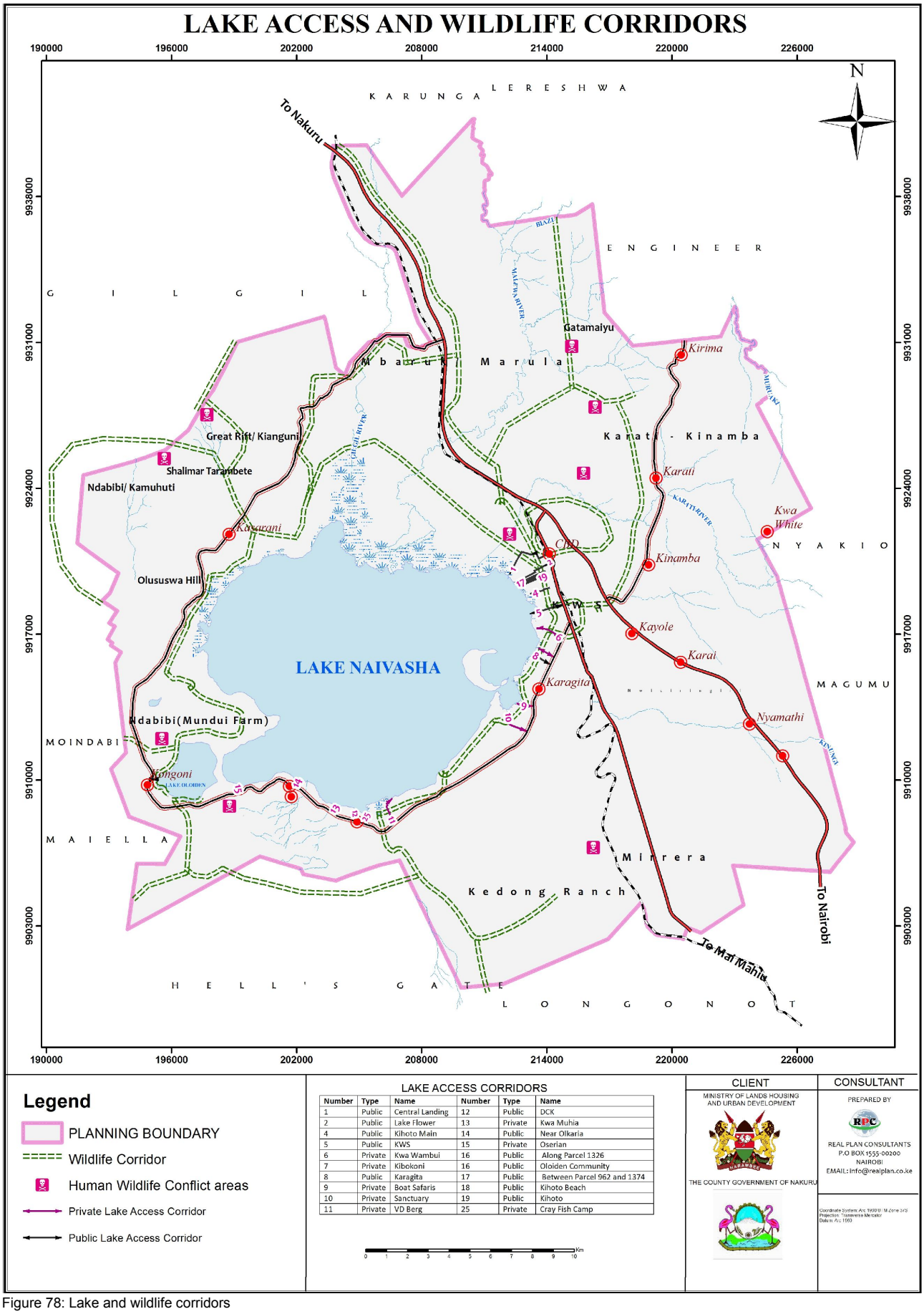


Figure 78: Lake and wildlife corridors

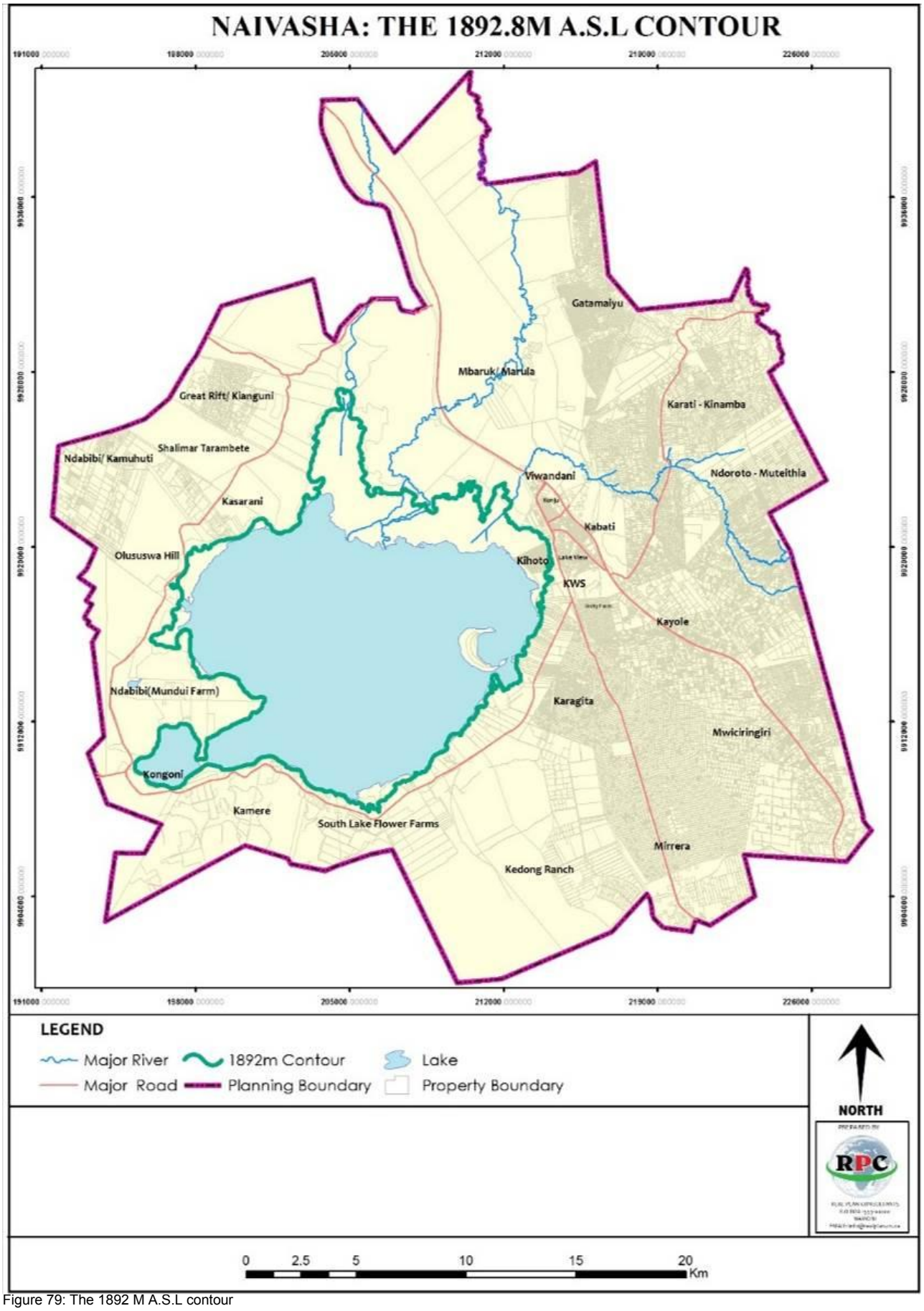


Figure 79: The 1892 M A.S.L contour

The matrix below summarizes the environmental management strategies proposed. It presents action plans, actors and project period.

Table 32: Environmental management plan

Problems	Location	Objectives	Strategies	Action plans/areas	Actors	Period
Encroachment into lake riparian reserves	Lake Naivasha	To protect and conserve water bodies and their riparian To promote sustainable utilization of riparian reserves.	Conserving and restoring the riparian vegetation Develop, control and enhance ecotourism , agriculture activities Enhance public participation in management of the riparian.	Delineation and reclamation of riparian reserves for Lake Naivasha and Rivers Malewa, Gilgil and Karati. Observation of the 1906 contour boundaries for the lake(gazetted in 2013) Mark the riparian reserves to using beacons. Enforce existing laws on water quality regulations, wetlands regulation of 2009 and riparian reserve guidelines Implementation of the Lake Naivasha Basin Integrated management plan Provide incentives to adjacent land owners to set aside and conserve the riparian vegetation Environmental education and campaign among the community Management and monitoring of resources buffer zones by residents. Strengthening water resources Users association through increased funding and capacity building No construction allowed on the riparian	County Government WRMA NEMA CBOs such as LNRA WRUAs	Short term (5 Years)
Encroachment into river riparian reserves	River Malewa Gilgil River River Karati			Provide incentives to adjacent land owners to set aside and conserve the riparian vegetation Environmental education and campaign among the community No construction shall be allowed within river reserves	NCG WRMA WRUAs	Short term (5 Years)
Water pollution	Lake Naivasha River	To conserve and protect the water resources	Monitoring and regulating activities along the water ecosystems	Formulate area specific committees to monitor pollution concerns Set up Lab to Monitor the discharge of waste into the lake	County Government WRMA	Short term (5 Years)

	Malewa Gilgil River River Karati	To promote sustainable use of water resources	Formulation of guidelines controlling discharge into the resources Promote environmental friendly economic activities along water ecosystems. Enhance participatory management of resources.	and feeder rivers Increase environmental monitoring and policy implementation staff in NEMA, WRMA, county environment department and other environmental Agencies Promote sustainable farming around the lake and feeder rivers Strengthening of the polluter pay principle. Delineation of riparian reserves for Lake Naivasha and Rivers Malewa, Gilgil and Karati. Resettlement of Kihoto residents who are west of the pipeline ,away from proposed lake Naivasha riparian reserve Environmental education among residents including billboards at strategic points. Construct conservancy tanks in areas of high water table other than pit latrines (such areas include Karagita, Kihoto, Kwa Muhia & Shah.	NEMA Residents CBOs NGOs NAIVAWASS Water Users Association. NEMA	
Lake pollution by flower farms	Lake Naivasha	To conserve and protect the water resources To promote sustainable use of water resources		Constructions of mini-waste water treatment plant by all flower farms discharge substantial amounts waste water. The plants must be NEMA approved. Preparation of environmental management plans by flower farms that shall be approved by NEMA. The management plans should show; - Strategies to reduce use of chemicals during immediately before and during rainy seasons e.g. spraying - Measures to eliminate surface runoff that is occasionally a mixture of agricultural chemicals used in the farms - Measures to reduce lake pollution by intoxicated groundwater from the farms	Flower farm companies NCG	
Over exploitation of water resources	Lake Naivasha River Malewa Gilgil River	To protect and conserve water resources To promote	Implementation/enforcement of existing regulations Formulation of a committee to monitor	Regulating/Controlling fishing in Lake Naivasha Regulate water use to improve efficiency (Lake Naivasha, Malewa, Karati and Gilgil Rivers) Implementation of the water use guidelines Develop water detention facilities in the agricultural areas	NCG WRMA NEMA	Short term

	River Karati	sustainable use of resources	fishing activities and water usage Providing alternative water sources Enhance participatory approaches.	Environmental education among residents Roof harvesting mechanisms in new development applications		
Deforestation and encroachment of forests	Olususwa Forest	Conserve and protect forest resources Restore and increase forest cover to 10%	Delineating and fencing the forest areas and other natural habitats Promote sustainable use of the forest resources Increase forest and vegetation cover Increase public participation and awareness.	Reclamation and restoration of encroached and destroyed habitats Afforestation/reforestation in cleared forests and on private properties Providing incentives for communities/farmers who protect and increase tree coverage Controlling activities within the Olususwa forest Public awareness on sustainable use forest resources	County Government NEMA KWS KFS CBOs Residents	Long term
Soil erosion & dust storms	Kabati CBD	To reduce soil erosion	Increase vegetation cover (windbreakers and ground cover vegetation)	Green landscaping in the Naivasha Town Construction of gabion in affected areas. Tree planting on the upper catchment areas of the water bodies	County Government Residents	Short term
Poor Solid waste Management.	Gatamaiyu, Kinamba Mutethia/ Customa Kayole, Mirera Mwiciringiri Kamere Karagita Mundui	To develop an effective solid and liquid waste management system To encourage reduce, reuse and recycling of solid	Identification of waste sources Providing for a standard dumpsite/appropriate facilities to handle solid waste Encourage the Reduce, recycle and reusing of waste materials policy	Provision of waste disposal bins in CBD and other centres/compost pit in the identified neighbourhoods Encourage separation of waste at the source. Introduce waste reuse and recycle programmes to minimize the waste dump into the sites. Relocation of the Kayole disposal site The development of standard disposal site for Naivasha area Provision of standard waste collection and transfer trucks to serve the CBD and other areas Encourage solid private management companies in Naivasha	County Government NEMA Private waste collectors Recycling companies CBOs Residents	Short term

	farm Lake view Kabati Villa view	wastes within the planning area To provide facilities for improved handling of waste	Encourage a participatory approach	Town. Enforce the existing laws and regulations Public awareness of methods of sorting and managing wastes in the problem areas / Empowering garbage collection and sorting staff		
Poor storm water management	Conference tourist zone, Kabati, Villa View, Kihoto Lake view, CBD Viwandani Ndabibi/Kamuhuti	To develop an efficient storm drainage system free from industrial waste water	To reduce flooding Promote water harvesting techniques	Expand the existing storm water channels Integrate artificial and natural drainage channels/ the storm and sewer system Construct storm water detention facilities such as piping systems or retention ponds and tanks. Encourage proper waste handling by the residents. Make rain water harvesting plan a mandatory requirement for development approval.	County Government Naivasha residents	Short term
Inadequate sewerage system	Kayole Mirera Kongoni Karagita Mwiciringiri	To provide for the development an efficient sewerage system (expansion)	Assess sewerage needs Expand the existing sewerage facilities	Increased sewerage coverage in Naivasha Town and the surrounding Encourage use of septic tanks over pit latrines	County Government Donor Agencies	Short term

7.4 DISASTER MANAGEMENT PLAN

Naivasha area is prone to natural disasters such as flooding; rock falling, fires and dust storms as briefly explained below.

Flooding is caused by excessive storm water. Areas prone to flooding in Naivasha include:

- CBD
- Areas around Lake Naivasha
- Kihoto
- Kabati

Rock fall or landslides are caused by unstable geological formation. Kayole area is prone to landslides. Other areas prone to landslide are the sand mining areas which results from unsustainable mining.

Fire hazards result within the special density areas and occasional forest fires. Special measures are proposed to mitigate the challenges. Areas affected include Kihoto and Karagita

In response to these hazards, a Disaster Management Strategy/Plan has been prepared. The purpose of the plan is to:

— identify disaster prone areas;
— protect inhabitants from disasters,
— explore available options for early warning systems that institutionalizing monitoring systems and enhancing strong coordination and collaboration mechanisms.

The table below presents a summary of proposed the strategies, action plans, actors and anticipated project period.

Table 33: Disaster management plan

Problems	Location	Objectives	Strategies	Action plans/areas	Actors	Period
Flooding/storm water	CBD Areas around Lake Naivasha Kihoto Kabati Kasarani Central Ndabibi Maraigushu Karagita	To eliminate frequent incidences of flooding To reduce loss of lives and property Reduce surface runoff	Development and Implementation of a storm water drainage system and plan Enhance disaster preparedness among the residents Control development in the disaster prone areas Promote water harvesting Public awareness	Periodic assessment of the drainage according to land use trends Extend the drainage channel to areas of inadequacy Expand the existing drainage channels within the planning area Integration of manmade and natural drainage systems Pegging of rivers. Planting trees and grass to reduce surface runoff Undertake resettlement programs for population settling on the disaster prone areas Comprehensive Public awareness and training campaigns Establish and empower flood response teams in Naivasha Require water harvesting and flood management mechanism in building approvals. Encourage the construction of storage dams to store the storm water Create kitty for disaster management.	County Government National Government Residents	Short term
Rock falls / landslides	Kayole Kinamba Mithuri Maeila areas	To eliminate loss of lives and property To reduce cases of rock fall and land slides	Enhance disaster preparedness Control development Identify and assess the unstable areas Increase vegetation in the unstable area	Establish and empower disaster management team Restrict settlements and development in the identified areas like Kayole Planting trees on the affected areas to increase stability	County Government National Government Residents	Short term

Fire hazards (Special density areas and forests)	Kihoto Karagita Kasarani Kinungi	To reduce cases of fire disaster To eliminate the incidences of lives and properties loss.	Enhance disaster preparedness Upgrade informal settlements and slums Control development Enhance public awareness	Increase the fire management personnel within Naivasha sub county. Addition of two fire engines to boost the response strategy. Expand the road widths within the special density areas to improve accessibility. Upgrading of informal and slum settlements. Enforcement of the building codes. Ensuring acquisition of the Occupation and Safety certificate to any development within the planning area. Ensure fire assembly points within the high density areas are visible to every individual. Conduct seminar trainings and workshops to the citizens and fire. Management personnel are on the best fire management strategies. Create kitty for disaster management	County Government National government CBOs NGOs Residents	Short term

7.6 CONCLUSION

The sector plans provides for all sectors in Naivasha Town which include infrastructure &services, cultural heritage, environmental and disaster preparedness. It seeks to ensure adequate provision of such facilities to current and future generation. The proposals also purpose to mitigate the identified challenges and harness the opportunities.

CHAPTER EIGHT
PLANNING POLICIES

Planning policies address concerns affecting development applications. Such applications are likely to impact the attainment of the overall objectives of the plan. The policies guide the planning, approval and development of facilities. They ensure sustainable implementation of the ISUDP. The provisions are discussed below.

8.1 PARKING POLICY

The purpose of this policy is to regulate parking requirement, provision and standards. The issues it seeks to address include:

- Inadequate parking supply within the CBD.
- Uncontrolled parking on road sides. Vehicles are parked along the road obstructing entrances to commercial premises and traffic flow the same road. With inadequate parking, majority of developments rely on road reserves as the only places available.
- Road side parking by transit trucks.

The objective of the policy is to provide guidelines that will increase the provision of parking facilities by developers. It seeks to ensure that:

- The need for parking spaces is met
- Access needs of new developments are properly provided
- A balance is struck between the needs of different road users
- The impact of new development on congestion is minimal

Types of parking facilities

The types of parking facilities available for developments are outlined below:

Basement Parking is private parking provided on the lower floors of high rise buildings. It is common in commercial and residential premises. The facilities are provided in plots exceeding 0.1 hectares and a width span of 30m. They are exclusively private and regulated by the land owner.

Roadside parking is provided along public road reserves and regulated by the local authorities. It comprises angle or flash parking. A standard parking bay measures $15m^2$ – $35m^2$per vehicle.

Silo Parking comprises of a high rise building exclusively dedicated to parking. They are private developments that are regulated by the land owner. In cases where there are offices, these may occupy up to 10% of the building usually the upper floors.

Open Parking Yards are private facilities comprising of open spaces used for parking. The facilities are regulated by the land owner.

Proposals

The provision of parking facilities is determined by the level of activities generated. For every 100m^2 of land in the CBD, a minimum of 1.5 parking spaces should be provided except where basement parking is provided. For small centres, a car park may be provided for every 500m^2. The minimum plot size should be 0.045 hectares. This will cater for the architectural design, street landscape, natural lighting and limited parking. A standard of 15m^2-35 m^2 parking spaces per car is recommended. More regulations are outline in the table below.

Table 34: Parking regulation

Type of Development	No. Of Parking
Commercial plots > 0.1ha /Office space	1 Parking bay per 1000 sq. ft.
Commercial plots < 0.1ha	1.5 parking space for 100m^2
3-4 b/rm flats	1 Parking bay for each flat
2 b/rm flats	1 parking bay for each 2 units
1 b/rm flats	1 Parking bay for each 4 units
Town houses	1 Parking bays for each unit
3-4 b/rm bungalow/maisonette	1 parking bay per unit
2 b/rm bungalow/maisonette	1 parking bay for 2 units
1 b/rm bungalow	1 Parking bay for 4 units
Hotels/ guest houses	1 Parking bay for 5-8 bed
Hospital	1 Parking bay for 5-10 beds
Industrial	1 Parking for every 10 workers

8.2 OUTDOOR ADVERTISEMENT POLICY

Outdoor advertising publicizes a business, product or services. Types of outdoor advertising include billboards, bus stop benches, interiors and exteriors of buses, taxis and business vehicles, hoarding and signage posted on the exterior of private brick-and-mortar locations. The policy provides guidelines on how to assess outdoor adverting applications. It directs the use of urban outdoor space whilst incorporating socio-economic aspirations, visual aesthetics and environmental conservation. Key policy values include:

- Improving and protecting public safety, environmental and physical health;
- Enhancing environmental attributes and qualitative neighbourhood character;
- Increasing choice diversity of products and services in the economy to the public;
- Dissemination to the public of approval procedures; and
- Introduction of an efficient and reliable revenue collection method for the county.

The types of advertisements that require regulation includes,

1. Billboards;
2. Wall wraps;
3. Sky signs;
4. City clocks;
5. Display flags;
6. Suburb signs;
7. Sign boards;
8. Banners and Posters;
9. Hand bills/Fliers;
10. Airborne advert;
11. Branded umbrella / parasols;
12. Landscape Scheme;
13. Street displays;
14. Multi motion neon signs;
15. Film/ Video shooting;
16. Guard Rail Advertisement;
17. LED screen advertisement;
18. Construction site boards;
19. Wall/ Window branding;
20. Advertisements on canvas/ canopy
21. Festive-decorations(on walls, windows, and canopies; and
22. Directional signs (inside plot/ free standing) Multi directional signs (per slot);
23. Signs above /sitting on canopy (Illuminated /Non Illuminated);
24. Sky signs/ Wall wrap 20 Ft above the ground and over properties;
25. Advertisement by loudspeaker (P. A system) per day;
26. Funfair / fete/ Acrobatics;
27. Wall painting adverts on temporary premises (Kiosks, litter bins;
28. Hoarding
29. Advertisement on hoarding;
30. Change of use boards;
31. Decorations/branding of motor vehicles;
32. Tri face sky signs;
33. Street light pole advertising;
34. Business encroachment within street pavement/shop corridors (Canopies)

Table 35: Type of advertisement and requirement

Advertisement type	Location and site requirements
Clock advertisement	• To be located at roundabouts, road junctions, bus stops, outside supermarkets, parking etc. • Maximum size: Outer cube (1140 x 1540) mm and inner cube (960 x 1350). • To pay application and license fees as determined by the County Government
Street name advertisement	• Location: junction, • Size not to exceed 1sq.m (1000mm x 1000mm). • Product advertisement model not allowed. • To pay application and license fees as determined by the County Government
Advertisement on billboards	• Not allowed on road reserves. • Maintain 150m between billboards. • Colours of billboards to conform to those of adjacent areas. • No billboards to be allowed in the main commercial area • Billboards to be 5m high (from the ground). • Standard billboards to have a size of 12M x 10 M • Big billboards (20 x 10 m and 10 x 30 m) to be put up in the outskirts • Billboards not to hang on road reserves • Billboard applications be accompanied by structural drawings • To pay application and license fees as will be determined by the County Government • Billboard application to be prepared by a registered Physical planner. Planning brief and PPA 1 to accompany application
Advertisement on bus shelter	• Minimum size: 5595mm x 1200mm • Two bus shelters are allowed per stage. • Colours of a new bus shelter to conform to those of the existing one. • To pay application and license fees as will be determined by the County Government
Sale sticker, decorations on wall, windows, canopies etc.	• On stickers per windows only A4 size is allowed. • Colours to conform to those of the building. • Not be less than 8 feet from the ground level. • To pay application and license fees as will be determined by the County Government
Signboards	• Different sizes as long as the length does not exceed beyond that of the building. • Not exceed 5ft x 2ft. Different sizes not allowed for the same building • Shall be at least 8ft from the ground level. • To pay application and license fees as will be determined by the County Government
Directional signs	• To be located on road reserves of non-classified roads (600mm x 1200mm) • Multi-directional signs allowed on road junctions; 150mm x 1500mm each plate to be paid individually.

	• Directional signs on road junctions leading to classified roads should be off classified road reserves. • Directional signs side road junctions to be placed inside the plot as free standing.
Sitting on canopy (illuminated and non-illuminated signs)	• Different length sizes allowed as determined by the size of the canopy. • At least 12ft from the ground level. • To pay application and license fees as will be determined by the County Government
Sky sign (above canopy and over anything above 12ft properties)	• To be 12ft above the ground. • Structural integrity report of buildings to be mounted with the structures to be submitted by registered engineers. • Structural drawings for the proposed advert be submitted to the County Government • Planning brief and PPA 1 to accompany application • To pay application and license fees as will be determined by the County Government
Banners	• Banners on road reserves to be 9000mm x 750mm in size. • To advertise events. • To pay application and license fees as will be determined by the County Government
Posters	• Maximum size A3 • Designated locations such as bus stop parking, supermarkets, schools, churches etc. • All public buildings, commercial buildings and apartments blocks to provide space for posters board. Preferably, poster board erected on ground shall not exceed 3000mm height by 1500mm in width • To pay application and license fees as will be determined by the County Government
Handbills	• Maximum size A5 • Not to be spilled on ground • To pay application and license fees as will be determined by the County Government
Construction site boards	• To observe the size of multiple directional signs • To pay application and license fees as will be determined by the County Government
Bridge advertisements	• The face of the bridge should not be completely covered by the advert. Gaps of 400mm should be left in between. • Bridge construction for advertisement purpose to be done in consultation with public works classified roads and The County Engineer. • To pay application and license fees as will be determined by the County Government
Airborne adverts i.e. airplanes, balloons etc.	• Application to be made to the County Government • To pay application and license fees as will be determined by the County Government
Display flags	• Allowed for public buildings, hotels, international corporate etc. • Should not be below 15ft. • Only cloth material of $1M^2$ is allowed. • To pay application and license fees as will be determined by the County Government

Branded umbrella	• Permanent umbrellas not allowed on the streets • To pay application and license fees as will be determined by the County Government
Outdoor functions Open public areas/grounds Fun-fair/fete/acrobats Open air (preaching/processions/movie shooting) per day.	• Not to obstruct pedestrians and vehicles movement • Not to exceed sound pollution levels • To pay application and license fees as will be determined by the County Government l
Landscape scheme	• Pedestrian's walk way of 1200mm to be observed • The size of the drainage to be determined by one road. • Road side trees to observe a spacing of not more than 15 meters. • To pay application and license fees as will be determined by the County Government
Bus stop advertisements	• One advert per bus stop. • Maximum size 1sq.m (1000mm x 1000mm) • To pay application and license fees as will be determined by the County Government
Change of user board per fortnight	• Not to exceed 1200mm x 600mm. • To be placed on or against the fence of the plot • To pay application and license fees as will be determined by the County Government
Lamp post advertisements	• To be allowed on every fourth post maximum size $1M^2$ (1000mm x 1000mm) • To pay application and license fees as will be determined by the County Government
Wall painting adverts on permanent premises	• Allowed in commercial and industrial zones only. • Any painting above $10M^2$ to pay 500 for every additional sq.m • To pay application and license fees as will be determined by the County Government
Advertisement on canvas	• Colours to conform to those of the surrounding areas canvas. • Lengths should not exceed the building heights. • To pay application and license fees as will be determined by the County Government
Advertisement on hoarding	• Hoarding to be undertaken along the perimeter fence of construction sites. • Advertising agencies to submit copies of approved building plans for construction on site. • Hoarding material not to exceed the height of hoarding mabati. • Colours to conform to those of the surrounding areas • To pay application and license fees as will be determined by the County Government
Suburb and public facility signs	• Only one sign per facility is allowed. • Structure sign not to exceed 2700mm x 1200mm. • Advert size not to exceed 1600mm x 1200mm • To pay application and license fees as will be determined by the County

	Government
Penalties	• To be determined by the County Government, Charges for collection of illegal signboards and other displays per item • Penalty for non-payment of advertisement fees

Outdoor hoarding and content criteria

The policy will rely upon self-regulatory controls within the advertising industry to enforce minimum advertising standards. Notwithstanding this approach, the county may take action to modify or remove any advertising device that breach the advertising industry's code of ethics, (refer List of Negative Advertisements) or that otherwise causes a traffic hazard.

Table 36: Negative advertisements

1.	Nudity
2.	Racial advertisements or advertisements propagating status, community or ethnic differences
3.	Advertisements propagating exploitation of women or child
4.	Advertisement having sexual overtone
5.	Advertisement depicting cruelty to animals
6.	Advertisement depicting any nation or institution in poor light
7.	Advertisement casting criticism of any brand or person
8.	Advertisement glorifying violence
9.	Destructive devices and explosives depicting items
10.	Advertisement of Weapons and related items such as firearms, firearm parts

The process for outdoor advertising application requires the following:

- A planning brief giving a broad framework of the proposal in line with the approved control guidelines
- A photographic simulation of the proposal illustrating the anticipated visual impact and appearance in terms of surrounding character and function;
- A site plan showing every building on the site and the position with dimensions of the sign or advertising in relation to the boundaries of the site, the location of the streets and buildings on properties abutting the site;
- Consent or legal agreement between the structure owner and registered land owner;

8.3 CHANGE OF USE POLICY

Processing of change of use applications enables the county and other relevant agencies to remain abreast with the changing land use and needs. As a result the agencies could initiate reviews of the existing zoning regulations where necessary.

Problem statement

Currently, there are no zoning regulations in force. Land in Naivasha is agricultural but developments have continued to take place without an elaborate change of use framework. Investors are developing without applications of approvals from the authorities. This has led to unplanned environments with minimal regard to spatial and environmental considerations.

The policy seeks to provide a framework to regulate changes in land use. The policy's specific objectives are:

- To identify the various types of permitted land use;
- To avoid uncontrolled change of use;
- To obtain consensus in change of land use;
- Maintain harmony in the constantly changing urban character;
- To ensure the new users remain compatible with the zoning regulations; and
- To set requirements for development applications.

Planning Requirements

The following requirements are essential in order to acquire approval for a change of user:

a) A Planning brief;
b) Land ownership documents i.e. land allotment letter, tenancy at will agreement, land certificates, title deed;
c) Duly filled and signed PPA 1 forms;
d) Rates payment receipts;
e) Newspaper advert; and a
f) Public Notice/ Site Notice.

Types of Land uses

The transformation of the use of land or premises from one to any of the following land use constitutes change of use. Often the permitted use is defined in the lease in case of leasehold land. Unless stated otherwise, freehold land is usually agricultural. Change of use involves the change in the density of use of land or a deviation from the use permitted in a lease. Permitted uses in Naivasha are discussed below.

Residential

Residential purposes are divided into two categories as discussed below.

Single dwelling use entails construction of one dwelling house including a guest wing that may include a maisonette, bungalow, or Town house.

Multiple Dwelling Units is the use of land/property for several dwelling units. The use should be specified to any one of the following:

- **Flats** - residential premises with multiple dwelling units with or exceeding 2 floors.
- **Maisonettes**- single dwelling units with two levels; attached, detached or semi-detached. It has internal stairs and a single on street entrance.
- **Bungalows** - attached, detached or semi attached dwelling units with ground level only.
- **Town houses** - this applies to single dwelling units with up to three levels.

Commercial

Commercial purposes allow a variety of business activities. It permits the unrestricted use of land/premises for one or many types of business activities. This is appropriate for designated commercial areas.

Offices

The category allows the use of land/ premise for offices. This is ideal for tertiary services as opposed to trading of commodities prevalent in commercial areas.

Professional offices

Under this category, the policy applies to use of land/premises for rendering consultancy services. Professional offices attract low volumes of clientele and traffic and can quite easily operate within residential neighbourhoods without raising land use conflicts. Professional certificates should accompany applications as evidence of the specialization.

Commercial-cum-Residential

It is referred to as Business-cum-Residential (BCR) as it allows mixture of compatible commercial and residential activities. The two activities may each take between 20 to 80% of the utilization.

Shops and Residential

Under this application, a minimal mixture of business and shops is allowed. The principal use, mainly residential may take of up to 80%. The shops provide basic household items. The shops should be located at the plots fronting the main roads only. Bars, clubs, hardware shops, distributor outlets are not permitted given the strong residential character and the narrow roads.

Industrial use

Industrial use permits the use of land or premises for all types of industrial activities. The change of use to industrial use should be allowed in designated industrial areas only. Light industry category permits use of land or premises for light industrial activities. The major activities permitted are inoffensive and may therefore interrelate quite well within or adjacent to residential and other populated locations.

Educational

Under this category, the use of land or premises is limited to one or more of various educational purposes. This includes a nursery, day care centres, tuition centres, primary schools, secondary school or tertiary institutions. The type of institutions to be developed should be clearly stated.

Mixed Developments

Mixed developments permit a combination of various compatible uses resulting from comprehensive developments. They may include various types of uses such as residential, educational, shopping centre etc. Each subplot or unit within the scheme has no mixed use but a distinct use.

Institutional use

Institutional use permits development of institutions. This allows a comprehensive nature of developments that may include offering combination of services such as religious, educational, health, recreational, staff housing, guest houses etc.

8.4 EXTENSION OF USE POLICY

Extension of use implies a combination of two or more land uses on a single unit of land.

Problem

There is increasing utilization of land for two or more uses without approval from the planning Department. This has led to a combination of incompatible uses resulting to land use conflicts that may lead to loss of economic value, social benefits and aesthetic

significance. There is thus the need for the County to evaluate the existing land use to enhance land use compatibility and to provide harmony in the constantly changing urban character while ensuring that the proposed use is compatible with the zoning regulations for the area where the plot is located.

Policy Objectives

The major objectives of this policy include:

- To provide a framework for approval of combination of developments;
- To ensure that only compatible uses are combined;
- To safeguard neighbourhood character;
- Adhere to zoning regulations; and
- To maintain harmony in changing urban character.

Planning Requirements

- Principal use should take up to 80% of the utilization
- Supplementary use should take up to 20% of utilization
- Supplementary use may be short term
- Building alterations to accommodate the supplementary use, if any, may not to exceed 10%
- Only maximum two uses are allowed

8.5 SUBDIVISION POLICY

There is rapid, uncontrolled sub division of land in the town. In addition, there are no set minimum plot sizes for existing zones. Therefore, the policy seeks to achieve the following objectives:

- To establish a consistent and coordinated approach to the creation of plots throughout the State
- To adopt criteria for plots sizes in order to ensure that each plot is provided with a suitable level of amenity, services and access.
- To facilitate the supply of plots of a wide range of sizes and shapes which reflect the statutory provisions of local planning schemes, the availability of reticulated sewerage and the need for frontage to public roads.
- To maintain minimum productivity for agricultural land to ensure sustainability

General Principles

All subdivisions should adhere to minimum plot sizes as set in the detailed land use regulations section of this planning report.

Where change of use has been done to alter prior land uses, the roads should be altered to meet the minimum conditions of the current land use as set in the road widening policy.

All new plots shall, in addition to compliance with the general requirements for subdivision of land, be:

- Capable of development in accordance with the density assigned to it by local planning schemes, together with any local variations that may apply.

- Located within an area which is suitable for subdivision in terms of its physical characteristics, such as topography, soils, drainage, vegetation and natural features, and accord with an overall plan for the area which reflects these characteristics
- Served by a suitable level of community services, schools, retail facilities, etc, as determined under other policies adopted.
- Located within a system of vehicle and pedestrian movement consistent with the principles of the road expansion policy in terms of the hierarchy of roads, matters of road safety and lot access and the provision of cycle ways and pedestrian walkway
- Where the county government is prepared to approve new residential lots without sewerage, it will need to be satisfied that a minimum unencumbered area of 150m of suitable shape is available for each dwelling for the installation of a suitable on-site effluent disposal system
- Conditions may be imposed upon the approval to ensure compliance with the criteria whenever practical and appropriate

Context and site analysis

a) Subdivision applications should be submitted with such detail as is necessary to enable the County Government make a determination on the application**.**
b) For larger scale subdivisions, for example, major urban expansion areas or new industrial subdivisions, a more detailed context and site analysis may be necessary
c) The County Government will require sufficiently detailed assessment of the site and its immediate surrounds, in accordance with the relevant policies, demonstrating:
    - A sustainable and environmentally site responsive design;
    - The creation of a positive sense of place and identity based upon natural and cultural assets;
    - Compatible integration of interfaces between the development site and neighbouring land use and development

Lawful Development

a) Lots which cannot be developed in accordance with relevant statutory requirements will not be approved.
b) The County Government will also ensure that, by creating a new lot, it does not render an existing lot or development upon that lot illegal in terms of statutory requirements. Such matters may include lot sizes, car parking, setbacks or the provision of services.

Public Utility Services

a) The County Government will ensure that each new lot is provided with a standard of public utility services, or that provided by a licensed private service provider, appropriate for its intended use.
b) The level of such services will be determined by the WAPC in the light of the intended use, the size of the lot, soil conditions, the provisions town planning scheme and the any other published plan/policy that may be relevant
c) In instances where subdivision is proposed for land across which there is an existing public utility easement or facility (such as high voltage electricity transmission and distribution lines, natural gas pipelines, gas distribution system sand the major water and sewerage mains), the subdivider should negotiate with the service agency concerned

before lodging an application with the County Government and, if possible, reach agreement on both:

- The surrender of the existing easements;
- The way in which the particular facility will be protected and/or relocated upon subdivision.

A letter from the agency confirming the arrangements should be supplied with the subdivision application. Where this is not supplied by the applicant, the County Government will normally impose a condition requiring certification from the servicing agency concerned that both the surrender of existing easements and protection of the facility will be undertaken to the satisfaction of the agency. This condition will normally be imposed unless the County Government is satisfied that the requirement of the servicing agency is unreasonable.

Access

a) Where new roads are needed, the applicant will be required to dedicate these roads to the specifications and satisfaction of the County Government on the advice of the local government.
b) The County Government may also require existing roads or rights-of way to be widened, upgraded or dedicated to ensure proper access.

8.6 URBAN AGRICULTURE POLICY

Naivasha is a rich agricultural zone but due to urbanization agricultural land has been converted to commercial and residential uses. Rapid subdivision has also reduced its productivity. If this trend is not constrained, urbanization is likely to harm urban agriculture in the region.

The Urban Agriculture Policy seeks to provide a regulatory framework to guide sustainable agriculture. It aims to ensure food security and maintain viable sizes of farm land. Specific objectives include;

1. To provide appropriately located and sized land for urban agriculture use;
2. To provide local opportunities for agriculture-based entrepreneurship and employment;
3. To propose strategies, practices and appropriate technologies that promotes sustainable agriculture;
4. To identify, enhance and strengthen linkages among the various actors dealing with agriculture development in the region;
5. To protect nearby residential areas and the lake from any adverse impacts of agricultural use;
6. To ensure that land best suited for non-agricultural use remains available for such use;
7. To ensure safe and sanitary conditions for urban agriculture uses; and
8. To facilitate local food production and improve community health.

In the areas where land is used for residential use, roof gardens, green wall and back yards, among others should be encouraged to practice agriculture.

Strategies
These strategies are made to guide, promote and support the local food system through:

1. Appropriate location and land sizes for urban agriculture use;
- This can be achieved through zoning of agricultural land.
- Change of use and subdivision of agricultural land to be applied at planning department and circulated to local agricultural officer for evaluation
- Setting up minimum plot sizes to regulated subdivisions.

2. Protection of nearby residential areas, rivers and the lake from adverse impacts by agricultural use;
- The County Government will require EIA/Audits and EMPs where appropriate. Annual Environmental Audits to be carried out in large scale farm;
- Treatment of waste water before discharging to the river; and
- Proper disposal for unused agro-chemicals and toxic substances

3. Create economic opportunity for growers, processors, and distributers of food; plan for efficient road networks, markets and distribution outlets for farm produce. An efficient and properly organized marketing system is necessary for ensuring viable and sustainable agriculture. This can be ensured through:
- Provision of planned market centres;
- Provision of refrigerating equipment, cold rooms and storage facilities in Market centres;
- Strengthening existing and promoting formation of new commodity based producer organizations. E.g. Dairy farmers associations, Flowers planters union etc. as such enhance collective bargaining;
- Establish and strengthen market information exchange systems;
- Promote product differentiation to meet market needs;
- Enhancing access to agricultural areas and market places;
- Establishment of value addition industries in the area; and
- Enforce regulations to harmonize informal marketing and slaughter of small stock.

4. Promote innovative design for food growing. This includes use of intensive technologies such as green houses, drip irrigation and hydroponic farming. Also mixed farming practices should be encouraged in the area e.g. waste water from a fish pond can be used for irrigation.
5. Promote product safety by strengthening disease surveillance, control and regulation of livestock movement within and without the region. These can be achieved through:

8.7 EDUCATION POLICY
These policy proposals will form the basis for development control within the education sector in terms of location and space requirements as outlined in table 41. The types of education facilities covered;

- Day care centres
- Nursery schools
- Primary schools
- Secondary schools
- Commercial colleges
- Tuition centres
- Orphanage

Challenges in education

1. Not all schools have adequate land to provide facilities such as playgrounds for co-curricular activities and other social activities of the school.
2. Some schools are located in areas where there are obvious land use conflicts with neighbouring developments. This situation is more common with private schools, especially those located within residential neighbourhoods.
3. Some schools are not registered by the ministry hence quality control on the education offered is not guaranteed.
4. Some parents do not take their children to school due to lack of schools fees.

Table 37: Requirements for educational institutions

Type of institution	Land requirement	Plot coverage (%)	Population catchment	Location requirements	Other requirements
Day care centres	0.045ha	35	1500	Within residential areas	Not fronting a major road Not within a commercial area Not within industrial areas
Nursery schools	Single stream-0.1ha Double stream-0.15ha Triple stream-0.25ha	10	2500	Within residential areas	Not fronting a major road Not within a commercial area
Primary schools	Combined with nursery minimum of 3.25ha Single stream-1.2ha Double stream-2.0ha Triple stream-3.0ha	10	3500	Within residential areas	Have an access road of a minimum of 12m
Secondary schools	Single stream-3.5ha Double stream-4.0ha Triple stream-4.8ha	15	8000	-	Access road should be a minimum of 15m
Commercial colleges	0.045ha	75	-	Within commercial areas	Not located in residential areas
Tuition centres	0.045ha	65	-	Acceptable within residential areas	Access road to be a minimum of 15m
Orphanage	Minimum of 0.2ha	35	-	-	-

8.8 REGULARIZATION POLICY

Land regularization is generally understood as the process of public intervention in illegally occupied zones to provide urban infrastructure improvements and to recognize ownership titles or other occupancy rights.

The process of Land Regularization

1. The County Executive Committee member in charge of land matters shall serve notice to the owner of the unauthorized development
2. On receiving the notice, the owner shall comply and furnish the relevant particulars and documents as specified on the notice
3. Any owner may, on his/her own motion, make an application to the County Executive Committee member for regularization of unauthorized development. The regularization application shall be done through a Registered Physical Planner.
4. On receipt of relevant particulars and documents from the owner, the County Executive Committee member shall, after necessary inquiries and is satisfied that the development can be regularized, issue order requiring the owner to pay land regularization fees.

Payment Period of Regularization Fees

Within two months from the date of receipt of a provisional order of regularization, the person concerned will be required to pay the fee prescribed by the county government

Unauthorized Developments that cannot be regularized

- Unauthorized development on existing or proposed roads, including those proposed for widening, railway lines, communications and other civic facilities or public utilities;
- Unauthorized development on public land or land otherwise reserved for public utility;
- Unauthorized development on forest land and riparian reserves;
- Unauthorized development done by any person on land belonging to another person over which the former person has no title or where the title is disputed as evidenced by court proceedings;
- Unauthorized development on land belonging to the government and not allotted;
- Unauthorized development which is structurally unsound or which poses danger to the occupants of neighbouring premises or members of the public in general

8.9 LANDSCAPING AND GREENING POLICY

Landscaping refers to any activity that modifies visible features of an area such as flora and fauna. Greening refers to the art of growing plants with a goal of creating a beautiful environment. Landscaping and Greening requires planning permission from the County Government.

There deterioration of the environment and loss of greenery in Naivasha is notable. With increasing urban developments, rampant encroachment on road reserves and riparian way leaves by visually agricultural and building constructions is evident. The open spaces are un-maintained, destruction of trees to pave for development without replacement, un-repaired and un-maintained pavements, and poorly maintained property frontages. As such, the landscaping and greening policy seeks to achieve the following;

- Avoid loss of greenery;
- Improve aesthetic value of Naivasha character and image;
- Improve streetscape and landscaping;
- Conserve and enhance natural and cultural heritage; and
- Promote sustainable use of natural resource.

The sites covered by this policy include road reserves and frontages, riparian areas, mangroves, reservoirs, parks, open yards within plots, conservation areas and property boundary fences. The planning requirements include;

- Applications for landscaping and greening should be submitted to the County Government for consideration;
- A technical drawing will form part of the applications;
- All approvals not implemented for up to one year will lapse and will be subject to renewal after every three years.
- As an incentive, applicants will be granted sole advertising rights on the sites;
- Planting of appropriate indigenous and exotic vegetation on the sites; and
- Cutting of trees will require County Government permission.

Land owners are required to plant trees within their plots as follows;

Residential Plots	**No. of trees**	**% of Land**
0.030 Ha	2	-
0.045 Ha	4	-
0.1 Ha	6	-
Industrial Plots	**No. of Trees**	**% of Land**
0.045 Ha	4	-
0.1 Ha	6	-
Institutions	-	15
Hotels	-	10

8.10 ENVIRONMENTAL MANAGEMENT POLICY

Environment includes the physical factors surrounding human beings such as land, water, atmosphere, sound, odour, taste, the biological factors of animals and plants and the social factors of aesthetics, and includes both the natural and the built environment.

This Environment Policy aims to provide a holistic framework to guide the management of the environment and natural resources in Naivasha. Naivasha hosts significant environmental and natural resources that ought to be protected and effectively exploited for optimal benefit.

Policy goal, objectives and principles

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

The objectives of this Policy are to:

- Provide a framework for an integrated approach to planning and sustainable management of Naivasha's environment and its natural resources.
- Strengthen the legal and institutional framework for effective coordination and management of the environment and natural resources.

- Ensure sustainable management of the environment and natural resources, such as unique terrestrial and aquatic ecosystems, for economic growth and improved people's livelihood and well-being.
- Promote and support the use of innovative environmental management tools – such as incentives, disincentives, total economic valuation, and indicators of sustainable development, SEA, EIA, Environmental Audit, and payment of environmental services – in environmental management.
- Promote and enhance cooperation, collaboration, synergy, partnerships and participation in the protection, conservation and better management of the environment by all the stakeholders
- Ensure inclusion of cross-cutting issues –such as poverty reduction, gender, disability and HIV&AIDS –in the management of environment and natural resources.

Implementation of this Policy will be guided by the following principles:

(a)Environmental Right: Every person has a right to a clean and healthy environment and a duty to safeguard and enhance the environment.

(b) Right to Development: The right to development will be exercised taking into consideration sustainability, resource efficiency and economic social and environmental needs.

(c) Ecosystem Approach: An integrated ecosystem approach to conserving environmental resources will be adopted and enhanced to ensure that all ecosystems are managed in an integrated manner while also providing a range of benefits to people.

(d) Total Economic Value: The benefits that ecosystems generate will be integrated into the county accounting system, programmes and projects.

(e) Sustainable Use: Environmental resources will be utilized in a manner that does not compromise the quality and value of the resource, or decrease the carrying capacity of supporting ecosystems.

(f) Equity: The management of the environment and natural resources will ensure equitable access to resources for present and future generations.

(g) Public Participation: A coordinated and participatory approach to environmental protection and management will be enhanced to ensure that the relevant government agencies, private sector, civil society and communities are involved in planning, implementation and decision making processes.

(h) Subsidiarity: The management of the environment and natural resources will be through decentralization and devolution of authority and responsibilities to the lowest level possible.

(i) Precautionary Principle: Where there are credible threats of serious or irreversible damage to key environmental resources, lack of full scientific certainty will not be used as a reason for postponing cost-effective measures to prevent environmental degradation

(j) Polluter Pays Principle: The polluter and users of environmental and natural resources shall bear the full environmental and social costs of their activities.

(k) Good Governance: Rule of law, effective institutions, transparency and accountability, respect for human rights and the meaningful participation of citizens will be integrated in environmental management.

Specific principles include:

Forest Ecosystems and climate change management

1. Formulate an innovative strategy to increase forest and tree cover from the current to at least 10% as required under the Constitution.
2. Develop and implement strategies for rehabilitation and restoration of degraded forest ecosystems.
3. Protect and conserve forests located in key water catchment areas.
4. Support effective implementation of the Forests Act, 2005.
5. Develop and implement cost-effective, objective and measurable standards, principles and criteria of sustainable forest management.
6. Develop an integrated, improved early warning and response systems for climate and disaster risks with a clear strategy for dissemination of information to the grassroots.
7. Build and strengthen research capacity on climate change and related environmental issues.

Freshwater and wetland ecosystems

1. Develop and implement integrated wetland and water resources management strategies and action plans.
2. Promote and institutionalize payment for environmental services schemes to support catchment protection and conservation.
3. Promote sustainable use of freshwater and wetland resources and the conservation of vulnerable river and lake ecosystems through development and implementation of river basin management plans.
4. Develop and implement catchment-based wetland management plans for all Ramsar sites and riparian areas through a participatory process.
5. Ensure restoration of degraded wetlands, riverbanks and lakeshores and, where appropriate, promote and support establishment of constructed wetlands.

Wildlife Corridors

1. Protect, conserve and improve the habitats, corridors and dispersal areas of wildlife.
2. Review the existing Wildlife Policy and Wildlife (Conservation and Management) Act to comprehensively address contemporary wildlife conservation and management issues.
3. Provide incentives for investment in sustainable tourism and wildlife conservation initiatives.
4. Encourage and support the establishment of community based conservation areas in order to expand protected area network and win more space for wildlife.
5. Maintain and expand all gazetted protected areas and reclaim and restore the encroached parks and reserves for enhanced wildlife conservation.
6. Strengthen and support wildlife research and monitoring to generate adequate information for decision making

Waste management

1. Develop an integrated waste management strategy
2. Promote the use of economic instruments to manage waste.
3. Promote establishment of facilities and incentives for cleaner production, waste recovery, recycling and re-use

8.11 CONCLUSION

The policies described provide for the planning, approval and development of facilities, such as change and extension of use, education, advertisement, Urban Agriculture, Environmental conservation and management among others. They will be a guide to addressing various development application challenges, hence drive Naivasha towards the above-mentioned planning vision and help in the execution of proposed projects and programmes.

The planning policies, though covering a large scope, have been simplified so that the County Government may have freedom to make decisions in the best interest of their area. The County Government and community are crucial players in the planning system in order to achieve socially, environmentally and economically sustainable development.

CHAPTER NINE
DEVELOPMENT APPLICATIONS AND CONTROL

To carry out certain types of developments, an application may need to be made for a development permit. The development application provides information to the assessment personnel about the proposed development. It enables the assessment manager to properly assess the application. Depending on the type of development proposed, the application may require information about what the development will look like when complete, the materials to be used, and any impacts on the surrounding environment. The types of development that need a development application are listed below.

1. New buildings;
2. Alterations and additions to existing buildings;
3. Demolition of dwellings,
4. Change-of-use of existing building /premises & land use
5. Change of densities
6. Extension of use
7. Extension of lease
8. Subdivision & Amalgamation of land
9. Boundary adjustments
10. Outdoor Advertising and signage;
11. Earthworks, filling and clearing
12. Regularization of existing developments

9.1 KEY CONSIDERATIONS

Through careful analysis of design concerns, a better development proposal is expected. The factors to consider include:

9.1.1 County's requirements

Local physical development plans (LPDPs), Zoning plans, by-laws and related policy documents contains requirements in form of guidelines and/or objectives. These are geared to minimize adverse impacts and maximize positive benefits to the community.

9.1.2 The site and neighbouring properties

Under this consideration, the site characteristics (constraints and opportunities) and the impact of proposed development on the neighbourhood should be evaluated.

9.1.3 Consultants

They include design professionals such as architect (for building plans), physical planner (for change of use, subdivisions, extension of lease, and outdoor advertisement), and environmental expert (for environmental impact assessment and audit). In all these submissions no consent will be given where professionals are not involved.

9.1.4 Plans and Drawings

The type of plans required will vary depending on the type of development. If a proposal is not provided for in the matrix below inquiry should be made at the Planning Department.

Table 38: Development application requirements

ITEM (Submission by A - Architect P – Planner)	Change of Use (P)	Subdivision (P)	Extension of use (P)	Amalgamation (P)	Boundary/Roads adjustments (P)	Amendments of approved developments (P)	Development Regularization (P)	Outdoor Advertising (P)	Extension of lease (P)	Land use plan (P)	Duplicate copies	Building plans (A)
Ownership documents	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Planning report	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
English Newspaper	✓		✓	✓			✓			✓		
Swahili Newspaper	✓		✓	✓			✓			✓		
Site Notice	✓		✓	✓	✓		✓			✓		
Location &Site plan	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓
Contours data		✓			✓	✓				✓		
Colour coding		✓		✓	✓	✓				✓		
Linen copy		✓		✓								
Pictorial illustration	✓		✓				✓	✓				
Traffic management plan										✓		
Schemes/Plans		✓			✓	✓	✓			✓		✓
Elevations								✓				✓

9.2 APPLICATION PROCESS

This section presents the current and proposed application process. The proposals are guided by Physical Planning Act, The Planning Handbook and other authoritative materials. The application processes for different developments are discussed below while full processes are captured in the report.

9.2.1 Subdivision process

Currently, Naivasha has a sub-division process that lacks some components. The proposals attempt to address the inadequacies.

Current steps

i. Preparation of Development Application
ii. Submission of Application
iii. Circulation
iv. Obtain recommendations.
v. Payment of fees
vi. Technical committee
vii. Approval letter(PPA2)
viii. Consent from the local boards
ix. Survey

Proposed process

The following components are required;

- Ownership documents
- Survey plan
- Subdivision scheme
- Subdivision brief
- Linen copy of subdivision scheme
- PPA 1

Subdivision scheme/plans

This plan illustrates the proposed subdivision layout. Draw the plan to a standard scale such as 1:200 or 1:500, or a higher scale for large comprehensive schemes and show

- Existing boundaries and the dimensions;
- Proposed subplots and their dimensions (meters);
- Proposed subplot areas (hectares);
- Proposed roads and footpaths (indicate respective width);
- Relationship to existing roads and neighbouring parcels;
- Proposed easement and rights of way (way leaves for power lines, sewer mains, railway lines, water/fuel pipe lines etc.);
- Proposed public utility parcels;
- Topography/terrain by way of contours
- Location plan

The subdivision process is shown on figure 56 below.

submission

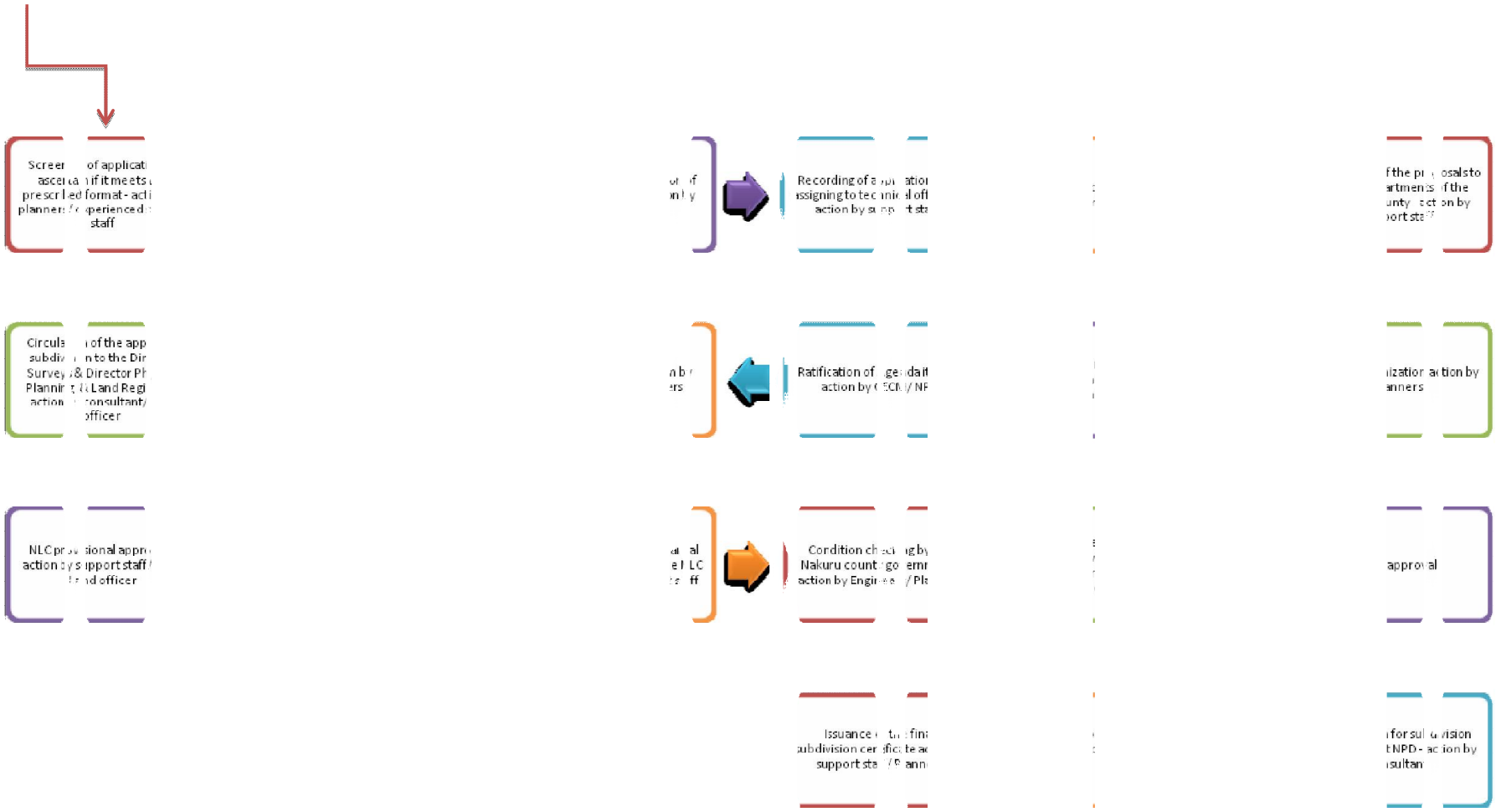


Figure 80: The subdivision process

9.2.2 Change of use/amalgamation process

Current process

- A planning brief is prepared by a registered physical planner
- The brief is submitted to the Sub-County as an application through PPA1 form
- The physical planner writes a letter to the regional surveyor, lands registrar and county clerk (all in Nakuru) for comments.
- The comments are taken in a technical committee in the Sub County/Town for approval consideration (Approval, approval with conditions or denial).
- A PPA2 is issued as approval for the change of use.
- The director of physical planning (Nakuru) issues a PPA5 for compliance
- Actual development/amalgamation is done on the ground

Proposed process

The process requires the following:

- Advertisement notice of intention to change use in two local dailies and at the development site. This is given a 14-day response/no objection period.
- After the 14-day lapse, submission of the planning brief outlining the following:
  - General location setting;
  - Infrastructure services and scope of future developments;
  - Traffic generation and management;
  - Research on development trends;
  - General environmental impact and implications (Note a separate and independent Environmental Impact Assessment (EIA) report might also be required)
  - Justification and efficacy of proposal

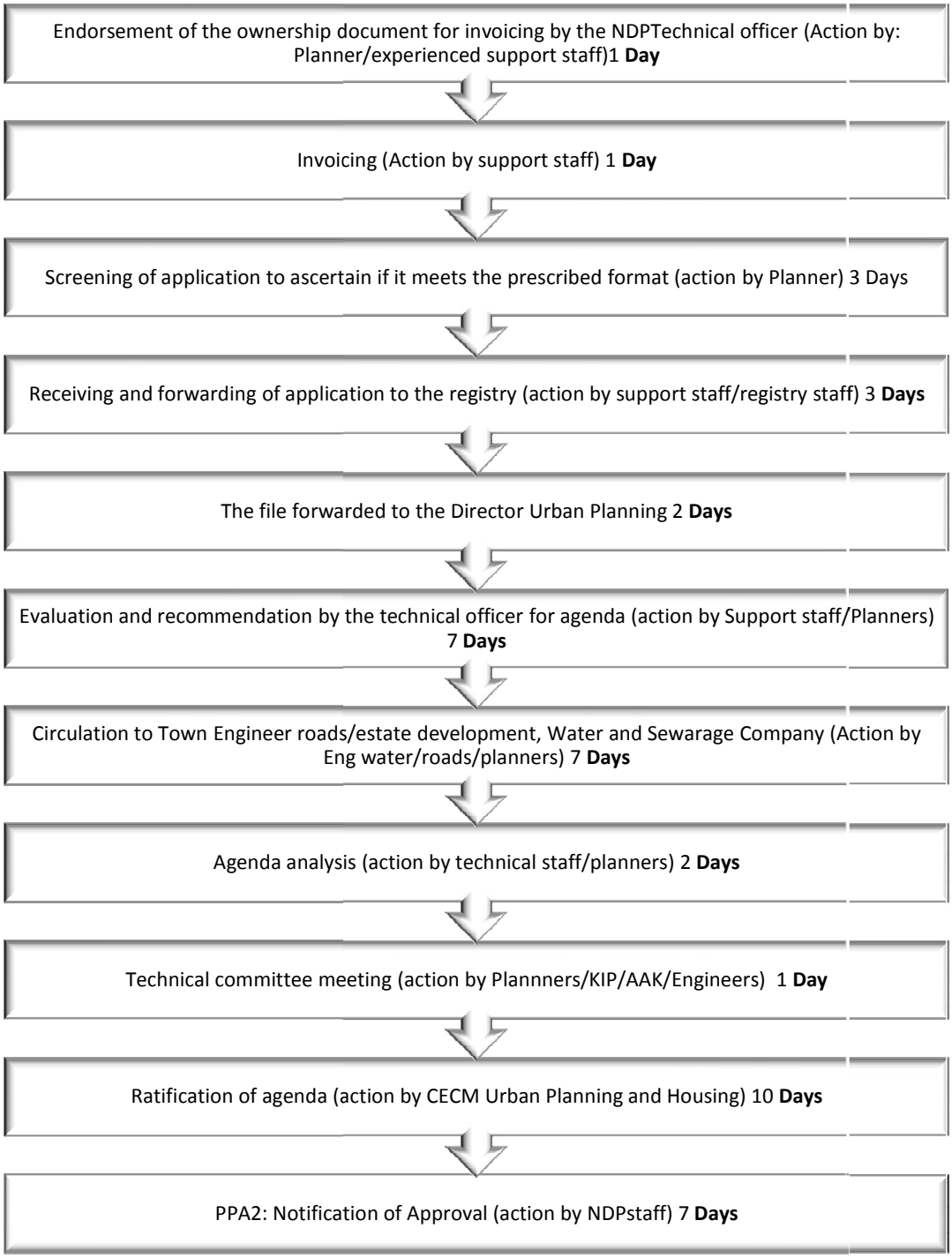


Figure 81: Change of use and extension of use approval process

Figure 82: Amalgamation process

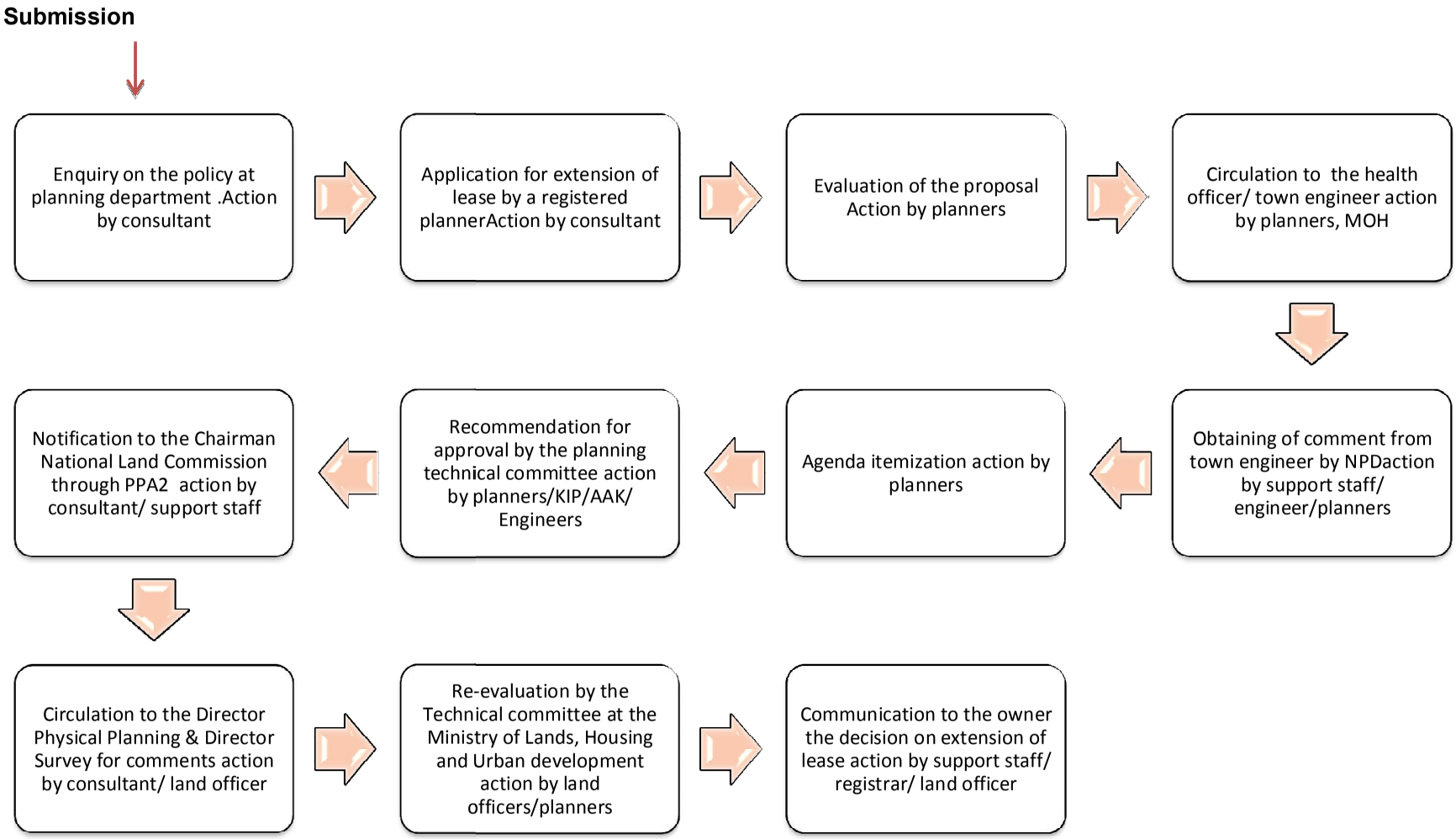


Figure 83: Extension of lease application process

9.2.3 Building Plans

These plans document the proposed development. Draw the details at a standard scale such as 1:100, 1: 200 or 1:500. Plans and drawings describing the proposed development must indicate (where relevant);

- The location of proposed new buildings or works (including extensions or additions to existing buildings or works) in relation to the land's boundaries and adjoining development;
- Floor plans of proposed buildings showing layout, partitioning, room sizes and intended uses of each part of the building;
- Elevations and sections showing the proposed external finishes and heights;
- Proposed finished levels of the land in relation to building and roads;
- Proposed parking arrangements, entry and exit points for vehicles, and provision for movement of vehicles within the site (including dimensions);
- Proposed methods of draining the land;
- The height and external configuration of proposed buildings in relation to the site on which it is to be erected'
- Site and location plan to include: The location, boundary dimensions, uses of existing buildings site area and north point of land;
- For major proposals, sites with special significance, prepare a perspective drawing, artist's impression or architectural model to supplement the elevations.

Approval process

Step 1 Enquiry on the policy at NPD .(*Action by consultant)*

Step 2 Application for approval of building plans by a registered Architect.(*Action by consultant*

Step 3 Evaluation of the proposal (*Action by planners*

Step 4 Circulation to the health department/ Town engineer *action by NPD*

Step 5 Obtaining of comment from Town engineer by NPD *(action by support staff/ engineer/planners)*

Step 6 Agenda analysis

Step 7 Recommendation for approval by the planning technical committee. (*action by planners/KIP/AAK/Engineers*

Step 8 Communication the decision to the owner

9.2.4 Occupation Certificate

This certificate is issued to completed developments that have complied with all approval conditions and have undergone the regular inspections at the required stages. The application has to be accompanied by:

- Copy of approved building plans;
- Copy of approved structural plans;
- Structural Engineer's indemnity form;
- Architect's report;
- Plumbers certificate
- Kenya Bureau of Statistics form duly filled.

9.2.5 Regularization of Existing developments

These plans document the existing development. The format of submission is similar to new development application building plans and Change of use but have to be accompanied by:

- Architect's report; and Structural Engineer's report on workmanship (in case of buildings).
- Planner`s report (In case of change of use/extension of use & subdivision)

9.2.6 Outdoor Advertisements

Outdoor advertising is largely associated with large billboards advertising products and services. However, in its broadest interpretation, outdoor advertising includes all signs erected and displayed out of doors for the purpose of providing information.

The process for outdoor advertising application requires the following:

- A planning brief giving a broad framework of the proposal in line with the approved control guidelines (these are available in the Urban Design and Development section);
- A photographic simulation of the proposal illustrating the anticipated visual impact and appearance in terms of surrounding character and function; A site plan showing every building on the site and the position with dimensions of the sign or advertising in relation to the boundaries of the site and the location of the streets and buildings on properties neighbouring the site;
- Consent or legal agreement between the structure owner and registered land owner.

9.2.7 Signage

Signage in its strict interpretation is limited to signs that make known place names, notice of events, public safety notices, traffic control/warning signs and directional information.

The process for outdoor advertising application requires the following:

1. a drawing sufficient to enable the County to consider the appearance of the signage and all relevant construction detail;
2. If a sign is to be attached to or displayed on the facade of a building, the submission of an additional drawing showing an elevation of the building;
3. A photograph of the site or building showing the location of the proposed sign; adjacent sites or buildings showing the relationship of the proposed sign to existing signs.

9.3 DEVELOPMENTS APPROVAL CONDITIONS

These are conditions given to development promoters during the approval processes. Their objective is to mitigate impacts of the development on land uses, traffic, infrastructure and utilities.

The existing development approval conditions shown below are insufficient hence the need for comprehensive guidelines.

1. Submit Building Plans for approval
2. Ensure Waste management measures are put in place
3. Conduct Environmental Impact Assessment
4. Not to encroach into lake riparian reserve.
5. Not to encroach to the road reserve
6. Ensure inspection is carried out at all stages
7. Provide enclosed chamber for solid waste

To mitigate the concerns, development conditions for the following has been proposed.

- Roads
- Water
- Change of use
- Extension of use
- Land use plan
- Subdivision
- Regularization

The proposed development approval conditions and forms for the above have been annexed in the report (annex 3 and 4).

9.4 DEVELOPMENT FEES

Development fees are imposed by the government on new or proposed developments to pay for all or a portion of the costs of providing public services to the new development.

9.4.1 Existing development fees

The current county fee structure is deficient of significant elements that the plan seeks to correct. The existing structure is illustrated below.

Table 39: Existing fee structure

Particulars	Unit of Measure	Existing fees
Land Subdivision		
Application fees		5000
Processing fees(Non Agricultural)	Per Plot	2000
Processing fees(Agricultural)	Per Plot	3000
Land amalgamation		
Application fees		5000
Processing fees(all Users)	Per Alteration	10000
Application for Dispute resolution		3000

Change of use/Extension of use/lease		
Change of use	Per plot	20,000
Special change of use(petrol station/Industrial)	Per Plot	50,000
Extension of use	**Per plot**	**15,000**
Extension of lease beyond 20 acres	Per plot	100000
Extension of lease below 20 acres	Per Plot	20000

9.4.2 Proposed development fees

The proposed structure is based on zones in Naivasha Town. The Town has been divided into five zones as shown below.

Table 40: Proposed development fees

Category	Areas
A	**Commercial Zones**
	CBD and Conference Tourism
B	**Zones Close To CBD**
	Viwandani, Kanju, Site And Service, Lakeview, Kabati, Villa View, Unity Farm, Kayole, Karagita, Mirera, Mwiciringiri
C	**Informal Settlement/Special Density Zones**
	Kihoto, Karagita, Kasarani, Kongoni, Kamere
D	**Small Scale Farming Zones**
	Gatamayu, Karati-Kinamba, Ndoroto-Muteithia
E	**Large Scale Farms Zones**
	Kedong Ranch, Mbaruk Marula, Great Rift/Kianguni, Shalimar-Tarambete, Ndabibi (Mundui Farm), Ndabibi Kamuhuti

New items of fees have been introduced into the county structure as indicated below.

Table 41: Introduced fee items

ITEM	PARTICULARS
1. Renewal of Development Application	Change of Use
	Extension of Use
2. Regularization of Developments	Change of Use
	Extension of Use
	Subdivision
	Buildings
3. Registration under sectional properties	Per application
4. Amendments to subdivision	Lump sum
5. Subdivision certificate	Subplot
6. Certified copies of original subdivision plans	Per set
7. Certified copies of subdivision certificate	Per set
8. Certified copies of approval letters	Per set
9. Land use plan	Per application
10. Evaluation of NEMA Reports	Per report
11. Site visits fee	Per visit

12. Inspection fee	Per visit
13. Construction Monitoring, enforcement and occupation certificates	
14. Sales of documents	
- Town Plan	Per copy
- Local Physical Development Reports (LPDPS)	Per copy
- Other Planning Policy Reports	Per copy
- Base maps. Part Development Plans (PDP)	Per copy
- Duplicate copies	Per copy

9.5 PROPOSED PLANNING DEPARTMENT STRUCTURE

This plan proposes an enhanced planning department at the county and sub-county level as shown on figures 56 and 57 below.

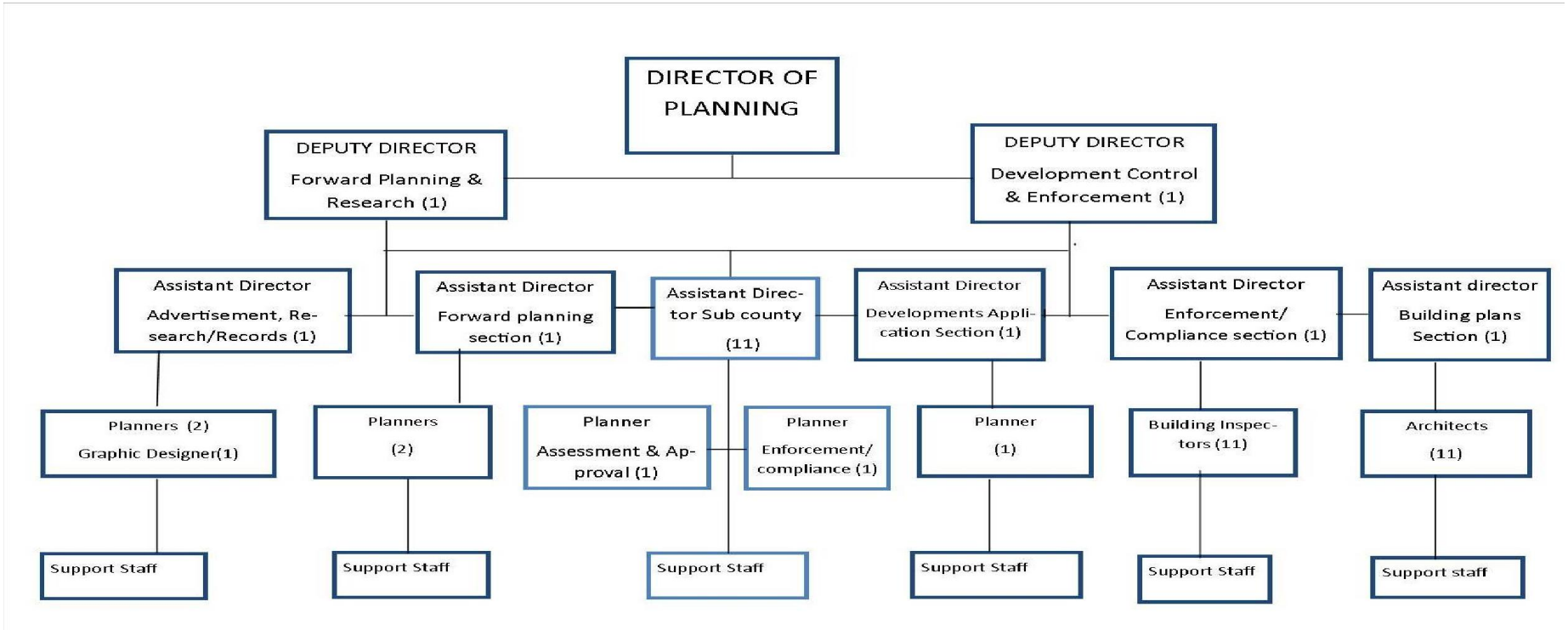


Figure 84: County planning department structure

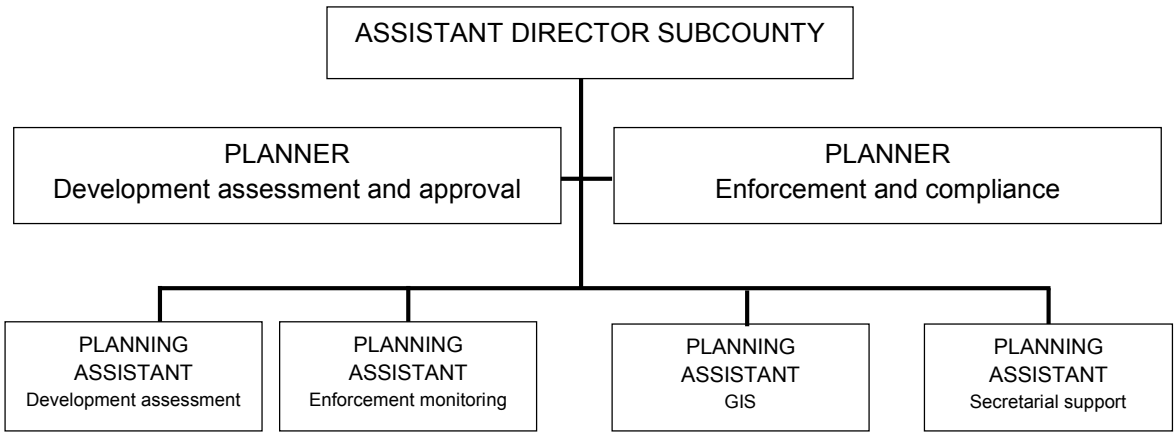


Figure 85: Sub-county planning department structure

9.6 CONCLUSION

Development control provides guidelines on requirements and procedures to be followed in development application in Naivasha town. It ensures orderly and rational development of land to create sustainable human settlement that accommodates a variety of compatible land uses hence reducing land use conflict. The proposals aim to improve development process and mitigate impacts of the development on land uses, traffic, infrastructure and utilities as well as the environment.

PART III
CIP AND IMPLEMENTATION

CHAPTER TEN
CAPITAL INVESTMENT PLAN

A Capital Investment Plan provides a detailed understanding of anticipated investments into tangible capital assets. These assets include basic facilities, services and installations needed for the proper functioning of the community.

This CIP particularly outlines the projects, both on-going and proposed, that are envisioned to support development of Naivasha town, within the context of the proposed Integrated Strategic Urban Development Plan (2014-2035). The projects are detailed out per sector. Also included are the sub counties covered, budgetary allocations, land requirements, the implementing and financing agencies and implementation time lines.

The total number of projects proposed for Naivasha is 111, out of which 6 are already on-going. The highest proportion (46%) of these projects falls under the transportation sector, followed by the education sector at 29% and then by the projects in the water and sanitation sector, which form 6% of the total. The remaining 19% of the projects are taken by capacity building, industry, environment, energy, health and community sectors. The table below summarizes the sectoral distribution of the projects in Naivasha.

Table 42: Sectoral Distribution of Project Proposals

Sector	No. of projects	Estimated cost (Million Ksh.)	% of total cost
1. Water and Sanitation	7	50,997	61.90
2. Transportation	51	26,314	31.94
3. Energy	4	1,270	1.54
4. Industrial development	1	1,000	1.21
5. Capacity Building	4	1,342	1.63
6. Education	32	650	0.79
7. Community facilities	3	375	0.46
8. Health	4	266	0.32
9. Recreational	4	107	0.13
10. Land acquisition	-	50	0.06
11. Environment	1	20	0.02
Total	**111**	**82,391**	**100.00**

Notably, the water and sanitation sector takes the highest portion of the budget. This is because the projects are the most capital intensive. The next highest proportion of the budget is taken up by the transportation sector. The environment sector takes the least amount of capital since there is one project which is not as expensive as such.

In respect to the spatial distribution of these projects, Naivasha Sub-county enjoys a higher proportion of the projects than Gilgil. The sub-counties take 33 and 2 sub-county-specific projects respectively. Among the remaining projects, 84 traverse the two sub-counties while 1 has no specific proposed location. This scenario is explained by the fact that Naivasha sub-county takes up to about 70% of plan area. Table 2 below is a summary of the spatial distribution of the projects.

Table 43: Spatial Distribution of Project Proposals

Sub-County	**No. of projects**	**Estimated cost (Million Ksh.)**	**% of total cost**
Naivasha	33	47,056	57.11
Entire plan area	44	23,303	28.28
Naivasha and Gilgil (trans-boundary)	31	9,056	10.99
Gilgil	2	2,626	3.19
Projects whose location is not specified	1	350	0.42
Total	**111**	**82,391**	**100.00**

The projects also vary in terms of the implementation period. A number of them are quick wins, while others are to be implemented within the short, medium and long term. There are also those that are to be implemented continuously. The table below summarizes the projects based on the proposed implementation time frames.

Table 44: Project Proposals Based on Implementation Time Frames

Implementation time frame	**No. of projects**	**Estimated cost (million Ksh.)**	**% of total Cost**
Short-medium term	42	40,165	48.75
Short-term	24	23,323	28.31
Continuous	7	11,863	14.40
Medium- term	26	5,045	6.12
Long term	2	1,160	1.41
Medium-long term	6	828	1.00
Quick wins	4	7	0.01
Total	**111**	**82,391**	100.00

The total budget for the implementation of these projects is estimated at Ksh. 82.4 billion. Water and sanitation sector takes the largest portion (Ksh. 51 billion) of the budget, while the environment sector takes least, Ksh. 20 million. The transportation sector takes up the second largest proportion of this budget, at Ksh. 26.3 billion. It is however worth noting that this budget does not cover all projects since those that are to be implemented by the private sector have not been budgeted for.

10.1 PROJECT PROPOSALS

The projects in this CIP are constituted by the following:

- **Economic Infrastructure:** These projects include the ones in the transportation infrastructure such as roads, water, energy, markets, and other infrastructures proposed during the participatory workshops.
- **Investment in the Productive Sector:** These are projects in tourism, agriculture, fisheries and forestry as they are important in the future economic and commercial growth of the towns. Others include direct support to enterprise development; technology and innovation advancement. **Environmental infrastructure: These** include investments in solid/chemical waste management, sewerage and water systems, and investment for environmental sustainability.
- **Critical Social Investment such as in health, housing, and recreation.** Capital investment projects in education and health are also part of this CIP.
- **Human Capital**: In order to ensure that t**he above developments are re**alized, there must be adequate capacity to plan, implement and monitor the interventions over time. In this regard, the capacity of the counties and the towns to manage the portfolio has been assessed and appropriate recommendations made.
- **Resource Envelops**: The plan in addition has determined the input needed to implement the various projects. All the stakeholders operating from the planning area have been included in the implementation matrix. A stakeholder analysis was carried out to determine their effectiveness in the cause of implementing the plan.

The details of the projects are further broken down per sector.

10.1.1 **Transportation Sector**

The projects in this sector entail road construction, road expansion and provision of various transport infrastructures. They totals to 51. Those that are to be implemented in the short, medium and long run are 18, 27 and 3 respectively. Quick wins are on the other hand 3 in total.

Up to 25 transportation projects cross-cut the sub-counties while the rest are within specific sub-counties. Naivasha sub-county has higher number of transportation projects than Gilgil since the former constitutes a much bigger portion of the planning area.

The main implementers and financiers of transportation projects include KURA, KeNHA and the county government. The budget for implementing these projects is estimated at Ksh. 26.3 billion.

10.1.2 Water and Sanitation Sector

The number of water and sanitation projects is seven (7). They involve construction of water and waste management networks. They all traverse different sub-counties within the planning area and are newly proposed. One of the projects is a quick win, one is to be implemented between the short and the medium term, three are to be done within the medium term and the last two fall in the period between the medium and the long terms. The county government and the private sector take the biggest role in implementing and financing these projects. The budget for implementing water and sanitation projects is estimated at Ksh.51 billion.

10.1.3 Industrial Sector

There is only one project in this sector which is proposed in Naivasha Sub-county. It is a major project involves development of an industrial park. Implementers and financiers of this project include the National and County governments in conjunction with private investors. The government contribution to the industrial park is estimated to take Ksh.1.0 billion through the provision of basic infrastructure such as roads, water and electricity.

10.1.4 Energy Sector

There are four project proposals in the energy sector, all of which cross-cut the entire plan area. The estimated budget for the projects is Ksh. 1.3 billion. One of these projects is already on going while the remaining three are proposed. Among them, three are expected to be complete between the short and medium term periods while one is to be implemented in the long term.

10.1.5 Environment Sector

The environment sector also has 1 proposed project which is to be implemented and financed by the County government between the short and medium terms. The budget estimate for this sector is Ksh. 20 million.

10.1.6 Health Sector

A total of 4 projects are proposed in the health sector and are all in Naivasha Sub-county. They entail construction of new health facilities and upgrading/refurbishment of the existing ones. Two of the projects are to be implemented in the short run while the other two are expected to be complete in the medium term. The key players in the implementation and financing of these projects are the National and County governments together with the private sector. This sector is expected to take up Ksh. 266 million.

10.1.7 Education Sector

The education sector projects basically entail constructing and equipping schools. The proposed primary and secondary schools throughout the planning area are 15 and 10 respectively. One centre of excellence, two special school and three tertiary learning institutions are also recommended. Twenty seven, three and two projects are to be implemented in the short, medium and long term periods respectively. The education sector projects are expected to consume up to Ksh. 650 million.

10.1.8 Other Community Facilities

The other community facilities include social halls, sports facilities, fire stations, cemeteries, cultural centres and libraries among others. Implementation and financing community facility projects is squarely the responsibility of the county government. Private partners can however be involved too. A total of 7 projects are proposed under this category, four of which are in Naivasha sub-county and three are in Gilgil. Only 1 of the 7 projects is on-going. All the projects are expected to cost about Ksh. 375 million.

10.1.9 Projects involving the Youth, Women and People with Disabilities (PWD)

These projects constitute the ones intended to benefit the above mentioned groups. They also include projects in whose implementation they will be involved. Such projects in Naivasha include those that require supply of various inputs/materials, whereby, according to procurement law, 30% of tenders must go to the youth, women and PWD. Examples of these projects are those that involve all infrastructure and building construction works among others. The youth are also supposed to be directly involved in all construction projects, from which they should earn some income. Furthermore, education projects are meant to directly benefit the youth (both boys and girls) and particularly special schools are meant for the PWD.

All community projects are meant to benefit the youth, women and PWD both socially and financially. Agricultural projects are also potentially beneficial to the vulnerable groups since they can be involved directly as a means of empowering them economically. A total of 96, 94 and 86 projects proposed in Naivasha are thus envisaged to involve and/or benefit the youth, women and PWD respectively.

10.1.10 Catalytic Projects

Catalytic project recommendations for the planning area are intended to promote the implementation of the plan goals and objectives. They will help increase spatial development, show progress and stability in the planning area, represent visible investment and spur additional investment. Such projects include the following:

1. Strengthening the Nakuru County Planning Department and training of all relevant personnel on crucial components of the ISUDP and general planning processes and techniques.
2. Airport construction
3. Geothermal Power Development – Ol Karia
4. Development of an Industrial Park
5. Road network extension projects
6. Extension of sewer system to un-served areas
7. Construction of 6No. Multi modal transport termini
8. Construction of 4No. water transport terminals at Central landing beach, Karagita, Kamere and Kasarani
9. Construction of Naivasha stadium

Strengthening the Nakuru County Planning Department and training of personnel is the first step to enhancing proper and timely implementation of Naivasha ISUDP. Among the personnel to be

included in the training process are the county planners, architects, engineers, surveyors, land officers, members of the county assembly, the Chief Executive Committee member and Chief Officer in charge of Physical Planning and Housing. The county treasury should also be part of this induction so that it understands the need to properly fund planning projects and programs. It is expected that these officials will have direct roles in spearheading the implementation of the Naivasha ISUDP and subsequent plans. This notwithstanding, it is also important to involve various stakeholders who are expected to play different roles in project implementation and financing.

Airport construction is the second project expected to have ripple effects on development of the planning area. It will not only make air transport more efficient but also attract other investments such as those in the hotel and hospitality industry. It may also boost the tourism industry since direct international flights to Naivasha will be possible. These will in turn increase the revenue base for the county among other things.

Geothermal power development is definitely another catalytic project that will boost energy supply both within and outside the planning area. With adequate energy, production activities will be more viable hence increased industrial developments and related investments. This project is expected to cost approximately Ksh. 750 million.

Additionally, a proposal has been made to develop an Industrial Park in Naivasha. The implementation of this project is expected to heighten value addition to various raw products, employment creation, income generation and revenue base of the county. These directly impact on the lives of a majority of the Naivasha dwellers and so they enrich the worth of the ISUDP. The development of the industrial park will cost approximately Ksh. 1 billion in the provision of requisite infrastructure.

The road network expansion project will help to promote efficiency in movement/circulation. Easing movement within Naivasha town will be one of the greatest score points for the ISUDP since this will in turn improve business, attract investment and stimulate further developments.

Extension of sewerage networks to un-served areas will definitely improve sanitation in the planning area, promote high environmental quality and consequently, make people enjoy healthy living. This is an aspect that is of great significance to everyone and so it is expected to promote the ISUDP extensively. This is estimated to cost Ksh. 120 million.

Construction of water transport terminals will make transportation more efficient by reducing overreliance on road transport means. Investments are also expected to take place around the terminals and as a result there will be increased business activities and subsequently job creation and income generation.

Construction of Naivasha stadium is another catalytic project which will not only bring about social cohesion but also improve business and enhance income and revenue generation in the county. Basic infrastructure development will also have to take place in the areas around the proposed location of the stadium.

Table 4 below gives a summary of all the project proposals discussed above.

Table 45: Summary of Projects

SECTOR	SUB-COUNTY	NO. OF PROJECTS												
		Quick Wins		Short Term		Short to Medium Term		Medium Term		Medium to Long Term		Long Term		Total
		Proposed/Ongoing												
		P	O	P	O	P	O	P	O	P	O	P	O	
TRANSPORTATION	Roads	Naivasha	Nil	Nil	14	Nil	1	Nil	8	Nil	Nil	Nil	Nil	Nil	**23**
		Gilgil	Nil	Nil	Nil	Nil	Nil	Nil	2	Nil	Nil	Nil	Nil	Nil	**2**
		Projects traversing Sub-counties	1	Nil	Nil	Nil	Nil	1	4	Nil	Nil	Nil	Nil	Nil	**6**
	Street furniture	Projects traversing Sub-counties	2	Nil	Nil	3	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**5**
	Interchanges	Projects traversing Sub-counties	Nil	Nil	Nil	Nil	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**1**
	Footbridges	Projects traversing Sub-counties	Nil	Nil	Nil	Nil	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**1**
	Walkways	Projects traversing Sub-counties	Nil	Nil	Nil	Nil	6	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**6**
	Drainage system	Projects traversing Sub-counties	Nil	Nil	Nil	Nil	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**1**
	Terminal facilities	Projects traversing Sub-counties	Nil	Nil	1	Nil	2	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**3**

SECTOR	SUB-COUNTY	NO. OF PROJECTS												
		Quick Wins		Short Term		Short to Medium Term		Medium Term		Medium to Long Term		Long Term		Total
		Proposed/On-going												
Railway transport	Projects traversing Sub-counties	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1	Nil	Nil	Nil	**1**
Water transport	Entire plan area	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1	Nil	Nil	Nil	**1**
Air transport	Location not specified	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1	Nil	**1**
WATER & SANITATION														
Water	Projects traversing Sub-counties	Nil	Nil	Nil	Nil	Nil	Nil	2	Nil	1	Nil	Nil	Nil	**3**
Solid Waste Mgt.		1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**1**

Sewerage System		Nil	Nil	Nil	Nil	Nil	Nil	1	Nil	1	Nil	Nil	Nil	**2**
Storm water Drainage		Nil	Nil	Nil	Nil	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**1**
INDUSTRY														
Industrial park	Naivasha	Nil	Nil	Nil	Nil	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**1**
ENERGY	Entire Planning area	Nil	Nil	Nil	1	2	Nil	Nil	Nil	Nil	Nil	1	Nil	**4**
ENVIRONMENT	Naivasha	Nil	Nil	Nil	Nil	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**1**
HEALTH	Naivasha	Nil	Nil	2	Nil	Nil	Nil	2	Nil	Nil	Nil	Nil	Nil	**4**
EDUCATION														
Primary	Entire plan area	Nil	Nil	Nil	Nil	25	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**25**
Secondary		Nil	Nil	Nil	Nil	11	Nil	Nil	Nil	Nil	Nil	Nil	Nil	**11**
Tertiary		Nil	Nil	Nil	Nil	Nil	Nil	3	Nil	Nil	Nil	Nil	Nil	**3**
Special schools		Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	2	Nil	Nil	Nil	**2**
COMMUNITY FACILITIES	Naivasha	Nil	Nil	2	Nil	Nil	Nil	1	1	Nil	Nil	Nil	Nil	**4**
	Projects traversing Sub-counties	Nil	Nil	1	Nil	Nil	Nil	2	Nil	Nil	Nil	Nil	Nil	**3**
CAPACITY BUILDING	Entire plan area	3 Continuous and 1 short term project												**4**
TOTAL														**120**

10.2 LAND REQUIREMENTS

Land is an important requirement for the implementation of the projects, especially those involving construction works. New projects like industrial park, the University and the construction of schools and health infrastructure, relocation of various facilities and road construction and expansion definitely require land acquisition. For road expansion projects, there is need to budget for demolition and compensation in cases where the road reserves have encroached into. About Ksh. 50 million has been set aside for land acquisition in this CIP.

10.3 IMPLEMENTATION FRAMEWORK

The implementers of the projects basically include the National and County governments and the private sector, with the help of development partners and agencies. The national

government is represented by various institutions including but not limited to ministries, departments, authorities and Semi-Autonomous Government Agencies. The private sector is on the other hand made up of institutions and individuals. NGOs, CBOs and Faith Based Organizations are also potential implementers and financiers of some of the projects proposed in this plan.

The county government is expected to be more involved in project implementation since it needs to play one role or another in all the projects. The National government may only need to support the major projects, especially those entailing establishment of trunk infrastructure. Such projects take about 80% of the total bulk.

The private sector is on the other hand to be involved in implementing projects in the housing, health, business, industry and education sectors. These take about 20% of the project proposals. They are also supposed to get involved in all projects during public participation forums. The table below elaborates further on the implementation framework designed for the Naivasha ISUDP.

Table 46: Implementation Responsibility of Institutions

Sector	**Nature of Projects**	**No. of Projects**	**Implementing Institution(s)**	**Roles of Implementing institution (s)**
Capacity Building	Capacity Building	4	County Government	- Mobilization of financial & human resources - General Supervision
Transportation	Road construction projects	2	KeNHA/ KURA/County government	- Financing the projects - Identification and acquisition/ purchase of land - Contracting experts - Maintenance of the roads
	Road expansion and tarmacking projects	27	Planners, Architects, Engineers EIA experts, Contractors	- Planning and design of roads and surrounding land uses - Project Environmental Impact Assessments
			Contractors/ surveyors	- Actual construction works
	Interchanges	3	Residents/NGOs/CBOs (Private Sector)	- Contribution of resources e.g. money, labour, ideas etc.
	Terminal facilities	6		
	Air Transport projects	1	Kenya Airport Authority/ County government	- Financing the project - Identification and acquisition/ purchase of land

				- Contracting experts - Maintenance of the airport. - Maintenance of railway line
	Rail transport projects	1	Kenya Railway Corporation/ Government of China	
	Regulation Enforcement	1	Traffic Police Dept.	- Formulating adequate and effective traffic rules - Enforcing the rules
			Road users	- Observation of the traffic regulations
Sector	**Nature of Projects**	**No. of Projects**	**Implementing Institution(s)**	**Roles of Implementing institution (s)**
Water & Sanitation	Water and sewerage network projects	6	Naivasha Water and Sewerage Company/ Rift Valley Water Services Board/ County Gov't	- Financing the project - Identifying and acquisition of land - Contracting experts
			County Gov't	
	Solid waste management	2	Kenya Water Trust Fund/ WARUAs	- Help in financing water projects
			Planners and Engineers	- Planning and design works
			Contractors	- Construction
			Residents/NGOs/CBOs (Private Sector)	- Contribution of resources e.g. money, labour ideas etc
Commerce, Industry & Tourism	Industrial developments	1	Ministry of Industrialization & Enterprise Dev't/ County government	- Identification of ideal spaces/land and acquisition of the same - Financing construction of some of the plants and/or offering subsidies to private investors
Energy	Electrification projects	2	Kenya Rural Electrification Authority	- Financing the project
			County government	- Help to identify land (way leave) and acquire the same - Help KREA in organizing and monitoring the process
			Kenya Power	- Establishment of electricity networks and supply of electricity
			Residents and	- Electrical installation works in

			business people (Private Sector)	the homesteads & business premises
	Geothermal power & non-renewable energy projects	2	Ministry of Energy/ County Government	- Financing the project
Environment	Beautification projects	1	County Gov't	- Financing the project - Supervision of works
			Landscape Architects/ contractors	- Design and landscaping works
			Private institutions	- Sponsorship of landscaping sections of Naivasha town
Health	Construction/ equipping of health facilities	4	Ministry of Health/ County Government	- Financing the project - Contracting experts - Supervising construction work
			Planners/ Architects Contractors	- Planning, Design and Construction works
			Residents (Private Sector)	- Contribution of resources e.g. money, labour ideas etc.
Education	Educational facility Upgrading projects	32	Ministry of Education, Science Technology/ County Gov't	- Funding the projects - Contracting experts and supervising works
			Constituency Development Fund	- Helping in funding the projects
Community facilities	Construction of Facilities	7	Private institutions/religious institutions/ private individuals	- Upgrading and running some of the schools - Constructing and running some of the community facilities

10.4 FINANCIAL STRATEGY

This section provides the details of the budget for the projects and subsequently proposes a strategy on how to raise the required funds from various sources.

10.4.1 Budget Allocations

The cost estimates vary from one sector to another because of the differences in the nature and number of projects. The transportation sector for instance constitutes the biggest part of the estimate while the smallest portion goes to the environment sector.

The table below is a summary proposed budgetary allocation for the projects in each sector.

Table 47: Proposed Project Budget Allocations

Sector	Approximate Cost (Ksh. Million)
1. Water and Sanitation	50,997
2. Transportation	26,314
3. Capacity Building	1,342
4. Energy	1,270
5. Industrial development	1,000
6. Education	650
7. Other Community facilities	375
8. Health	266
9. Recreational	107
10. Land acquisition	50
11. Environment	20
Total	**82,391**

10.4.2 Institutional Shares of the Financial Responsibility

The proposed projects will be financed by various individual institutions. Some will however be jointly funded by two or more institutions. The highest number of projects (26) to be financed by individual institutions is taken up by the County Government. They cost approximately Ksh. 3.6 billion covering about 4% of the total budget. The highest percentage of the budget (62%) is however taken by the projects that are supposed to be financed jointly by the NAIVWASCO and Rift Valley Water Services Board.

The details of institutional budget share proposal are summarized in the table below:

Table 48: Institutional Shares of the Financial Responsibility

Institution	No. of projects	Approximate Cost (Million Ksh)	% of Total Budget
NAIVWASCO/Rift Valley Water Services Board	5	50,945	61.83
KURA & KeNHA	41	24,524	29.77
County Government	26	3,602	4.37
Ministry of Energy	2	1,250	1.52
Ministry of Industrialization and Enterprise Dev't	1	1000	1.21

Ministry of Education, County Government & CDF	32	650	0.79
Kenya Airports Authority	1	350	0.42
Ministry of Land, Housing and Urban Development & County Gov't	1	50	0.06
Kenya Rural Electrification Authority	2	20	0.02
Total	**111**	**82,391**	100.00

10.4.3 Sources of Funding

1. National Government Sources

The national government has a variety of potential sources of finances for the proposed projects. These include revenue from taxes, returns from investments, borrowings and donations from international donor institutions.

2. County Government Sources

The county government also has several windows of raising funds for development and recurrent expenditures. These include the Equitable Share of National Revenue, conditional grants, internally generated funds, funding from Public Private Partnerships, borrowing through municipal bonds, private investment, support from development partners and other non-governmental organizations.

The investment plan assumes that adequate resources will be available or can be mobilized to undertake program activities up to 2034. The county administration should study expenditure patterns; and make forecasts of revenue that is likely to be realized within the plan period. The various sources of funds for implementing projects and programs include:-

(a) County Generated Revenues

The main sources of revenue for the County government are:

- Single Business Permit;
- Entertainment taxes
- Parking Fees;
- Market Fees;
- Land Rents; (property rates)
- Bill Boards; and
- Other miscellaneous licenses.

Counties are expected to allocate at least 30% of their budget to development and the remainder to recurrent expenses. Budget appropriations should be maintained at levels that will promote investment, create employment and improve incomes. It will therefore be necessary to undertake reforms in this field in order to determine areas of unnecessary recurrent expenses that should be transferred to development.

(b) Public Private Partnerships (PPP)

This concept will see counties privatize assets that can be managed or developed better by the private sector. The law governing Public Private Partnerships was enacted in January 2013. PPP underscores institutional relationships between the state and the private sector where public and private actors jointly participate in defining the objectives, the methods and the implementation of an agreement of cooperation. PPPs present a middle case between public procurement and privatization. The private sector would be encouraged to propose solutions and offer technical expertise. It could also provide viable financial arrangements for the projects and undertake the associated operational risks. The PPP arrangements, therefore, can offer opportunities to attract enhanced private sector participation in financing, building and operating infrastructure services and facilities to close funding gaps.

(c) Municipal Bonds

Municipal bonds are securities that are issued for the purpose of financing the infrastructure needs of the issuing municipality, in this case a county. The proceeds from the bonds can be used to finance the implementation of streets and highways, bridges, schools, hospitals, public housing, sewer, water systems, power utilities, and various public projects. It is however worth noting that municipal bonds are yet to be used to finance county projects. A legal framework is required to safeguard counties from debt stress if the window is not properly used.

(d) WRUA Financing Strategy

In order to carry out project in the field of environment, it is important to use the Community Forest Associations (CFAs) and Water Resource User's Associations (WRUA) strategy that improves activities that revolves around water. The activities involve the protection of water catchments, preservation of riparian areas particularly along river courses, conservation of wetlands and forests. This can be done in collaboration with WRMA and NGOs/CBOs that are friendly to the environment.

WRMA and the Water Services Trust Fund (WSTF) and development partners are currently funding these activities.

(e) NGOs/CBOs

There is substantial amount of funding of various types of projects by Non-Governmental and Community Based organizations.

3. The Private Sector

There is scope for support from development partners for infrastructural projects particularly in the road sector. The private sector is also expected to be one of the greatest contributors of capital to projects in the housing, health, business, industry and education sectors.

10.5 MONITORING AND EVALUATION FRAMEWORK

There is need to provide a means through which checks and balances can be undertaken in order to ensure that the projects are adequately implemented and the required outputs and outcomes realized. The monitoring and evaluation framework helps with this. It outlines the

projects, expected outputs and outcomes, means of achieving them, institutions involved and indicators of success. This is shown the table below.

Table 49: Project Monitoring and Evaluation Framework

Sector	Nature of Projects	No. of Projects	Monitoring Institution(s)	Expected outcomes	Indicators of Success
Capacity Building	Capacity Building	4	County Government	- Adequate capacity for proper implementation of the ISUDP and subsequent plans - Properly trained county personnel	- Proficiency in planning service delivery
Transportation	Road construction projects	2	KeNHA/ KURA/County government	- Improved road transport system - Enhanced movement of people and goods - Reduced traffic rule violation - improved traffic movement and road safety - Enhanced ease of movement of pedestrians across rivers and busy road - Improved rail and air transport services	- Adequacy of road network - Ease of traffic circulation - Level of traffic rules observation - Level of road safety - Quality of transport services
	Road expansion and tarmacking projects	27			
	Interchanges	3			
	Terminal facilities	6			
	Air Transport projects	1	Kenya Airport Authority/ County Gov't		
	Railway Transport Projects	1	Kenya Railways Corporation		
	Regulation Enforcement	1	Traffic Police Dept.		
Housing	Slums Upgrading projects	1	KISIP/ County government	- Increased housing stock in the planning area - Improved living environment of the concerned residents	- Sufficiency of housing - Quality of living environment
Water & Sanitation	Water and sewerage network projects	6	Naivasha Water and Sewerage Company/ RVWSB	- Improved water supply - Better sanitation in the planning area	- Level of access to water and sewerage services - Level of sanitation
	Solid waste management	2			

Commerce, Industry & Tourism	Industrial developments	1	Ministry of Industrialization & Enterprise Dev't/ County government	- Increased employment opportunities - Improved household income - Improved government revenue	- No of plants established - Production levels in the industry - Employment levels in the industry - Income levels of workers - Amount of revenue
Energy	Electrification projects	2	Rural Electrification Authority, County Gov't & Kenya Power	- Improved access to electricity, geothermal & non-renewable energy in the planning area - Reduced reliance on non-renewable sources of energy	- Extent of access to electricity and geothermal energy
	Geothermal power & non-renewable energy projects	2	Ministry of Energy/County Gov't		
Environment	Beautification projects	1	County Gov't	- Improve the aesthetic value of Naivasha town	- Extent of green areas in the town
Health	Construction/ Renovation of health facilities	4	Ministry of Health/ County Gov't	- Enhanced healthcare	- Sufficiency of health facilities - Quality of healthcare
Education	Educational facility Upgrading projects	32	Ministry of Education, Science Technology/ County Gov't	- Efficient access to education	- Sufficiency of education facilities - Quality of education
Community facilities	Construction of Facilities	7	County Gov't	- Improved access to information - Improved access to social services - Increased of social integration in the community - Better skill development - Reduced level of idling by the youth	- Sufficiency of community facilities - Quality of social services - Level of skill development - Level of social cohesion - Innovation levels of individuals, businesses and institutions

10.6 CONCLUSION

Capital investment plan is an important part of any integrated development plan since it identifies and costs the projects that would help to address the needs of the people in the planning area. This CIP has thus elaborately discussed details of the projects that need to be implemented in Naivasha based on the needs they have expressed throughout the planning period.

CHAPTER ELEVEN
CONCLUSION

The ISUDP has been prepared to address the planning challenges experienced in Naivasha Town. It seeks to optimally utilise the natural and manmade resources available in the Town. This report presents the planning interventions purposed to address the latter objectives. Their formulation has been guided by the data obtained during the situational analysis. The proposed interventions have also been developed and adjusted by stakeholders during workshops, thematic and focus group discussions. Several stakeholders' discussions have been held with regards to the same. Additionally, the proposal presented herein have been guided by various visions including KMP Mantra, Vision 2030, Nakuru County Vision and the planning vision for Naivasha Town proposed by the stakeholders.

The proposals made envision a well-planned lake city leading in tourism, world class conference facilities, geothermal and horticulture farming. They serve as a guideline towards urban development and growth. The interventions likened herein are multi-sectoral and enhances urban development from every angle. Compatible and complementary land uses have been promoted to ensure optimal advantages and avoid conflicting land uses. The recommendations have also considered environmental sustainability especially since Naivasha Town lies with the Lake Naivasha Basin. This fragile ecosystem serves both national and international significance. Therefore, measures to protect conserve and rehabilitate the basin and natural habitats are in place.

Finally, the participative approach taken during the formulation of the proposal is also advocated for during their implementation, monitoring and evaluation stage. Therefore, ISUDP ensures the involvement of stakeholders with special attention to community members to contribute in the actualization of the set goals and objectives. Such honours the spirit of constitution in its call for public participation

ANNEXES

ANNEX 1: LAND USE REGULATION

DETAILED LAND USE REGULATIONS												
Zone no.	**Zone name**	**Area description**		**Existing use**	**Permitted use**	**Density (low, medium, high)**	**Minimum plot size (Ha)**	**House type**	**Plot ratio**	**Ground coverage**	**No. of floors**	**Area(km2)**
0_1	Lake view		Low	Residential	Residential BCR on front row of Kenyatta avenue	Low	0.1	Bungalows Maisonettes Town house	75%	50%		0.79
0_2	Spherical	Spherical	High	Residential flats	Residential BCR on front row of Kenyatta avenue	High	0.05	Flats	80%	75%	4 floors	0.08
0_3	Site & Service	Off Mbaria Kaniu- Kabati Rd	High	Residential	Residential	High	0.05	Flats	80%	65%	5 floors	0.03
0_4	Kabati	Kabati around cemetery	High	Residential	Residential BCR on front row of Kenyatta avenue	High	0.05	Flats	80%	65%	5 floors	0.22
0_5	Kihoto	Kihoto	High	Residential	Residential; BCR on front row of main spine road	High	0.05	Bungalows, &Row housing	80%	65%	1 level (high water table)	0.62
0_6	Extension of Kabati and site	Opposite Kabati over Nairobi-Nakuru road	Medium	Residential	Residential	Medium	0.05	Maisonettes	75%	50%	N/A	0.10
0_7	Kinamba	West of Kinamba-Karati road behind commercial zone	Medium	Residential	Residential	Medium	0.05	Maisonettes Flats	80%	65%	5 floors	0.95
0_8	Kinamba residential	Kinamba bordering KWS	Low density	Residential	Residential Agricultural	Low	0.1	Bungalow maisonette	50%	35%	N/A	1.24
0_9	Kabati and site	Boundary Between Kabati and site & service	Medium	Residential Agricultural	Residential	Medium	0.05	Bungalow Maisonette	70%	50%	N/A	0.08
0_{10}	Kayole		Medium	Residential & agricultural	Residential	Medium	0.05	Flats Row housing	75%	50%	5 floors	20.06
0_{11}	Kengen housing	Next to Kamere	Medium	Residential	Residential& Institutional	Medium	0.05	Bungalow Maisonette	75%	50%	N/A	0.38
0_{12}	Kamere scheme	informal settlement	High	residential	Residential	High	0.05	Flats Row housing	80%	65%	5 floors	0.12
0_{13}	KCC SLUM	Located at Malewa Farm	Informal settlement on private land	Residential (informal)	N/A	Informal settlement on private land	0.05	N/A	N/A	N/A	N/A	0.24
0_{14}	Kasarani residential	Along Moi South Lake Rd	High	Residential informal settlements	Residential(High)	High	0.05	Flats Row housing	80%	65%	5 floors	0.38
0_{15}	Mithuri estate	Captured on google mapping	Medium	Residential	Residential	Medium	0.05	Maisonette Bungalow	75%	50%	N/A	0.11
0_{16}	Maryland	Opposite Kayole	Medium	Residential	Residential	Medium	0.05	Maisonette Flats	75%	50%	5 floors	
0_{17}	South Lake Villas	Located along Moi south lake road	Medium	Residential	Residential	Medium	0.05	Maisonettes Town Houses	75%	50%		
0_{18}	Undeveloped	Next to Great Rift on Upper side	Low & Medium	Agricultural	Residential and Recreation	Low and medium	0.1	Maisonettes	50%	35-50%	N/A	0.34
0_{19}	Longonot gate	off Mai Mahiu road	Low & Medium	Residential mixed use	mixed use development	Low and medium	0.1	mixed typologies	75%	35-50%	3 floors	9.70
0_{20}	Lake view mixed zone	Fronting Mai Mahiu to Mama Ngina road	Medium	Residential mixed use	BCR Residential mixed use	Medium	0.1	Maisonettes Flats	50%	35-50%		0.55
0_{21}	Karagita	Along Moi South Lake Rd	High	Residential	Residential mixed use	High	0.05	Flats	80%	65%	5 floors	9.31

0_{22}	Kanju estate	Next to Industrial area	High	Residential	Residential Allow commercials on parcels fronting road	High	0.05	Flats	80%	65%	5 floors	0.10
0_{23}	Industrial area	Near Kanju estate	High	Residential	Residential Allow commercials on parcels fronting road	High	0.05	Flats	80%	65%	5 floors	0.30
0_{24}		Next to Naivasha golf course	Medium	Residential	Residential	Medium	0.05	Maisonettes Flats	80%	50%	5 floors	0.11
0_{25}	Karati	Next to Karati node	Medium	Residential	Residential	Medium	0.05	Maisonette Flats	75%	35 65%	5 floors	
0_{26}	Hopewell residential	Area opposite Buffalo mall	Medium	Residential	Residential	Medium	0.05	Flats	75%	65%	5 floors	0.32
0_{27}	Villa View	Along Moi south lake road	Medium	Residential (controlled estate)	Residential	Medium	0.05	Bungalows Maisonette	50%	35-50%		0.56
0_{28}	Next to villa view	Next to villa view along Mai Mahiu road	Medium	Residential	Residential	Medium	0.05	Bungalows Maisonette	50%	50-65%		0.35
0_{29}	Part of Mirera	Next to Karagita and fronting the railway line	High	Residential	Residential	High	0.05	Flats	75%	50-65%	5 floors	0.52
0_{30}	Future Residential area	Next to Karagita	High	Residential	Residential	High	0.05	Flats	75%	50-65%	5 floors	2.96
0_{31}	Part of LR no 13209	Next to Kihoto and sewer treatment plant	High	Agricultural	Residential	High	0.05	Apartments	75	65	5 floors	0.38
0_{32}	Part of LR no 13209	Next to Kihoto and sewer treatment plant	Low	Agricultural	Residential	Low	0.05	Maisonettes	50	35	1 floor	0.16
0_{33}	Aberdare Hills	Next to Morendati and Gatamaiyu	Low	Residential	Mixed use development (golf course & residential)	Low	0.05	Maisonettes Town Houses	75%	50%		4.57
0_{34}	Aberdare Hills	Next to Morendati and Gatamaiyu	Medium	Agricultural	Mixed use development (Hotel, Commercial & residential)	Medium	0.05	Maisonettes Flats		50%	3 Floors	2.56
0_{35}	Future Residential area part of LR no 398/12/1	Next to Karagita	High	Agricultural	Residential	High	0.05	Flats	75%	50-65%	5 floors	0.53
0_{36}	DCK/Karuturi	Next to Karagita	Medium	Residential	Residential	Medium	0.05	Row flats	75%	50-65%	5 floors	
1_1	Cable Industry	Along Nairobi Nakuru highway	N/A	Industrial	Industrial	N/A	N/A	N/A	N/A	N/A	N/A	0.02
1_2	Keroche brewery	Kayole-Karai area	N/A	Industrial	Industrial	N/A	N/A	N/A	N/A	N/A	N/A	0.08
1_3	Proposed industrial zone	Along Mai Mahiu road and next to railway line	N/A	Industrial	Industrial	N/A	N/A	N/A	N/A	N/A	N/A	1.34
3_1	Stadium	new stadium Next to Buffalo Mall	N/A	Recreation	Recreation	N/A	N/A	N/A	N/A	N/A	N/A	0.01
3_2	Naivasha golf course	near sewer treatment plant	N/A	Recreation	Recreation	N/A	N/A	N/A	N/A	N/A	N/A	0.34
3_3	Great Rift resort	Along Moi North Lake Rd	N/A	Recreation	Recreation	N/A	N/A	N/A	N/A	N/A	N/A	2.53
3_4	Proposed public park	Along Mai Mahiu road and next to Kihoto	N/A	Recreation	Recreation	N/A	N/A	N/A	N/A	N/A	N/A	0.27
3_5	Naivasha Kongoni lodge	opposite Kongoni primary school	N/A	Recreation	Recreation & Ecotourism	N/A	N/A	N/A	N/A	N/A	N/A	0.16
3_6	Elsamere	Close to Kamere	N/A	Recreation &	Recreation &	N/A	N/A	N/A	N/A	N/A	N/A	0.83

	resort			conservancy	conservancy							
3_7	Kongoni resort	1st one along Moi south lake road from Karagita	N/A	Recreation	Recreation		N/A	N/A	N/A	N/A	N/A	0.16
3_8	Wileli camp	Off Moi north lake road at Kongoni and next to Lake Oloiden	N/A	Recreation	Recreation		N/A	N/A	N/A	N/A	N/A	0.05
4_1	Naivasha sub county offices	along Moi avenue	N/A	Public Offices	Offices		N/A	N/A	100	75%	N/A	0.05
4_2	ACK Church	next to sub county offices	N/A	Public purpose	Public purpose		N/A	N/A	100%	75%	N/A	0.01
4_3	County and Govt Offices new	At lake view area	N/A	Public purpose	Public purpose		N/A	N/A	150	75%	N/A	0.08
4_4	Public Purpose	Next to Catholic Church lake view	N/A	Public purpose	Public purpose		N/A	N/A	150	75%	N/A	0.06
4_5	Naivasha Hospital	Naivasha Referral Hospital	N/A	Public purpose	Public purpose		N/A	N/A	240	75%	N/A	0.08
4_6	Public Purpose	Fronting Kenyatta Ave. Next to Kerra, KWS	N/A	Public purpose	Public purpose		N/A	N/A	150	75%	N/A	0.03
4_7	L. View Police	Police station along Police line Rd	N/A	Public purpose	Public purpose		N/A	N/A	150	75%	N/A	0.07
4_8	Police quarters	Police quarters adjacent to police station	Medium	Police housing	Public purpose-Residential		N/A	Flats	100%	75%	N/A	0.03
4_9	Police quarters	Along Police line Rd opposite police station	Medium	Police housing	Residential		N/A	Flats	100	70%	N/A	0.03
4_{10}	Kabati Cemetery	Kabati Cemetery	N/A	Cemetery	Cemetery		N/A	N/A	N/A	N/A	N/A	0.07
4_{11}	Naivasha prison facility	GK Prison	N/A	prison, school, health centre	Public purpose		N/A	Low and high-rise	200	60%	N/A	3.50
4_{12}	Institution along A104 before KCC		N/A	Education	Education		N/A	N/A	100	75%	N/A	2.21
4_{13}	Public park	off Kariuki Chotara rd.	N/A	Public purpose	Public purpose		N/A	N/A	N/A	N/A	N/A	0
4_{14}	Playground at Site and service	Site and service	N/A	Public purpose	Public purpose		N/A	N/A	N/A	N/A	N/A	0.01
4_{15}	Library	along Mbaria Kaniu rd. close to DEB school	N/A	Public purpose	Public purpose		N/A	N/A	-	50%	N/A	0.01
4_{16}	Unnamed facility	Kabati area	N/A	Public purpose	Public purpose		N/A	N/A	N/A	N/A	N/A	0.01
4_{17}	AIC church Kabati	Kabati area	N/A	Public purpose	Public purpose		N/A	N/A	100	75%	N/A	0.07
4_{18}	Unnamed facility	Junction of Mbaria Kaniu & A104	N/A	Public purpose	Public purpose		N/A	N/A	100	75%	N/A	0.02
4_{19}	County water treatment facility	near Hopell school	N/A	Public purpose	Public purpose		N/A	N/A	N/A	N/A	N/A	0.01
4_{20}	Cemetery at Site and service	Site and service	N/A	Public purpose	Public purpose		N/A	N/A	N/A	N/A	N/A	0.01
4_{21}	Part of LR no 13209	Next to Kihoto and sewer treatment plant	N/A	Public purpose	Public purpose		N/A	N/A	N/A	N/A	N/A	0.68
5_1	Commercial	Buffalo mall area	High	Commercial	Commercial/ offices		0.1	High-rise	600	75%	6	0.21
52	Commercial	1st 3 rows of Viwandani along Moi Avenue	High	Commercial	Commercial/ offices		0.1	High-rise	600	75%	6	0.23
5_3	Commercial	Between County Govt Offices & Kenyatta Av.	High	Commercial	Commercial/ offices		0.1	High-rise	500	75%	6	0.6
5_4	Current CBD	East of Mbaria Kaniu road	High	Commercial	Commercial		0.1	High-rise	600	80%	6	0.29

5_5	Front Kabati	From row of Kabati	High	Commercial & BCR	Commercial		0.1	High-rise	350	75%	6	0.20
5_6	Naivasha main Junction	Junction of Kenyatta avenue and Nakuru-Nairobi road	High	Commercial	Commercial		0.1	High-rise	600	75%	6	0.03
5_7	Kinamba	First row west of Kinamba	High	Commercial & BCR	Commercial & BCR		0.05	High-rise	240	75%	3	0.08
5_8	Kinamba	10 first row S.E of Kinamba-Karati road	High	Commercial & BCR	Commercial & BCR		0.05	High-rise	240	75%	3	N/A
5_9	Karati node	Karati centre	High	Commercial	Commercial		0.05	High-rise	240	75%	3	0.39
5_{10}	Karai 1st row		High	BCR	Commercial		0.05	High-rise	350	75%	3	0.88
5_{11}	Kinungi	Kinungi nodes	High	Commercial	Commercial		0.05	High-rise	240	75%	**3**	0.96
5_{12}	Ihindu	Past Kinungi towards Nairobi	High	Commercial	Commercial		0.05	High-rise	150	75%	3	0.13
5_{13}	Nyondia	Centre between Kinamba-Karati first row on both side of road	High	Commercial & BCR	Commercial		0.1	High-rise	150	75%	3	N/A
5_{14}	Karagita	Off Moi south lake road	High	Commercial & BCR	Commercial& BCR		0.05	High-rise		75	4	N/A
5_{15}	Part of LR no 13209	Adjacent to Kihoto & Sewer plant	High	Agricultural	Commercial, offices & public purpose		0.045	High-rise	50-150	35-75%	6	N/A
5_{16}		Between railway and golf club	High	Commercial & BCR	Commercial & light Industrial		0.1	High-rise	150	75%	6	0.23
5_{17}	Kayole	Along Nakuru Nairobi highway	High	Commercial & BCR	Commercial& BCR		0.05	High-rise		75	4	N/A
6_1	Sewer treatment plant	next to train station	N/A	public utility	public utility		N/A	N/A	N/A	N/A	N/A	0.6
6_2	Dump site	at Kayole	N/A	public utility	public utility		N/A	N/A	N/A	N/A	N/A	0.4
7_1	Oserian Airstrip	Oserian Airstrip	N/A	Airstrip (private)	Airstrip (private)		N/A	N/A	N/A	N/A	N/A	0.17
7_2	Karagita Airstrip	Karagita Airstrip	N/A	Air strip	Air strip		N/A	N/A	N/A	N/A	N/A	0.13
7_3	Kinangop bus park	Along Mbaria Kaniu	N/A	Transport	Transport		N/A	N/A	N/A	N/A	N/A	0.02
7_4	Nairobi bus park	Along Kenyatta Avenue	N/A	Transport	Transport		N/A	N/A	N/A	N/A	N/A	N/A
8_1	Kihoto Public space	Area Kihoto adjacent to the school	N/A	Unutilized	Public purpose		N/A	N/A	N/A	N/A	N/A	N/A
9_2	Agricultural	At view point to the right hand side on entry to Naivasha	Low & medium	Agriculture & Residential	Agriculture & Residential		0.4	N/A	N/A	N/A	N/A	11.96
9_3	Agricultural	Agricultural farm next to Oserian Hill with Residential	Low & medium	Agricultural &Residential	Agriculture & Residential		2	N/A	N/A	N/A	N/A	4.80
9_4	Malewa &Marura Farm	west of A 104	Low (Large scale)	Agriculture	Agriculture		4	N/A	N/A	N/A	N/A	54.51
9_5	Stockman Rosen	next to Kongoni centre	Agriculture	Agriculture & Eco Tourism			2	N/A	N/A	N/A	N/A	N/A
9_6	Agri around Morendati& Flower business park	east of A 104	Low (Large scale)	Agriculture	Agriculture		2	N/A	N/A	N/A	N/A	104.19
9_7	Gatamaiyu	Next to Morendati and part of Gilgil	Medium	Agricultural	Agricultural		0.4	N/A	N/A	N/A	N/A	15.98
9_8	Karati area	West of Kinangop road and east of Gatamaiyu	Medium	Agricultural	Agricultural		0.4	N/A	N/A	N/A	N/A	29.05

9_9	Kedong Ranch	Kedong Ranch	N/A	Agriculture	Agriculture		2	N/A	N/A	N/A	N/A	42.05
9_{10}	Karuturi Rift farm	along Moi South Lake next to Kedong	N/A	Agriculture	Agriculture		4		N/A	N/A	N/A	24.47
9_{11}	Kinamba-Ndoroto, Muteithia	east of Kinangop road up to Ndoroto	N/A	Agriculture	Agriculture		0.4	N/A	N/A	N/A	N/A	62.77
9_{12}		east of A104 up to Kinangop road junction	N/A	Agriculture	Agriculture		0.4	N/A	N/A	N/A	N/A	17.14
9_{13}	Agric. Kongoni Ranch	Along Moi North Lake Rd	Large scale	Agriculture	Agriculture		2	Bungalow no flats	N/A	N/A	N/A	14.22
9_{14}	Agri Shalimar	Opposite Kasarani	Large scale	Agriculture	Agriculture		1	Bungalow no flats	N/A	N/A	N/A	10.6
9_{15}	Mbaruk Agric.	Agricultural at Mbaruk next to Great Rift	Large scale	Agriculture	Agricultural		2		N/A	N/A	N/A	18.44
9_{16}	Ndabibi Kamuhuti	Off Moi North Lake Rd	Small Scale	Agricultural	Agricultural		0.4	Bungalow no flats	N/A	N/A	N/A	0.45
9_{17}	Mwiciringiri - Nyamathi	east of A104 up to Mai Mahiu road	Small Scale	Agricultural	Agricultural/		0.4	Bungalow no flats	N/A	N/A	N/A	72.81
9_{18}	Along Mai Mahiu	East of Longonot gate, west side op Mai Mahiu road	Small Scale	Agricultural	Agricultural/		0.4	Bungalow no flats	N/A	N/A	N/A	11.61
9_{19}	Agricultural	Next to Karagita along Moi south lake road	Small Scale	Agricultural	Agricultural/		0.4		N/A	N/A	N/A	0.45
9_{20}	Agricultural	East of Moi north lake rd. and Kongoni ranch next to lake	Large scale	Agricultural	Agricultural		2	Bungalow no flats	N/A	N/A	N/A	23.85
9_{21}	Agricultural	Btwn Karagita and villa view along Moi south lake road	Small Scale	Agricultural	Agricultural		0.4	Bungalow no flats	N/A	N/A	N/A	1.79
9_{22}	Agricultural	Junction of Moi south lake road and Mai Mahiu	Small Scale	Agricultural	Agricultural		0.4	Bungalow no flats	N/A	N/A	N/A	0.63
9_{23}	Agricultural undeveloped	Next to Hopewell	Large scale	Agricultural	Agricultural		0.4	Bungalow no flats	N/A	N/A	N/A	0.08
10_1	Part of Mundui farm	Agricultural Kongoni lodge	Large Scale	Agriculture	Eco-tourism		2	No high-rise	50%	35%	N/A	15.95
10_2	Agricultural	Agricultural next to Kongoni resort	Large scale	Agriculture	Agriculture & Eco-tourism		2	No high-rise	50%	35%	N/A	25.57
10_3	Agricultural	Agriculture around crater lake east of north lake road	Large scale	agriculture	Agricultural & Ecotourism		2	No high-rise	50%	35%	N/A	19.65
10_4	Oserian farm	Oserian farm	large scale	agriculture	agriculture		2	No high-rise	50%	35%	N/A	20.12
10_5	South lake flowers farm	North Side of Moi South Lake	large scale	Floriculture & Hotels	Agriculture & Hotel		2	No high-rise	50%	35%	N/A	0
11_1	Lake Oloiden		N/A	Conservancy	Conservancy & Recreational		N/A	N/A	N/A	N/A	N/A	7.68
11_2	Lake Naivasha		N/A	Conservancy	Conservancy		N/A	N/A	N/A	N/A	N/A	15.833
11_3	Olesuswa conservancy		N/A	Conservancy	Conservancy		N/A	N/A	N/A	N/A	N/A	12.47
11_4	Crater Lake	Along Moi North Lake Rd	N/A	conservation	Conservation and Eco-tourism		N/A	N/A	N/A	N/A	N/A	0.14
11_6	lake Swamp	Lake Swamp in Marula Area	N/A	Swamp	Conservancy &Recreational		N/A	N/A	N/A	N/A	N/A	21.87
11_7	undeveloped plot along A104	Next KWS east of A104	N/A	Agricultural/ conservation	Agricultural/ conservation		N/A	No developments	N/A	N/A	N/A	5.22

ANNEX 2: APPROVAL CONDITIONS

1. **Roads**

1. The proposed cul-de-sac/road serving the development to be constructed to adoptive/non adoptive/murram standards including surface drainage and street lighting. Plans and specifications to be submitted for approval by the director of roads
2. Vehicular access to all subplots……to be from……and constructed to the satisfaction of the director of roads
3. Subplots……to be provided with a combined access from…….road. Form of application for permission to construct plot access in a public road to be obtained from the director of roads
4. Vehicular plot entrance to…….will not be permitted
5. ……..truncations to be provided at the junction with……road
6. A…….metre wide strip of land along……road to be surrendered to the government free of cost
7. A comprehensive surface water drainage scheme to be submitted and implemented to the satisfaction of director of roads
8. A …..Metre wide drainage way leave to be provided as shown on the deposited plan
9. Area of land coloured blue on the deposited plan to be surrendered to the government free of cost
10. Road realignment and surrender to be effected on the ground as per the approved subdivision scheme and in alignment with adjacent plots
11. Construction of any building or boundary wall/hedge should not encroach on to road reserve
12. Survey plan showing surrender approved by the director of survey to be attached before final approval
13. Provide a…….. Metre wide riparian way leave along……..river.

2. **Water**

1. Application for water supply to each subplot to be made to the Director [Water & Sewerage Company] and his conditions for such supply to be met.

2. Existing water main passing through the plots as shown on the proposed plan to be realigned at the developer's expense and to the satisfaction of the director [Water and Sewerage Company] and way leave to be transferred to the subplots as appropriate.

3. The easement for the existing water main is/are to be transferred to the subplots.

4. A comprehensive water reticulation to be provided. Plans and specifications to be approved by Nakuru County

3. **Sewer**

1….Metres diameter sewer/s to Nakuru County standards to be extended to serve all subplots. Plans to be submitted to the city county for approval

2. Sewers serving subplot:……to be realigned.

3. Civil engineering drawings and specifications to be submitted to the water and sewerage company for approval.

4. Appropriate sewer way leave to be given/obtained as shown on the plans along the existing/proposed sewer where applicable.

5. Existing sewer with its diameter direction of flow and way leave to be shown.

4. **Change/Extension of Use Conditions Of Approval**

1. Submission of satisfactory building plans within one year and completion of construction within two years otherwise the approval lapses.
2. Payment of revised ground rent as will be determined by the Government Chief Valuer of the Ministry of Lands.
3. Payment of revised rates as will be determined by the Chief Valuer – Nakuru County.
4. Subject to the plot not constituting part of the disputed public/private utility land/Allocation.
5. Subject to compliance with Section 36, 41 and 52 of the Physical Planning Act & Urban Areas & Cities Act & other relevant statues.
6. Subject to compliance with the approved zoning policy for the area.
7. Subject to surrender of ……..metres for road widening
8. Subject to surrender of……..by ……..metre road truncation
9. Subject to provision of appropriate setback (s) as per rezoning/SPs.
10. Subject to provision of adequate and functional on-site parking to the satisfaction of the Director of Roads.
11. Subject to the development being limited to specified No. of cottages as per the policy.
12. Subject to professional office being limited to …….% of the principal residential use approved.
13. Subject to commercial development being limited to ground and first floor only.
14. Subject to each unit being limited to a minimum plot size of ….. Ha.
15. Subject to one dwelling unit of …… Ha,
16. Subject to the development observing …… Ha. Per unit.
17. Subject to the development being limited to …… levels.
18. Subject to the development being limited to ……. % principal use.
19. Subject to the development being maintaining the requisite of 3m, 6m, 9m building line as per the statues.
20. Subject to no loud music/noise as stipulated in the EMCA.
21. Subject to comprehensive handling of clinical waste as recommended by the statues.
22. Subject to obtaining practicing license from the medical practitioners licensing board.

23. Subject to limitation of the number of children as per the recommendation of the Public Health Act &M.O.H
24. Subject to submission and implementation of traffic management plan to the satisfaction by the Director of Roads-Nakuru County.
25. Subject to adherence to the C.C.K conditions as per the approved statues.
26. Subject to the flats /serviced apartments being limited to ……% of the approved plinth area and office being limited to ……% with clear separation of the functions of the two uses.
27. Subject to obtaining of approval from NEMA for installation and use of Bio-digester as an alternative waste disposal systems in accordance with policy and statues.
28. Subject to no total re-development.
29. Subject to the development maintaining the residential character and densities of the area.

5. **Land Use Plans**

1. Submission of civil engineering drawings to the chief officer, roads, transport and public works for roads and surface drainage works within 6 months
2. Residential shall observe a ground coverage of …..% and plot ratio of ….%.Commercial building shall observe ground coverage of ……% and plot ratio of ….%
3. Reservation of adequate land for public amenities (Planning Handbook)
4. Compliance to WARMA guidelines on appropriate river riparian reserve
5. Submission of a traffic study report
6. Undertaking an EIA and obtain NEMA license before commencement of any work
7. Surrender the freehold title in exchange of the 99 year leasehold title
8. Subject to compliance with County Spatial plan zoning guidelines
9. Subject to provision of appropriate setback(s) as per zoning plan
10. Subject to provisions of adequate and functional onsite parking to the satisfaction of the County Government of Nakuru
11. Submission of detailed plans/layout of each zone to the county before approval of building plans
12. Development of Physical infrastructure to the county adoptive standards before developments
13. The public amenities should be reserved and developed as per the SP
14. Ensure no encroachment onto road reserve or way leave

6. **Subdivision**

1. Payment of revised ground rent as will be determined by the Government Chief Valuer of the Ministry of Lands.
2. Payment of revised rates as will be determined by the Chief Valuer – Nakuru County.
3. Subject to the plot not constituting part of the disputed public/private utility land/Allocation.
4. Subject to compliance with Section 36, 41 and 52 of the Physical Planning Act & Urban Areas & Cities Act & other relevant statues.
5. Subject to compliance with the approved zoning policy for the area.
6. Subject to provision of cul-de-sac as indicated on the attached schematic layout of the proposed development.

7. Subject to the development observing …….. Ha. Per unit.
8. Surrender … metres for road widening along……
9. Direct access to……..road will not be permitted.

7. **Regularization Standards**

1. Subject to structural stability of existing building being verified/confirmed to the satisfaction by the Director of Public works.
2. Subject to the plot not constituting part of the disputed public/private utility land/Allocation.
3. Subject to Environmental Audit
4. Surrender ……metres for road widening along……

ANNEX 3: APPROVAL FORMS

Agenda item no……..

Subdivision comment sheet

Plot/L.R. NO……..…
Area……..…road……..…
Total plot size……minimum plot size…….
No of sub-plots……..….reg. No……
Date submitted……
Agent's name……..……
Address/email/phone no…….……
Owner……..……
Date circulated……

Department	**Planning**			**Survey**	**Ph**	**W&s**		**Tc**	
Section						W	S		Remarks
Room no									
Received									
Cleared									
Signature									
Status									
Received									
Cleared									
Signature									
Status									
Rates									

The following plan of subdivision is recommended to the government for approval subject to the following conditions:

Subdivision certificate inspection sheet

1. Plot/L.R.No……...
   Road……..…(estate)
2. Final approval/partial release recommended on…… (date)
   Ref.No……
3. Final approval/partial release approved on……..….
   Date, cl. Ref.No……
4. No. Of subplots released……..(%)
5. No. Of subplots remaining……..……...(%)
6. Subdivision certificate fee KShs……
   Receipt no……date……
7. Subdivision certificate no…….
   Issued no……

8. Outstanding rates cleared…….(yes/no)

9. Checked by ……name

signature date

10. Confirmed by :…….....

Signature date

11. Certificate issued by: …….....

Signature date

ANNEX 4: PROPOSED PROJECTS FOR INVESTMENT (2016-2034)

No.	Project Title	Current Status	Timeframe	Financing Agency	Implementing Agency	Cost Estimate Ksh. (Millions)	Remarks
A	**CAPACITY BUILDING**						
1.	Procurement of GIS Equipment and Training	Proposed	Short term	Ministry of Land, Housing and Urban Development	County government	13.0	To build capacity in management
2.	Capacity Development for skill enhancement	Proposed	Immediate and Short-long term	All concerned	County government	50.0	All staff and community to be trained appropriately
3.	Personal emoluments for the staffing of the proposed planning office	Proposed	Immediate and Short-long term	All concerned	County government	1,102.0	
4.	Pre-feasibility and Feasibility	Proposed	Immediate and Short-long term	All concerned	County government	75.0	All staff and community to be trained appropriately
B	**TRANSPORTATION**						
	QUICK WINS						
1.	Enforcement of Traffic Regulations	Not effectively implemented	Quick win	National and County Governments	National and county governments		
2.	Roads marking /signage on A104, Mai Mahiu – Naivasha, Moi South Lake (D323), Moi North Lake and Naivasha-Kinangop Roads	Are major roads yet not marked and are without signage	Quick win	County Government	County Government	125.0	
3.	Construction of Bodaboda Sheds	Proposed	Quick win	County Government	County Government	1.0	
4.	Build Street seats	Proposed	Quick win	County Government	County Government	2.0	
	MAJOR ROADS						

1.	Planning and design		Continuous	County Government	County Government	120.0	
2.	Road bypass (7.4 KM)	Proposed	Medium Term	KURA	KURA	595	
3.	Upgrading A104 to dual carriage road	Plans and Modalities completed	Short to Medium Term	World Bank/IDA	KeNHA	-	National government
4.	Develop 3No. Interchanges at Kenyatta Avenue-A104, Moi South lake-Mai Mahiu road & Nyamathi link road Junctions	Road junctions causing traffic congestion and accidents	Short to Medium term	KeNHA/KURA/County Government	KeNHA/KURA/ Contractor	240	National government
	LINK ROADS TO BE CONSTRUCTED						
1.	Mirera Kedong	Non-existent Proposed to be 30 m wide and 3.6 km long	Short to Medium term	KURA/County Government	KURA/ Contractor	180.0	
	ROADS PROPOSED FOR TARMACKING						
1.	Kabati Road	Earth Road	Short term	KURA/County government	KURA/Contractor	120.0	
2.	Lake View Road	Earth Road	Short term	KURA/County government	KURA /Contractor	130.0	
3.	Kinamba-Kwa white	Earth Road	Short term	KURA/County government	KURA/ contractor	105.0	
4.	Kayole Road	Earth Road	Short term	KURA/County government	KURA/contractor	110.0	
5.	Naivasha Dumpsite Road	3.94 km Long Motorable Track	Short term	KURA/County government	KURA/contractor	197.0	
6.	Kinamba-Kirima	Earth road	Short term	KURA/County government	KURA/contractor	115.0	
	ROADS PROPOSED FOR EXPANSION AND TARMACKING						
1.	Expand Moi North Lake road from 15 m to 30 m	15 m wide & 31.3 km long	Medium term	KURA/County government	KURA/ contractor	3750.0	

2.	Expand Karagita-Karai road from 12 m to 25 m	12 m wide and 5.6 km long	Short term	KURA/County government	KURA/contractor	700.0	
3.	Expand Mwiciringiri-Nyamathi road from 9 m to 25 m	9 m wide and 7.4 km long	Short term	KURA/County government	KURA/contractor	1233.0	
4	Expand Unity farm-Kayole road from 9 m to 20 m	9 m wide and 4.3 km long	Short term	KURA/County government	KURA/contractor	573.0	
5	Expand Kinamba-Ndoroto-Kinangop road from 12 m to 20 m	12 m wide and 11.5 km long	Short term	KURA/County government	KURA/contractor	1,150.0	
6	Expand Kayole-Mutethia K17 road from 9 m to 18 m	9 m wide and 6.0 km long	Short term	KURA/County government	KURA/contractor	720.0	
7	Expand Mwiciringiri-A104 road 9 m to 18 m	9 m wide and 6.2 km long	Short term	KURA/County government	KURA/contractor	744.0	
8	Expand A104-ndoroto-kinamba road from 9 m to 18 m	9 m wide and 8.9 km long	Short term	KURA/County government	KURA/contractor	1,068.0	
9	Expand A104-kinamba road 12 m to 18 m	12 m wide and 9.5 km long	Short term	KURA/County government	KURA/contractor	855.0	
10	Expand Kinangop-Ndoroto-Kinamba road from 15 m to 20 m	15 m wide and 6.2 km long	Medium term	KURA/County government	KURA/contractor	496.0	
11	Expand Kinangop road through Kwa White from 9 m to 20 m	12 m wide	Medium term	KURA/County government	KURA/contractor	1,600.0	
12.	Expand Karati-prison-Marula road from 12 m to 20 m	12 m wide and 8.7 km long	Medium term	KURA County government	KURA/contractor	870.0	
13.	Expand Gatamayu-Morendati road 9 m to 20 m	9 m wide and 9.3 km long	Medium term	KURA/County government	KURA/contractor	1,240.0	
14.	Expand Moi S.Lake road-Longonot gate-Mai Mahiu road from 12 m to 18 m	- 12 m wide and 11.3 km long - Connects	Medium term	KURA/County government	KURA/contractor	1,017.0	

		CBD to southern parts of Naivasha					
15	Expand L2-L3-Kayole-Mwiciringiri road from 9 m to 15 m	9 m wide	Medium term	KURA County government	KURA/contractor	900.0	
16.	Expand Marula farm-Lake Naivasha road from 6 m to 18 m	6 m wide and 7.1 km long	Medium term	KURA County government	KURA/contractor	1,278.0	
17.	Expand Moi south Lake-Karagita airstrip-Mai Mahiu road from 9 m to 15 m	9 m wide and 3.9 km long, partly tarmacked	Medium term	KURA County government	KURA/contractor	390.0	
18.	Expand Longonot –A104 road 9 m to 25 m	9 m wide and 6.4 km long	Medium term	KURA County government	KURA/contractor	1,066.0	
19.	Moi South Lake-Longonot gate to Mirera from 9 m to 20 m	9 m wide and 9.8 km long	Medium term	KURA County government	KURA/contractor	1,306.0	
20.	Moi south lake near DCK – Kedong to 20 m	5.1 km long	Medium term	KURA County government	KURA/contractor	305.0	
21.	L2-L3 from 9 m to 20 m	9 m wide and 4.2 km long	Medium term	KURA County government	KURA/contractor	560.0	
	AREAS/POINTS PROPOSED FOR FOOTBRIDGE CONSTRUCTION						
1.	Milimani primary	Located along Kenyatta Ave. & prone to accidents	Short/ Medium term	KURA/County government	KURA/contractor	15.0	
2.	Lakeview-Kabati						
3.	Kayole-Maryland	Located along A104 road & prone to accidents					
4.	Karai						
5.	Nyamathi						
6.	Kinungi						
	ROADS PROPOSED FOR CONSTRUCTION OF WALKWAYS						

1.	Kenyatta Avenue	6.21 km long and tarmacked Lack NMT facilities	Short/ Medium term	KURA/County government	KURA/contractor	62.0	
2.	Mbaria-Kaniu road	2.44 Km long and tarmacked Lack NMT facilities	Short/ Medium term	KURA/County government	KURA/contractor	24.0	
3.	Kariuki-Chotara	1.28 km long and tarmacked Lack NMT facilities	Short/ Medium term	KURA/County government	KURA/contractor	13.0	
4.	Mama-Ngina road	3.61 km long and tarmacked Lack NMT facilities	Short/ Medium term	KURA/County government	KURA/contractor	36.0	
5.	Lake View Road	Lack NMT facilities	Short / Medium term	KURA/County government	KURA/contractor	20.0	
6.	Kabati Road	Lack NMT facilities	Short / Medium term	KURA/County government	KURA/contractor	20.0	
	TERMINAL FACILITIES						
1.	Construct 6No. terminals at Karagita, Kayole, Kinungi, Kinamba, Ihindu and Kihoto	Proposed	Short to medium term	KURA/County government	KURA/contractor	12.0	Purchase of Land necessary.
2	Develop 9No. bus stops at Karai, Nyamathi, DCK, Kamere, Kasarani, KCC, Gatamaiyu, Kwa white and Kirima	Proposed	Short/ Medium term	KURA/County government	KURA/contractor	5.0	
3.	Construction of shelter/shades at Nakuru, South Lake and Nairobi	Proposed	Short term	County government	County government	1.5	

	stages						
	RAILWAY, AIR AND WATER TRANSPORT						
1.	The Standard Gauge Railway	Planned by the National government	Medium term/long term	GOK/Chinese Government	Kenya Railways Corporation/ County government	-	National government responsibility
2.	Extension of SGR into proposed industrial area	Proposed by the County government	Medium term/ long term	GOK/Chinese government	Kenya Railways Corporation/ County government	-	National government responsibility
3.	Airport Feasibility Study and construction	Proposed	Long term	National government	Kenya Airport Authority/County government	350.0	Faster communication and economic activities increased tourism activities
4.	Construct 4No. water transport terminals at Central landing beach, Karagita, Kamere and Kasarani	Proposed	Medium/ Long term	National government	Kenya Ports Authority/ County government	8.0	
	OTHER TRANSPORTATION PROJECTS						
1.	Installation of Traffic Lights and Signals in major Junctions in the town (5No.)	On-going	Short/ Medium term	County government	County government	100.0	
2.	Construction and maintenance of street lights - (Tarmac roads)	On-going	Short/ Medium term	County administration	County government	950.0	To improve security; enhance business and encourage 16-24hours economy
3.	Construction and maintenance of high mast floodlights (10No,)	On-going	Short term	County administration	County government	10.0	To improve security; enhance business and encourage 16-24 hours economy.

4.	Construction of drainage channels along all CBD roads, A104 road, Moi South Lake road, Moi North lake road & link roads	Proposed	Short and medium term	KURA/KeNHA/County Gov't	Contractor KeNHA/KURA/	250.0	
C	**WATER AND SANITATION**						
1.	Develop/preserve a reliable water supply source from Aberdare ranges	Proposed	Medium/ Long term	County/ National Government	NEMA/WSB/WRMA County Government	50,000.0	To improve and maintain constant water supply to Naivasha and serve the industrial Park
2.	Extend water connection to un-served areas	Proposed	Medium term	County government	County government/NAIVWASCO	120.0	
3.	Increase number of water kiosks in the residential areas	Proposed	Medium	County government private sector	County government/WRMA/WRUAs	50.0	
4.	Construction of storm water drainage	Proposed	Short term and medium	County government	County/ contractor	300.0	
5.	Purchase 10 acres of land for new dumpsite	Provide space for Kayole dumpsite relocation(proposed)	Medium term	County government	County government	50.0	Kayole dumpsite not appropriate
6.	Fencing the Kayole dumpsite	proposed	Short term	County government	County government	2.0	Fencing the site is necessary
7.	Extension of sewerage networks to un-served areas	proposed	Medium term/continuous	County government	County government/contractor NAIVWASCO	500.0	
8.	Expand the existing sewerage plant	Proposed	Medium term	County government	County government/contractor NAIVWASCO	25.0	
D	**ENERGY**						

1.	Provision of electricity in the informal settlements	on-going	Short term	KP and KISIP	Kenya power	0	Implemented by KISIP
2.	Geothermal Power Exploration – Ol Karia	Planned	Long Term	National Government/PPP	National Government/ County Government/PPP	750.0	
3.	Rural Electrification Programme	Planned	Short/ Medium Term	County Administration	National Government/ County Government	20.0	
4.	Promotion and Establishment of Renewable Energy; Solar, Wind Mills and Biogas	Request being prepared	Short/ Medium Term	County Administration	National Government/ County Government	500.0	National Project
E.	**INDUSTRIAL DEVELOPMENT**						
1.	Development of an Industrial Park	Request being prepared	Short/ Medium Term	County Administration	County Administration	1,000.0	purchase 20 acres, complete infrastructural dev. PPP
F.	**ENVIRONMENT**						
1.	Greening Naivasha Town	Planned	Short/ Medium Term	County Administration	County Administration	20.0	
G.	**HEALTH**						
1.	Improving Level 5 referral hospital	Proposed	Short term	County government	County government	120.0	
2.	Upgrade 1 Health facility to a county hospital	Proposed	Medium term	County government Private sector	County government	70.0	
3.	Construction of 3No. mortuaries	Proposed at Marula, Malewa or Upper	Medium term	National and county government	County admin.	70.0	

		Mwiciringiri					
4.	Purchase of 2No. Ambulances	Proposed	Short Term	County Government	County Government	6.0	
H	**EDUCATION**						
1.	Improvement of ECDE infrastructure	Proposed	Short to Long Term	County Government/CDF	County Government	25.0	
2.	Construction of 15 new primary schools	proposed	Short term to medium term	National and county government	County administration	300.0	Expansion of existing schools, Private sector participation
3.	Improvement of secondary schools (10No.)	Proposed	Short term to medium	County admin and parents	County administration School administration	100.0	
4	Construction of a Centre of excellence	Proposed	Medium Term	County Government	County Government	50.0	
5.	New Tertiary Institutions (3No.)	Proposed	Medium Term	County Government	County Government	105.0	
6.	New Special Schools (2No.)	Proposed	Medium / Long Term	County Government	County Government	70.0	
I	**RECREATIONAL**						
1.	Construction of Naivasha Sub county social Hall	Proposed	Short term	County admin	County government/ department of social services	12.0	
2.	Construction of Naivasha stadium	Proposed	Medium term	County admin	County government/ department sports and culture	55.0	28 acres available, poor management.
3.	Building 2no. symbolic monuments	Proposed at the CBD	Short term	County admin	County government	5.0	
4.	Construction of 1No. community centre	Proposed at the planning neighbourhood	Medium term	County government	County governments	35.0	

J.	**OTHER COMMUNITY FACILITIES**						
1.	Equipping existing fire station and Training	Proposed	Short term	National/County government	County government	50.0	
2.	New Fire station at proposed Mai Mahiu (industrial Park)	Proposed	Medium term	National/ county government	County government/contractor	150.0	To improve fire response within the planning area
3.	New fire station and emergency response centre	Proposed at Viwandani and South Lake	Medium term	National government/county government	County government/contractor	175.0	

ANNEX 5: PHASED OUT DEVELOPMENT PROJECTS

Quick wins

		Estimated Cost of Projects in Millions of Shillings			
No	**Title of Project**	**Immediate Term (Quick Wins)**	**Short Term**	**Medium Term**	**Long Term**
	QUICK WINS	**2016-2017**	**2017-2022**	**2022-2027**	**2027-2034**
1.	Enforcement of Traffic Regulations	0.0	0.0	0.0	0.0
2.	Enforcement of Zoning Regulations	0.0	0.0	0.0	0.0
3.	Roads marking /signage	1.5	0.0	0.0	0.0
4.	Street naming	1.5	0.0	0.0	0.0
5.	Construction of Bodaboda Sheds	1.0	0.0	0.0	0.0
6.	Construct Street seats	2.0	0.0	0.0	0.0
7.	Regulation of hawking business	0.0	0.0	0.0	0.0
8.	Identification of Land for public utilities	1.0	0.0	0.0	0.0
9.	Identification of service lanes to facilitate commerce	0.0	0.0	0.0	0.0
10.	Surveying of informal roads	0.0	0.0	0.0	0.0
	Sub Total	**7.0**	0.0	0.0	0.0

Short, Medium, Long term Projects

No.	Title of Project	Short Term	Medium Term	Long Term
A.	**CAPACITY BUILDING**			
	Time frame	**2016 – 2022**	**2022 - 2027**	**2027 - 2034**
1.	Procurement of GIS Equipment and Training	8.0	2.0	3.0
2.	Capacity Development for skills' enhancement	50.0	50.0	50.0
3.	Personal Emoluments for the Staffing of the Proposed Planning Office	408.0	290.0	406.0
4.	Feasibility Studies	25.0	25.0	25.0
	Sub Totals	**491.0**	**367.0**	**484.0**
B.	**TRANSPORTATION SECTOR**			
	MAJOR ROADS			
1.	Planning and Design	50.0	40.0	30.0
2.	Road bypass (7.4 KM)	0.0	595.0	0.0
3.	Upgrading A104 to dual carriage road	National Project	National Project	National Project
4.	Develop 3No. Interchanges at Kenyatta Avenue-A104, Moi South lake-Mai Mahiu road & Nyamathi link road Junctions	160.0	80.0	0.0
	LINK ROADS TO BE CONSTRUCTED			
1.	Mirera Kedong Non-existent Proposed be 30 m wide and 3.6 km long.	0.0	180.0	0.00
	ROADS PROPOSED FOR TARMACKING			
1.	Kabati Road 1.6 Km (Earth Road)	80.0	0.0	0.0
2.	Lake View Road 0.9 Km (Earth Road)	45.0	0.0	0.0
3.	Kinamba-Kwa white, 9.0 Km (Earth Road)	450.0	0.0	0.0

4.	Kayole Road, 6.0 Km (Earth Road)	300.0	0.0	0.0
5.	Naivasha Dumpsite Road (3.94 km Long Motorable Track)	197.0	0.0	0.0
6.	Kinamba-Kirima 14 Km (Earth road)	700.0	0.0	0.0
	ROADS PROPOSED FOR EXPANSION AND TARMACKING			
1.	Expand Moi North Lake road from 15 m to 30 m (31.3 km long)	0.0	2,000.0	1,750.0.0
2.	Expand Karagita-Karai road from 12 m to 25 m (5.6 km long)	700.0	0.0	0.0
3.	Expand Mwiciringiri-Nyamathi road from 9 m to 25 m (7.4 km long)	0.0	1,233.0	0.0
4	Expand Unity farm-Kayole road from 9 m to 20 m (4.3 km long)	573.0	0.0	0.0
5	Expand Kinamba-Ndoroto-Kinangop road from 12 m to 20 m (11.5 km long)	1,150.0	0.0	0.0
6	Expand Kayole-Mutethia K17 road from 9 m to 18 m (6.0 km long)	720.0	0.0	0.0
7	Expand Mwiciringiri-A104 road 9 m to 18 m (6.2 km long)	0.0	744.0	0.0
8	Expand A104-Ndoroto-Kinamba road from 9 m to 18 m (8.9 km long)	0.0	1,068	0.0
9	Expand A104-Kinamba road 12 m to 18 m (9.5 km long)	855.0	0.0	0.0
10	Expand Kinangop-Ndoroto-Kinamba road from 15 m to 20 m (6.2 km long)	0.0	496.0	0.0
11	Expand Kinangop road through Kwa White from 9 m to 20 m (10.1 m long)	0.0	1,346.7	0.0
12.	Expand Karati-prison-Marula road from 12 m to 20 m (8.7 km long)	0.0	870.0	0.0
13.	Expand Gatamayu-Morendati road 9 m to 20 m (9.3 km long)	0.0	1,240.0	0.0
14.	Expand Moi S. Lake road-Longonot gate-Mai Mahiu road from 12 m to 18 m (11.3 km long & Connects CBD to southern parts of Naivasha)	0.0	1,017.0	0.0
15	Expand L2-L3-Kayole-Mwiciringiri road from 9 m to 15 m (8.9 Km long)	0.0	0.0	890.0
16.	Expand Marula farm-Lake Naivasha road from 6 m to 18 m (7.1 km long)	0.0	1,278	0.0
17.	Expand Moi south Lake-Karagita airstrip-Mai Mahiu road from 9 m to 15 m (3.9 km long, partly tarmacked)	0.0	390.0	0.0
18.	Expand Longonot –A104 road 9 m to 25 m (6.4 km long)	0.0	1,066	0.0
19.	Moi South Lake-Longonot gate to Mirera from 9 m to 20 m (9.8 km long)	0.0	1,306.0	0.0
20.	Moi south lake near DCK – Kedong (5.1 Km Long)	0.0	306.0	0.0
21.	L2-L3 from 9 m to 20 m (4.2 km long)	0.0	560.0	0.0
	AREAS/POINTS PROPOSED FOR FOOTBRIDGE CONSTRUCTION			
1.	Milimani primary	2.5	0.0	0.0
2.	Lakeview-Kabati	2.5	0.0	0.0
3.	Kayole-Maryland	0.0	2.5	0.0

4.	Karai	0.0	2.5	0.0
5.	Nyamathi	0.0	2.5	0.0
6.	Kinungi	0.0	2.5	0.0
	ROADS PROPOSED FOR CONSTRUCTION OF WALKWAYS			
1.	Kenyatta Avenue (6.21 km long and tarmacked Lack NMT facilities)	62.0	0.0	0.0
2.	Mbaria-Kaniu road (2.44 Km long and tarmacked Lack NMT facilities)	24.0	0.0	0.0
3.	Kariuki-Chotara (1.28 km long and tarmacked Lack NMT facilities)	13.0	0.0	0.0
4.	Mama-Ngina road (3.61 km long and tarmacked Lack NMT facilities)	36.0	0.0	0.0
5.	Lake View Road 0.9 Km (Lack NMT facilities)	9.0	0.0	0.0
6.	Kabati Road 1.6 Km (Lack NMT facilities)	16.0	0.0	0.0
	TERMINAL FACILITIES			
1.	Construct 6No. terminals at Karagita, Kayole, Kinungi, Kinamba, Ihindu and Kihoto	6.0	6.0	0.0
2	Develop 9No. bus stops at Karai, Nyamathi, DCK, Kamere, Kasarani, KCC, Gatamaiyu, Kwa white and Kirima	2.5	2.5	0.0
3.	Construction of shelter/shades at Nakuru, South Lake and Nairobi stages	1.5	0.0	0.0
	RAILWAY, AIR AND WATER TRANSPORT			
1.	The Standard Gauge Railway	National Gov't	National Gov't	National Gov't
2.	Extension of SGR into proposed industrial area	National Gov't	National Gov't	National Gov't
3.	Airport Feasibility Study and construction	0.0	0.0	350.0
4.	Construct 4No. water transport terminals at Central landing beach, Karagita, Kamere and Kasarani	0.0	4.0	4.0
	OTHER TRANSPORT PROJECTS			
1.	Installation of Traffic Lights system in major Junctions in Naivasha town	0.0	100.0	0.0
2.	Construction of street lights - (Tarmac roads)	500	450	0.0
3.	Construction of high mast floodlights (10No,)	0.0	10.0	0.0
4.	Construction of drainage channels along all CBD roads, A104 road, Moi South Lake road, Moi North lake road & link roads	200.0	50.0	0.0
	Sub Total	**6,835.0**	**16,448.2**	**3,024.0**
C.	**WATER AND SANITATION**			
1.	Develop/preserve a reliable water supply source from Aberdare ranges	0.0	30,000.0	20,000.0
2.	Extend water connection to un-served areas	0.0	120.0	0.0
3.	Increase number of water kiosks in the residential areas	0.0	50.0	0.0
4.	Construction of storm water drainage	200.0	100.0	0.0
5.	Purchase 10 acres of land for new dumpsite	0.0	50.0	0.0
6.	Fencing the Kayole dumpsite	2.0	0.0	0.0
7.	Extension of sewerage networks to un-served areas	0.0	350.0	150.0
8.	Expand the existing sewerage plant	0.0	25.0	0.0
	Sub Total	**202.0**	**30,695.0**	**20,150.0**

D.	**ENERGY**			
1.	Provision of electricity in the informal settlements	KISIP		
2.	Geothermal Power Exploration – Ol Karia	0.0	0.0	750.0
3.	Rural Electrification Programme	15.0	5.0	0.0
4.	Establishment of Renewable Energy; Solar, Wind Mills and Biogas projects	300.0	200.0	0.0
	Sub Total	**315.0**	**205.0**	**750.0**
E.	**INDUSTRIAL DEVELOPMENT**			
1.	Development of an Industrial Park	0.0	1,000.0	0.0
	Sub Total	**0.0**	**1000.0**	**0.0**
F.	**ENVIRONMENT**			
1.	Greening Naivasha Town	10.0	5.0	5.0
	Sub Total	**10.0**	**5.0**	**5.0**
G.	**HEALTH**			
1.	Improving Level 5 referral hospital	120	0.0	0.0
2.	Upgrade 1 Health facility to a county hospital	0.0	70.0	0.0
3.	Construction of 3No. cemeteries	0.0	70.0	0.0
4.	Purchase of 2No. Ambulances	6.0	0.0	0.0
	Sub Total	**126.0**	**140.0**	**0.0**
H.	**EDUCATION**			
1.	Improvement of ECDE infrastructure	15.0	5.0	5.0
2.	Construction of 15 new primary schools	100.0	100.0	100.0
3.	Improvement of secondary schools (10No.)	60.0	40.0	0.0
4	Construction of a Centre of excellence	0.0	50.0	0.0
5.	New Tertiary Institutions (3No.)	70.0	35.0	0.0
6.	New Special Schools (2No.)	35.0	35.0	0.0
	Sub Total	**280.0**	**265.0**	**105.0**
I.	**RECREATIONAL**			
1.	Construction of Naivasha Sub county social Hall	12.0	0.0	0.0
2.	Rehabilitation of existing Stadium	0.0	55.0	0.0
3.	Building 2No. symbolic monuments	5.0	0.0	0.0
4.	Construction of 1No. community centre	0.0	35.0	0.0
	Sub Total	**17.0**	**90.0**	**0.0**
J.	**OTHER COMMUNITY FACILITIES**			
1.	Equipping existing fire station and Training	0.0	50.0	0.0
2.	New Fire station at proposed Mai Mahiu (industrial Park)	0.0	0.0	150.0
3.	New fire station and emergency response centre (Viwandani and South Lake)	0.0	175.0	0.0
	Sub Total	**0.0**	**225.0**	**150.0**
	GRAND TOTAL	**8266**	**49435.2**	**24663**

Estimated cost of all the projects between 2015 and 2034 is Ksh. 82.4 billion

ANNEX 6: PROJECT IMPLEMENTATION MATRIX

Project Name	Objectives	Location	Implementing Agency(ies)	Roles of Implementing Agency(ies)	Resource Requirements	Implementation period
CAPACITY BUILDING						
Strengthening the Nakuru County Planning Department and training of all relevant personnel.	To build capacity for proper implementation of the ISUDP and subsequent plans	County Gov't Lands and Planning offices	County Gov't	- Equipping the department as necessary - Mobilizing the staff to be trained - Financing the process	- Finances - Human resource - Training space& equipment	Short term
Procurement of GIS Equipment and Training	To promote GIS Based planning in the county	County Gov't Lands and Planning offices	County Gov't	- Financing the project - Contracting the GIS equipment suppliers - Maintenance of the equipment - Mobilizing the staff to be trained	- Finances	Short term
TRANSPORTATION SECTOR						
Enforcement of Traffic Regulations	To regulate traffic rule violation and improve traffic movement and road safety	Entire planning area	Traffic police Road users	- Formulating adequate and effective traffic rules - Enforcing the rules - Observation of the traffic regulations	- Human resource	Continuous
2No. Road construction & rehabilitation projects	To improve road transport system To enhance movement of people and goods	Naivasha town	Planners and Engineers KeNHA/ KURA/County government Contractors and surveyors Residents/NG	- Planning and design of roads and surrounding land uses - Financing the projects - Identification and acquisition/ purchase of land - Contracting experts - Maintenance of the roads - Actual construction works - Contribution of resources e.g. money, labour,	- Land - Finances - Human resource	Medium term

			Os/CBOs	ideas etc.		
27No. Road expansion and tarmacking projects 3No. Interchanges 6No. Terminal facilities	To improve road transport system To enhance movement of people and goods	Entire planning area	Planners and Engineers KURA/County government Contractors and surveyors Residents/NGOs/CBOs	- Planning and design of roads and surrounding land uses - Financing the projects - Identification and acquisition/ purchase of land - Contracting experts - Maintenance of the roads - Actual construction works - Contribution of resources e.g. money, labour, ideas etc.	- Land - Finances - Human resource	Short, medium and long terms
Construction of an international airport	To improve air travel services	Location to be identified	Planners, architects and Engineers Kenya Airport Authority/ County government Contractors Residents/NGOs/CBOs	- Planning and design of airstrip and surrounding land uses - Financing the project - Contracting experts - Identification and acquisition/ purchase of land - Maintenance of the airstrip - Actual construction works - Contribution of resources e.g. money, labour, ideas etc.	- Land - Finances - Human resource	Short to medium term
WATER AND SANITATION SECTOR						
Develop/preserve a reliable water supply source from Aberdare ranges	To improve access to piped water supply by planning area residents	Entire planning area	Naivasha Water and Sewerage Company/ County Gov't Kenya Water	- Financing the project - Identifying and acquisition of land - Contracting experts - Help in financing	- Land - Finances - Human resource	Short and medium terms

Extend water connection to un-served areas Extension of sewerage networks to un-served areas Expansion of the existing sewerage treatment plant	To improve sanitation and sewerage services in the concerned areas		Trust Fund/ WARUAs Planners and Engineers Contractors Residents/NGOs/CBOs	the project - Planning and design works - Construction - Contribution of resources e.g. money, labour ideas etc.		
Construction of Solid Waste Management facilities	To improve solid waste management in the planning area	Entire planning area	County Gov't Contractors Residents/NGOs/CBOs Private solid waste management firms, Residents and CBOs/ Neighbourhood Youth Groups	- Financing the project - Identifying and acquisition of land - Contracting experts - Construction - Contribution of resources e.g. money, labour ideas etc. - Proper collection and disposing of solid waste	- Land - Finances - Human resource	Short term
COMMERCE, INDUSTRY AND TOURISM SECTOR						
Development of an Industrial Park	To enhance industrial productivity in the planning area	Location to be identified	Ministry of Industrialization & Enterprise Development/ County government Planners/ Architects	- Identification of ideal spaces/land and acquisition of the same - Financing construction of some of the plants and/or offering subsidies to private investors - Planning and design works	- Land - Finances - Human resource	Medium term

			Private investors/ Business groups Kenya Manufacturers Association (Naivasha Branch)	- Financing the construction and equipping them - Conducting the actual business - Financing the projects - Mobilizing members to invest in the ventures		
ENERGY SECTOR						
2No. electrification projects	To improve access to electricity in the planning area	Naivasha informal settlements	KISIP County government Kenya Power Residents and business people	- Financing the project - Help to identify land (way leave) and acquire the same - Help KISIP in organizing and monitoring the process - Establishment of electricity networks and supply of electricity - Electrical installation works in the homesteads & business premises	- Land - Finances - Human resource	Short to medium term
Geothermal Power Exploration –	To provide geothermal energy in the planning area	Ol Karia	Ministry of energy	- Financing the project		
ENVIRONMENT SECTOR						
Beautification and Greening Naivasha town	To improve the aesthetic value of Naivasha town	Naivasha town	County Gov't Landscape Architects/ contractors Private	- Financing the project - Supervision of works - Design and landscaping works - Sponsorship of landscaping sections of the	- Finances - Human resource	Short to medium term

			institutions	town		
HEALTH SECTOR						
4No. projects of, equipping health facilities	To enhance healthcare	Entire planning area	Ministry of Health/County government Resident Planners/ Architects Contractors	- Financing the project - Contribution of resources e.g. money, labour ideas etc. - Planning and Design works - Construction works	- Land - Finances - Human resource	Short to medium term
EDUCATION SECTOR						
Improvement of ECDE Infrastructure Construction of 15 New Primary School Improvement of Secondary Schools New Tertiary Institutions (3No.) including a public university	To meet future demand for education	Entire planning area	Ministry of Education, Science Technology/ County Gov't Constituency Development Fund Private institutions/religious institutions/ private individuals Planners/ Architects/ Contractor	- Funding the projects - Contracting experts and supervising works - Helping in funding the projects - Construction and running some of the schools - - Planning, design and construction works	- Land - Finances - Human resource	Short to medium to long term
COMMUNITY FACILITIES						
Construction of Naivasha Sub county social Hall Construction of Naivasha stadium	To promote social activities	Naivasha town	County Gov't Constituency Development Fund Planners/	- Funding the projects - Contracting experts and supervising works - Helping in funding the projects - Planning, design	- Finances - Human resource - Land	Short to medium term

Construction of 1No. community centre 3No. fire stations & an emergency response centre	To improve social-economic development in the planning area	Entire planning area	Architects/ Contractor	and construction works		

ANNEX 7: MONITORING & EVALUATION MATRIX

Project	Monitoring Institutions	Expected output(s)	Expected outcome(s)	Indicators of success
CAPACITY BUILDING SECTOR				
Strengthening the Nakuru County Planning Department and training of all relevant personnel.	County Government	Well-structured County Planning Department	- Adequate capacity for proper implementation of the ISUDP and subsequent plans - Properly trained county personnel	Proficiency in planning service delivery
Procurement of GIS Equipment	County Government	Adequate GIS Equipment	- GIS Based planning in the county	Adequacy of the GIS equipment and level of effectiveness in planning
TRANSPORTATION SECTOR				
Enforcement of Traffic Regulations	Traffic Police Department	Traffic Policy/ Rules and Regulations	- Reduced traffic rule violation - Improved traffic movement and road safety	Level of traffic rules observation and road safety
Project	**Monitoring Institutions**	**Expected output(s)**	**Expected outcome(s)**	**Indicators of success**
TRANSPORT SECTOR CONT'D				
2No. Road construction & rehabilitation projects 27No. Road expansion and tarmacking projects	KURA/KeNHA & County Government	Road network of adequate capacity and good condition	- Improved road transport system - Enhanced movement of people and goods	- Adequacy of road network - Ease of traffic circulation - Level of road safety - Quality of transport services
Construction of an international airport	Kenya Airports Authority/ & County Government	Higher capacity air strip	- Improved air transport services	
WATER & SANITATION				

Develop/preserve a reliable water supply source from Aberdare ranges Extend water connection to un-served areas	Naivasha Water and Sewerage Company/ RVWSB/County Gov't	Properly functioning town-wide water supply system	- Improved water supply	- Level of access to water and sewerage services - Level of sanitation
2No. projects on Improvement of sanitation and sewerage services		Adequate sewerage system	- Better sanitation in the planning area	
Construction of Solid Waste Management facilities	County Gov't	Adequate solid Waste Management facilities		
COMMERCE, INDUSTRY AND TOURISM SECTOR				
Establishment of 1No. industrial park	Ministry of Industrialization & Enterprise Development/ County government	Adequate operational industries	- Enhanced value addition to raw products - Increased employment opportunities - Improved household income - Improved government revenue	- No of industries established - Production levels in the industries - Employment levels in the industries - Income levels of workers
		Productive fish farms	-	
ENERGY SECTOR				
2No. electrification projects Geothermal Power Exploration	Kenya Rural Electrification Authority/ Kenya Power Ministry of energy	Increased coverage of electricity networks Functional geothermal power plant and energy supply system	- Improved access to electricity in the planning area - Reduced reliance on non-renewable energy sources - Increased energy supply	- Extent of access to electricity - Extent of access to geothermal power
ENVIRONMENT SECTOR				
Beautification and Greening Naivasha town	County government	Landscaped town	- Improve the aesthetic value of Naivasha town	- Extent of green areas in the town
HEALTH SECTOR				
4No. projects of equipping health facilities	County government	Sufficient health facilities	- Enhanced healthcare	- Sufficiency of health facilities - Quality of healthcare

EDUCATION SECTOR				
Improvement of ECDE Infrastructure Construction of 15 New Primary School Improvement of Secondary Schools New Tertiary Institutions (3No.) including a public university	Ministry of Education, County Government, School administrations	Sufficient education facilities	- Efficient access to education	- Sufficiency of education facilities - Quality of education
COMMUNITY FACILITIES				
Construction of Naivasha stadium Construction of 1No. community centre 3No. Fire stations and an emergency response centre	County government	Enough community facilities	- Improved access to social services - Increased of social integration in the community - Better skill development - Reduced level of idling by the youth - Income generation by youth in the entertainment industry - Improved access to information	- Sufficiency of community facilities - Quality of social services - Level of skill development - Level of social cohesion

This table should be reviewed during the period when the county is preparing the County Integrated Development Plan.

ANNEX 8: PHASED EDUCATION FACILITIES PROPOSALS

Ward	Type	Existing No of Facilities	Pop 2014	Proposed Addition Institutions	Pop 2018	Proposed Addition Institutions	Pop 2022	Proposed Addition Institutions	Pop 2026	Proposed Addition Institutions	Pop 2030	Proposed Addition Institutions	Pop 2034	Proposed Addition Institutions	Totals
Biashara	Pry Sec Tert	6 5 0	20,934	0 0 0	25,469	1 0 0	30,961	1 0 0	37,634	2 0 0	45,695	2 1 0	55,600	2 1 0	14 7 0
Hell Gate	Pry Sec Tert	13 2 0	49,768	0 4 0	60,489	2 2 0	73,532	4 1 0	89,381	4 2 0	108,527	4 3 0	132,049	7 4 0	34 17 0
Lake View	Pry Sec Tert	20 3 0	26,167	0 1	31,837	0 0 0	38,701	0 1 0	47,043	0 1 0	57,120	0 1 0	69,499	0 2 0	20 9 0
Mai Mahiu	Pry Sec Tert	4 5	5,280	0 0 0	6,367	0 0 0	7,741	0 0 0	9,410	0 0 0	13,138	0 0 0	13,900	0 0 0	4 5 0
Maeila	Pry Sec Tert	2 3	13,084	2 0 0	15,924	0 0 0	19,351	1 0 0	23,522	1 0 0	28,560	2 1 0	34,750	1 1 0	9 5 0
Naivasha East	Pry Sec Tert	3 7	23,551	3 0	28,654	2 0	34,831	1 0	42,339	2 0	52,549	3 0	62,550	3 1 0	17 8 0
Viwandani	Pry Sec Tert	17 0 6	57,670	0 8	70,004	1 0	85,117	4 3	103,451	4 2	127,975	6 3	152,898	6 3	38 19 6
Olkaria	Pry Sec Tert	3 0	31,460	5 4	38,204	2 1	46,441	2 1	56,451	3 1	62,235	1 1	83,399	4 3	22 11 0

ANNEX 9: PHASED HEALTH FACILITIES PROPOSALS

Ward	Type	Existing No Of HC	Pop 2014	Proposed Addition HC	Pop 2018	Proposed Addition HC	Pop 2022	Proposed Addition HC	Pop 2026	Proposed Addition HC	Pop 2030	Proposed Addition HC	Pop 2034	Proposed Addition HC	Total
Biashara	H /c	2	20,934	1	25,469	1	30,961	0	37,634	1	45,695	0	55,600	1	4
Hell Gate	H/c	3	49,768	3	60,489	1	73,532	1	89,381	1	108,527	1	132,049	2	9
Lake View	H/c	0	26,167	2	31,837	0	38,701	1	47,043	0	57,120	2	69,499	0	5
Mai Mahiu	H/c	2	5,280	0	6,367	0	7,741	0	9,410	0	13,138	0	13,900	0	1
Maeila	H/c	3	13,084	0	15,924	0	19,351	0	23,522	1	28,560	0	34,750	0	2
Naiv East	H/c	0	23,551	2	28,654	0	34,831	0	42,339	1	52,549	1	62,550	0	4
Viwandani	H/c	3	57,670	3	70,004	1	85,117	1	103,451	1	127,975	2	152,898	2	11
Olkaria	H/c	1	31,460	2	38,204	1	46,441	0	56,451	1	62,235	0	83,399	2	6