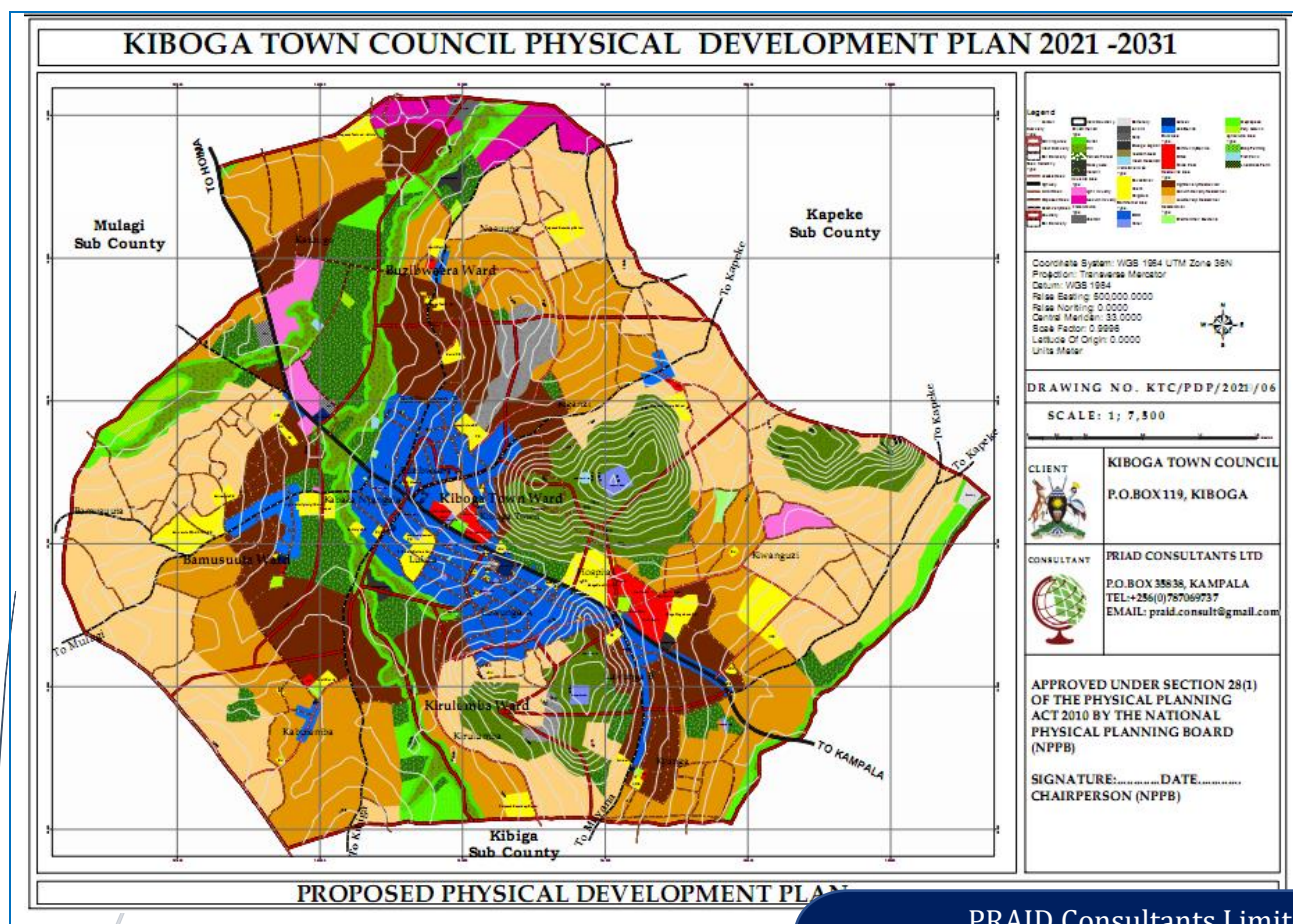


PHYSICAL DEVELOPMENT PLAN FOR KIBOGA TOWN COUNCIL (WITH DETAILED PLANS FOR KYANGA, BUZIBWERA, KIWANGUZI AND BAMUUSUTA WARDS)



PRAID Consultants Limited
 Plot 439 Sir Apollo Kagga Road
 JSK Building,
 Suites No 18,23 &25
 P.O Box 35838, Kampala, Uganda
 Tel: 0787069737

CLIENT:
 Kiboga Town Council
 P.O Box 119
 Kiboga District

FOREWORD

Praid consultants limited is pleased to write a forward to this existing analysis report as part of the process for preparing the Urban Physical Development of Kiboga Town Council. We trust that this exercise and all the activities therein will serve as great contribution to the betterment of Kiboga town for the next Ten (10) years. It is hoped that the outcome of this exercise will create more awareness among the residents of Kiboga Town Council, and further enhance peoples appreciation of physical planning as tool and a framework that is vital in creating and preserving the environment. Create harmony in our day today actives and minimize disorder. Furthermore, it is hoped that this process will encourage the town council authority and the locals to work together and be actively engaged in the process. To ensure that the outcome of this exercise is part and partial of their effort and initiative. It is our prayer and wish that their participation make this exercise a success.

ACKNOWLEDGEMENTS

It is with gratitude that Praid Consultants Limited make acknowledgment of all those entities and persons who have rendered considerable assistance and support in the process of preparation of the physical development plan of Kiboga Town. First and foremost, our sincere thanks go to; Kiboga Town Council who procured Praid Consultants limited to undertake this Physical planning exercise for the whole town and selected area for detail planning. The Ministry of Lands, Housing and Urban Development for technical guidance, supervision, monitoring of planning activities to meet/adhere to planning standards. We further wish to also extend our thanks to the Local Authorities, Councilors, LC III (Mayor), the Town Agents and LC chairpersons. Who have so far made this first phase a success. We are grateful for your support and pray that your effort will still be available to the end of this exercise.

For God and My Country.

TABLE OF CONTENTS

FOREWORD	i
ACKNOWLEDGEMENTS	iii
Table of Contents	iv
LIST OF FIGURES	viii
LIST OF TABLES	viii
LIST OF MAPS	ix
ACRONYMS and ABBREVIATIONS	x
CHAPTER ONE	1
1.0 INTRODUCTION	1
1.2 Background	1
1.3 Objectives	2
1.4 Scope of the Consultancy	2
1.6 Background of Kiboga Town Council	2
1.6.1 Geographical Location	2
1.6.2 Previous Planning Interventions	4
1.6.3 Levels and trends of urbanization	5
1.7 Location in National and regional Planning Context	6
1.8 Methodology	7
1.9 The Policy Framework, Legal and Institutional Framework	11
CHAPTER TWO	13
2.0. EXISTING SITUATION DESCRIPTION	13
2.1 Kiboga population size and Projection	13
3.4.2 Projected Population of Kiboga	13
2.1.1 Population distribution	13
2.2 Physical environment	14
2.2.1 Location	14
2.2.3 Climate	14
2.2.4 Temperatures	14
2.2.5 Topography	14
2.2.6 Relief and drainage	15
2.2.7 Surface water drainage	15
2.3 Shelter	15
2.3.1 Shelter and Living Conditions	15

2.3.2 Strategic Housing Requirements.....	16
2.3.3 Strategic Interventions	16
2.4 Existing land use pattern.....	16
2.4.1 Civic (administration).....	16
2.4.2 Commercial land use.....	16
2.4.3 Residential land use	17
2.4.4 Industrial	17
2.4.5 Agricultural land use.....	17
2.5 Social Service.....	17
2.6 Recreational facilities.....	17
2.7 Public Utilities	18
2.7.1 Roads.....	18
2.7.2 Proposed Road Network	19
2.7.3 Water and sanitation	21
2.7.4 Solid wastes/Garbage Management.....	24
2.7.6 Kiboga town Sanitation Future Requirements	25
2.7.6Solid waste in infrastructure.....	26
2.7.7Energy Sources	29
2.8 The Economic base and Local Economic Development (LED).....	31
2.9 Development potentials and constraints	32
2.9.1 Potentials.....	32
2.9.2 Constraints	33
2.10 Gender and HIV/AIDS	33
2.10.2Specific Gender Responsive Interventions	34
2.10.3Means of communication.....	34
2.10.4Poverty	35
2.11Town council land tenure system	35
2.11 SWOT Analysis	36
2.13 Community Concerns that wish the PDP should address.....	36
CHAPTER THREE	38
3.0. THE PHYSICAL DEVELOPMENT PLAN AND STRATEGIC INTERVENTIONS	38
3.1 Introduction.....	38
3.1.1 Vision and Mission	38

3.1.2 Planning Goals	39
3.1.3 Objectives	39
3.2 Overall Planning Principles	39
3.3 CONCEPTUAL DEVELOPMENT	41
3.4 PLANNING PROPOSALS	43
3.4.1 Housing / Residential Land Use	44
3.4.1.1 Low density.....	46
3.4.1.2 Medium density	46
3.4.1.3 High density	46
3.4.2 Transportation	47
3.4.3 Local Economic Development.....	47
3.4.3.1 Commercial Land Use	47
3.4.3.2 Market.....	48
3.4.3.3 Hotel.....	48
3.4.3.4 Industrial Land Use.....	48
3.4.3.5 Urban agriculture	48
3.4.4 Social Services	49
3.4.4.1 Civic Areas.....	49
3.4.4.2 Community Centre.....	49
3.4.5 Institutional areas	49
3.4.5.1 Health.....	49
3.4.5.2 Religious	49
3.4.5.3 Educational	49
3.4.6 Physical Infrastructure	50
3.4.6.1 Soiled Waste disposal site.....	50
3.4.6.2 Sewage Lagoon	50
3.4.6.3 Cemetery	50
3.4.6.4 Abattoir	50
3.4.6.5 Energy supply	51
3.4.6.6 Water supply	51
3.4.7 Environmental Management.....	51
3.4.7.1 Vegetation (Forest)	51
3.4.7.2 Riparian/Buffer zones	51
3.4.8 Recreational Land	51

3.4.8.1 Recreational parks.....	51
3.4.8.2 Playgrounds.....	52
3.4.8.3 Open space.....	52
4.0 THE DETAILED PLAN AND STRATEGIC INTERVENTIONS	54
4.1 Introduction.....	54
4.2 Applied Design Principle.....	55
4.3 Development Specification.....	56
4.3.1 Setbacks for dwellings	56
4.3.2 Vehicle parking requirements	57
4.3.3 General Guidelines/Restrictions	58
4.3.4 Site Standards for residential Development.....	59
4.3.5 General Guidelines/Restrictions	59
4.4 Proposed Detailed Plan.....	62
4.4.1 Commercial Zone.....	62
4.4.2 Residential.....	63
4.4.3 Parks and Recreational grounds.....	63
4.4.4 Institutional	64
4.4.5 Industrial zone.....	64
4.4.6 Civic.....	64
4.4.7 Roads.....	64
4.4.7 Transport Road Network.....	65
4.4.8 Wetland and Buffer Zones	66
4.4.9 Utility and Services Supply	66
4.5 Key Issues to Consider during development approval	66
CHAPETR FIVE	74
5.0 IMPLEMENTATION	74
5.1 Plan Implementation Strategy.....	74
5.1.1 Proposed Implementation Phasing Process and Plan.....	74
5.1.2 Plan Implementation Cost Estimates	74
5.3 Implementation Strategies.	77
5.4 Mobilization of resources.	77
5.5 Land Access.	77
5.6 Monitoring and Evaluation	77

5.7 Mechanisms of monitoring process and outputs.....	78
5.8 Review of the Plan.....	78
CHAPTER SIX	79
6.0 RECOMMENDATIONS AND CONCLUSION.....	79
6.1 Policies and Recommendations for all the Sectors	79
6.1.1 Technical Recommendations	79
6.1.2 Environmental Recommendations	80
6.1.3 General Recommendations	80
6.2 Conclusion	79
Annex I: REFERENCES	81
Annex IV: LIST OF ATTENDENCE.....	82

LIST OF FIGURES

Figure 1: Summary of the Methodology and Approach	8
Figure 2: Typical design for a secondary/Distributor road	19
Figure 3: Proposed design for a tertiary Road	20
Figure 4: Conceptual Development	42
Figure 5: Standard Plot Dimension.....	57
Figure 6:Residential Plot Layout	59

LIST OF TABLES

Table 1:Kiboga Wards and Cells	3
Table 2:Population distribution In Kiboga Town Council	13
Table 3: Population Projections	13
Table 4: Road Classification and Hierarchy	18
Table 5: Kiboga Town Road Network.....	18
Table 6: Proposed Distributors	19
Table 7: Distribution of existing Water Sources in Kiboga Town	23
Table 8: Types of solid waste generated.....	27
Table 9: Solid waste management strategy.....	28
Table 10: Kiboga District Household Source of Energy for lighting	30
Table 11: Source of Energy for lighting in Kiboga Town Council – 2018	30
Table 12: SWOT Analysis.....	36
Table 13: Community contribution/wishlist	36
Table 14: Population projections	44
Table 15: Analysis of space requirement in terms of densities	45
Table 16: Proposed plots in relation to the projected population 2031	45
Table 17: Proposed land uses.....	52
Table 18: Setbacks of dwellings	57
Table 19: Parking space requirement for off street.....	58

Table 20: Summary of plot sizes and plot Coverage for residential settlements	63
Table 21: Proposed road type and recommended width	65
Table 22: Summary of Part of Kyanga Neighborhood Detailed Plan Land uses	68
Table 23: Summary of Part of Bamusuuta Neighborhood Detailed Plan Land uses	69
Table 24: Summary of Part of Kiwanguzi Neighborhood Detailed Plan Land uses	70
Table 25: Summary of Part of Buzibweera Neighborhood Detailed Plan Land uses	73
Table 26: Proposed Implementation Phasing Process and Plan	74
Table 27: Plan Implementation Cost Estimates	75
Table 28: Detailed Plan Implementation Agencies and Strategy	76

LIST OF MAPS

Map 1: Location of Kiboga Town Council	3
Map 2: Kiboga Administrative boundaries	4
Map 3: Location in National and regional Planning Context	7
Map 4: Road intersections with interrupted traffic	21
Map 5: Kiboga Urban Physical Development Plan 2021-2030	53
Map 6: Location of Detailed Plan area Kiboga Physical Development Plan	55
Map 7: Proposed Detail Plans for Kyanga Neighbourhood	67
Map 8: Proposed Detail Plans for Bamusuuta Neighborhood	69
Map 9: Proposed Detail Plans for Kiwanguzi Neighborhood	71
Map 10: Proposed Detail Plans for Buzibweera Neighborhood	72

ACRONYMS and ABBREVIATIONS

LC	Local Council
PDP	Physical Development Plan
ToR	Terms of Reference
IIP	Infrastructure Investment Plan
NDPs	National Development Plans
SIPs	Sector Investment Plans
LGDPs	Local Government Development Plans
GPS	Geographical Positioning System
CBD	Central Business District
UBOS	Uganda Bureau of Statistics
GIS	Geographic Information Systems unit
NEAP	National Environment Action Plan
PPA	Physical Planning Act,
PPC	Physical Planning Committee
UPPC	Urban Physical Planning Committee
NEMA	National Environment Authority
UPDP	Urban Physical Development Plan
TPC	Technical Planning Committees
EPU	Economic Planning Unit.
ENR	Environment and Natural Resources
LGs	The Local Governments
LGMSDP	Local Government Management and Service Delivery Programme
EIAs	Environmental Impact Assessments
NEA	The National Environment Act
DPP& UD	Directorate of Physical Planning and Urban Development
NPPB	National Physical Planning Board
DPPC	District Physical Planning Committee
HH	Household
CSOs	Civil Society Organizations
ACFODE	Action for Development
UPE	Universal Primary Education
NGOs	Nongovernmental Organizations
CBO	Community Based Organization
ICT	Information Communication Technology
UGX	Uganda Shillings
NFB	National Fiber Optic
MTN	Mobile Telecommunication Network
UTL	Uganda Telecom Limited
FM	Frequency Modulation
LED	Local Economic Development
GDP	Gross Domestic Product
NPHC	National Population and Housing Census
AEZs	Agricultural Ecological Zones
GKMA	Greater Kampala Metropolitan Area
PWDs	People with Disabilities
HIV	Human Immune Virus
AIDS	Acquired Immune Deficiency Syndrome
PMA	Plan for Modernization of Agriculture

NAADS	National Agricultural Advisory Sector
SDA	Seventh Day Adventist
NITA-U	National Information Technology Authority of Uganda
NBI	National Backbone Infrastructure
EGI	Electronic Government Infrastructure
MoWT	Ministry of Works and Transport
UNRA	Uganda Roads Authority
Km	Kilometer
JICA	Japan International Corporation Agency
NWSC	National Water and Sewage Corporation
VIP	Very Improved Pit latrines

CHAPTER ONE

1.0 INTRODUCTION

Physical planning of Kiboga Town Council is to contribute to the physical realization of the Town and Kiboga as a District and Ministry of Lands Housing and Urban Development's (MoLHUD) desire to ensure strategic and orderly physical development in the entire Nation. Planning for the town's future needs takes cognizance of the existing situation; Including the underlying trends that are shaping the town's development, the desires and development direction desired by the community and the other regional and policy imperatives.

Kiboga town council sourced funds from local revenue to facilitate the process of review and update of the physical development plan for Kiboga town, through Praid consultants limited. This Physical Development Plan Report is part of the requirements and deliverables in the planning process for preparation of the Physical Development Plan for Kiboga Town.

The PDP Report fulfills the assignment objectives, the methodology adopted by the Consultant to reach these objectives, the primary findings of the Consultant's analysis, and their implications for the planning and development of Kiboga planning area. Emphasis was put on extracting field findings and cross-cutting recommendations for the direction of the towns planning process.

1.2 Background

The Planning of Kiboga Town emanates from the realization of the extent the previous plan was implemented and also the desire to ensure strategic and orderly physical development in the town. Being one of the key town councils (most Urbanised) in Kiboga District with increasing growth in terms of size, population, economic activities, public services and trade, which is likely to burst beyond the capacity of the urban managers to predict the trends and direction of its growth. It necessitates a guiding framework in form of a Physical Development Plan.

The of preparation of a physical development plan is to address the emerging trends and challenges by putting in place policies and tools (physical development plan) for Kiboga town council to address the urban development challenge. The objective of the assignment is ***“To review and prepare a Physical Development Plan (PDP) that will guide the orderly physical and sustainable development of Kiboga town for the next ten (10) years through a participatory process”***. The town council contracted Praid Consultants Ltd to review and prepare a Physical Development Plan (PDP) to guide the future development of the town in a sustainable manner.

Kiboga Town Council PDP Conceptualization Process

The Kiboga Town Council PDP was conceptualized basing on the following key considerations:

- i. The importance and input in the plans through highly participatory processes involving the public, private and community stakeholders.
- ii. The historical development context of Kiboga Town Council:
 - a. Primary functions of the centre now and in the future and implications on the development trends;

- b. The towns comparative advantage at the local, district and regional level and implications on the spatial development of the town
 - c. Environmental considerations
 - d. Town infrastructure and utility requirements
 - e. Stakeholder requirements
- iii. Empiric findings and conclusions as detailed out in the project situational analysis report
 - iv. The Consultant’s experience and understanding of the relevant issues as detailed in the body of this report.

1.3 Objectives

The overall objective of this consultancy is;

“To review and prepare a Physical Development Plan (PDP) that will guide the orderly physical and sustainable development of Kiboga town for the next ten (10) years through a participatory process”.

1.4 Scope of the Consultancy

The geographical scope of the assignment shall be limited to the town council boundary. The town council covers an area of about 21.48 Sqkm. The analysis revolves around the growth pattern of the town, activity distributions and regional linkage & existing situation, the form, economic backbone and the emerging potential significance. The assignment will cover the planning duration of Nine Months as required by the Physical Planning Act 2010.

More specifically, the ToR is in line with the objective, and required the consultant to develop the following:

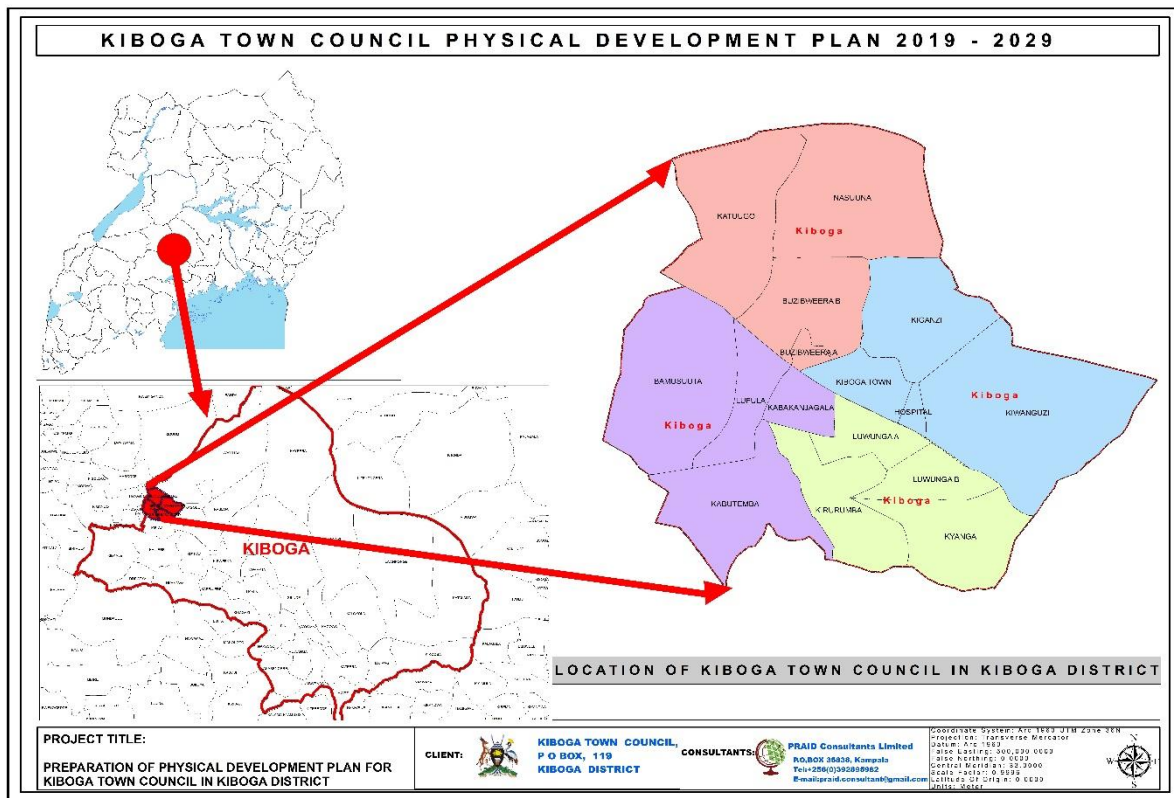
- (i) *The Town Physical Development Plan (PDP);*
- (ii) *Detailed plan for the selected area*
- (iii) *Communication strategy and engagement plan (IEC Strategy); and*
- (iv) *Implementation Strategy*

1.6 Background of Kiboga Town Council

1.6.1 Geographical Location

The town is located about 125km Northwest of Kampala City along Hoima road and covers an area of about 21.48 Sq. Kms. The town lies at an altitude of approximately 4,000 feet above sea level on latitude 0 55’ North of the Equator and on Longitude 31 45’ East of Greenwich. It occupies two steep hills of Kirulumba and Kiboga dissected by streams which flow within the valleys of the town. The nature of the topography has in a way influenced development and land use in the town with settlements taking preference of the gentle slopes of the two hills.

Map 1: Location of Kiboga Town Council



Source: GIS Unit Praid Consultants Feb-2019.

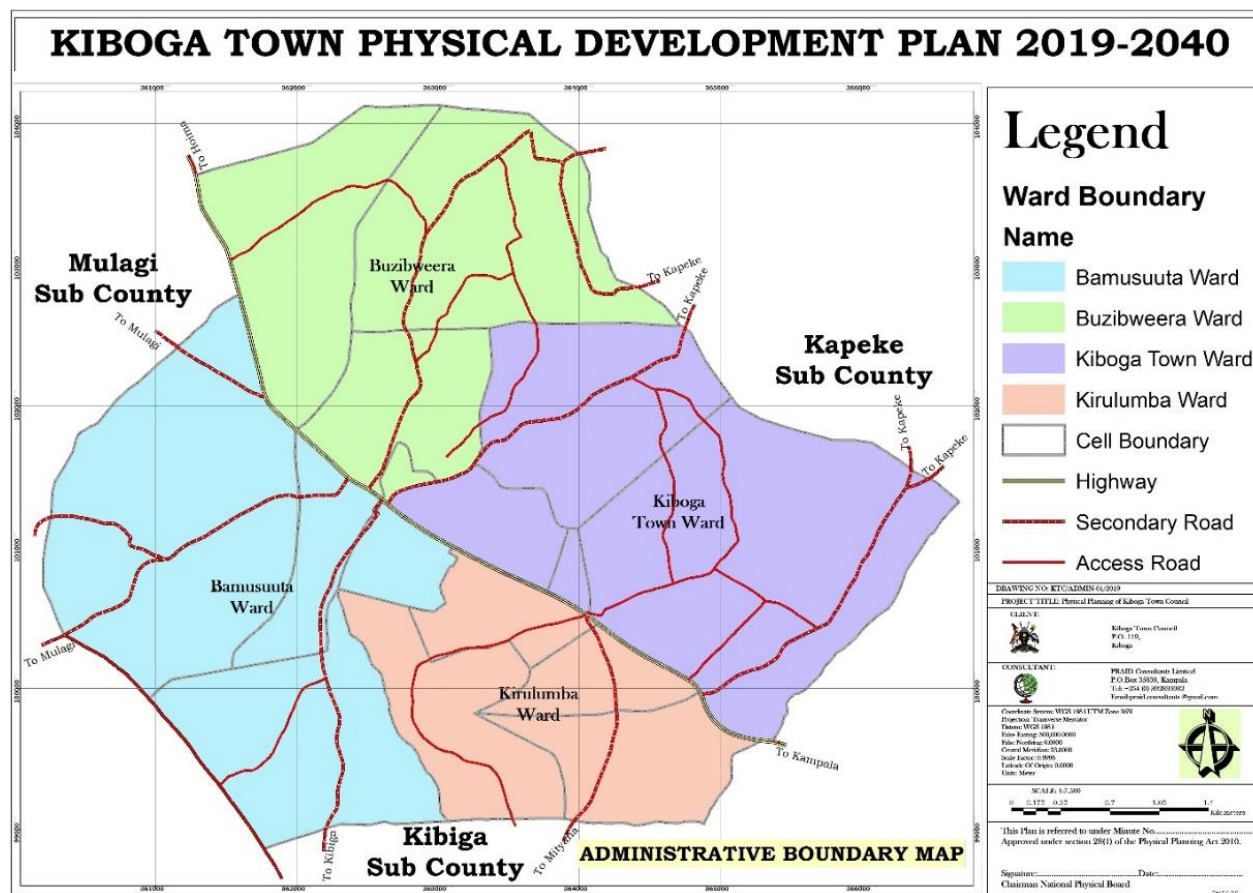
The town is made up of 4 wards and 16 cells constituting the boundary of the town council as indicated in table 1s;

Table 1:Kiboga Wards and Cells

WARDS	CELLS	AREA (Ha)
Buzibweera	Katuugo, Nasuuna, Buzibweera A, Buzibweera B	542.4
Kiboga town	Kiganzi, Kiboga town Hospital, Kiwanguzi	626.6
Bamusuuta	Bamusuuta, Lufula Kabaka N'jagala, Kabutemba	633.2
Kirurumba	Luwanga A, Luwanga B Kirulumba, Kyanga	337.9

Source: Consultants Compilation, Feb-2019

Map 2: Kiboga Administrative boundaries



Source: GIS Unit Praid Consultants Feb-2019.

1.6.2 Previous Planning Interventions

The elevation of Kiboga Sub District into a fully-fledged district in 1991, the town was eventually gazetted as a Town Council in 1995, which necessitated its planning in 1996 so as to ensure organized and orderly development. Hence, the preparation of a structure plan followed in 1996 with the aim of guiding developments. The 1996 plan which expired in 2006 was reviewed in 2007, Under the initiative of The Ministry of Local Government to plan for the 76 selected Urban Centers in Uganda among which Kiboga Town council was a beneficiary, with the object of ensuring continued spatial and orderly development and adherence to planning standards as required by the Ministry of Lands, Housing and Urban Development.

The reviewed physical development plan that was prepared in 2007 and approved in 2008, revealed that less was than 10% of the 1996 Structure plan was implemented. According to the recent survey and discussion with the Kiboga physical planner, 50% of the 2008 approved plan was implemented through its 5 year detailed plan for the CBD and the surrounding neighbourhoods. The following was observed;

- › Some open spaces in Kabutemba, Bamusuta, Kiboga, Kiwanguzi were purchased and still maintained as open space.
- › Residential houses were built as planned in their different categories.
- › Planted forests on Luwunga LCI B hill, Kiboga Hill, evident with pine trees.

- › Markets well established along Mityana, Kabutemba Central market, and Bamusuta Roads as provided for in the Plan
- › Industrial complexes well established in light industrial land use, however, plots sizes of (50m x 100m) were not adequate e.g. Kawa.com, Waligo Bena Coffee, Mama Moze, Kayondo Richards, Kayondo Bernanrd etc.
- › A number of Feeder roads/access roads were surveyed and opened in Kyanga, Kiwanguzi, Kiganzi, Kirurumba, Bamusuta, Nassuna, Bamusuta and luwunga LCI "A". In addition to Kabutemba and Katugo access road.

Other challenges in the implementation of the plan 2008 included;

- › Poor coordination and conflict of interest, e.g. land office issuing fresh titles in environmentally sensitive areas.
- › Corruption,
- › The meagre resource envelope for the physical planning section. This has affected monitoring and control of development. That is why there are several illegal development cropping up.

1.6.3 Levels and trends of urbanization

Kiboga town council is a gazetted urban council located in Kiboga District. It is one of the first and oldest urban councils in the district that attained Council status in...its elevation to urban council level was based on the increasing economic activities and the attraction of human settlements to the urban centre. The attraction of human activities in the centre led to increased concentration of permanent structures and settlement for habitation and for economic/commercial activities. The level of urban expansion and development has increased from% to%. This has been ignited by the increase in population growth through rural-urban migration and increased birth rates.

Kiboga Town Council is also experiencing increased infrastructural development and services like roads, electricity, water and solid waste management among others. The town has services that fulfill the basic needs of life and sustain the day today activities of residents in the town. These range from social services, infrastructure to administrative services.

The Town Council also exhibits a character of high level development as compared to the neighboring town councils such as Bukomero town council and Kyakwanzi town council among others. The town council is currently experiencing high peak construction and on its heights of development by those who return home from the City and abroad. Especially in hotel and residential development in the neighborhoods and also in the town Centre.

However, inadequate political will seems to be still an inherent obstacle to the steady progress of the town council. Where land politics impairs easy access to land for development. The town council as a Polity seems to have less authority and power to monitor and implement most of its mandate. Hence, policy implementation seem to operate within the preserve of those who can influence decisions. Such kind of attitude impede the smooth operation of the town council which slows the level of growth and development.

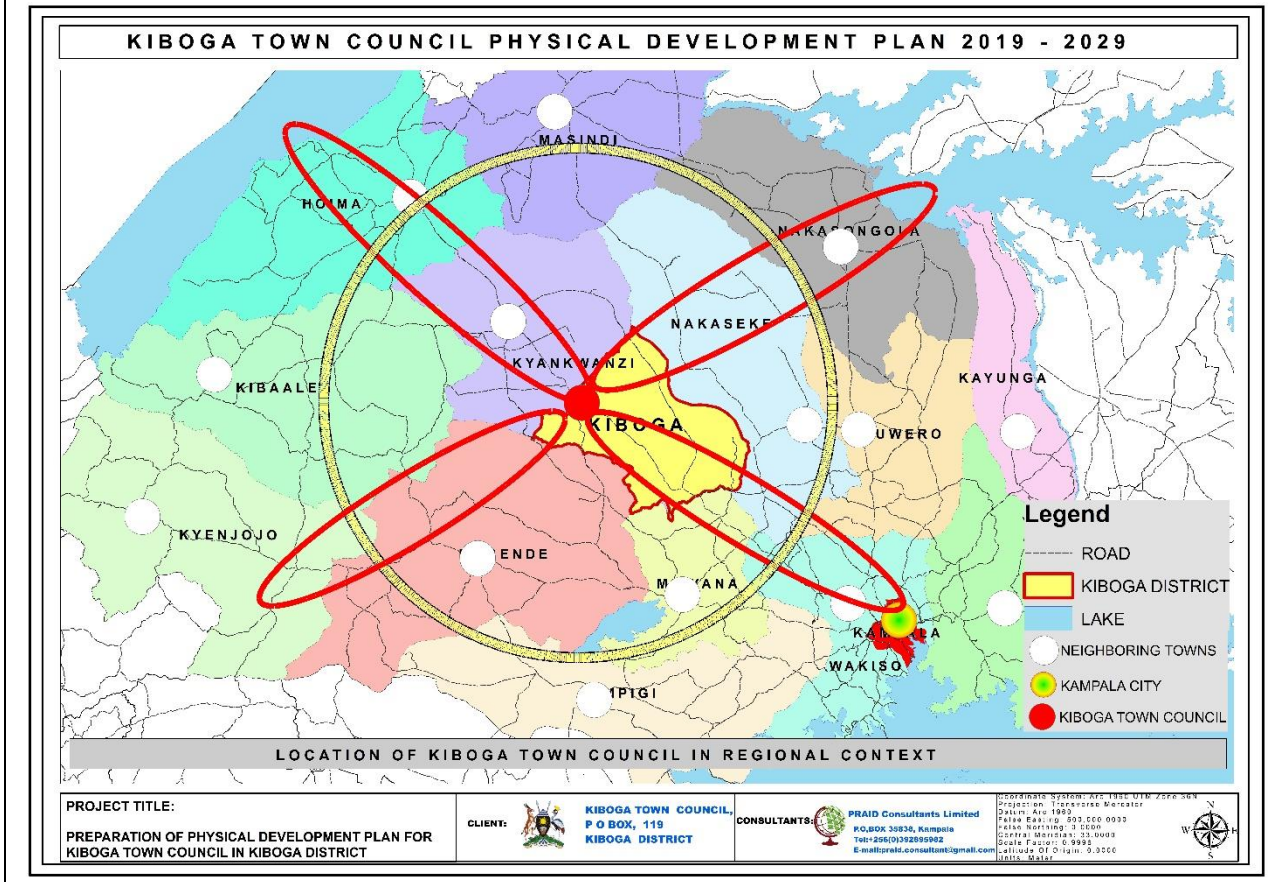
1.7 Location in National and regional Planning Context

The physical planning and preparation of the Kiboga Town council Urban Physical development plan is pegged on Uganda's vision 2040; "A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years". Which is cognizant of the fact that for this vision to be achieved, urbanization and urban development is inevitable. This is also in line with The physical planning Act, 2010 (section 6(1) which calls for integration of physical planning with social and economic planning at the national and local levels. In the same context of the of the Physical Planning Act 2010 section 3, which declares the whole country a planning area.

Henceforth, Kiboga town council as a local authority in Kiboga District is given the mandate to incorporate its plan preparation in the development process of Kiboga Town, which must be within the National Framework. The Comprehensive National Development Planning Framework which provides for the development of a 30-year Vision that is implemented through: three 10-year plans; six 5-year National Development Plans (NDPs); Sector Investment Plans (SIPs); Local Government Development Plans (LGDPs); Annual work plans; and Budgets. Provides a frame work within which all major government programmes focusing on transforming Uganda as a whole are embraced. One other fundamental factors that the town council may exploit to its benefit, is its location within key pivotal economic towns within the region which include, the industrial town of Kapeeke, tourism town of Kyenjojo and its close proximity to the Capital City Kampala.

The national framework for local government should be bent on paying attention to the realization of Vision 2040, which requires the wholehearted support of all stakeholders. The same applies to the subsequent National Development Plans derived from this vision and intended to achieve its goals and objectives. The ownership is not only for the formulation process but also for a smooth and successful implementation of programmes, projects and other initiatives by local governments.

Map 3: Location in National and regional Planning Context

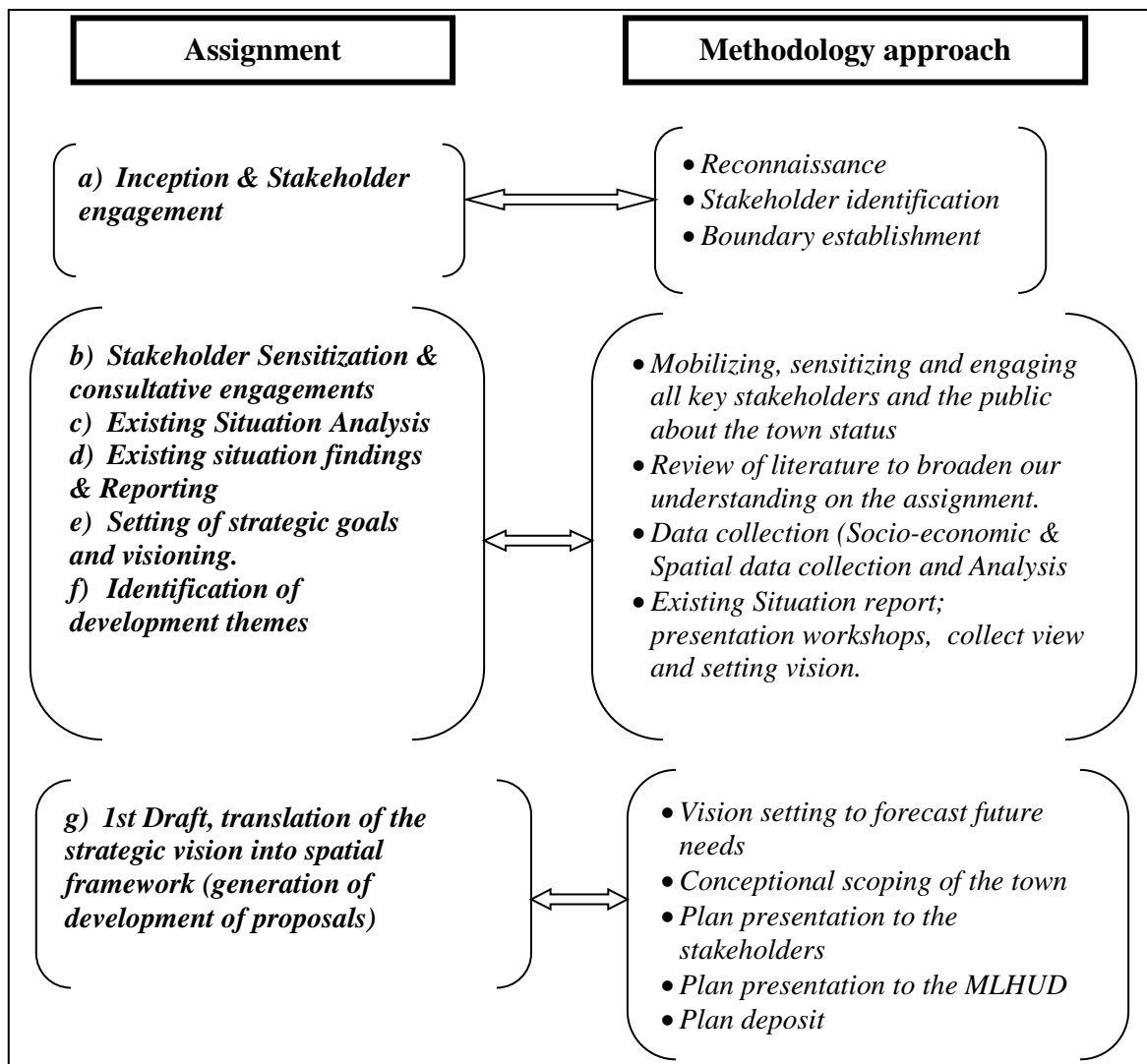


Source: GIS Unit Praid Consultants Feb-2019.

1.8 Methodology

Our methodology centered on the primary requirement of the assignment which was to facilitate the process of review and preparing the Physical Development Plan (PDP) to guide the orderly physical and sustainable development of the town council through a participatory process. Also limiting ourselves to the scope of the assignment. Therefore, to come up with the final output/product, the methodology was premised on the following; the inception, Sensitization/ Consultation, field surveys on the existing situation and analysis, generation and development of the PDP strategy and Draft PDP.

Figure 1: Summary of the Methodology and Approach



Source: Consultants Compilation, Feb-2019

The inception activity:

The first requirement of the planning process was to carry out an inception activity which revolved around the following issues;

- i) The Consultant embarked on the mobilisation of the key personnel and other necessary project resources that were put together to enable in the planning for field work. Meeting with the client to sign the contract, briefing the client on the consultants understanding of the ToR's and getting the clients views and expectation about the project. And the client to appreciate the overall planning process as detailed out by the Consultant. Also engaged the team in planning and preparation for the reconnaissance survey; data collection instruments that were used to effectively carry out; data collection, the consultative process, mapping process, thematic analysis, consultations and preparation of Physical Development Plans.
- ii) Mobilization of project resources and key personnel to articulate to them the project objectives, process, deliverables, time frame, stakeholder input and requirements in the planning process. Planning and preparation for the reconnaissance survey to Kiboga

Town Council (work plan & task assignments, Data & information required schedule, field checklist, survey requirements & logistics)

- iii) The Consultant undertook a reconnaissance visit with the aim of getting a better feel and understanding of the planning area (Kiboga Town Council), met with the Town Council and Technical Team and had initial Project briefings and discussions which involved;
 - › Introduction of the project consultant team, assignment objectives, deliverables and time frame
 - › Brief on the process of preparation of the Town Council Physical Development Plan
 - › Brief on the structure and content of a Physical Development Plan process
 - › Preparation and Approval process of a Local Physical Development Plan
 - › Data requirements from the Town Council Physical Development Plan preparation process
 - › Inquiry on the available data, plans and other policy documents
 - › Brief about the expectations and inputs of the Town Council and public stakeholders
- iv) Identification and acquisition of required documents and information from the Town Council and the District that helped in the out of the Existing Situation report and Physical Development Plan. The data available and retrieved by the team covered the following areas;
 - › Policy and Data;
 - › Kiboga Town Council Five Year Development Plan
 - › The institutional set-up in terms of Council administrative structure, staffing structure, staffing levels and gaps
 - › Data on Town Council Road Network; names, reserves including length.
 - › Previous Structure plan of Kiboga Town Council
- v) Preparation of the draft inception activity report; key sectoral maps/plans prepared and updated using satellite image, digitized and analysed to provide information for generating the required Plans.

Sensitization/ Consultation and Stakeholder Participation

The consultant employed a number of ways in mobilizing stakeholders for the sensitization and consultative process. This was achieved through formulating well packaged messages and designing effective ways to reach out to all stakeholders, both residents in the Kiboga town and the neighboring communities. This included use of both Print and Electronic Media; printed materials like banners, posters, stickers and handouts were used and applied to target audiences/residents of Kiboga town council. Radio announcement through Fm radios and local radios (known as mambo bado) were also employed as a means of communication to the entire town council and the neighboring areas.

In order to effectively engage the community, the consultant undertook a participatory and consultative meeting with the public and the stakeholders. The Public consultative **meetings were** conducted for the four wards in the town council; Kiboga ward, Buzibweera ward and Bumusuuta Ward and Kirulumba ward at the Town Council Hall for the stakeholder's in the four wards.

Engagement with stakeholders covered the following objective:

- i) Sensitize stakeholders on importance of Physical Planning and the relevance of the Physical Development Plans and stimulate the stakeholder's participation and contribution in the planning process
- ii) Carryout consultations with town council technical team, land owners, Local Leaders, and Other stakeholders.
- iii) Facilitate the stakeholders in identification and evolving consensus on the following matters:
 - › Confirming the planning area (Parishes) boundaries,
 - › Problem, potentials identification
 - › Goals and objectives formulation (planning, and development)
 - › Identification of possibilities / solutions

The main method of communication was through presentations, discussions and reporting. The tools employed included, presentation handouts, drawings in form of thematic maps, flyers, posters and stickers, discussion guides and the town base map was used to facilitate participatory mapping.

Data capture (Data collection)

This process involved engagement with the stakeholders while undertaking mapping and planning field visits in order to generate the most accurate situation of the physical and socio-economic infrastructure of Kiboga Town. The combination of spatial data and participatory community mapping, interactions with various stakeholders of the town, informal interviews and formal inquiries regarding the town status allowed inclusion of community perspectives, the GPS mapping of actual and accurate update of the town perspectives.

The use of specialized equipment and tools such as GPS in execution of the work. Was paramount. These devices were accompanied with accessories especially the booking sheet, the camera, GPS data downloading cables, work stations and GIS software such as ArcGIS 10.4 to ease the exercise of data entry and also to minimize errors if manual methods were used.

The data surveys covered the following planning themes:

- › The planning area land use
- › Area physical environment and natural systems status
- › Mapping of planning area physical infrastructure, community facilities, and public amenities
- › Establishment of Planning area Institutional Structures and Systems
- › Investigations into the history of the town and Growth Trends
- › Socio-economic status

The field investigations were undertaken to collect the necessary data and information to provide a basis on which preparation of Kiboga town council physical development Plan would be determined. The findings complimented and clarified the issues obtained in the preliminary literature review information.

Existing situation and analysis:

The towns existing situation analysis ranged from publicity and mobilization of all stakeholders to participate in assessing the town status and future requirements, analysis of key development and policy issues; stakeholder engagement on key town development challenges and emerging issues, identification, acquisition, review and analysis of collected primary and secondary data from existing documents and others sources.

- i. Mobilizing, sensitizing and engaging all key stakeholders and the public about the town status, the needs and benefits of having a planned urban setting/development, the need to benefit from the town's strategic location
- ii. Visioning and setting strategic positions on how to achieve the desired, sustainable and integrated town within the region's economy
- iii. Translation of the town development Vision and strategies into spatial development framework that will facilitate the stakeholder participatory planning processes and evaluation to determine the plan that addresses their aspirations, those of the district, region and national requirements
- iv. Effective communication and popularization of the planning activities and products of the town at all levels

Generation and development of the Draft PDP and PDP strategy.

The proposal for development strategies (PDP) captured the input of the stakeholders during the participatory processes in the town council and at local levels (communities).

The field surveys data and the information obtained during the analysis of was further classified to provide a basis for the preparation of the PDP draft. The team carried out the overlaying of different thematic layers at different scales (Physical Analysis), to generate the spatial development strategy of the area.

The GIS approach used by the team combined the following;

- i. Analysis of high resolution satellite image
- ii. Analysis of topographic maps obtained from Entebbe Mapping and Surveys department
- iii. Community survey of planning themes generated by mapping using GPS
- iv. Review of satellite images from Google Earth at 1230m resolution
- v. Kiboga town council roads register and maps for the town council infrastructure.

The current development trends were reviewed and harnessed considering the population projection figures, and the level of activity demand, standard space dimensions. The invariably population increase is partly a precursor to the town's development PDP.

The above processes provided a base for development of a Planning for the urban centre. Nevertheless, the most critical aspect for the process to be legitimate is the legal requirement. As such a number of existing policy, legal and institutional frameworks informed the process. These include;

1.9 The Policy Framework, Legal and Institutional Framework

The Policy Framework

National, Regional District, Urban and Local PDPs are prepared within a solid umbrella policy context including the National Vision 2040, the Second National Development Plan 2015/16 – 2019/20 (NDP II) and key Government policies. Direction provided by all of these policies guides the preparation of PDPs as the first supporting piece of area physical planning framework within the area of jurisdiction. Preparation of PDPs is also done with the knowledge that it must integrate into the broader National, regional, district, urban or Local Physical and economic Plans. The key policy frameworks in place reviewed and referenced in this assignment included the following;

- i) Uganda's Vision 2040
- ii) The Second National Development Plan 2015/16 – 2019/20
- iii) The Uganda National Land Policy, 2013
- iv) Uganda's National Environment Action Plan (NEAP)

- v) Environment The National Environment Management Policy, 1994
- vi) The National Water Policy.1999
- vii) The Wetlands Policy, 1995
- viii) The Energy Policy, 2012
- ix) The National Housing Policy, 2016
- x) The National Urban Policy, 2017
- xi) The National Population Policy, 1995
- xii) Tourism Policy Framework

The legal framework

Physical planning is a legal activity in Uganda, whether planning is at the lowest level or the highest level of government; there is no planning activity that is carried outside this legal framework. The legal framework for physical planning is enshrined in a number of laws and regulations. These legal instruments were reviewed, for purposes of formulating appropriate provisions, standards and institutional requirements. The key Acts of Parliament in this regard include; the Constitution of the Republic of Uganda, The Local Government Act, The Physical Planning Act, The Land Act, The Public Health Act, The National Environment Act, The Wildlife Act, The Forest Act and The Petroleum Supply Act, 2003 and the Petroleum Exploration and Production Act, The Water Act CAP 152, among others. There is no planning activity that is carried outside this legal framework and as such, they guided the preparation of the Kiboga urban Physical Development Plan and its implementation frameworks.

Physical planning institutional Framework.

The Government has over the years equally put in place a hierarchy of planning institutions and bodies for policy alignment, planning, implementation and monitoring of the Physical Development Planning process at national, regional and local levels. These institutions are enshrined in Acts of Parliament, policies, guidelines and standards guiding the planning and implementation of plans at all government levels in Uganda. The Ugandan institutional framework is the totality of public and quasi-public agencies involved in comprehending, formulating and implementing physical development plans. They provide direction on how broader state and local planning policies will be achieved or implemented. The Physical Planning Act 2010 stipulates these key institutions to include;

The key Ministries in charge of formulation of policy and physical planning oversight;

- i) Ministry of Lands Housing and Urban Development for policy and oversight
- ii) Ministry of Local Government for local government governance issues and processes
- iii) Ministry of Public Service for institutional and staffing structural requirements for enforcement of compliance
- iv) Compliance and enforcement supportive ministries and institutions; Ministry of Water and Environment; National Environment Management Authority; security agencies; government land sector agencies; etc.

CHAPTER TWO

2.0. EXISTING SITUATION DESCRIPTION

2.1 Kiboga population size and Projection

According to the National Population and housing census-2014, Kiboga Town Council had a total population of 19,338 people, of which 9,290 were males and 10,048 females. Constituting 5,261 households in Kiboga Town Council. Understanding the population trends in the town council is necessary because it a key factor that enables urban managers to know the level of demand for certain services and the amount of pressure exerted on the available services.

Table 2: Population distribution In Kiboga Town Council

Ward	Male	Female	Total	Households	% of Female Headed HHs
Bamusuuta	3,194	3,573	6,767	1,923	34
Buzibweera	2,083	2,244	4,327	1,172	25
Kiboga town	1,811	1,664	3,475	826	31
Kirulumba	2,202	2,567	4,769	1,320	29
Total	9,290	10,048	19,338	5,241	30

Source: National Census 2014 main report

3.4.2 Projected Population of Kiboga

The National population and Housing census, 2014 put Kiboga town population growth rate at an average of 3.01% per annum. Based on this growth rate, the town's future population has been projected for the planning period of ten years. Since the town's total population is currently estimated to be 22,527 people with an increase of 3,189 people, in the next 10 years, the population is estimated to be 31,150 people.

Table 3: Population Projections

Year	Male			Female			Total		
	2014	2021	2031	2014	2021	2031	2014	2021	2031
Population	9,290	10,822	15,266	10,048	11,705	15,884	19,338	22,527	31,150

Source: Consultants generated Data NHPC, 2014.

2.1.1 Population distribution

The rapid ongoing urbanization in the towns and in Uganda as a whole is expected to continue as the impacts of universal education begin to influence the aspirations and expectations of the younger generation who have acquired several skills and through the urban centre for job opportunities. Attraction to the town centre are inevitable because the urban sector contributes on average about 70% to the Gross Domestic Product (GDP) of the country. The increase in commercial trade in Kiboga Town Council will as well create an increase in the in-migration of population to Kiboga Town.

Based on the above analysis and current distribution of the town's population, majority of the people reside in Bamusuuta, Kirulumba, and Buzibweera ward respectively. This necessitates deliberate action to prioritize integrated planning of urban areas to harness potential as engines of economic growth. Therefore, Planned urbanization is an effective strategy for enhancing access to basic services by the population, reduces the cost of service delivery, and creates demand and market for goods and services. Hence, the physical development plan will need to address the equitable distribution of services to the town's population between the respective zones.

2.2 Physical environment

2.2.1 Location

Kiboga Town council is located about 171km Northwest of Kampala City along Hoima road and covers an area of about 18.9 Sq. Kms. according to the 2007-2017 approved structural and detailed physical plan. The town lies at an altitude of approximately 4,000 feet above sea level on latitude 0 55' North of the Equator and on Longitude 31 45' East of Greenwich. The Town occupies two steep hills of Kirulumba and Kiboga dissected by streams which flow within the valleys separating the two hills. The nature of the topography dictates more concentrated settlement and land use development in the central business area along the gentle slopes of the two hills. The Kampala- Hoima highway road dissects the town into the Southern region being agricultural (crop) while the Northern region specializes in pastoralism/animal husbandry. Along the roads are commercial enterprises such as shops, markets, fuel stations, banks, schools and administrative centre including District Police station.

2.2.3 Climate

Kiboga Town Council experiences a dry and a relatively humid climate, associated with short and unreliable rainfall pattern. Followed by some seasons of dry spells. The area is also experiencing change and reduction in rainfall due to general climatic changes.

The climate is tropical, and during the wet season there a good deal of rainfall, while very little rainfall during the dry season. The average annual temperature in Kiboga is 22.4 °C. About 1182 mm of precipitation falls annually.

2.2.4 Temperatures

The climate in Kiboga is warm, muggy and overcast. Over the course of the year, the temperature typically varies from 57°F to 87°F and is rarely below 55°F or over 94°F.

February is the warmest month of the year. The temperature in February averages 23.3 °C. July is the coldest month, with temperatures averaging 21.4 °C.

2.2.5 Topography

The area has an altitude range of 1100 to 1400ma.s.l., the Town landscape is characterized by two steep sides' hills, Kirulumba on the Southern side and Bamusuuta on the Northern side. Small streams flow within the valleys surrounding the two hills on the Northern and Southeastern side. Some of the streams like Nakayenga is permanent while Kyanga-Kiwanguzi

swamp is seasonal. The nature of the topography therefore, provides for more concentrated development in the centre and along the gentle slopes of the two hills.

2.2.6 Relief and drainage

Kiboga town council has two catchment areas namely; Nakayenga swamp that runs from NorthEast side flowing downwards to the Western side of the town and Kyanga-Kiwanguzi swamp that form the town boundary on the eastern side of the town.

The Town Council generally experiences surface runoff during rainy seasons, which pours into the streams, and wetlands, permanent and seasonal. The town council's drainage is defined by a number of swamps/wetlands; mainly Nakayenga swamp which covers areas of Buzibweera ward, Bamusuuta ward and Kirulumba ward and another swamp passes in Kyanga cell that stretches to Kiwanguzi cell. The swamps run through parts of the town council and are apparently experiencing encroachment, evidenced by cultivation and planting of eucalyptus trees and other agricultural activities. These point towards environmental degradation. Most wells/springs i.e. open water sources are along these swampy areas. Implying that the water tables along these swamps is quite high and are suitable for sinking shallow wells which can be used as alternative sources for those who are not connected to the piped water system.

2.2.7 Surface water drainage

The Town Council physical form create a challenge on management of storm water drainage; challenges on control flow of surface water, the lack of suitably designed conduits to properly channel away the storm water from the Centre and developed areas, easily impairs public safety, health and wellbeing of the public and disrupts people businesses. Currently, storm water is undirected because most of the roads lack road side drains and culverts. Where the drains exist, they are in poor condition and often clogged by solids which at times cause flooding whenever it rains.

2.3 Shelter

2.3.1 Shelter and Living Conditions

Housing is one of the basic human needs that have impact on the health, welfare, social attitudes and economic productivity of the individual. It is also one of the indicators of a person's standard of living and his or her place in society. The demand for housing remains high in most developing countries including Uganda. Information on housing conditions in this section refers to only household population in the planning town of Kiboga town, in Kiboga District however, in terms of housing conditions, the area has all types of houses built using different materials as evidenced by the survey carried.

The survey statistics indicated a significant improvement of residential accommodation within the town shown with the increase in residential housing stock in the town from 60% to 90%. The statistics have been triangulated from the number of persons who lived in permanent structures in 2014, and those who lived in permanent structures as of 2018. The survey indicates the following;

- i. Significant proportions of the population live in four and above roomed houses with improved facilities
- ii. The rising use of permanent materials in construction could be indicators for the moderate incomes and soaring prices of building/construction materials. However, this sector is faced with challenges such as;

- a) The insecure land tenure system, outdated physical development plan to guide development and attract investors in required housing types
- b) There is vivid absence of enforcement arm to cause compliance to planning and building standards and regulations
- c) Some areas are not well serviced land to facilitate and attract investment in the key activities supportive to the emerging residential and trade activities in the town.

2.3.2 Strategic Housing Requirements

The housing, hotel and service demands in the town are on the rise given the following;

- i. The town's strategic location and linkage along Kampala- Hoima road requires significant housing, trade and hotel services for the transit population.
- ii. The growing trade and economic benefits with neighboring communities, Hoima town and Kampala, capital city neighboring the town, all demands for improved housing and services.

2.3.3 Strategic Interventions

The objective of the plan in the housing and service sectors is to address the emerging trends and challenges by putting in place policies and tools (physical development plan) for the town to address the above gaps and challenges. Among the proposals raised by the household respondents were the following;

- i. There urgent need for planned and serviced land to facilitate and attract investment in the key activities supportive to the housing sector.
- ii. Need for improvement and upgrading of the roads in the town
- iii. Plan and improve town infrastructure and services (electricity, health services)
- iv. Land for a range of land uses and housing standards

2.4 Existing land use pattern

2.4.1 Civic (administration)

The town has a number of administrative offices for the public, like The Town Council Offices, The Central Police Station (CPS) and Non-Government Organizations (NGO) among others. Kiboga Town Council is situated in Kiboga town ward, in this same ward is where the District headquarters are situated. This land use covers 16.05hectares of the town land.

2.4.2 Commercial land use

The commercial area is comprised of built up nodes at strategic road junctions along the trunk road and the main feeder roads in the town. The main commercial area (CBD) of the town is a linear stretch along the highway especially in the lower side of the town in the two wards of Bamusuuta and Kirulumba with retail shops, banks like Stanbic and Centenary Bank, and Advance Bank, fuel stations among others. The area contains structures housing shops, few offices, SACCOs, like and residential. These are areas where day today business activities and transaction are carried out such as; markets, groceries, retail shops, filling station, butcheries, road side markets which sell food stuffs and general merchandise.

There are also offices, restaurants, lodges, hotels and health facilities that functions in the CBD. Additionally some areas within the town boundary especially along the feeder roads have emerging commercial structures and have also been categorized under commercial use (local centers). Our mapping, transect walk surveys and data analysis revealed that the land under commercial use is 83.2 hectares of the land.

2.4.3 Residential land use

All land under housing is categorized under residential use. This includes areas with housing both near the town centre, peri - urban and dominantly rural characteristic.

The pattern of residential densities are typical of any other upcoming town, in that, there are a few high concentrations of houses within the close proximity of the town centre in Luwunga A and B, Lufula, Kyanga, Bamusuuta, Buzibweera A and B. There is also mixed use where people do reside within commercial buildings at the rear and the main type of structures within the town centre. The buildings are both permanent and semi-permanent, most are tenements in nature. Generally, the town residential developments are in three categories (high, medium density and low density). The distribution is compact and mainly linear along the feeder roads and the community access arterials that branch off these roads into the rural interior with some scattered settlements within the town boundary.

Low density is more in the semi-urban locations of Kyanga, Kiwanguzi, Bamusuuta, and parts of Buzibweera B among others where land is still in plenty and under agriculture. The locations have a mixture of both high income, medium and dominantly low income housing types (permanent and Semi permanent). Residential land use covers an area of 178.4 hectares of total the land.

2.4.4 Industrial

The industrial sector is still in its infancy and most are at small scale, dealing in maize milling coffee husking factories and storage stores in Bamusuuta and Buzibweera along Hoima Road which is also likely to boost the town in terms of economic activities.

The residents of the town are more involved in agriculture, resource extraction from the environment and most of the resources are sold as raw materials without adding value such as coffee and milk. Spatial mapping of this activity covered areas found having Coffee, and maize mills. Industrial use covers. 12.9 hectares of the town land.

2.4.5 Agricultural land use

The biggest part of the town is still under agriculture and the main crops grown are; maize, coffee, beans, groundnuts, cassava, banana plantations and other crops. Apart from coffee that is grown as a cash crop, the other crops are grown at small scale for subsistence consumption. And the rest is taken to the local markets. The agricultural land covers an estimate of 380.3 Hectares hence constitution the second biggest of the town land.

2.5 Social Service

It is a service centre for excellence in the town like educational facilities, Religious facilities, culture, sport, police, Hospital, clinics like St. Peters Clinic and other private health support facilities. Institutional land covers 59.5 hectares of the planning area.

2.6 Recreational facilities

These are non-built up areas patched up in whole the town, they are basically open grassland/areas that are not occupied with or by any physical developments. They are characterized with thick bushes and forest vegetation, short grass vegetation used for cattle grazing. This land use covers 3.25 hectares.

2.7 Public Utilities

2.7.1 Roads

The roads infrastructure falls under Primary roads which include Kampala-Hoima highway, reserves of 30–40 meters and bituminous surface. Secondary distributors which connect to areas outside the town boundary to neighbouring. Sub counties of Kibiga, Mulagi and Kapeke are mostly narrow, gullied and loose surfaced.

Table 4: Road Classification and Hierarchy

No.	Road Type	Desired Road Reserve width in metres
1	Trunk Roads/Freeways	60
2	Primary	40
3	Secondary	30
4	Tertiary	18
5	Local Access	8-20

Source: National Physical Planning Standards 2011

Since transportation is a major factor in the social and economic growth and development of an urban area and region of location. The presence and state of the transport network is key to urban development as it facilitates the smooth flow of goods, people and services. Hence focus in this planning process is to ensure that the town requirements, strategies for provision and management of facilities and services should facilitate safer, faster, comfortable, convenient, economical and environmentally friendly movement of people and goods within the town and the region.

Table 5: Kiboga Town Road Network

Road condition	Distance (Km)
Paved	0.6
Unpaved	62.412
Unpaved roads	
Poor motorable condition (Earth roads)	24.92%
Fair condition	51.8%
Very good condition	5.7%

Source: the 5 year Development Plan 2015/16-2019/20

Future Road traffic growth.

The National Transportation Master Plan (2008-2023) bases its traffic growth projections on survey data from 97 stations that were carried out by several consultants during 2008 in several central districts around Kampala. Studies along the Nansana – Busunju – Lwamata main radial route on the 96.3 km stretch provided a growth rate of 16.6% per annum. The derived average growth rates for traffic on all the main radial routes out of Kampala indicated an overall traffic growth rate of around 8 percent per annum since 2001.

Analysis of the projections, shows that by 2040 road operating conditions in the current situation for the main/primary/trunk road will attain maximum flow operating conditions and will culminate into congestion especially along Kiboga-Hoima road. The solution therefore is to provide additional road capacity by either widening the carriageways or construction of town distributors and relief roads to relieve pressure on the Kiboga-Hoima road.

2.7.2 Proposed Road Network

Land Use/Road Hierarchy Relationship

One of the key aims of the hierarchy is to optimize accessibility, connectivity, amenity and safety for all road users including motor vehicles, bicycles pedestrians and public transport patrons. The relationship between road hierarchy and the future land uses they serve will need to be considered. The proposed town road network length must be defined by hierarchy to separate functions of the roadways that constitute efficient road operating conditions.

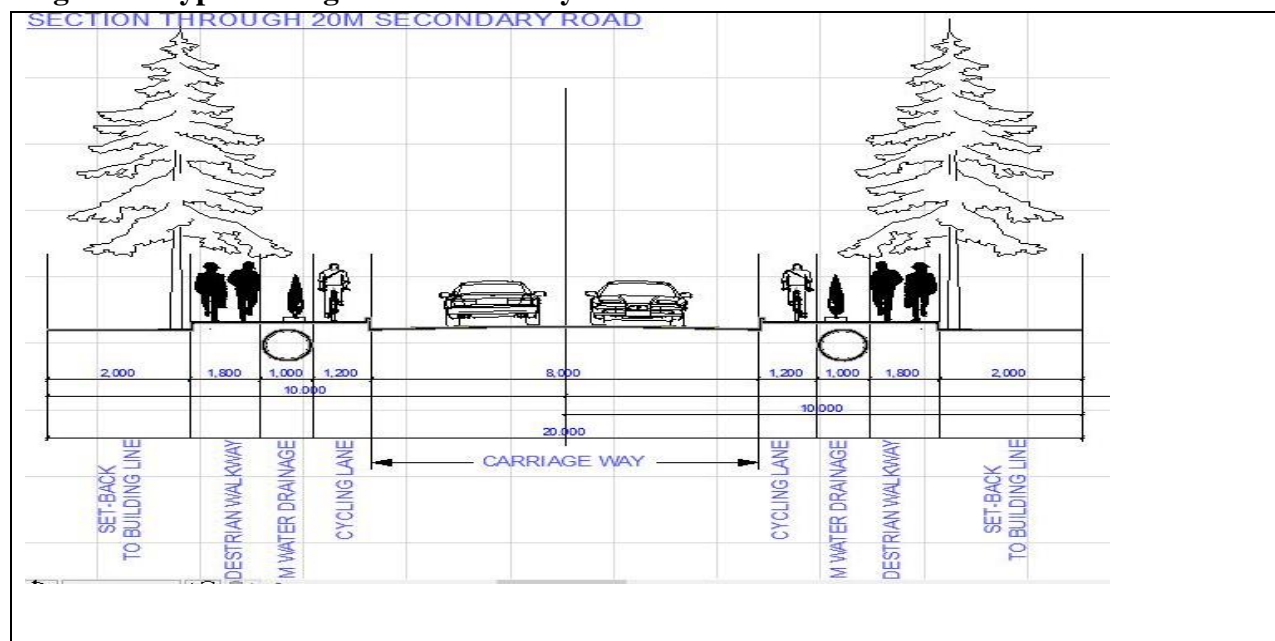
The Plan proposes 17.75 Km of distributor roads which are double carriageways to link between Divisions, neighborhoods, villages and with immediate sub-counties. These will be upgraded and properly engineered with a minimum of two lanes, adequate shoulders and proper drainage. They will be paved and will require a road reserve width of 20metres. Table 4, indicates the details;

Table 6: Proposed Distributors

No.	Road Name	Km	Desired Road Reserve width in metres
1	Second Street	1.97	20
2	Kiganzi	2.0	20
3	Wamala	0.7	20
4	Hospital	0.3	20
5	Third Street	2.5	20
6	Bamusuuta	2.38	20
7	Kirulumba	2.2	20
8	Katanjovu	2.8	20
9	Buzibweera	1.5	20
10	Kachwanguzi	1.4	20
TOTAL		17.75	

Source: Consultants Compilation, Feb-2019

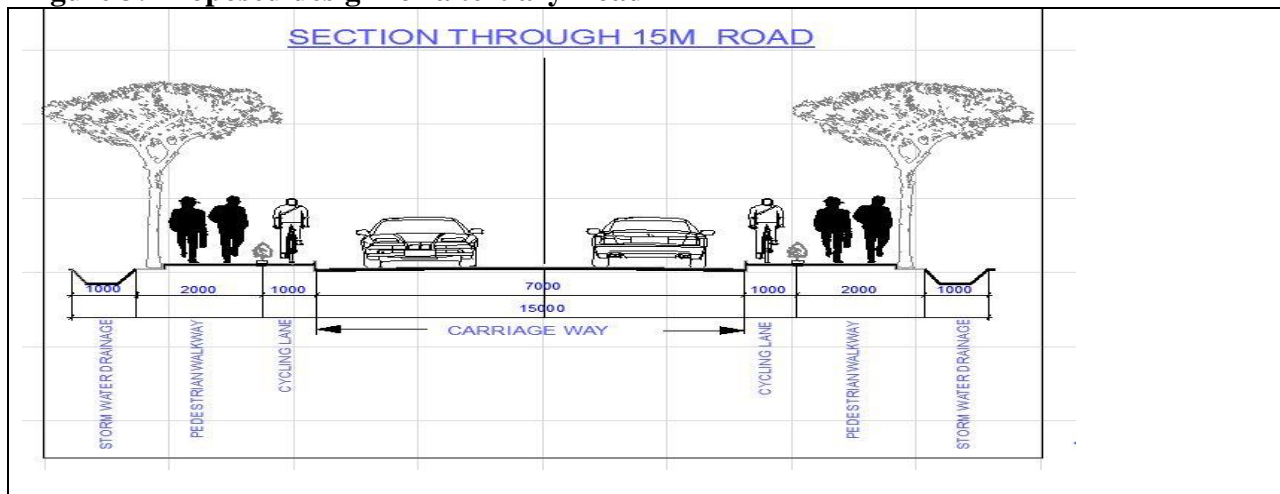
Figure 2: Typical design for a secondary/Distributor road



Source: Consultants Compilation, Feb-2019

Our analysis identifies 36.28 Kms of collectors/urban/tertiary streets of double carriageways. The roads run through the town and link up the neighborhoods. The recommended reserve width is 15m wide to link neighbourhoods with the secondary/sub-arterial/distributor routes.

Figure 3: Proposed design for a tertiary Road



Source: Consultants Compilation, Feb-2019

Proposed Road Transport management system

Traffic Management System.

The town Council should develop Traffic Management System. This will include;

- Intersection traffic management improvements are required,
- Tarmacking of Sub-arterials and Urban streets and provision of vehicle stops
- Introduction of paved walkways that are separated from motorized traffic.
- Standards for commercial plots to include ingress and egress provisions.
- Parking, loading and lighting facilities. The town CBD is beginning to experience traffic congestion partly because of unregulated street parking. It is important to put much emphasis on regulating street parking and loading
- Provide for safe and adequate space for temporary storage of vehicles,
- Ensure safe ingress and egress of vehicles entering and leaving public street system,
- Provision of parking space for transit vehicles especially cargo/trucks/trailers

Road Safety

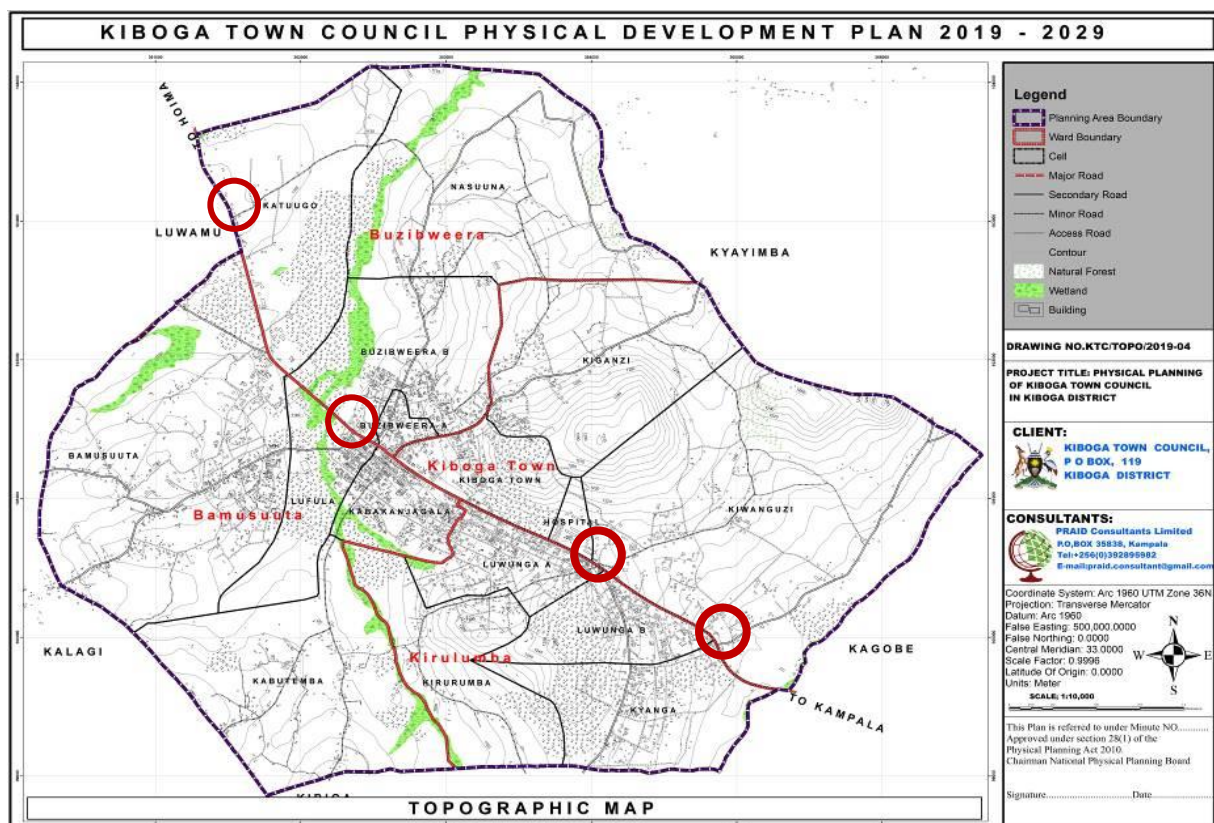
- There is need to improve safety at intersections by providing additional capacity through design and implementation of adequate traffic separation or signalling the intersections that have potential for interrupting smooth flow of traffic.
- Existing Arterials are characterised by many local area access roads that are not controlled, and in future will lead to frequent traffic flow interruptions and jams. Collectors will require vehicle stop areas to eliminate vehicles stop within the carriageway and provide clearance for passing vehicles.

The existing road network must keep pace with the future increase in traffic. At peak hours, traffic volumes will increase, driver speeds reduce and roads will get congested. In general, high traffic volumes and congestion affect road safety. Road safety is also affected by the number of interactions between vehicles.

Critical Intersections in Kiboga Town.

Road intersections that will in future be characterised by interrupted traffic flow are the traditional 3 or 4 arm intersections (which will create many conflict zones as a result becoming unsafe) as reflected in Map, 4.

Map 4: Road intersections with interrupted traffic



Source: GIS Unit Praid Consultants, Feb-2019

Taxi/Truck

Kiboga Town has a relatively smaller taxi and truck parkas compared to the National planning standards, where passengers and cargo are exchanged between vehicles or between transport modes however the facility is never used. Operators prefer to park, load and offload along roads. The facility is not developed to cater for the service, is small and enforcement of use is lacking. The sub-arterials and collectors (Urban streets) lack provisions for bus stops and pedestrian walk ways for the dominant mode of non-motorized transport (walking). It is recommended that, these facilities be incorporated in the road designs and included during construction of new roads and expansion/upgrading of the existing roads.

2.7.3 Water and sanitation

Kiboga town is dominated by hilly to gentle slopes topography with the two dominant hills of Kirulumba and Kiboga. Kiboga district has low to medium groundwater potential with low yields generally and differing from place to place. The town is connected to piped water, provided and managed by Central Umbrella Uganda. Though the level is still low, connection is ongoing. The residents also use other sources of water like, public taps, protected spring and open springs, bore hole and streams.

The Current Water Consumption

The connection fee is at 300.000 Ushs, for new water applicants to be connected with piped water. Currently the active water connection/customers is standing at 830 persons. The planned extension of 3 kilometers to Katuugo-vumba covering Nasuuna is underway, this connection will cover 50 household. Another extension along Katanjovu road will cover 40 households. According to the operation manager of Central Umbrella Water Services in charge of Kiboga, he indicates that almost the whole town council has been covered in terms of laying pipework except Nasuuna Cell.

The future intension to expand the active water connection/distribution is under way targeting a clientele of 30,000 households, because the water reservoir has been elevated to a greater height that enhance the water pressure. However, it is worth noting that many people in the Town Council will continue to access water through other means that include; spring wells, protected or unprotected. This is the most important source of water for urban dwellers who don't get piped water.

Town council water situation

The survey carried out, indicated that 48% of the households in town use treated piped water. Kiboga Town Council has a Pumped Piped Water Supply System which was commissioned in 2001. The system was constructed with a grant from JICA. However, it was also discovered according to the household survey that over 50% of the households relies on untreated water sources in town such as springs, wells an boreholes. This is simply because in some areas like Nasuuna and Katuugo, the system has not reached there yet. In addition other residents revealed that the piped water is not very conducive for drinking or bathing because it has too much chlorin.

Piped Water Supply System

Approximately 600 houses are connected, 10 public standpipes and 10 water kiosks. Piped Water which has a high level of sustainability is supplied by four different connections types:

- House connections
- Private yard taps
- Public standpipes with prepaid water meters
- Taps operated by yard-tap owners and kiosk operators

Existing Water Infrastructure in Kiboga Town

Piped Water supply infrastructure in Kiboga town council is under the mandate of Central Umbrella Kiboga. The general supply system consist of a pump station; pump house with a standby generator, surface pumps, treatment unit and a guard house, office block located in Kiwanguzi Cell, and two public toilets one at Hospital Cell and the other at Buzibweera A Cell.

Other Sources of water

The survey established distribution of water sources in the town Council as summarized in table 22. Though for the case of borehole most of them are non-functional apart from one in Katuugo Cell.

Table 7: Distribution of existing Water Sources in Kiboga Town

Administrative area		Water source		
Ward	Cell	boreholes	Protected springs	Well
Kiboga	Kiganzi			
	Kiboga town			
	Hospital			
	Kiwanguzi			2
Buizibwera	Katuugo			
	Nasuuna	1		
	Buzibwera A			
	Buzibwera B		1	1
Bamusuta	Kabutemba	1		1
	Lufula		2	
	Kabakanjagala			1
	Bamusuta	3		1
Kirulumba	Luwunga A		1	
	Luwunga B			
	Kirulumba	1		2
	Kyanga			
Total		6	4	8

Source: Consultants Compilation, Feb-2019

Goals

1. To provide clean and adequate water supply coverage to meet the growing demand.
2. To upgrade, extend and maintain the water supply system to all consumers in town

Objectives

- i. To increase water supply coverage from 2 Km to 5 Km piped network
- ii. To increase water storage
- iii. To extend and maintain the water supply system to all eligible consumers

Water Demand Forecast.

Central Umbrella a privately run water service provider, puts water service coverage in Kiboga town area as adequate. They project that the two water reservoirs (each of 100m³) at Kirulumba hill and the distribution mains will be able to meet the current and future water demand up to 2040. However the water providers will have to provide additional reservoir capacity at Kiboga hill to meet the unforeseen future water demand for the town's projected population and economic activities. In the medium term, Central Umbrella has plans for extension of water supply to areas currently not served and beyond. The plans for extension include;

- Along Katuugo – Vumba road a distance of a further 3 kms to serve Nasuuna area
- Along Kibiga road extension of water for a further distance of 5 kms
- Along Katanjovu road an extension for a further 3 kms

2.7.4 Solid wastes/Garbage Management

Overview of Existing Situation

There is still a lot to be desired in as far as sanitation is concerned, in both commercial and residential areas, due to lack of facilities, poor drainage, poor attitude on sanitation.

This section covers key areas of excreta disposal/management, personal and food hygiene, solid waste management, waste water disposal, and drainage. Facilities for Excreta disposal can be subdivided into household sanitation, institutional sanitation and Public sanitation. Sanitation facilities and services are required to protect public health.

Household and Public Sanitation

The Town Council under the preventive health branch of public health department has the overall responsibility of maintaining a safe health environment including provision and construction of sanitation facilities which include: Public toilets/Latrines emptying, collection and haulage of faecal sludge, provision of Faecal sludge haulage to treatment plants and Waste water treatment plants. Provision of household sanitation is a responsibility of individual households.

Under 1995 water statute NWSC is mandated to provide sanitation related activities as follows;

- i) Waste water collection.
- ii) Waste water treatment.
- iii) Faecal sludge treatment.
- iv) Industrial wastes discharge consents.
- v) Investment planning and implementation.

On-site Sanitation Facilities

The findings of the household survey indicate that most residents use on-site sanitation systems. The household survey indicated that 65% of the households use pit latrines, 33% use VIP toilets and only 2% use waterborne toilets for excreta disposal. The field surveys further demonstrated that a small percentage of the population use septic tanks, however, this is likely to increase as the level of urbanization increases in the town Council. Because currently more people are constructing good permanent structure.

Therefore, this will demand for a conventional sewerage management system with connection to piped water. To meet this demand, a site for sewer lagoon is proposed in the physical development plan. On the other hand the current Lagoon in Nasuuna should takes care of those using septic tanks. Because the lagoon which is under construction located in Nasuuna cell, Buzibweera Ward, is intended/designed to be sustained by use of Exhauster and not direct sewer connections. Given its location, it cannot support natural gravity flow for the whole town council. The sewerage lagoon covers a total area of 3.9hectares

The use of the ordinary pit latrine as the main mode of waste disposal can be explained by the fact that there is no centralized sewage management system in the town but also constructing pit latrines is much easier compared to other modes as it does not need expensive materials and does not require much maintenance. The management of the facilities at household level indicates the advantage of the availability of land in town to build a new facility once one is full. The problems identified by stakeholders included;

- a) Poor disposal that leads to diseases like cholera, dysentery and other communicable diseases.

- b) Poor building materials used in the construction of the facilities. The materials in some cases cannot stand the test of the expected lifetime.
- c) Poor use, hygiene which discourages use of the facility due to smell hence forcing the population to resort to bad sanitation habits and the associated problems.

The extensive use of pit latrines for disposal of human excreta is not sustainable and poses public health challenges given the fact that the water table in some parts of the town like Kabaka N'jagala, Lufula and Luwunga A is very high and that it is not easy to construct pit latrines in the area yet it is these facilities that the local community depend on. This will therefore require planning for a conventional sewerage treatment system in order to sustainably manage sewage produced by residents. Sites for the development of the sewage lagoons have to be planned for which the PDP has to take care of.

2.7.5 Sewage and sewerage infrastructure

There is no adequate sewer system in Kiboga town currently, a part from the existing one which only serves the Hospital and the District administration block. Despite its existence, it is poorly maintained since it's under the hospital management hence facing some rampant blockages in the system. No rehabilitation work has been done on the sewerage system yet.

There is no proper designed physical sewerage system for the town council. This is because sanitary lanes and some access roads are not yet properly opened. This hinders the designing of the sewerage network, since there is need to have connections and discharge points.

Problems

Important to note is that currently the construction of a new sewage lagoon in Nasuuna Cell is ongoing. However, this facility is planned to be a regional facility that will not only serve the Kiboga town council but other neighbouring town councils. The only limitation is that this facility is designed to handle sewage treatment with no direct sewer connection network/line. Implying that the means of disposal will be by use of sewage trucks/exhausters. It equally means that septic tanks will still remain the means of sewage disposal at household levels in the town council. More so if direct sewer connections are to be provided, then it will cover a very limited area. This project is under the Ministry of Water, Environment and Sanitation and is expected to be complete by end of the year 2019.

In conclusion, Kiboga town council has a very limited sewerage system. The population served by water borne sewerage is less than 1% and the population using septic tanks is also still small, about 33%.

Given the limited resources, the rest of the population, about 65% is still using pit latrine system. Efforts should be made to improve the situation of latrines most of which are in poor condition and are shared by many people.

2.7.6 Kiboga town Sanitation Future Requirements

The estimation of sewage production and collection is based on the projected population and accumulation rates. The future projections point to the need for a sewage treatment plants in the Kabaka N'jagala catchment area of Kiboga Town Council. This will therefore require planning for a conventional sewerage treatment system in order to sustainably manage sewage produced by residents. Sites for the development of the sewage lagoons have to be planned for which the PDP has to take care of.

General Challenges on Sanitation in Kiboga Town

- Lack of a town drainage master plan to improve on proper storm water management.
- Challenge of sanitation hence the need to create waste water treatment plants as a long term strategy
- Lack of faecal management services due to lack of emptying services in high density areas with difficult access.
- Environmental limitations (High ground water table or low soil permeability) in the valleys.
- Cost of constructing disposal facility is high due to high cost of construction materials.
- Cost of hiring vacuum trucks is high.
- The lack of public toilets in public places and high water table areas.

Objectives

Waste water and storm water networks contribute to management of health and floods hazards in the community. Without sanitation facilities, urban residential, commercial, industrial, health and education facilities would not function. Storm water infrastructure contributes to flood management in urban areas enabling effective and efficient operation of the road network. The PDP objectives therefore Sort out the town physical form by providing a structured land use system.

Future Sanitation system

The future Kiboga town sanitation system should be based on piped sewerage system, sewage and faecal sludge treatment facilities to be managed by NWSC and the Town Council. Waste water collection and transfer shall be by gravity following natural gravity to avoid pumping stations hence the town council authorities must sort out the town physical development challenges. The future sewerage system shall be based on the town's topography and its natural catchment systems.

2.7.6 Solid waste in infrastructure

Waste disposal infrastructure includes incinerators, sanitary landfills and open dumping sites. The responsibility of waste disposal is solely on Kiboga Town Council however, the Council lacks funds for regular collection, storage, transportation and disposal of the waste generated within the town.

Solid Waste Management situation

The problem of poor solid waste management has affected mostly the central business area that is shared by all wards. There are almost no collection facilities in the central main market. There is also poor disposal of polythene (kavera), which affect the soils and blocks the drainage channels and other waterways. This situation is liable to cause epidemic/disease out breaks. The low soil quality and productivity due to soil and water pollution, health hazards and other environmental problems caused by poor wastes management have direct bearings on social and economic costs and thus affect the people's quality of life and sustainable development. Such costs imply increased cost of living for the poor and therefore leads to declining standards of living. Besides, such costs impact negatively on services delivery.

The waste generated in the Town of Kiboga is composed of the following types:

- i) Household waste which is mainly wet organic material.
- ii) Waste from markets of which is mainly raw vegetable matter from plantains.

- iii) Commercial/industrial waste from offices, retail shops, warehouses, and bars.
- iv) Industrial waste is mainly coffee and maize husk wastes.
- v) Street waste is composed of sweepings like sand, litter and drain cleanings.
- vi) Special waste from the main hospital, the abattoir waste. This waste needs special treatment, handling and finally disposal.

From the survey it was established that the above wastes generated are categorized as;

Table 8: Types of solid waste generated

Types of solid waste	Percent
Biodegradable	52
Non-Biodegradable	16
Both	32
Total	100

Source: Consultants Compilation, Feb-2019

Storage of Waste

Generated refuse before collection is deposited and stored in some common points. The garbage is put in sacks and placed near road. Where the garbage truck collects and transports to the landfill. In some scenarios, garbage is dumped in old and dilapidated mason skips, letting garbage spill over yet collection is not regularly done. This attracts flies, pathogens and makes the place filthy and smelly.

Transport of Waste

The town council has only 1 Truck that is used to ferry/transport garbage to the landfill. Despite the existence of the refuse truck, waste is not collected regularly yet the rate of waste accumulation is high. This is also compounded by the challenge of the refuse truck which most often has mechanical issues.

Disposal of Waste

From the survey carried out 48% of the population dispose their waste by open dumping, 17% dispose their waste by burning, 9% dispose their waste by compositing, 9% dispose in a compost pit while 2% dispose their waste indiscriminately. The refuse generated in the Kiboga town is stored and collected for disposal to the landfill in Kiwanguzi cell.

Problems of Solid Waste Management

Storage

There are no proper gazetted collection points for storage of wastes in the town council. Open dumping becomes the order of the day and is quite rampant and is especially practiced in commercial areas where wastes are scattered, and there is no specific collection points for some areas.

Transport:

There is only 1 truck in the town whose operation is insufficient for the town. Hence the normal collection frequencies are rarely achieved and overfilling and spillage are problems experienced at the collection points. The public is therefore exposed to pathogens and smells. Some skips are in a terrible state and the situation often worsens when it rains, because the area becomes so muddy and filthy.

Disposal

The management at the pit site leaves a lot to be desired. The landfill site at Kiwanguzi has a residential area nearby and is located near a road in the area where the water table is high near the swamp and the inhabitants have their sources of water in these swamps. No monitoring whatsoever has been carried out to ensure that this water from the underground is not contaminated by the leachate from the waste.

Given the fact that the population in the Town Council is growing by 3.5% per annum, there is need to address this problem by providing for more organized collection facilities for waste storage and trucks for its transportation to the landfill. Much as the town has a landfill as a final waste disposal site located in Kiwanguzi Cell, it is important for the town council to devise a proper solid waste management system at the landfill to curb and prevent any inconveniences associated with solid waste. Ideally it is recommended that they look for funds and procure a refuse plant.

Kiboga town Council is experiencing a solid waste management problem. Most of the solid waste is managed privately. Households pay between 10,000-30,000 Ugandan shillings to private waste collectors per month.

Challenges

- Currently waste is dumped in non-designated sites.
- The town lacks waste collection points before it is transported to the landfill.
- Inadequate funding especially in acquisition of garbage trucks for transporting garbage.
- There are clear bye-laws to manage waste collection at household level
- The council lacks planned collection points where sorting can be done before waste being disposed of to landfill.
- The fact that there no garbage trucks collecting waste from individual households, confirms that solid waste management is not properly managed.
- Need for council solid waste management by-laws to guide, collection, transport and disposal.

Table 9: Solid waste management strategy

Local Authority	Infrastructure	Land Requirement
Town Council	Recommend joint acquisition of a solid waste disposal area/land to be shared between town councils of Kiboga, Kyankwanzi and Bukomero	3-4 Ha
	Enact of Sanitation bye-laws	N/A
	Preparation of Town Drainage Master Plan	N/A
Wards of Kiboga, Buizibwera, Bamusuuta and Kirulumba	Each should plan and provide ward waste collection points (could be used also for sorting before collection and disposal)	
Cells	Enforcement of Town Council solid waste bye laws on collection and on-site/HH management requirements.	N/A

Source: Consultants Compilation, Feb-2019

Possible Challenges

- High cost of land acquisition for infrastructure.
- Insufficient resources from Town Council to meet the growing and future demand for water and sewerage services.
- Limited town financial resources envelope to fund sanitation activities and environmental issues impacting on sanitation.

Recommendations

- › It is therefore, recommended that the town installs wastes collection facilities like garbage bins in various locations of the town council so as to reduce on littering of wastes by the population.
- › It is also recommended that the wastes management plant should be developed to adequately handle waste management process. That include sorting of the wastes to separate recyclable and non-recyclable waste. The current landfill covers an areas of 1.04ha in the Town total area.

2.7.7 Energy Sources

There are different sources/types of energy used in town council ranging from electricity, Paraffin, charcoal, firewood and portable gas for cooking, electricity. Most people use electricity and paraffin are used for lighting plus a few people using solar for lighting. The survey findings indicate that most people in town council rely on charcoal and firewood for cooking. The existing electricity in the town is supplied by the national grid that runs through the town council along Kampala- Hoima road.

There are a number of challenges identified from using the above identified energy sources among them include;

- Pollution especially with fumes from charcoal, firewood and paraffin that affect people's health
- Unaffordable; some residents are unable to afford different energy sources for instance payments of domestic power bills, purchase of solar panels among others, payments for extension and installation of power lines to their property sites
- Environmental degradation as a result of cutting down trees for firewood and charcoal which have adverse climate change impacts

The future recommendations will need to consider;

- › Alternative source of energy that are eco-friendly and affordable for both lighting and cooking.
- › Employment creation centres that provides alternative source of income other than dependence on firewood as source of income

Type of Energy Used for Cooking

The household survey sought views on the use of the different energy types in homes for cooking and lighting and the findings revealed that most households in the town council (50%) use charcoal for cooking while 38% use firewood, 7% use both firewood and charcoal and only 2% use electricity as illustrated in Table 38. This trend has a significant implication on the environment and health of especially the women who do the cooking in 95% of the households that use charcoal and firewood as opposed to 2% that use electricity.

There is need for deeper popularisation of use of alternative sources of energy for cooking such as recycling biodegradable garbage from domestic waste and markets to make electricity, briquettes and biogas from both animal and human waste, though the latter must be done consciously putting into consideration the social innuendos attached to the latter proposal.

Type of Energy used for Lighting

The NPHC 2014 Report indicated that 16% of households in Kiboga district use electricity as source of lighting, 54% used paraffin lanterns and tadooba lanterns.

Table 10: Kiboga District Household Source of Energy for lighting

Source of Energy for lighting	Number of HH	Percent
Households that have access to electricity	5,441	16.0
Households that use Tadooba for lighting	18,552	54.5

Source; UBOS – NHPC 2014

However, there is a marked improvement at the urban level since the household survey conducted established that the percentage of households that use electricity as a source of energy for lighting rose to 42%, 3% used solar and electricity, 28% used solar and 13% of households used paraffin; a drop from the percentage posted at the district level in 2014. The rising use of solar as source of energy for lighting shows a positive move into the right direction since it has reduced on widespread use of paraffin which could have adverse effects on the health of household members.

Table 11: Source of Energy for lighting in Kiboga Town Council – 2018

	Energy Source for lighting	Percent
1	Electricity	42
2	Electricity & Solar	3
3	Solar	28
4	Paraffin	13
5	Charcoal	2
6	Firewood	2
7	Others	10
	Total	100

Source: Consultants Compilation, Feb-2019

Overview of Electricity Distribution Network

Kiboga town council is spread with both high voltage distribution lines which power factories, commercial and institutions as well as low voltage distribution lines which power domestic energy needs for households. Map 13 provides the distribution network in the town. The coverage for high voltage distribution lines is adequate however the coverage for low voltage lines is inadequate in the cells of Nasuuna, Katuugo, Kiwanguzi, Bamusuuta and Kabutemba areas. This implies that there is need to intensify extension of low voltage lines in the cells.

Key Challenges associated with energy

- High cost for connection hence threat to the environment and aggregated effect of climate change.
- Low voltage distribution should be extended to the cells of Nasuuna, Katuugo, Kiganzi, Kiwanguzi, Lufula, Kabutemba and Kiruluumba
- High power tariffs has compelled communities as an alternative to use of wood fuel which depletes the environment in unsustainable manner
- Economic activities requiring high voltage energy have not yet emerged in the town hence low demand, low high paying employment and low income/revenue for the town community and council.

- Challenge posed by use of firewood and charcoal as a threat to the environment and aggregated effect of climate change. There is need to scale down on use of both solid wood fuel products and devise safer methods of generating fuel that promote environmental sustainability.
- High cost of paraffin and electricity
- The intermittent supply of electricity, and
- The low quality of solar equipment on the market.

Key Strategies

- Address town council physical planning to allow efficient reticulation of energy
- Government should reduce the high-power tariffs to encourage energy use for domestic activities, stimulate industrial growth in the primary processing sectors and service growth.
- Use of alternative renewable sources of energy for cooking such as recycling biodegradable garbage from domestic waste and markets to make briquettes and biogas or liquid petrol gas is recommended.

2.8 The Economic base and Local Economic Development (LED)

Kiboga Town is the commercial center in Kiboga District with majority of people engaged in wholesale/retail business operations, while others are engaged in agro-business enterprises and farming. Produce buying and selling is one of the most lucrative businesses in the town attracting traders from both within and outside the district. The most traded in items are coffee, maize and beans these have greatly improved the standards of living of the people. However, prices have greatly affected crop production in the recent years. Kiboga Town is basically a meeting point for commercial traders for both agro-produce and manufactured goods. There is growing demand for local fabricated products like steel windows, doors, building materials like sand bricks.

Income and source of Livelihood

The Kiboga TC 5 Year Development Plan: 2015/16 – 2019/2020 indicated that the major source of income of the households is employment income 32.5% (salary and wages) at 32.5%, followed by farming (25.8%) and property income being the least source of at 1.7%.

The consultant's household (HH) survey on contrary established farming (animal and crop) as the main source of income for the households at 37%. While trade (petty trade and trading in crops) at 28%, and salary income at 12% of the households as source of income.

General LED Challenges in Kiboga town

- i) Unstructured local economy with no clear basis dominated by non-tradable sectors (like retail, hairdressers and street vending), very limited employment opportunities, lacking significant productive, high value added sectors (manufacturing in structural and fabricated metal products, manufacturing in basic iron and steel, and manufacturing in plastics).
- ii) The high dependency on the City and Wakiso centres. The town lacks functional economic zones to curtail deterioration in unemployment and informally
- iii) Unguided development/transition, the town is slowly losing its attractiveness and identity provided by its topography, natural features (lake, hills and valleys), culture and traditional history.

- iv) Majorly residential and in effect it is a dormitory but generally lacking those fundamental elements of urban quality and amenity offered by an urban environment.
- v) Unemployment that is high and reflected through high poverty levels.
- vi) Lack institutional capacity in terms of human and financial resource in order to deal with the enormous development needs through implementation of the Physical Development Plan.
- vii) The complex land tenure system hampering the town's growth potential and slows the effectiveness of future investments.

Town LED Objectives

Therefore, the Local Economic Development objective is “To transform the local economy through promotion of investment and employment creation”.

Strategies

- i) Restructuring the town space economy
- ii) Planning and increased support to manufacturing and tradable service sectors to bring about transformation (planned industrial areas, commercial areas, high added value services, modern efficient building and construction industry and a modern efficient public transport sector).
- iii) The spatial configuration of the town to ensure development allows optimal land use to free productive land for agriculture, attain economic density and good infrastructure which makes production activities profitable.
- iv) Enabling the town's industry sector and other priority sectors (like manufacturing tradable industries and services.). The towns PDP should therefore target structuring the council space to ignite and attract investment in higher value sub-sectors, particularly in processing industries, which have a greater contribution to productivity e.g. in grain milling, food processing, and financial services all have both above average returns to job creation and productivity.

2.9 Development potentials and constraints

2.9.1 Potentials

The town council is endowed with a number of resources that are potential to development. They include:

- Undeveloped land these can be developed into residential, commercial, institutions, hotels for low and medium earners or even industries.
- Suitable Agriculture land which supports all plant life, but mainly coffee and maize
- Forested areas with short trees and some shrubs
- Hilltops e.g. Kiboga, Kiulumba and Bamusuuta hills; these provide rock materials for stone quarrying
- Basically potential areas were located in the peripheries of the town. Also of infrastructure; like roads, water and electricity plus service industry that include; Health, education and accommodation(Hotels and Lodges) not forgetting the relative political will.
- Wetlands; these are potential areas for Aquaculture

2.9.2 Constraints

There are a number of constraint that may pose a challenge to proper and maxima utilization of resources that were identified in the field, these include:

- The swamp/wetland: These were located in Nasuuna, Buzibweera, Kabakanjagala, Kabutemba, Kiwanguzi areas. Since wetlands are environmentally gazzeted there is no development proposal that can be made in such locations hence constraints.
- Steep hills: Kiboga town consists of several steep hills which are rocky in nature. This limits low earners from developing such area leaving it to high income earners who can incur some extra costs while developing such areas hence a constraint.
- Concentrated development (CBD): The central area of the town is much concentrated with developments such as commercial, light industries, residential, markets, institutions like Hospital, schools and places of worship. Hence, the complexity of making profound proposals in such already developed areas.
- **Soil Degradation:** Soil degradation is a function of soil erosion. The most affected areas are: hilly areas of Kirulumba and Buzzibweera wards, deforested areas, overgrazed rangelands Buzzibweera and Kiboga ward, construction sites like road upgrading and opening, and degraded wetlands. The major cause of soil degradation is soil erosion, which is facilitated by poor farming methods, uncontrolled bush fires, unregulated civil works, deforestation, and overstocking of domestic animals especially cattle.
- Soil degradation results into loss of soil productivity and thus affects agricultural production, which eventually impacts negatively on food security, household income and livelihood. Soil degradation and reduced productivity, therefore, have direct impacts on the community survival mechanism that is largely farming in Kiboga town Council.

2.10 Gender and HIV/AIDS

Gender is a critical variable in the development process. It addresses issues to do with differences between women and men, boys and girls within the same households, and within and between cultures that are socially and culturally constructed and change over time. These differences are reflected in roles, responsibilities, access to resources, constraints, opportunities, needs, perceptions and views held by both women and men, and their relationships. The distribution of development in the Town Council is highly skewed in terms of gender relations, on top of the overall poor development ranking in Uganda. However, there are various development partners in form of local and National CSOs e.g. THP, SNV, ACFODE, the private sector and individuals are actively engaged in working towards elimination of gender inequalities. C

Gender Responsive Interventions

The goal of Town council gender mainstreaming is to achieve equal opportunities for the marginalized and bridge the gender gap by empowering men and women to participate and benefit from the social, economic and political development. The players and actors responsible for initiating and implementing activities include line ministries, District & Town council local governments, indigenous CSOs and Private Sector operatives.

Objectives of Gender Interventions

- To increase the awareness amongst marginalized and to recognize their contribution to productive, reproductive and community activities.
- To broaden the opportunities of marginalized groups and identify mutual benefits that can be gained from the empowerment of both men and women.
- To undertake gender planning, conduct gender analysis, identify gender sensitive indicators and to monitor progress.
- To engender budgets to ensure adequate gender sensitive allocation of resources.
- To promote for policies which are gender sensitive and inclusive
- To promote gender networking between key players like NGOs, CBOs, women groups, youth groups, cooperatives as well as government agencies.
- To improve communication flow between ministries, the local administration and lower councils.
- To develop the capacity of main actors who are responsible for implementing the gender interventions.

2.10.2 Specific Gender Responsive Interventions

a) Gender Practical Needs

Efforts have been made to address gender Practical Needs. There is provision of piped water and protected springs to address the Gender Practical Needs.

b) Community Management Roles

Women are involved in water source management/ maintenance and sensitization committees. They constitute over 50% of the composition of all water source committees.

c) Functional Adult Literacy Programme

There has been enrolment of women in Functional Adult Literacy classes in all the 4 Wards. However, the number is still low.

d) Girl-Child Friendly School Environment

The school constructions ensure separate latrine stances for boys and girls and provide with hand washing facilities. This improves on privacy for the girl child and leads to girl child retention in schools. There have been byelaws set up by the Town Council to reduce the vulnerability of the girl child. Makeshift Film/Cinema halls commonly referred to as Bibanda have been limited in working hours. The girl children have been barred from going and participating in Karaoke.

2.10.3 Means of communication

Access to efficient and affordable ICT services is key to promoting private sector investment given that this significantly reduces the cost of communication, internet services which also stimulate the growth of other related sectors of the urban economy. However, on the national level, the sector currently employs over 1.3 million people and has generated up UGX 416.7 billion in 2014 up from UGX 332 billion in 2013. It contributes almost 2 percent to national output. All these are attributed to the improved ICT infrastructure¹.

The telecommunications sector in the town is dominated by mobile services, which are growing rapidly, spurred by new entrants and intensive price competition. The transmission network

¹ (National Budget Speech 2016/2017).

today in the country consists of mainly microwave links. There are however arrangements to implement fiber optic cables (NFB) throughout the country to facilitate broadband high speed internet services.

Field experiences indicated that a number of mobile Telephone Networks present in the area including MTN-Uganda, UTL, Airtel, Africell and Smile among others. The town is blessed by the proximity to Hoima district, the home base for most of the radio stations, namely, Radio Kiboga, Radio Maria and Capital FM. The town also receives signals from privately subscribed Digital Satellite Television operators hence the community can access local and international information via television broadcasts. Besides radios and phones, the Town development Plan indicates other modes of communication to include posters, Town and Parish notice boards, churches, mosques, drinking places and burial places and word of mouth.

2.10.4 Poverty

Poverty is always perceived differently based on geographical location, nature of economic activities and social status. However, poverty is generally summarised “as the inability to meet basic needs such as food, shelter, clothing, basic health care, basic education, lack of information and inadequate household items like paraffin, salt and soap”. In relation to Kiboga, the lack of opportunities for survival and employment, and having limited or low productive assets such as farm tools and land emerged strongly in the definitions of poverty.

According to the 5 year development plan, the household incomes in Kiboga town council are generally below standard, with high illiteracy rate of 33%, abject poverty; the large family size of approximately seven people and general ill health and malnutrition. It is estimated that 38% of the people in the Town Council live below the poverty line due to general illiteracy, which stands at 40% for male and 60% for female averaging at 33% compared to the national average of 31%. There are low levels of consumption and household expenditure per Capita is estimated at Shs 300 /= per day, with an average development index of 0.4.

Life expectancy in the Town Council is estimated at an average of 46.7 years disaggregated into 43.3 years for male and 46.7 years for female. Due to malnutrition, 44% and 26% of the boys and girls are subject stunted growth. Malaria, Pneumonia, intestinal worms, Diarrhea and Anaemia constitute most of the common diseases in the Town Council.

2.11 Town council land tenure system

The engagement with stakeholders indicates that Kiboga Town is dominated by Mailo land ownership and a reasonable land parcel being owned by the Buganda Kingdom under Buganda Land Board. In the absence of a well-defined system, the uncertainty of tenure in the town will constrain the functioning of the property market, limits access to essential financial markets for development and constrains/complicates the implementation of planned public development projects

The Household Survey in the town indicated that the biggest percentage (78 %) of the land in Kiboga is under Mailo Land tenure system, 7 % is free hold system while only 1 % is at leasehold tenure systems, and other households (14%) do not know the type of the land system because they are tenants.

The requirement is that a person who owns or occupies land shall manage and utilize the land in accordance with the Forests Act, the Mining Act, and the National Environment Act, the Water Act, the Uganda Wildlife Act and any other law.

2.12 SWOT Analysis

Table 12: SWOT Analysis

<ul style="list-style-type: none"> • Strengths of the town 1. Secure town environment for investment 2. Available/ Vacant land for development 3. Available Institutions (Schools, health facilities among others) 4. Available infrastructure like road network Electricity, Water, markets and playgrounds 5. Rocks used for stone quarrying 6. Landscape and terrain of the town 	<ul style="list-style-type: none"> • Opportunities 1. Strategic location of the Town along the route to the Oil city 2. Economies of scale from oil investments 3. Central government funding 4. Favorable National investment policies
<ul style="list-style-type: none"> • Weaknesses 1. Limited Development control 2. Politics in Town Council activities 3. Corruption 4. High illiteracy levels 5. High poverty levels 6. Low revenue for the town 	<ul style="list-style-type: none"> • Threats 1. Competition from upcoming town councils like Lwamata, Wattuba etc 2. Change of government policy on some sources of revenue like quarantines 3. Increased spate of land grabbing and speculation 4. Delayed central government releases

2.13 Kiboga town council comparative advantage

Kiboga town has a number of factors which position it at a comparative advantage. These are;

- Kiboga town is a district headquarters and biggest urban Centre in Kiboga district. This makes Kiboga a centre of trade and commerce for the entire district.
- Kiboga is a centre of Agro-processing particularly for maize and coffee from within the region.
- Kiboga town is a gate way to the oil region. Its location on the route the oil city of Hoima gives it a big advantage to serve as a dormitory town for business people in the oil and gas sector.
- Kiboga Market which serves the entire sub-region comprising Kiboga, Kyankwanzi and Nakaseke districts. The market is already in place. However, the market needs redevelopment into modern facility to swerve the regional purpose.
- Kiboga is a centre of services for sub-region. Services like Kiboga Regional Hospital and the sewer lagoon are already playing a regional role.

2.14 Community Concerns that wish the PDP should address

The Kiboga Community members and Stakeholders aired out their views and concerns. These according to the stakeholders were expressed as areas that would bring about and equitable distribution of services in their town and will act as a precursor to enable the town council move forwards in uniformity. Therefore a wish list was generated by the stakeholders during the community sensitization, consultation workshops and presentation of the existing situation analysis report.

Table 13: Community contribution/wishlist

Proposals for Kiboga PDP: Community Contributions/Wishlist	
Buzibweera	<ul style="list-style-type: none"> • Road to Kyankwanzi from Buzibweera • Road connecting directly Buzibweera and Katuugo • Secondary school in buzibweera • Extension of water and Electricity ways in Katuugo and Nasuuna

Kirulumba	<ul style="list-style-type: none"> • Hotel facility on the hill because of the location • Extension of piped water • Secondary school • Improved road network
Kiboga Town	<ul style="list-style-type: none"> • Technical Institute • Playgrounds • Market • Secondary school • Hotel Facilities • Extend electricity lines • Primary School
Bamusuuta Ward	<ul style="list-style-type: none"> • Hotel facility • Health center • Playground • Market

Source: Field Data Compilation/2018

CHAPTER THREE

3.0. THE PHYSICAL DEVELOPMENT PLAN AND STRATEGIC INTERVENTIONS

3.1 Introduction

The Urban Physical Development Plan has three main functions;

- i) To provide a framework of strategic policies for local planning and development control decisions
- ii) To ensure that provision for development is realistic and consistent with national and regional policy
- iii) To secure consistency between development plans at the local level.

The Physical Planning Act 2010 requires all relevant planning decisions to be in line with the Plans. This necessitate that the plans ought to be up-to-date and able to address the planning issues identified.

The Urban physical development plan is operationalized by the physical detailed plan, which forms the basis of development of the Town Council. It not only implements the local vision but rather in consideration with the National Vision 2040 of a transformed Uganda. It is ideally a strategic policy document that guides and presides over development decisions.

Further still, the Urban Physical Development Plan is a broad land use and transport strategy which establishes the main principles and priorities for the future development of the area. It is a policy document that is focused on the control of change. The broader changes in the environment of the town which planning is concerned about, are occurring all the time with or without a plan and hence sets a framework for orderly urban development and coordinated action.

The Town's Urban Physical Development Plan is an essential prerequisite for provision of basic urban services. Since activities on land extend through space and spatial interaction, activity location is therefore an important dimension to establish a common basis, in terms of the overall scale and distribution of development and land uses. And the plan will also function with the council's other programmes, strategies and relevant sector agencies.

3.1.1 Vision and Mission

The towns vision is a continuum of strategies espoused to improve the quality of the lives of Kiboga town council residents. This is in line with the Five year Development Plan, detailed through subsequent budgeting and work planning to form the appropriate framework to achieve development goals in the town council.

Town Council's Vision

Town Council Vision is

to achieve sustainable socio-economic development through efficient provision of quality service delivery to the people in conformity with national policy and local priorities

Mission

The mission is have a Town Council with a development oriented community, which forms the space for inclusiveness of all stakeholders, with a harnessed robust effort towards poverty eradication initiatives focusing on creating prosperous a town, through efficient and sustainable means.

3.1.2 Planning Goals

The main planning goal is to prepare Urban Physical Development Plan (PDP) which is a basis for identification of priority areas of intervention for development and as a mechanism for urban and regional development control. This will characterize spatial structure, land use and other associated layers for the future planning of Kiboga Town Council.

In this regard, the overall planning goals for the Urban Physical Development Plan of Kiboga Town Council include the following;

- To create an appropriate development framework that takes into account physical growth of the town and enhance orderly development patterns, aesthetic qualities and convenience.
- To provide for a pronounced infrastructural system that promotes safe, efficient and functional road network throughout the town council, to support economic activities.
- To provide a planning framework which focuses on equitable provision and distribution of social-economic facilities and public utilities.
- Provide sufficient land for the identified uses such as; residential, commercial, industrial, institutional and recreational activities.

3.1.3 Objectives

The specific objectives will be achieved through the strategic urban development plan;

- To densify residential neighbourhoods by creating a conglomeration of residential types in sparsely developed and occupied areas to cater for the future population housing need.
- To develop a road web that enhance mobility and connectivity within the town centre and the residential neighbourhoods in consonance with the road hierarchy.
- To provide for green infrastructure that factors in recreational and leisure activities in the easy reach.
- To locate a variety of activities on land that promote social interaction and identity, with particular emphasis on social facilities and amenities such as, health centres, schools, office space, shopping areas and community centres.
- To provide for planning and rehabilitation, improvement and extension of water, electricity and the sewerage system with in the planning area.

3.2 Overall Planning Principles

Urban and development planning processes are designed to bring out the planning objectives based on the planning principles.

To achieve the planning objective, a number of planning principles were adopted to guide in the design of the Physical Development Plan design process. They include the following:

Participation

For pragmatic urban development, the guiding principle should be participation. Which emphasizes inclusiveness in the planning process. This therefore calls for stakeholders' willingness to participate, collaborate and be involved in the plan initiation and implementation at all level. Decisions should be drawn and made both using "top-down and down-top approach in a collaborative manner. For example, for any planning changes to be made proper set

procedures/mechanisms and regulations ought to be followed at all level; thus from lower to the higher level and vice versa. This requires building an adaptable social infrastructure to ensure meaningful participation by stakeholders in planning and policy decisions.

Existing Situation consideration

Planning ought to be a reflection of the established ground evidence. Consideration should be given to what is set on the ground as a starting point. Thus paying attention to already available facilities and services and where they are located. This is very vital because it helps the plan to minimize on the unnecessary costs that would be incurred during plan implementation. This also integrates the relevant policy documents like the activities workplans and the 5-year development plan.

Threshold and Range

The plan is to cater/take care of all the community needs in terms of facilities and services. Ensuring that there is equal access to facilities and services by all the community members. Equitable and adequate distribution of services should be the emphasis, so that all individual/community benefits. A range of options should be provided and be in consonance to the number of people it is intended to serve. For instance, the plan should consider all categories of income earners thus low, medium and high income earners.

Environmental Considerations

The planning process should take into account that the urban ecosystem is preserved and protected to achieve urban quality. To avoid the peril of environmental impacts, regulatory services must be put in place to check activities that might endanger the natural system such as wetland, natural forests and the riparian. Sustainable mitigation measures should be proposed to relief pressure on environmentally sensitive areas.

Compatibility of land uses

The proposed plan should ensure that Land uses are compatible and complement each other. There should be a functional relationship both physically, economically and socially. Identify the land uses which cannot be located adjacent to each other because of associated disturbances. for instance residential land use and abattoir or industrial, hotel development and landfill.

Hierarchy of service provision

Proposing high order goods to low order goods is necessary to cater for people based on distance and the number of people to be served. Hence certain proposals have to be decentralized in a hierarchical manner. For example main commercial centre being the CBD, local centers for low order goods that one needs not to go to the CBD, health service panning from the main Hospital to health centers and Aid posts, Central Police station to police posts among others.

Mixed use

The plan proposes a mix of uses for maximum benefit and optimal use of land. A range of activities are recommended within the same location. Especially those activities/uses that can easily blend into each other. For instance residential use and commercial use, commercial and office, hotel and residential among others. This is basically because of the changing social, economic, political and environmental circumstances. This equally encourages compact kind of development.

Neighborhood Concept

This is major foci of planning, where the societal fabric is hinged on. Here, land uses are proposed in such a way that services and facilities are easily accessible by foot and bicycle as well as by automobile on local – not regional – roads. Support services are brought within the easy reach of the people in an established neighborhood. This concept is typical of Kiboga Town Council, as this concept is already depicted on the ground, the only need is to increase more services.

3.3 CONCEPTUAL DEVELOPMENT

To guide the actual preparation of the physical development plan and Detailed plan of Kiboga town council, a range of information was clustered to generate ideas that aided the development of different planning themes. This information includes; existing land use, infrastructure/road network, utilities and services, local economic development, environmental consideration, base map and socio economic situation. This is further explained below;

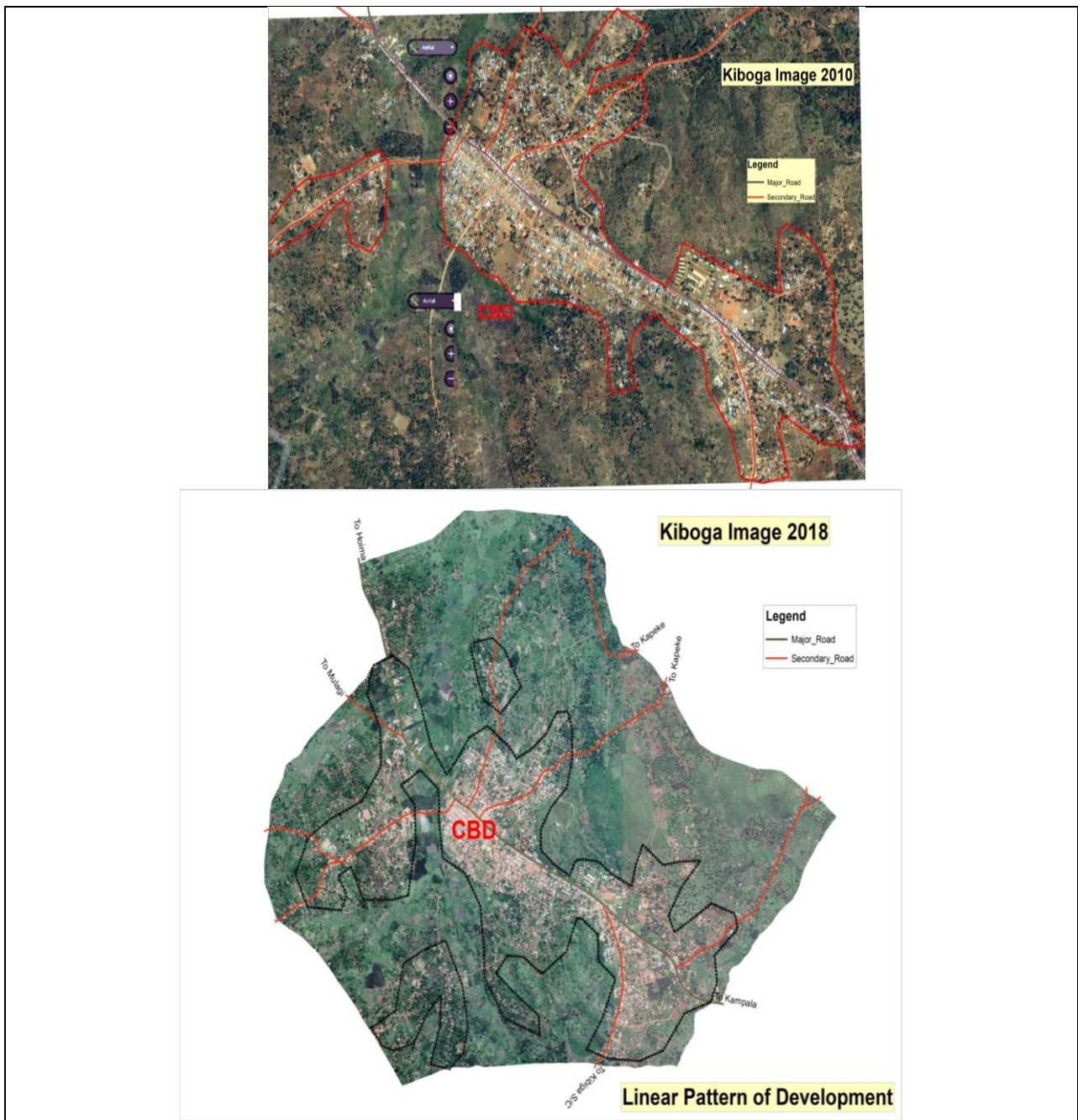
Kiboga town council is defined by the physical terrain, natural & physical features, and the traditional linear housing settlement pattern which give the town a unique feel within its context.

Analysis of different Aerial images of the town council (2010 & 2018) revealed that the pattern of development within the town council is along the tertiary routes that traverse the town. This has been attributed to ease of access to key services along the main road such as power, water, access etc.

The reviewed plan intends to harness from this current development trend and also incorporate new balanced urban nodes within the town in order to reduce travel distance to proposed facilities. This concept allows for the current development trend to continue around the main core (the CBD) town centre and along the major streets. In the short run, it allows organized, uninterrupted and faster commercial development particularly in the current town centre and along the major Hoima-Kampala road. New local centres shall be created along some of the key routes hence eliminating the amorphous nature of development by dispersing development and allowing the other centres and attendant land uses to develop in the periphery. This certainly would lead to the following;

- a. Improved infrastructure will be expected to be found primarily in the centre and the other surrounding neighbourhoods.
- b. Access to key services (water & power) will be easily provided and accessed by the community
- c. The challenge of sprawl will remain given the relaxed controls in land use and standards emanating from the lack of planning and guided development imbalance.
- d. The two aerial images clearly indicate that the developments in town council are taking a linear pattern. The PDP will therefore incorporate this linear development and propose additional nodes.

Figure 4: Conceptual Development



The two aerial images clearly indicate that the developments in town council are taking a linear pattern. The PDP will therefore incorporate this linear development and propose additional nodes.

Source: GIS Unit, Praid Consultants, Feb-2019

Kiboga town

To contextualize the plan, local engagement and participation was inevitable. This process stems from the very first field excursion/inception, community sensitization and existing situation analysis (socio-economic survey) that were conducted. During this period different stakeholders from all backgrounds ranging from political, economic to social among others were involved and engaged. This convergence culminated into formulation of ideas and approaches that aided the preparation of the physical development plan, which is a shared vision. The coming up of the ideas was based and influenced by the views that were raised by the Kiboga town residents who expressed how they wished their town to look like and the services they desired. In so doing it became imperative for us to come up with plans that focused on the stakeholders contributions and the choices made. The cohesion resulted into a harmony and hybridity of the plan.

Putting things together:

Notwithstanding, the planning process and stakeholders engagement, reference was made to the previous planning interventions. Gaps were identified, ideas developed and the needs also acknowledged. This was appreciated by bringing together identified needs and ideas, then put into the plan. So attention was put on distributing social infrastructural services in different wards to allow for ease of access and equitable distribution of the services. The view point is that the proposed plan embraces equal distribution of service to achieve the shared vision of balanced development in the town. However, it is vital to point out that this was not done in isolation of the planning principles and the planning standards.

2 3.4 PLANNING PROPOSALS

The design of the physical development plan adopted a mix of planning principles, to locate and allocate different land uses. The approach was tied to the existing situation analysis and the projected population figures of 31,150 people by 2031. In addition to the prevailing demands and aspirations of the town council.

The land requirements for different land uses were made basing on the population projection figures, and the level of activity demand, standard space dimensions, facility space, existing development patterns, property boundaries and other methods like possible plot amalgamation. Projectably, the number of people in the town are expected to increase basing on a growth rate of 3.01%. Implying that Kiboga Town Council authority needs to step up its game not only in the provision of infrastructure and services. But also paying much attention to the incoming pressure from the rising number of people. More so, town council ought to take serious measures to ensure that the plan implementation is sustainably managed. The Kiboga Urban Physical Development Plan is proposed as follows;

3.4.1 Housing / Residential Land Use

The housing provision in the plan was based on the analysis of development trends bearing in mind the prevalent conditions such as;

The future/projected population for Kiboga town by 2031, which was anticipated to be distributed throughout the four wards of the town council. The projected population of 31,150 persons, will be settled in areas of; Buzibweera, Bamusuuta, Kiboga Town and Kirulumba wards. In this regard space for residential development has been provided and planned for the increasing population.

The existing situation; took into consideration the present housing units/household units occupied by people spread throughout the town council with an average of 5 households per unit.

Classification for the residential categories of low, medium and high densities have been maintained, though a mixture of medium-high density has been planned for in Katuugo. This precisely is to attain a desirable mixture of land uses which are compatible and allow for accessibility and affordability for all the income levels in the town, and to distribute benefits of infrastructure provision.

Future land requirement for residential demand in Kiboga town

Future Dimension

The land requirement for future residential use relied on aspects such as organic growth the town, population inflow, population densities and size.

Population projections

Table 14: Population projections

Year	Male			Female			Total		
	2014	2021	2031	2014	2021	2031	2014	2021	2031
Population	9,290	10,822	15,266	10,048	11,705	15,884	19,338	22,527	31,150

Source: Consultants generated Data NHPC, 2014.

❖ Existing Residential Land Use 2021 is **615.35ha (6.1535Km²)**

P_d = Population Density

P₁ = Current Population

P₂ = Projected Population

La = Land Area (Km²)

Thus;

$$P_d (2021) = \frac{P_1}{La}$$

$$P_d (2021) = \frac{22,527}{6.2}$$

$$P_d (2018) = 3,465 @ \text{ km}^2$$

2021 population density is estimated at 3,465 people per Km²

Hence to find the required Residential area (Space) for the projected population of 2031 (31,150 people), will be;

$$P_d (2031) = \frac{P_2}{L_a}$$

$$P_d (2031) = \frac{31,150}{3465}$$

$$P_d (2031) = 8.98 \text{ km}^2$$

Analysis of the existing situation was done to come up with the residential densities.

The physical development considered all the residential land use categories (densities), these include; high, medium and low densities.

Table 15: Analysis of space requirement in terms of densities

Type	Low Density	Medium Density	High Density
Plot (Sq.M)	1000-2000	600-1000	300-600
Plot coverage (Metres)	(25mx40m)– (40mx50m)	(20mx30m)– (40mx50m)	(15mx30m)– (20mx30m)

Source: Physical planning Standards and guidelines 2011.

The areas for the demarcated densities will take into consideration the household size of 5 person as obtained from the Kiboga 5 year development plan 2015/16-2019/20

Table 16: Proposed plots in relation to the projected population 2031

Residential Density	Average Popn of 5 people per HH	Projected Popn 2031 (31,150)	Plot Area/ Coverage (Sq.m)	Land Use (Sq.M)	Land Use (Hectares)	Land Use (Sq.Km)
Low Density	5	6,230	1,000 (30mx40m)	6,230,000	623Ha	6.23Km
Medium Density	5	6,230	600 (20mx30m)	3,738,000	374Ha	3.74Km
High Density	5	6,230	450 (15mx30m)	2,803,500	280Ha	2.80Km
Total						12.77 Km (Excl 30% Roads of the total land Area)

Source: PRAID Ccompilation,2021

From the above triangulation, the impression is that if the current population is to be catered for with the consideration of the population density it will require 8.98Km² of land for residential development, as compared to the application of individual households in the different plot size/coverage which will require less land. The other infrastructural services will cover 3.79km, the 30% of the total land areas for residential land use

3.4.1.1 Low density

Low density category has been proposed in areas of Kiwanguzi, Bamusuuta, Kirulumba, Kabutemba, Nasuuna, kiganzi, Kyanga and Luwunga A. This has been proposed in areas where there are huge patches of uncommitted land and still under agriculture. Most of these are areas for high income earners with high cost of housing and high standard of infrastructure services. Considering the fact that they tend to locate in areas outside the town center preferably at the peripheral areas with large plots. This Residential land covers an estimated area of **623** hectares.

3.4.1.2 Medium density

Medium density residential areas are intended to cater for medium income earners with modest standard of housing and infrastructure services. They are the intermediate sector of the population who can easily transit to the high income group. This density is proposed in parts of Katuugo, Nasuuna, Kiganzi, Kiwanguzi, Kyanga, Kirulumba, Kabutemba, Bamussuta. This land use category is proposed and covers an estimated area of **374** hectares.

3.4.1.3 High density

High density areas tend to be compact and considered as areas of interface between the commercial centre and the medium density. This density has been propose to take care of the low income earners. Most often they are the working population in CBD. Hence the objective is to minimize cost and travel distance of the low income as they travel to and from work. This density is proposed in parts of Luwunga B, Kyanga, Kiwanguzi, Kirulumba, Kiboga town, Kiganzi, Buzibweera B, Nasuuna, Katuugo Kabaka N'jagala and Bamusuuta. It covers an estimated area of **280** hectares.

Other housing options/provisions are within the commercial areas. Most commercial structures double as space for residential accommodation. This is a common practice in the CBD where some upper floors of the commercial buildings are used as space for residential purposes. The same happens to the back rooms of the commercial structures in the CBD and Local centres as well. This mixture of residential-commercial use is inevitable and will continue to be part and partial of the town.

In a nut shell the proposed physical development plan is based on reinforcement of already existing situation in the town council to come up with appropriate Residential land use proposals that will enhance the development of the town council till the year 2031. This land use covers 59.2% of the total planning area.

3.4.2 Transportation

As regards to the road conditions, attempts have been made to standardize the roads in the different parts of the town council. Since the field surveys showed that the sizes of these roads vary in width; hence they have to be standardized in the plan. The proposed hierarchy of roads include: Secondary Distributer road width (reserve) of 20m - 25m, Tertiary distributor width (reserve) of 15m – 20m. The plan proposes a series of footpaths which interconnects portions of the neighborhoods, individual facilities and provides access to adjoining plots.

The presence and state of the transport network is key to urban development as it facilitates the smooth flow of goods, people and services. Hence focus in this planning process is to ensure that the town requirements, strategies for provision and management of facilities and services should facilitate safer, faster, comfortable, convenient, economic and environmentally friendly movement of people and goods within the town. More efforts been put towards creating harmony in the roads within the town. Emphasis is in terms of standardization when opening and maintaining roads, to avoid varying widths of the same roads. This is to provide adequate connectivity that encourages walking.

Road Network

The town road network particularly in the CBD has grid like pattern of road network. The road network is planned in such a way that Kampala-Hoima road is the primary/major through road in the Town with a 10 metre carriage way which acts as a major haul of traffic. This road passes through the main town centre. Secondary distributors connect to areas outside the town boundary to neighboring. Sub counties of Kibiga, Mulagi and Kapeke. And on the other hand Access roads have also been taken care of to increase circulation within. Furthermore, some local connectors of 10m width have been proposed to enhance the linkage between neighborhoods. The road network covers 75 hectares thus 3.5% of the total land area.

3.4.3 Local Economic Development

3.4.3.1 Commercial Land Use

This area stretches along the highway especially in the lower side of the town in the two wards of Bamusuuta and Kirulumba with retail shops, banks like Stanbic and Centenary Bank, and Advance Bank, fuel stations among others. The main commercial area (CBD) of the town has been extended downwards covering parts of Kabaka N’jagala and Luwunga A. On the upper side it has been extend to capture parts of Buzibweera B and Kiganzi. Commercial areas are also developed on the nodes at strategic road junctions along the Highway and the main feeder roads in the town. In addition, some areas along the junction of feeder roads have been proposed as Commercial Sub centres, to cater for the people in the neighborhood who are relatively far from the CBD. These areas include; Kiganzi, Nasuuna and Kabutemba. The land under commercial use is 175.9 hectares of the land.

3.4.3.2 Market

The town council has a main market located in Luwunga A. Aside, there exists a number of markets distributed in different areas of the town. These markets operate daily and do sell fresh foods and fruits that are required for daily consumption. for example bananas, tomatoes, fresh cassava, green vegetable, to mention but a few. Alongside the daily markets, a weekly market has been proposed in Katuugo along Kiboga-Hoima road, within the existing industrial area. This will ideally boost economic activities of the town, as this will provide an opportunity for people to sell their commodities and earn a living. Market areas cover 4.0 hectares of the total land.

3.4.3.3 Hotel

There are a number of existing hotel facilities in Kiboga town which offer eating and lodging services. These hotels are mainly situated in the CBD. In consideration of this, two hotel sites have been proposed in the hills of Kiboga and Kirulumba, where People on transit can be attracted to relax and sleep over. Hotels cover 22.9 hectares.

3.4.3.4 Industrial Land Use

Industrial sector is key in boosting the economic development of the town council. In line with this an industrial zone has been established in Katuugo and Nasuuna cells, because these areas still has vacant land and offers the potential for industrial investment. It is an area proposed to accommodate medium industrial production. Because the existing industries operate at small scale, dealing in maize milling, coffee husking factories and storage facilities in Bamusuuta and Buzibweera along Kampala-Hoima Road. In addition to its proximity to the highway, the basic infrastructure and utilities can easily be extended. The demarcated space for industrial use cover an estimated of 35 hectares of the total land. It is also projected that the current and future land requirement is adequate.

3 3.4.3.5 Urban agriculture

Agricultural portions of land have been proposed around the boundaries of the town council and some portions near the swamp area for not only subsistence purpose but also for economic gain. This land use is set aside to support/supplement on the local source of income of the urban residents. And also serve as source of food security. Agriculture which plays a vital role in economic development of the town, needs to be revitalized and strengthened. A variety of activities that range from livestock at zero grazing level, to crop farming can be practiced within residential plots and demarcated pieces of land through innovative and modern agriculture technics.

Livestock activities may include; cattle keeping, goat rearing, piggery, poultry, bee keeping and fish farming among others. On the other hand crop farming can include; maize, coffee, beans, groundnuts, cassava, banana plantations, vegetables, fruits and other crops. The agricultural land covers an estimate of 11.2 Hectares.

3.4.4 Social Services

3.4.4.1 Civic Areas

The town has a number of administrative offices for the public, like the Town Council Offices, the District Headquarters, the Central Police Station (CPS), the Courts of law and Water office among others. All these have been maintained where they are. The prison facility is recommended for relocation outside the town council. This facility is not in the appropriate location as it is next to the Main Hospital and the District headquarters. The civic land use covers 18.0 hectares of the town land.

3.4.4.2 Community Centre

These facilities have been proposed in various areas to cater for the local residents as places for; meetings, leisure activities, games and any other activities that are geared towards community benefit. For instance educational services like adult literacy education and nursery schools among others. The community centers have been proposed in Bamusuuta, Kabutemba, Kyanga, Kiganzi, and Nasuuna. The area coverage is approximately 1.9 Hectares of the land.

3.4.5 Institutional areas

3.4.5.1 Health

The existing health facilities have been maintained and two (2) health centre III's proposed. One has been located in Nasuuna and another in Kabutemba. This will supplement the hospital to help deal with minor ailments before referral. These proposals were made because these areas do not have any health facilities close. So they have to walk up to the town centre. In addition there also exists a referral Hospital located in Hospital cell plus other clinics and pharmacies and drug shops that offer health services.

3.4.5.2 Religious

The existing religious institution have been maintained, though some are in poor state (poor structures built with temporal materials). It is recommended the council authorities regulate their locations. The predominant faith in the area are Catholics, other religious denominations include Anglicans, SDA Born Again Pentecostals, Moslems and Bisaka (Owobusobozi).

3.4.5.3 Educational

Most existing schools have been maintained and some proposals made for purposes of equitable distribution. One primary school has been proposed in Kyanga, two secondary schools one in Kabutemba and another one in Nasuuna. To promote sustainable development through enhancing knowledge and skills impartation, a tertiary institution has also been proposed in Katuugo cell. The existing institutions include those that are privately owned and those that are under government ownership. Institutional land covers 39 hectares of the town land.

3.4.6 Physical Infrastructure

3.4.6.1 Solid Waste disposal site

There are available options that council would adopt for instance it would acquire a waste management plant to adequately handle waste management process. This in help in sorting of wastes to separate recyclable and non-recyclable waste. Secondly there is need for council to install wastes collection facilities like garbage bins in various locations of the town so as to reduce on littering of wastes.

There exists a dumping site in Kiwanguzi cell covers 1.03 hectares as a final disposal point for the town council, however waste is openly dumped and burnt. This is not appropriate for the town residents neither is it a healthy method of handling wastes hence need a waste plant. Two options were proposed for consideration in solid waste management that is sanitary land fill method and recycling method.

Recycling of waste material especially the biodegradable materials, is another better option for the town council. This could be through individual efforts or groups/association who are trained in solid waste recycling and reuse and be Go green advocates. Focus should be turning the decomposable products into fertilizer to improve on the soil fertility. Ideally, there are so many benefit related to this go green initiatives these include; economic gain, reduction of wastes, increase in crop yield and food production and general protection of the environment.

3.4.6.2 Sewage Lagoon

If the future Kiboga town sanitation system is to be based on piped sewerage system, sewage and faecal sludge treatment, the lagoon site that was proposed in the previous plan of 2008 has been maintained. This is because waste water collection and transfer shall be by natural gravity to avoid pumping machines that may attract more costs for the town council.

3.4.6.3 Cemetery

A public cemetery covering 2.05 hectares has been proposed in a new location in Kiwanguzi at the extreme end of the boundary along the road near the foot of Kiwanguzi hill. This facility not only caters for the town residents but for the people whose places of origin are not known.

3.4.6.4 Abattoir

The existing abattoir is located in Bamussuta cell, Bamusuuta ward, it is the only place where all the meat in the town is slaughtered and distributed. It is recommended that this facility be relocated to new location in Katuugo and be developed as a modern facility installed with modern handling equipment so as to ensure proper hygiene in the handling of meat products being produced. Because currently this facility is located within residential developments, so the effects of air pollution on residents is high. A proper waste management scheme should be designed to ensure that waste from the Abattoir is properly managed to reduce the effect of waste like; cow dung, blood and urine from polluting the neighboring residential zones. It covers an area of 2.82 Hectares.

3.4.6.5 Energy supply

The existing electricity in the town is supplied by the national grid that runs through the town council along Kampala- Hoima road. Most households use electricity and paraffin for lighting plus a few people who use solar for lighting. The households that are not connected to the grid use paraffin for lighting, while a big portion of households use charcoal and fire wood for cooking. This definitely has huge implications to the environment particularly air pollution from fumes and cutting down of trees. Alternative source of energy that are eco-friendly and affordable for both lighting and cooking are encouraged. For example briquettes for cooking and solar energy for lighting. Since briquettes are made from rubbish, it will help in addressing the challenge of littering of wastes. Reducing the cutting down of trees for firewood and charcoal which will contribute as an environmental mitigation measure. This will further save the residents from excessive smoke from firewood hence improving the health situation.

3.4.6.6 Water supply

The town is connected to piped water, provided and managed by Central Umbrella Uganda. Though the level of distribution is still low, connection is ongoing. The main water reservoir is planted on Kirulumaba Hill in Luwunga B. The water pump machines are located outside the planning area in Kapeke Sub county. The residents also use other sources of water like, public taps, protected spring and open springs, bore hole and streams. Further, the plan encourages the practice of rain water harvesting by the residents.

3.4.7 Environmental Management

3.4.7.1 Vegetation (Forest)

To achieve a balanced urban environment, vegetational areas have been maintained and they cover; wetlands, Natural Vegetation, Rocky areas, streams, natural and planted forests, hill tops, steep slopes, areas unsuitable for human occupation. This land covers 143.4 hectares and constitutes 6.7% of the total land area of the town.

3.4.7.2 Riparian/Buffer zones

Buffers have been proposed mainly along riparian areas that are environmentally sensitive such as wetlands (Nakayenga stream) to protect them from encroachment. Restrictive and conservation measures should be put in place to protect these areas from contamination. Other land uses such as lagoon, industrial development, landfill and cemetery are also buffered to protect other land uses that are not compatible. This riparian is proposed to be preserved with tree planting, covering a total area of 66.09 hectares.

3.4.8 Recreational Land

The existing recreational areas in the town have been maintained and others proposed.

3.4.8.1 Recreational parks

There are a number of recreational parks in the town that have been maintained. These parks are easily accessible and open to the general public; two are located in Kiwanguzi cell while another one is located in Buzibweera B along Hoima-Kiboga road. They serve as areas for relaxation, fun and social interaction for town residents. Recreational land cover 4.42 hectares of the proposed land.

3.4.8.2 Playgrounds

These are proposed in Bamusuuta, Kabutemba, Kyanga, Nasuuna, plus one in Kiwanguzi for progressive primary school. It is intended that the playgrounds will be used for sports activities like football, athletics. This will promote talent identification and promote good health practices when resident are engaged in various sports activities.

3.4.8.3 Open space

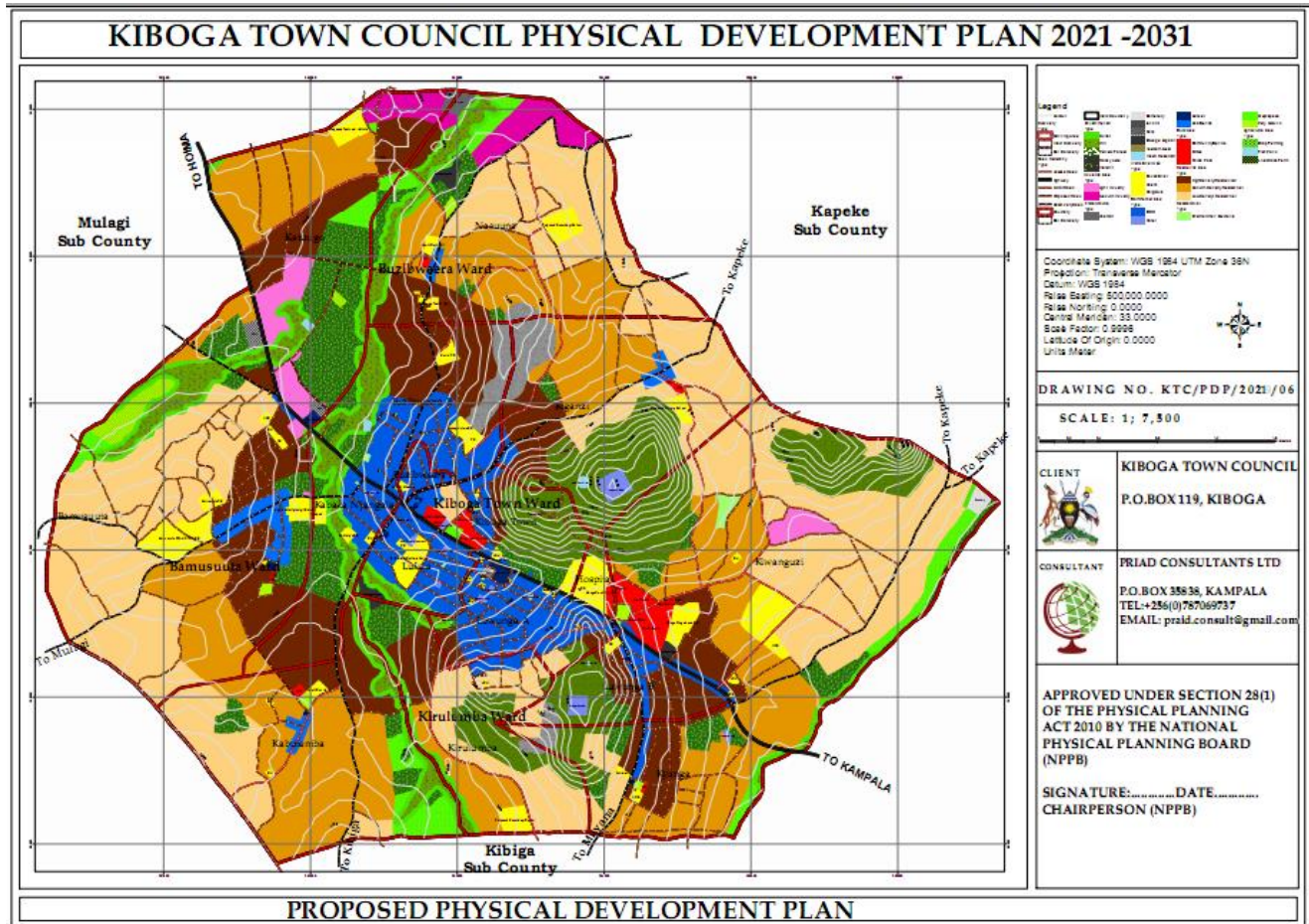
All the existing open spaces have been incorporated into the physical development plan, while others have been proposed. For instance, the town square has been maintained. These are also supplemented by the provision of play grounds which has been proposed in all the neighbourhoods.

Table 17: Proposed land uses

Proposed Land Uses			
No.	Type	Area (Ha)	Percent (%)
1	Residential	1277	59.2
2	Industrial	35	1.6
3	Agricultural	11.2	0.5
4	Environmental	474	22.1
5	Institutional	39	1.8
6	Infrastructure	16	0.7
7	Commercial	203	9.4
8	Recreational	4.4	0.2
9	Civic	20	0.9
10	Roads	75	3.5
Total		2154.6	100.0

Source: Consultants Compilation, Feb-2021

Map 5: Kiboga Urban Physical Development Plan 2021-2031



Source: GIS Unit, Praid Consultants, Feb-2021

CHAPTER FOUR

4.0 THE DETAILED PLAN AND STRATEGIC INTERVENTIONS

4.1 Introduction

The detailed planning of part of Kiboga town council provides the starting point for the requirements for the implementation of the Kiboga physical development plan (2021 – 2031) to guide development of infrastructure and development within the stipulated land use zones. This plan forms a basis for development control and it is a development control tool for guiding developments in the town. The plan is however aimed at;

- i) To Increase a tax base and taxable capacities of the town and the local people
- ii) The plan also is aimed at guiding developments so as to reduce on the mushrooming unplanned developments,
- iii) Streamlining equitable distribution of resources and employment so as to increase on the economic base and reducing on travel distances.
- iv) To extend social services near to the people (equitable distribution of services).
 - The Terms of Reference (T.o.R) specified one of the primary output one of the consultant apart from preparing a Physical development plan, was to prepare an area detailed physical development plan covering a minimum radius of four Square Kilometres (4Km²) of the selected areas in the town council. Since the central part (CBD) and the adjacent areas of the Town council already have detailed plans, it necessitated to extend detailed planning to capture parts of the remaining areas. The detailed planning areas included part of Part of Kirulumba ward, Buzibweera ward, Part of Kiboga town ward and Part of Bamunsuuta ward

The ToR also required that the plan and design be accompanied with the following;

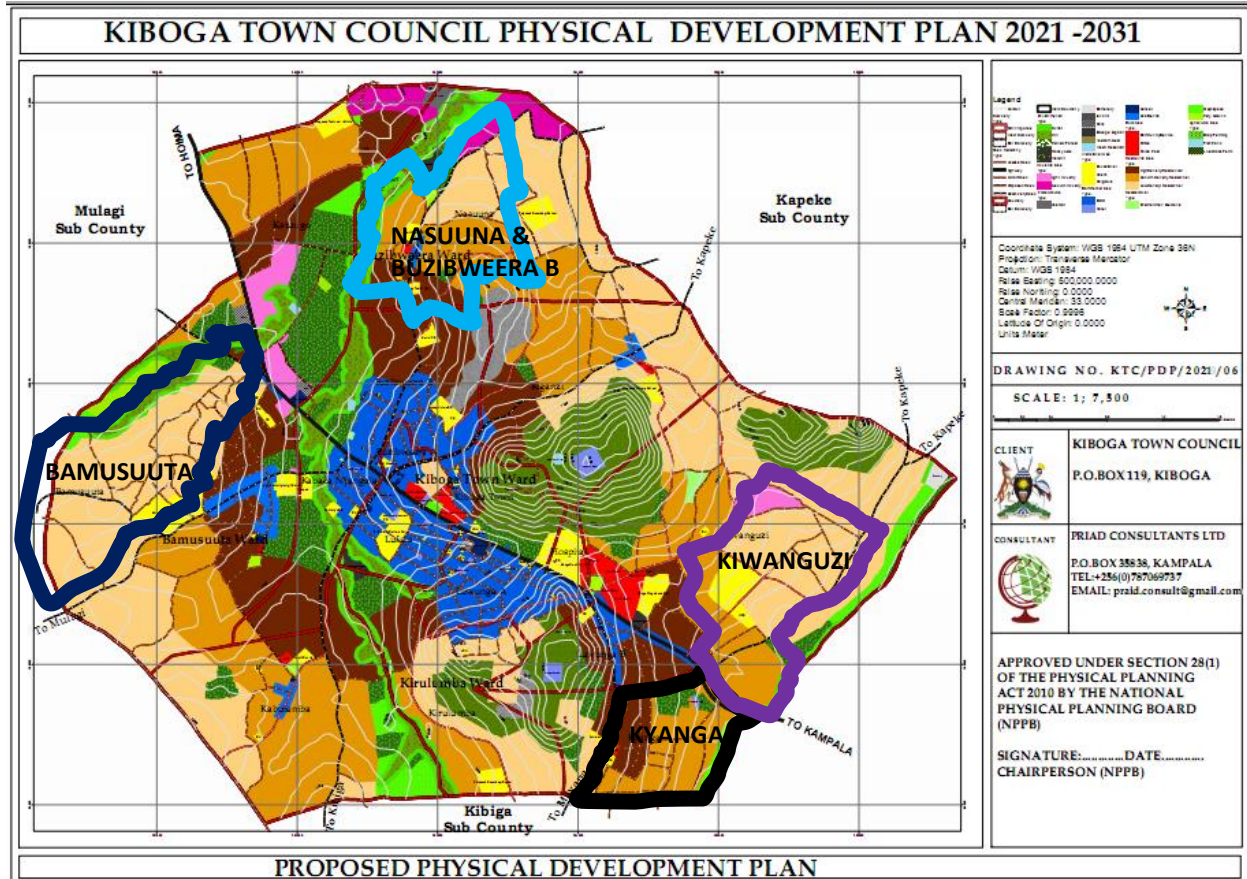
- User enforcement and variance requirements and administration requirements
- Land Use Guidelines and Regulations for the planned land use categories in the various locations
- General infrastructure and services planning and development standards
- Standards for land requirements and facility development for public facilities and services
- Protection of environmental and natural systems in the area Vs. competing implementation of proposed land uses
- Housing skyline, aesthetics, building standards, housing standards and designs to accommodate projected population growth
- The preferred location for development, facilities, services, etc.
- Implementation Strategy

The Detailed plan shows the proposed subdivision of the broad Land use proposals stipulated in the Kiboga TC Land use and zoning plan. It is upon this drawing/plan that a detailed is developed.

LOCATION OF DETAILED AREAS

The detailed planning for Kiboga TC was done for four areas;

- Part of Kyanga cell in Kirulumba ward.
- Part of Buzibweera B and Nasuuna cell, in Buzibweera ward
- Part of Kiwanguzi cell in Kiboga town ward
- Part of Bamusuuta cell in Bamunsuuta ward



Map 6: Location of Detailed Plan area Kiboga Physical Development Plan

Source: PRAID GIS Unit, 2021

4.2 Applied Design Principle

The detailed design process took into consideration the various design principles to achieve the desired functionality of the town council. These guiding principles have been derived from a series of consultations made with the key stakeholders. These principles have guided the qualitative and functional arrangement of the land uses and detailed activities in the overall TC PDP as a mechanism to achieve the desired future development of the town council.

The selected area detailed planning principles are:

- a) **Connectivity and Interconnectivity:** This is intended to make the town more accessible and well functional. It was paramount to ensure that the whole town is well connected and interconnected through the creation of roads, streets and pedestrian footpaths for one to easily walk around the town because some areas within the town are not easily accessible at a micro scale.
- b) **Compatibility of uses:** The proposed detailed plan considered locating of Land uses that are compatible and complement each other, and have a functional relationship both physically, economically and socially. For instance, hotel and residential development. Or residential development and schools. This principle helps to minimise environmental issues of pollution (noise and air) from adjacent land uses
- c) **Hierarchy;** This principle was used in order to ensure that the town operates efficiently through provision of urban roads designs of different sizes i.e. from primary, secondary, local, access roads to footpaths. Plus, services Centers that are in hierarchical manner. To achieve this, adequate number of roads have been proposed in the area to facilitate accessibility and connectivity
- d) **Existing situation (plot subdivision);** This principle ensures that the existing situation (plots) should be considered before new proposals are incorporated (paying attention to what was established on ground to minimize cutting through existing developments). An aerial image and cadaster information were incorporated to guide in plot subdivision.
- e) **Neighbourhood concept:** This concept takes into account that all basic services and support facilities planned should be accessed by all users at convenient distances and places, thus making the area integrated and self-sustaining. Basing on this concept, all possible functional areas i.e. commercial, central market, Administrative, Institutional, Warehousing, Recreation, buffer and others have been proposed taking into account the travel needs and requirements, distances involved to access these facilities, integration and connectivity requirements.
- f) **Ecological concern:** The principle emphasis is given to the natural environment, the plan took into consideration the environment concerns of the town by putting emphasis on preservation and conservation of the natural system by providing buffers to secure these areas (Swamps and Wetlands). In addition, certain areas have also been proposed as afforestation areas to minimize effects of climate change
- g) **Public spaces:** to ensure that the plan is people centered, social interaction places/points is necessary. These places enhance people wellbeing and comfort, they are places of vibrancy and offer safety to people to freely interact and offer since of belonging. Such spaces include, community centers, public open spaces, recreational areas and markets among others.

4 4.3 Development Specification

For purposes of adhering to the national planning provisions, a set of development guidelines and specification were adopted which include; national regulations, standards and guidelines among others;

4.3.1 Setbacks for dwellings

The setbacks of the proposed dwelling units are as indicated in the table below;

Table 18: Setbacks of dwellings

Function	Minimum set back (meters)		
	Front	Sides	Back (rear)
Commercial	2	0	5
Low density (grade A)	8	3	12
Medium density(grade B)	6	2	8
High density (grade C)	3	2	2

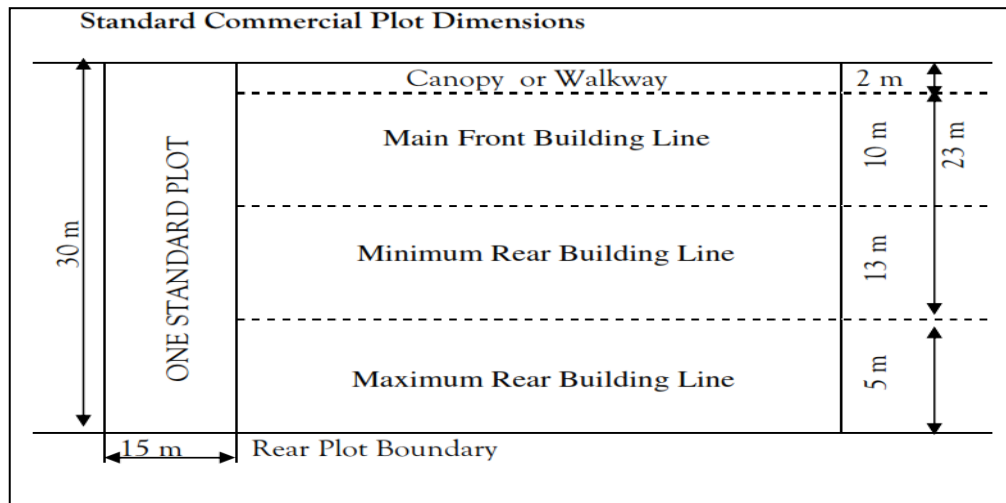
Source: National Physical Planning Guidelines 2011

The above table shows minimum distances from any side of the plot to the respective side of the building. Set back are given in order to control intensity of development and to promote porosity.

Note;

- All residential buildings of more than 2 (two) floors should have an additional set back from boundaries of 1-5m per additional floor.
- The frontage of 2m is for a covered walk way or canopy and has to continue to the end of the boundary.
- The rear building line for the commercial plots of 5m is to leave sufficient space for septic tank, soak pit, car parking and any rear services.

Figure 5: Standard Plot Dimension



Source: National Physical Planning Guidelines 2011

4.3.2 Vehicle parking requirements

a) On street Parking

It is a common practice to park vehicles on the street. This is acceptable if the street is wide enough and lightly trafficked. However, in the case of Kiboga town council on street parking should be discouraged especially along the main road (Kampala – Hoima road) because it will lead to reduced flow of traffic and is likely to cause accidents. In order to practice on street

parking it is advised that the council clearly marks out the parking spaces on the carriage way in the colour specified by the town engineer and in designated areas.

b) Off street parking

In absence of on street parking facilities, Public parking spaces should be provided within residential areas, industrial zones, commercial and business zones and social facilities, recreation and sports areas. The parking lot requirements for off street parking are given below;

Table 19: Parking space requirement for off street

Activity area	Consideration
Residential	A minimum of two parking spaces for each low density plot should be provided and one car parking space for a medium density plot whereas it is not mandatory to provide parking spaces for high density plots, these settlements should have a common parking lot.
Commercial	Four parking spaces for every 100sqm of floor area
Industrial Development	Three (3) car parking lots for the first 750 m ² and one car parking lot for every additional 609.5 m ²
Hotels and motels	One car parking lot for every three bed rooms of the hotel and one parking space for every three managerial staff are adequate. However if the hotel has bars, restaurants and is also used for functions the parking spaces used for these functions should assessed separately and added on
Restaurants and club houses	One car lot for every sixth seat of a patron
Community centre and place of worship	One car parking space for every 10 people
Warehouses	One car parking space per 30 m ² of gross floor space plus one additional space for every two employees on the largest work shift.

Source: National Physical Planning Standards 2011

4.3.3 General Guidelines/Restrictions

The following guidelines apply to all parking facilities within the town council:

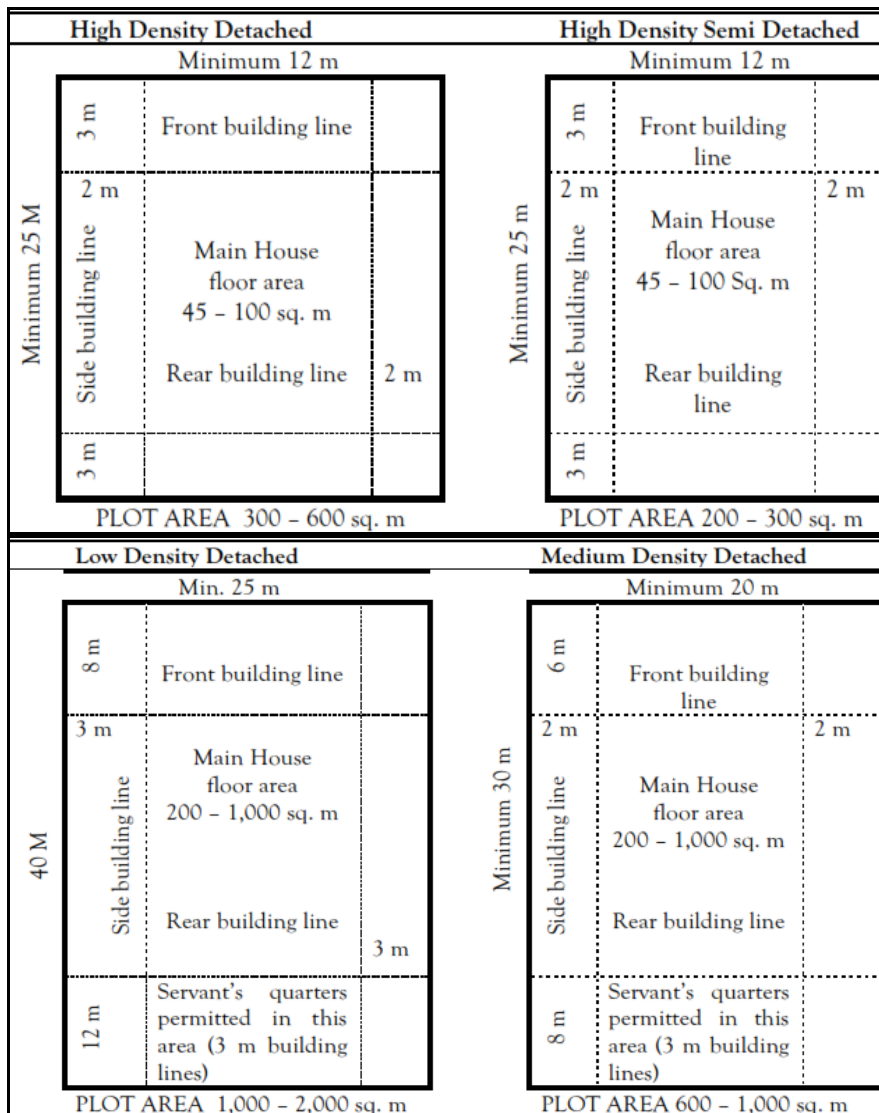
- i. No building shall be approved without adequate provision of parking space.
- ii. Required parking spaces shall be as provided for in the National Physical Planning standards and guidelines.
- iii. Parking spaces for employees, customers and visitors shall be marked and sufficient handicapped parking spaces shall be appropriately identified.
- iv. Parking and staging areas for transport and/or service vehicles shall be oriented away from abutting public streets.

All vehicular parking, circulation, manoeuvring and staging areas shall be paved with asphalt, pavers/concrete or comparable all-weather surface and such areas shall be permanently maintained by the owner or lessee.

4.3.4 Site Standards for residential Development

Note: Developers who would express interest in purchasing bigger plots than those provided for by the standards, is encouraged to consider plot amalgamation to meet their interest.

Figure 6: Residential Plot Layout



Source: National Physical Planning Standards 2011

4.3.5 General Guidelines/Restrictions

- a) No plot shall be developed or utilized in a manner that constitutes a nuisance to or disruption of business activity or any other owner within the Town council by way of odor, atmospheric emissions, air pollution, light, noise, vibrations, electromagnetic, noxious, toxic or glare.

- b) Only principal and ancillary uses shall be permitted in the Town council unless otherwise approved by the Town council technical committee.
- c) For purposes of harmony of external appearance, design, color and location in relation to surroundings and topography, no alterations, conversions, extensions or additions shall be made internally or externally until the plans and specifications showing the nature, kind, shape, height, materials and location of the same have been submitted to and approved in writing by the PPC. The Physical Planning Committee (PPC) shall have the authority, in its sole discretion, to permit such variances from the provisions of these restrictive covenants, where, owing to special conditions, a literal enforcement of the provisions of these covenants would result in unnecessary hardship. The decision of the Physical Planning Committee (TOWN COUNCIL COMMITTEE) shall be final and binding on all parties. In the event the Physical Planning Committee (PPC) fails to approve or disapprove the design and location within ninety (90) calendar days after plans and specifications have been submitted, the design and location of the improvement shall be deemed to have been approved.
- d) Construction plans and specifications and site plan shall be deemed submitted when delivered to the urban planner's office and subsequent registration is made in a manner prescribed by the PPC.
- e) In addition to his/her duties and mandates, the Town Planner shall conduct regular inspections to ensure compliance with these covenants.
- f) The following restrictions and standards shall apply to all plots within the Town council unless otherwise provided by guidelines/ standards or any other Regulations and Codes.
- g) All buildings shall be designed and constructed with architecturally attractive facades as deemed appropriate and acceptable by the Physical Planning Committee and shall comply with the following:
 - v. The exterior walls of the buildings shall be of weather resistant materials like steel, masonry, stones or a combination.
 - vi. For purposes of beauty of the town council, no more than 50% of facade on portions of building facing a street shall be of one material unless brick, decorative brick or other masonry type material approved by the Physical Planning Committee.
 - vii. Outside colors shall be harmonious and compatible with color of natural surroundings and/ or the buildings on adjacent plots.
- h) Utilities serving buildings shall preferably be underground unless specifically approved by Physical Planning Committee.
- i) All primary buildings in commercial, Institutional and industrial zones shall have provisions for firefighting equipment/system.
- j) To the greatest extent possible, loading docks and service areas where provided shall be located to areas not visible from public streets and shall be located to the side opposite and/or furthest from the street. Otherwise, loading docks and service areas shall be effectively screened from view via landscaped earthen berms or a combination of decorative masonry walls and year-round landscaping materials.
- k) Private utilities, including but not limited to heating and cooling equipment, cooling towers, and electric transformers shall be screened from all public streets. Roof mounted equipment shall be screened by parapet walls or comparable architectural features.

- l) Each owner shall keep their premises, buildings, improvements and appurtenances in a safe, clean, neat, wholesome condition and shall comply in all respects with all government, health and police requirements.
- m) Each owner will ensure that grass, weeds, flowers etc. are periodically neatly mowed and trimmed/maintained. The owners shall remove at their expense rubbish of any character which may accumulate on their plot(s)
- n) No waste, trash, rubbish or production by-products or any such and products shall be stored within the property without prior written consent of the PPC. Incinerators are not permitted except with special permit. Outside storage shall be limited to active finished stock and trade associated with the on-site business activity, and shall be located on the parcel in a manner to not be readily visible from a public street or adjacent property. Outside storage areas shall be effectively screened from the street and adjacent properties by a decorative opaque fence made of wood, decorative masonry wall, or shrubbery, not more than five (5) feet or 1.5 metres in height. Outside storage, areas shall be restricted to those portions of the plot situated behind the primary building façade plane that is oriented towards a public street.
- o) No fence, masonry wall or similar screening shall extend beyond building set back lines into the set-back area.
- p) Bulk storage of liquids such as gasoline, flammable liquids or petroleum products outside buildings or underground shall be permitted only with prior written consent of the PPC and subject to compliance with all governmental regulations.
- q) The owner of any plot shall protect and preserve the viability and integrity of existing trees as designated by the PPC and no designated tree shall be cut without the prior written approval of the PPC. The PPC shall ensure that any tree cut shall be replaced with another tree or as shall be guided by EIA/S where applicable.
- r) Except for a temporary moveable office used during construction, no temporary or moveable building or structure shall be placed, used or constructed on any plot unless with prior written permit by PPC.
- s) Landscaping plans shall be submitted and approved by the PPC.
- t) Outside lighting attached to buildings shall be of “low glare” and placed in a manner deemed appropriate to avoid interference beyond plot limits. Freestanding lighting shall be compatible with existing lighting on the public streets in the Urban TC .
- u) If a finished building remains unoccupied for ninety (90) calendar days or more, an assessment of the environmental and health standards shall be carried out in a manner prescribed by the PPC before the owner or a successor owner re-occupies the building.
- v) Where applicable, project specific Environment Impact Assessment (EIA) will be required prior to approval of any development project in the TC .
- w) At least 20% of the unbuilt area on residential and Institutional plots will be maintained as green area. Green areas in the plots and road reserves will be planted with plants particularly for conservation interest, beauty and environmental purposes.
- x) Building facades shall consist of surfaces such as wood, stone, rock, brick, or glass or as shall be approved from time to time by the PPC.
- y) All electrical and air conditioning structures, including towers and air handling units, regardless of location and whether on the roof or otherwise, shall be concealed by landscaping or by decorative screening materials which form an integral part of the design.
- z) No building shall be resurfaced without approval of the PPC.

Other Conditions

1. Construction of any building shall commence within six (6) months of the date of approval of the building plans. The completion date shall be the date the Town Clerk issues a Certificate of Occupancy. If construction does not commence within the 6 months, a request shall be made in writing to the PPC to extend the commencement period, otherwise, the PPC shall have the right to revoke the approval. If the PPC decides revoke the approval the developer shall forfeit any payments made thereof.
2. The PPC shall have the exclusive authority to interpret these guidelines/ regulations and conditions. Anyone aggrieved by the PPC's decision may, within 14 days of the date the PPC's written decision appeal the decision to the PPC as per section 10 (e) of the Physical Planning Act 2010.
3. The PPC and any such higher authority established by law, reserves the right to modify these regulations without giving notice to the owner(s); however, such modifications shall not be retrospective.
4. These regulations and conditions shall continue and be binding on the owners, their heirs, successors, assigns and all persons claiming under them for as long as the TC Physical Development plan for which they relate is still in force.
5. Any provision herein contained declared to be invalid by any Court of Law shall not affect the validity of the other provisions or the decisions taken in consideration of those provisions, which shall remain in full force and effect.
6. Nothing herein provided, shall be construed as a limitation of anybody acting for the PPC to petition the Courts of Law for injunctive restraining relief and damages caused by the developer's violation of the terms and provisions hereof.

4.4 Proposed Detailed Plan

All the proposals in the detailed plan originated from the provisions of the physical development plan of the town. Nonetheless in some instances, some detailed land uses that could not be displayed in the physical development where represented at the detailed plan.

4.4.1 Commercial Zone

There are a number of existing commercial sub centers which were maintained in the detailed plans/schemes in addition to the proposed; the main aim is to provide more commercial land uses (plot) to create more employment opportunities for the town residents, and also enable town council to expand revenue sources for the town.

The minimum plots sizes within the proposed commercial areas are of 15m x 30m wide. Access Roads of 10m-15m within the commercial sub centers were also provided/catered for to facilitate the business activities within these areas, plus service lanes of 5m wide.

Additionally, the detailed plan also permits and provides for a range of services and uses which are compatible and acceptable in commercial areas they include; Commercial services such as retail and whole sale shops, petrol stations, banks, car garages; Sleeping and eating places like; lodges, hotels, guesthouses and restaurants, entertainment such as; Bars, night clubs, cinema halls, market places, office spaces, health services like clinics, drug shops, pharmacies and other institutions to mention but a few.

4.4.2 Residential

Various categories of Residential areas have been proposed in the detailed schemes, which include; Low Density Development, Medium Density and High Density Development. These are purely areas of accommodation supported with corner shops to meet the daily needs of the residents.

a) Low Density

The low Density residential plots are bigger plots and spacious enough designed to accommodate the High income earners. The average proposed plot size of low density residential area is 30mx40m and a maximum of 40mx50m. The low density residential areas in the four detailed areas cover an area of about 1.421sqkm and approximately 142.1Ha. These have been proposed in Parts of Buzibweera, Part of Kiwanguzi, and Part of Bamusuuta detailed plans.

b) Medium Density

The medium density residential areas are proposed in parts of Kyanga, Kiwanguzi, Bamussuta and Buzibweera A detailed area. These areas are envisaged to accommodate medium income earners though the high income can also fit in these areas. The proposed plot sizes range from 20x30m and 30x40m with the plot coverage ranging from 20% to 40%. This land use cover about 1.031sqkm approximately 103.1Ha of land.

c) High Density

The High Density residential plots are relatively small and they are proposed to cover a size of 15m x 30.5m)/(50ft x100ft). These areas capture parts of Kyanga, Bamusuuta, Buzibweera 'A', and Kiwanguzi detailed areas 38.2 Ha. the plot sizes are not same because of the existing building, so maintaining the same plot standards/sizes was not possible. Therefore, some plots are bigger in sizes than others, as an attempt to avoid cutting through plots. The plan also encourages amalgamation of plots. The table below gives a summary of the proposed plot sizes and coverage for the proposed residential areas;

Table 20: Summary of plot sizes and plot Coverage for residential settlements

Type of Density	Minimum plot size (m)	Minimum plot size (m)	Plot Coverage %
Low	30 x 40	30 x 40	15-20
Medium	20 x 30	20 x 30	20-40
High	15x 20	15x 20	40-70

Source: National Physical Planning Standards 2011

4.4.3 Parks and Recreational grounds

Recreational Areas

These areas include playgrounds, parks, areas for outdoor activities, play lots and open spaces among others. Accessibility to these areas is essential and emphasis is on ease of access to these spaces by the public either through walking, cycling or by use of public means. These areas are proposed in all the detailed plan to encourage and promote outdoor activities and social interaction

Purpose of Recreational Grounds

- 1) To provide for the active and passive recreational needs of the town and the protection of aesthetic qualities of the area for the general benefits and welfare of the community. When the residents have where to relax and have fun, they are rejuvenated and this keeps them healthy and productive.
- 2) To provide, protect and improve the provision, attractiveness and accessibility of public open space intended for use of recreational or amenity purposes
- 3) To provide recreational and amenity resources for urban and rural populations subject to strict development controls.

4.4.4 Institutional

Institutional developments that were proposed in the PDP have been maintained in the detailed schemes. These include; Health, Educational, and Religious institutions. The institutions are proposed as below;

a) Educational Institutions

The existing educational institutions with adequate space requirements have been maintained and planned for the same use in the detailed plan. In addition, Nursery schools have been planned within the residential areas.

b) Religious

All the existing religious places of worship have been maintained and no addition has been made because the existing ones are sufficient to meet the religious needs of the population.

c) Health Institutions

The existing Health facilities are maintained and proposed ones have been incorporated into the detailed plan of the town.

4.4.5 Industrial zone

In this detailed plan an industrial area is proposed in Kiwanguzi cell. These are areas proposed for light scale industry and micro enterprise like Artisanry (Welding), Wood/Timber/Mechanical Workshops (Technicians). Because it is anticipated that these category of industries are likely to grow. The plot sizes in the industrial zone shall be a minimum of 30x60m (100ft x200ft) and may double the size depending on the size of the industry being set out.

4.4.6 Civic

The proposed civic areas comprise of the Police posts and community centres. These are areas intended to cater for the local residents as places for; meetings, leisure activities, games and any other activities that are geared towards community benefit.

4.4.7 Roads

Proposals on the design of roads took an analytical course of the existing roads in the town. The existing roads have been maintained and new ones proposed to improve accessibility to public utilities in the town. Modifications have been made on roads to create proper alignment of utility services that ought to move alongside the roads. Most narrow roads and existing foot paths have been proposed into motorable roads. Service lanes have been proposed in the Commercial areas of the town to ease pedestrian movement, loading and offloading of goods and provision of services in the commercial centre. The table below shows the proposed road types and road sizes.

Table 21: Proposed road type and recommended width

Road type	Road width (reserve)	Carriage way
Primary Road (Existing) UNRA	30	15
Secondary Road	20	10
Local Roads	10-15	6-8
Access residential	6-8	4-6
Access commercial	15	8
Cul-de- sacs	5-6	4-5
Service lane	5	5
Foot paths/ precincts	3	3

Source: National Physical Planning Standards 2011

4.4.7 Transport Road Network

The purpose of a good and efficient road network is to cater for sustainable socio-economic progress of the town. It is a catalyst to the development of the town through the mobility of the population, goods and services from one part of the town to another.

a) Primary Road

The proposed width of the existing primary road is 30 metres, with a function of hauling traffic from the city centre of Kampala to neighboring areas and region. The primary Road is designed as a double carriage way road, with controlled traffic. The traffic on the primary distributors has absolute right of way and is not interrupted by other accesses and have a maximum speed of 80km/hour.

b) Secondary Road (Residential)

These have been planned to a width of 15m. The function of secondary distributors is to direct traffic from the primary road to other particular neighborhoods. The design speed of these roads is about 50km/hour.

c) Local Road (Residential)

These have been planned to a width of 10m and their main function is to guide traffic from the secondary distributor to residential areas, commercial and social facilities except those of small children. The maximum speed on local distributors is 30km/hour.

d) Access Road (Residential)

Access roads have been planned to a width of 8m in residential areas. The main function of the access roads is to provide direct access to both commercial and individual residential plots. The maximum traffic speed is 30km/hour and the design of these roads should aim at discouraging through traffic.

e) Pedestrian walkway and cycle lane

All roads within the detailed area have been planned to also accommodate both Pedestrian walkway and cycle lane of about 2m. This is intended to separate motorised/vehicular and non-motorised traffic. There is need to provide routes for a green infrastructure.

4.4.8 Wetland and Buffer Zones

Wetlands are environmentally sensitive areas that need protection and preservation since they play a big role in improving the eco-system & micro-climate of the town. The detailed plan has put fourth measures to preserve these wetlands and strongly prohibits any developments in the wetlands. buffer zones of around 15m has been proposed around the wetlands to protect them from encroachment. All developments in the wetland shall require carrying out an EIA before approval.

The detailed plan has also recommended a number of activities to be undertaken in the wetlands but guideline regulations on the operational should be accessed from NEMA: these include; Brick making, Recreational activities such as sport fishing, maintenance of green spaces, Cultivation, Drainage, Commercial exploitation of wetland resources, Sewage nitration; Fishing using fish gear and weirs, fish farming and other aquaculture; Construction of transport and communication facilities such as roads, railways, telephone lines; Burning; Any exploitative activity which is of a commercial or trade nature, such as harvesting of papyrus reeds for commercial purposes.

Buffer zones for wetlands should consider soil type (colour, Composition); vegetation type; depth of water table; topographical features/contour levels; existing and agreed or recognised customary boundaries that favour the wetland.

4.4.9 Utility and Services Supply

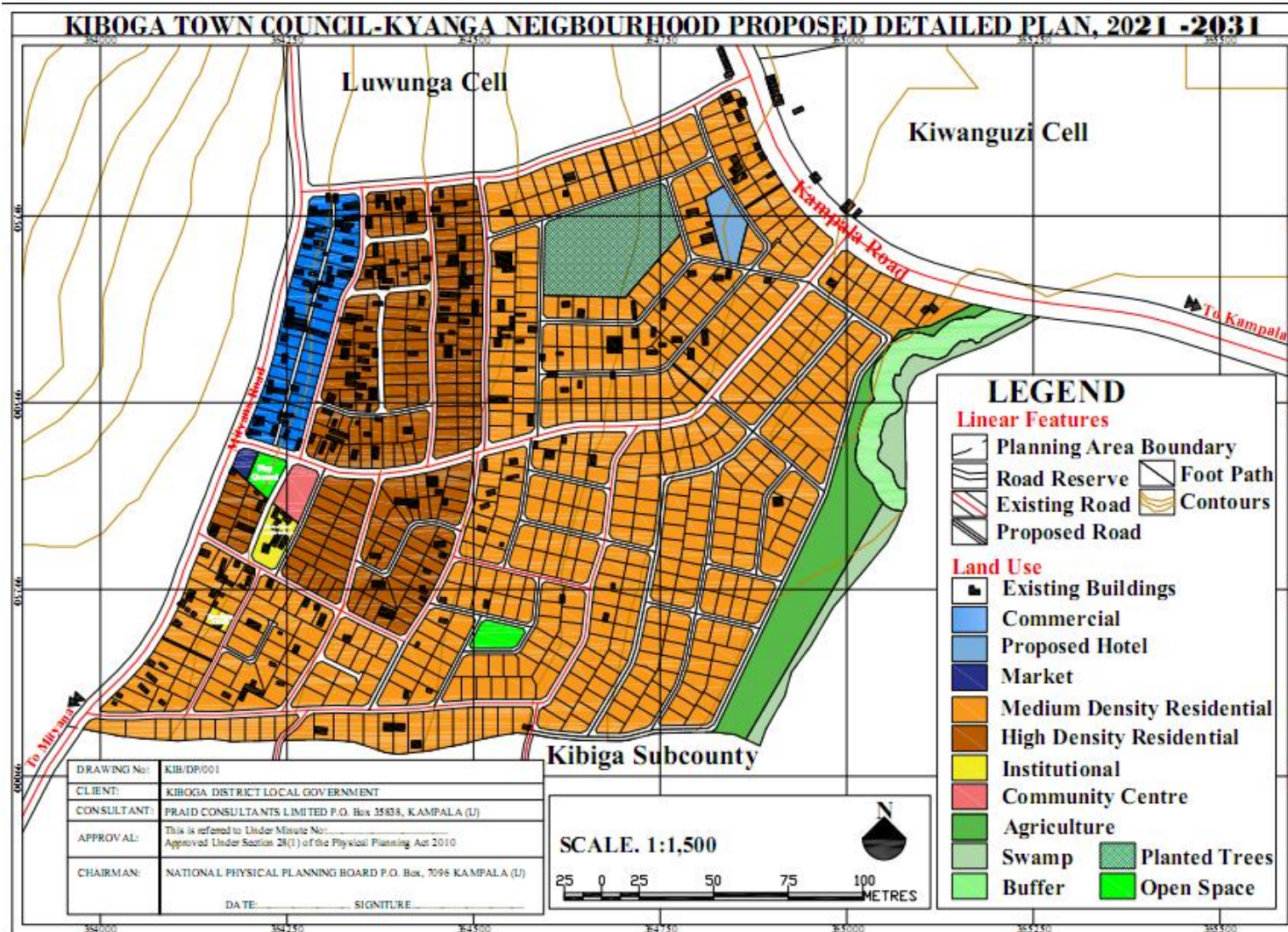
Services and utilities like water and electricity are planned to be supplied along the existing and proposed roads to reach users. All the proposed roads have adequate reserves to cater for the alignment and installation of the Utility services.

5 4.5 Key Issues to Consider during development approval

- i) Fence or boundary walls and hedges should be sited on the property line on the front of the plot boundary.
- ii) Gates on any fence or boundary walls ought to open inwards and not outwards on the access road
- iii) Boundary walls facing the road should not exceed a height of 150cm and no garage ramp should encroach on the road reserve.
- iv) All buildings containing more than four floors should consider provisions for an elevator
- v) All Public buildings must have ramps to facilitate PWD accessibility and mobility.
- vi) Residential direct access on primary and secondary roads should be prohibited

Proposed Detail Plans for the Four (4) Neighbourhoods in the Town Council

Map 7: Proposed Detail Plans for Kyanga Neighbourhood



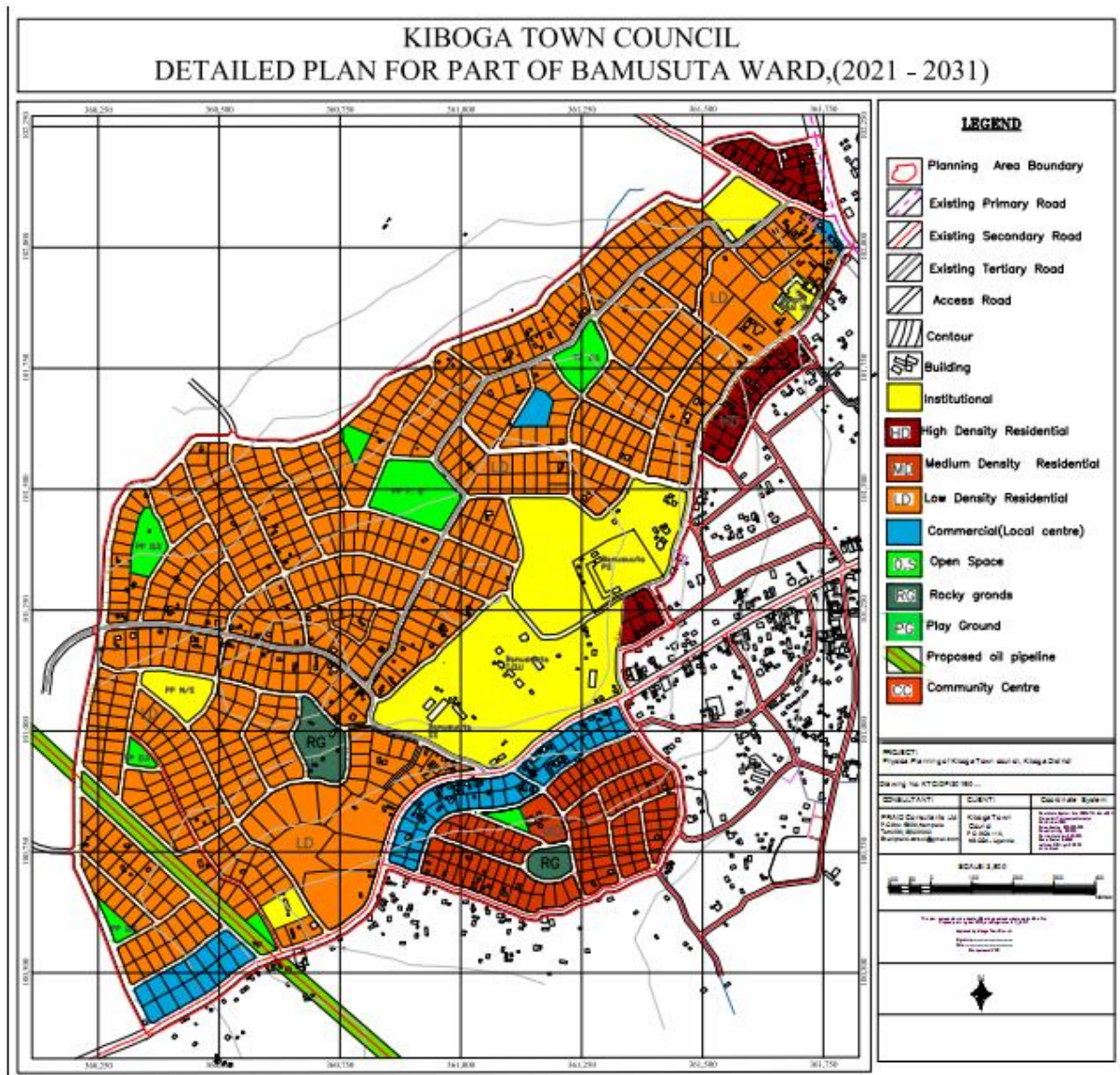
Source: PRAID GIS Unit, 2021

Table 22: Summary of Part of Kyanga Neighborhood Detailed Plan Land uses

Item	Land use	Area (Sq.M)	Area (Sq.Km)	No. of Plots	Coverage (%)	
1	Commercial plots	22,292	0.02	45	3.94	
2	Proposed Hotel	3,435	0.00		0.61	
3	Market	860	0.00		0.15	
4	Medium Density Residential	351,436	0.35	431	62.15	
5	High Density Residential	94,942	0.09	208	16.79	
6	Institutional	Educational	3,023	0.00		0.53
		Religious	819	0.00		0.14
7	Community Centre	2,685	0.00		0.47	
8	Agriculture	26,009	0.03		4.60	
9	Swamp	12,474	0.01		2.21	
10	Buffer	12,443	0.01		2.20	
11	Planted Trees	19,812	0.02		3.50	
12	Greening	Play Ground	2,086	0.00		0.37
		Open Space	1,920	0.00		0.34
13	Roads	Existing	5,227	0.01		0.92
		Proposed	6,033	0.01		1.07
Total			0.57		100.00	

Source: PRAID, 2021

Map 8: Proposed Detail Plans for Bamusuuta Neighborhood



Source: PRAID GIS Unit, 2021

Table 23: Summary of Part of Bamusuuta Neighborhood Detailed Plan Land uses

ITEM		LAND USE	AREA(Sq.m)	AREA(Sq.km)	NO. of Plots	Coverage(%)
1	RESIDENTIAL	High Density Residential	40,900	0.0409	49	2.73
		Medium Density			159	5.80

		Residential	87,000	0.0870		
		Low Density Residential	8,320	0.8367	656	55.75
2	COMMERCIAL	Plots		0.0560		3.73
		Hotel	4,445	0.0044		0.30
3	INSTITUTION	Education	181,790	0.1818		12.11
		Religious	19,609	0.0196		1.31
4	GREENING	Play Ground	18,000	0.0180		1.20
		Open Space	20,000	0.0200		1.33
		play lots	6,400	0.0064		0.43
5	ENVIRONMENT	Rocky areas	15,000	0.0150		1.00
		pipeline	16,000	0.0160		1.07
6	ROADS		199,000	0.1990		13.26
TOTAL				1.5008		100.00

		Km
ROADS	Primary Road	0.34 km
	Secondary Road	2.97 km
	Tertiary Road	5.87 km
	Access Road	21.89 km
TOTAL		31.07KM

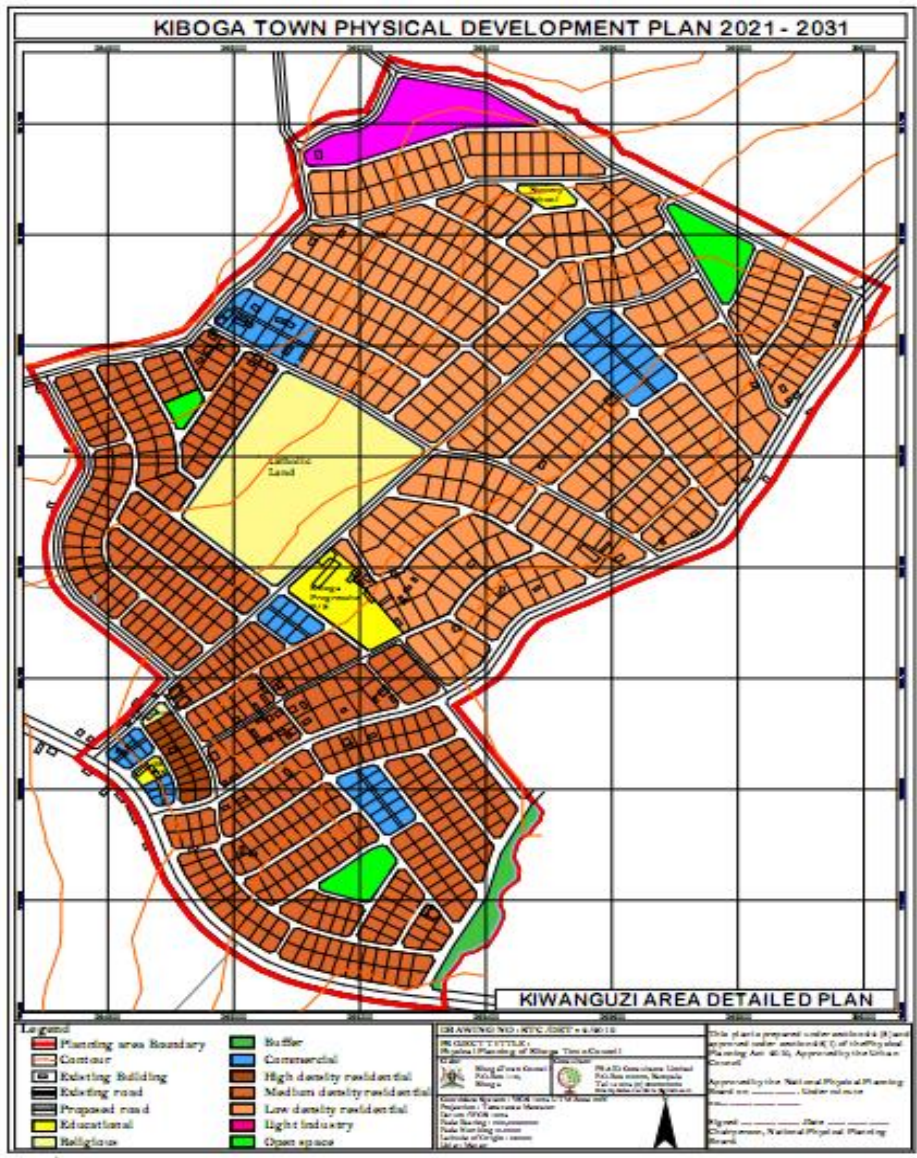
Source: PRAID GIS Unit, 2021

Table 24: Summary of Part of Kiwanguzi Neighborhood Detailed Plan Land uses

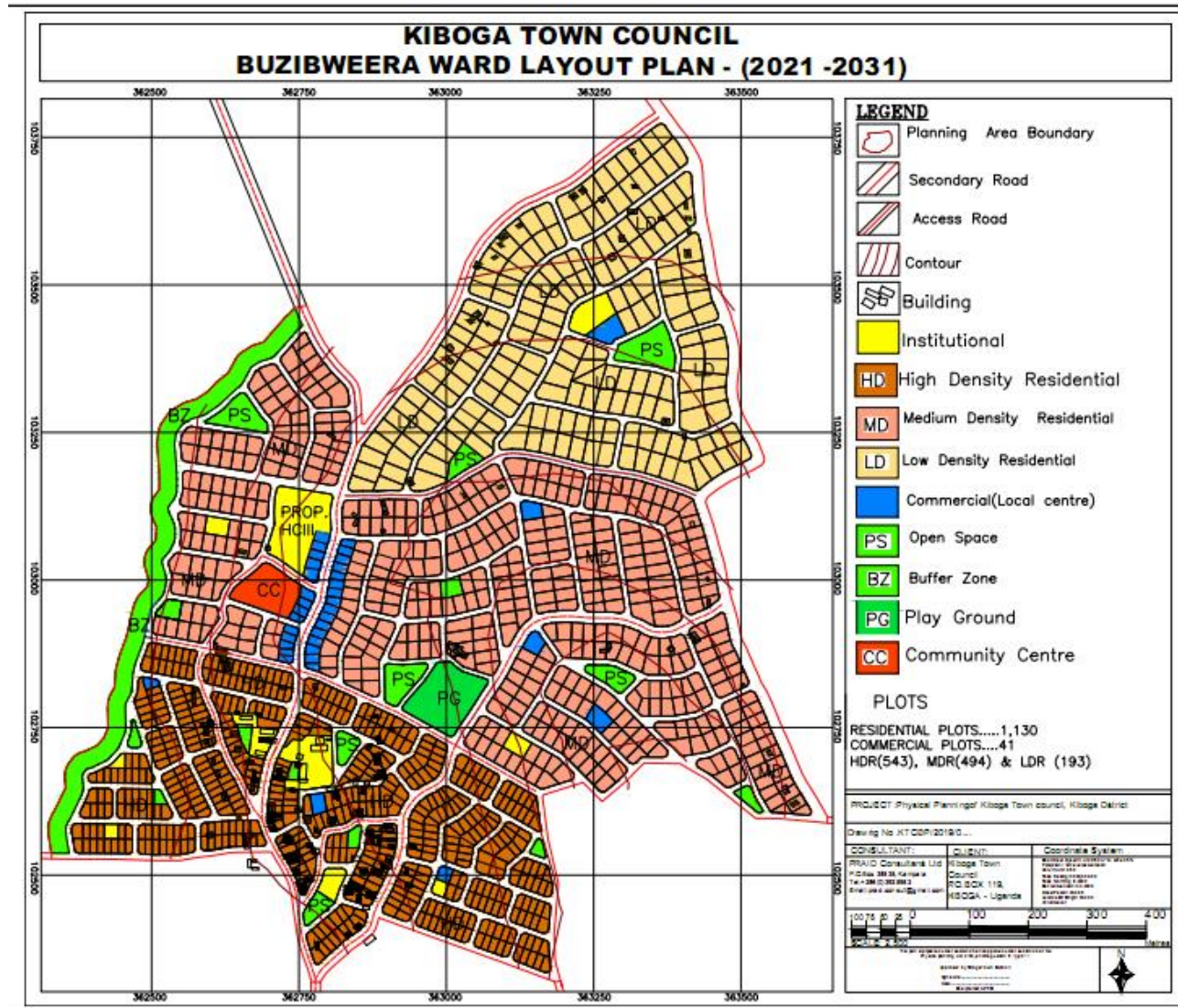
Item	Land use	Area (Sq.M)	Area (Sq.Km)	No. of Plots	Coverage (%)
1	Commercial	38,616	0.039	60	4.4
3	Low Density Residential	391,877	0.392	402	44.2
4	Medium Density Residential	298,337	0.298	498	33.6

5	High Density Residential		7,904	0.008	20	0.9
6	Institutional	Educational	20,137	0.02		2.4
		Religious	77,543	0.078		8.7
9	Light Industry		24,669	0.025		2.7
10	Buffer		8,256	0.008		0.9
12	Open Space		19,776	0.019		2.2
Total			887,115	0.887	980	100
			Meters	Kilometers		
13	Roads	Existing	5,713	5.7		
		Proposed	8,314	8.3		
Total			14,027	14.0		

Map 9: Proposed Detail Plans for Kiwanguzi Neighborhood



Map 10: Proposed Detail Plans for Buzibweera Neighborhood



Source: PRAID GIS Unit, 2021

Table 25: Summary of Part of Buzibweera Neighborhood Detailed Plan Land uses

Item	Land use		Length		Area		No. of Plots	Coverage (%)
			(M)	(Km)	(M ²)	(Km ²)		
1	Commercial plots				18450.00	0.018	41	2.19
2	Community Centre				6755.26	0.007		0.80
3	Health centre				10822.65	0.011		1.28
4	Buffer				32413.04	0.032		3.84
5	Residential	High Density Residential			244350.00	0.244	543	28.97
		Medium Density Residential			296400.00	0.296	494	35.14
		Low Density Residential			193000.00	0.193	193	22.88
6	Institutional	Educational			3440.14	0.003		0.41
		Religious			2444.85	0.002		0.29
7	Greening	Play Ground			10822.65	0.011		1.28
		Open Space			24656.07	0.025		2.92
8	Roads	Existing	5263.08	5.26				
		Proposed	6034.05	6.034				
Total			11297.13	11.294	843554.66	0.844		100

Source: PRAID GIS Unit, 2021

5.0 IMPLEMENTATION

5.1 Plan Implementation Strategy

The detailed Plan has major development proposals which require a lot of resources both; financial and technical in nature. It would be unrealistic to propose a full scale implementation of these proposals in one go. It is on that basis that a “Phased Implementation Strategy and Framework” is proposed. This Phased implementation approach would enable Kiboga Town Council and the Private sector to plan, source and implement parts of the detailed plan proposals in an affordable manner.

Implementation of projects depends upon the availability of financial and technical resources to the town council authority. These resources are necessary if a realistic implementation strategy is to be identified. The implementation of the plan will involve both the public and private sector.

Implementation begins when the plan has been approved by the National Physical Planning Board (NPPB) and it is spear headed by the Town Council.

5.1.1 Proposed Implementation Phasing Process and Plan

The detailed plan has proposed three (3) phases of development of all required infrastructure and is to be implemented by three (3) major agencies including KTC, donors and the private sector. The implementation of the detailed plan has been proposed to follow the following Implementation Plan.

Table 26: Proposed Implementation Phasing Process and Plan

ITEM No.	Proposal Description	Percentage to be Implemented for each Phase		
		Phase I	Phase II	Phase III
i	Plan dissemination	40%	30%	50%
ii	Land acquisition of market land	20%	40%	40%
iii	Survey and titling	5%	30%	65%
iv	Cadastral survey of detailed layout provisions; plots, roads, etc	20%	40%	40%
v	Opening and grading of planned and surveyed roads	10%	50%	40%
vi	Acquisition of land for Police Post	20%	40%	40%
vii	Surveying and titling	5%	30%	65%
viii	Acquisition of land for the Lagoon	15%	35%	50%
ix	Surveying and titling	25%	50%	25%
xii	Acquisition of land for the Recreational Centre	15%	35%	50%
xiii	Surveying and titling	25%	50%	25%

Source: Praid, 2021

5.1.2 Plan Implementation Cost Estimates

The detailed plan has provided “Provisional Cost Estimates” for the proposals. The actual costs for projects such as road infrastructure and other services will emerge after the detailed road designs. The actual costs for the proposals such as buildings will be borne by the owners of the properties.

Table 27: Plan Implementation Cost Estimates

KIBOGA TOWN COUNCIL PHYSICAL DEVELOPMENT PLAN 2021 - 2031															
10 YEAR PHASED IMPLEMENTATION STRATEGY															
	ACTIVITY	Phase I (Short term) 2021/22-2023/24			PHASE I COST	Phase II (Medium term) 2024/25 - 2026/27			PHASE II COST	Phase III (Long term) 2027/28 - 2030/31				PHASE III COST	OVERALL COST
		YR 1	YR 2	YR 3	Total	YR 1	YR 2	YR 3	Total	YR 1	YR 2	YR 3	YR 4	Total	
1	Community sensitisation	20m	30m	30m	80m	20m	30m	30m	80m	20m	20m	20m	20m	80m	240m
2	Construction of Vehicle terminal (Taxi/Bus)		800m	800m	1.6b	500m	500m	300m	1.3b						2.9m
3	Land acquisition for markets, Abattoir, Markets, Urban Green parks and Sewer lagoons		450m	1b	1.45b	200m	200m	200m	600m						2.5b
4	Phased construction of ...														
4.1	<i>Mordern T/C Abattoir</i>						2.5b	2.5b	5b	2.5b				2.5b	7.5b
4.2	<i>Central Market</i>					500m	500m	500m	1.5b	500m				500m	2b
4.3	<i>Mordern Lagoon</i>					600m	600m	600m	1.8b	600m				600m	2.4b
5	Road surveys and compensation		400m	400m	800m	500m	450m	450m	1.4b	350m	350m			700m	2.9b
6	Road Opening & Construction														
6.1	<i>Kiboga - kapeke Road(2.5km)</i>			1.8b											1.8b
6.2	<i>Mulagi Road (1.7 km)</i>			2b		2.5b				2b					4.5b
6.3	<i>Tarmacking Nasuuna Road (3.4 km)</i>			2b											2b
7	Detailed planning for residential neighbourhood						90m	90m	180m	90m	90m			180m	360m

Source: Praid, 2021

Table 28: Detailed Plan Implementation Agencies and Strategy

Item	Detailed Plan Proposals	Implementation Agencies	Remarks/ Implementation Strategy
1	Market	i. KTC ii. Private Developers	For actual implementation of the Market, MoTIC, KTC would source for funding to develop this market in phases. MoTIC in conjunction with the KTC should engage Private Developers who are interested in developing the market.
2	Lagoon	i. KTC ii. Ministry of Water and Environment	The KTC in conjunction with Ministry of Water and Environment will be responsible constructing the Lagoon.
3	Police Post	i. Central Government ii. KTC iii. Donors	The KTC annually prepares, holds discussion sessions and adopts the Town budget, which reflects the cost of conducting operations and monitors Town operations. Given the functions of the central government, KTC and the Donors may provide the finances for the acquisition of the land and building of the police post so that development can start quickly.
4	Open Spaces	i. KTC ii. Private developers	Given the importance of public squares in a developing Town, Kiboga Town Council will be responsible for developing the green open space by planting the required plant materials, landscaping as well the minor civil works. KTC may also liaise with private developers who may wish to develop the public squares jointly.
5	Roads	i. UNRA ii. KTC iii. KDLG	It is really vital that the major roads be implemented in the first phase. The Plan proposes that major roads be opened and graded. However, detailed road designs are required because the Plan provides only a conceptual layout.

Source: Praid, 2021

5.3 Implementation Strategies.

It's important to note that the town council should not rely on one strategy in the implementation of the detailed plan. The Implementation of the detailed plan can be done through a number of ways:

- Mobilization of stakeholders through participatory consultative meetings/workshops prior to actual implementation.
- Soliciting commitment from implementing agencies such as Utility Agencies, the Private Sector, Internal and External Development Partners.
- Preparation and execution of detailed planning schemes in terms of land acquisitions and surveying and titling.
- Establishing coalitions and partnerships such as Public Private Partnership (PPP), Sub-Leasing, Joint Ventures and others.

5.4 Mobilization of resources.

Resource mobilization is the process by which resources are beseeched for programs and provided by donors and partners. This is particularly important for projects in Kiboga Town, since most are externally financed programs with little or no capacity to earn income from their own resources. Kiboga Town Centre is blessed with 5 key resources; human resource, physical resource, natural resource, social and financial resource which if tapped effectively will lead to implementation of the plan

The process of mobilizing resources for the implementation of the detailed plan begins with the formulation of a resource Mobilization strategy (Strategy formulation comprises the articulation of a mission, a set of long term objectives to be achieved within the stated mission, and an action plan specifying how the mission and objectives will be realized) which may include separate strategies for mobilizing all resources (different avenues, ways for mobilizing the different resources).

It's important to note that mobilization of resources can be done in phases and depending on the programmer/sector that needs resources and this can be through;

- i).* Local revenues
- ii).* Local Government transfers
- iii).* Through Public Private Partnerships
- iv).* Build operate and transfer
- v).* Central government
- vi).* Lobby funds from Development partners

5.5 Land Access.

For implementation of the detailed planning scheme to take place, the government needs to acquire land for putting up the key public facilities. This can only be done through;

- Through community members' committing some parts of their land for public use,
- Through acquisition or purchase by Central or Local Government Authorities,
- Resettlement policy where required

5.6 Monitoring and Evaluation

To ensure that the planning process is moving in the right direction and progress, there is need for monitoring and evaluation. This helps in decision making and correction of errors made in the early stage. Normally, monthly, quarterly and annual monitoring and evaluation is conducted to check on the progress of planning process. This should be done by an independent expertise with experience in monitoring and evaluation plans and reporting.

The UPPC and ministry shall play a key role in the monitoring and evaluation process for Kiboga detailed plan

5.7 Mechanisms of monitoring process and outputs

The Kiboga Town Council/PPC and ministry shall need to employ a number of methods to ensuring effective and efficient project. Monitoring and stakeholders participatory monitoring through monitoring and evaluating the main interventions on the following issues:

- Progress: Implementation progress by Implementing Agency
- Impact: Achievements, Implementation costs, Limitations and Difficulties in achieving plan objectives and goals
- Long term impact: In terms of long term impacts stipulated in policies and long term impacts of the plan

5.8 Review of the Plan

This plan must be kept under constant review such that the plans output would be evaluated and enable redefining of objectives and strategies where and when necessary. This plan is not static but rather dynamic in its design and therefore there is need to review the plan by the Planning Authority anytime where the need arises

The Review of a general planning scheme shall be made at regular intervals annually so as to evaluate the extent to which the plan has been implemented and some of the challenges facing the plan. It shall be the mandate of the PPC and the Ministry to conduct an annual plan review and evaluation of the operation and implementation of the general planning scheme.

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Since plan implementation is broad, it calls for all stakeholders at all levels to participate. Public private participation becomes relevant and necessary because much of the land is individually owned and yet development is done on people's land. Therefore, land owners in Kiboga town should be involved in the process because there are direct benefits they equally enjoy, so that the plan and the finances injected in the plan production should not go to waste if the plan is not implemented and does not achieve its objective.

As an authority, Kiboga town council should serve as a regulatory body rather than a developer. It should only control, facilitate and promote development in the interest of the people.

Civil obedience is very critical if any success is to be registered. The establishment of rule of law and its implementation should not seem to work for and against others. The practice of respect of the law should cut across board. Nobody should be exceptional, or else compromise crops in stifling the development control. Therefore, everybody should and must become conscious of the rules and regulations and must follow and obey them.

Constant and routine monitoring of the plan implementation is necessary together with urban development trend in the town. Monitoring is also vital in early detection of development challenges so as to come up with quick solutions. Once attention is given to seeking out ways of providing for solution to planning, then this brings a ray of hope in saving local authorities from unnecessary expenditures, and the stress that is passed to the urban dwellers.

6.2 Policies and Recommendations for all the Sectors

Physical development planning ought to be understood as a continuous process and cyclic in nature. Constant routine field checks with provided policy for efficient development control are paramount. Some of the policy recommendations that are deemed vital for the plan implementation include.

6.2.1 Technical Recommendations

- a) All proposed infrastructural services in the implementation strategy should be included in the budget each financial year for implementation.
- b) The Town Council authority is advised to develop its implementation process in line with the implementation strategy developed in this report that is based on the short term, midterm and long term priorities.
- c) Consider all the necessary legal regimes that relate to Planning, plan approval, review and monitoring arrangements in the plan implementation.
- d) Establish a streamlined institutionalized mechanism that coalesces the different planning and decision organs, so as to link all sectoral budgetary processes with those of land management, to ensure transparency and accountability.
- e) Put in place a periodic/continuous capacity build mechanism for the personnel/agencies responsible for implementation of the Plan.
- f) Priority should be given to those proposals in the plan that need quick redress/urgency bearing in mind the available resources and capacity.
- g) Put in place a strict development control mechanism to check those who do not want to observe established development guidelines and regulations.
- h) Encourage community participation during the plan implementation to enable them be part and parcel of the plan and develop a sense of ownership.

- i) Much emphasis should also be directed towards waste management in Kiboga to curb the unnecessary dumping and littering of waste. Establish waste collection points at appropriate locations, plus storage facilities like garbage banker or containers. Equally encourage on source household storage of wastes.

6.2.2 Environmental Recommendations

- a) Do proper suitability site analysis to ensure that sites are developed according to standards stipulated in the National Physical Planning Standards.
- b) Enforcing the implementation of laws and policies regarding use of wetlands is necessary to protect encroachment on the wetlands
- c) Routine monitoring of the wetland to prevent human activities from encroaching the wetland.

6.2.3 General Recommendations

- a) Sensitization of communities about planning and its related objectives is crucial for a successful implementation of the plan.
- b) Generating political will to have due regard to the proposals of the Plan through orientation/briefing to the elected representatives about the detailed plan and its role in achieving quality of life for the present and future generations, dissemination of progress of implementation of the plan, and creating awareness among the communities.
- c) Seek and lobby for funding from the central government, local authorities and other development partners. To be able to implement those services that are identified as priority.

Annex I: REFERENCES

- i. Kiboga Town Council 2021-2031
- ii. Ministry of Lands, Housing and Urban Development; National Physical Planning Standards and Guidelines, 2011
- iii. Uganda's Vision 2040
- iv. The Second National Development Plan 2015/16 – 2019/20
- v. Kiboga Town Council Five-year Development Plan FY 2015/16-2019/20
- vi. The Uganda National Land Policy, 2013
- vii. Uganda's National Environment Action Plan (NEAP)
- viii. The National Environment Management Policy, 1994
- ix. The National Water Policy.1999
- x. The Wetlands Policy, 1995
- xi. The Physical Planning Act 2010
- xii. The Local Government Act– CAP 243
- xiii. The Land Act, 1998
- xiv. The Land Acquisition Act, CAP 226
- xv. The Public Health Act CAP 281
- xvi. The National Environment Act, Cap 153
- xvii. The Wildlife Act, 1996
- xviii. National Forestry and Tree Planting Act, 1999,
- xix. The National Environment Management Standards and Guidelines

Annex IV: LIST OF ATTENDENCE