DEVELOPMENT PLANNING AND DEVELOPMENT CONTROL CHALLENGES IN RUIRU TOWN

BY

GATERI C.W

B.A (Hons) Land Economics

A THESIS SUBMITTED IN PART FULFILMENT FOR THE DEGREE OF MASTER OF ARTS (PLANNING) IN THE DEPARTMENT OF URBAN AND REGIONAL PLANNING

UNIVERSITY OF NAIROBI.

AUGUST 2002

Dedication

To my *'Gathee'* Kimani
for all those special things he does for ME.
And
To Vanessa and Brenda
for just being there.

Declaration

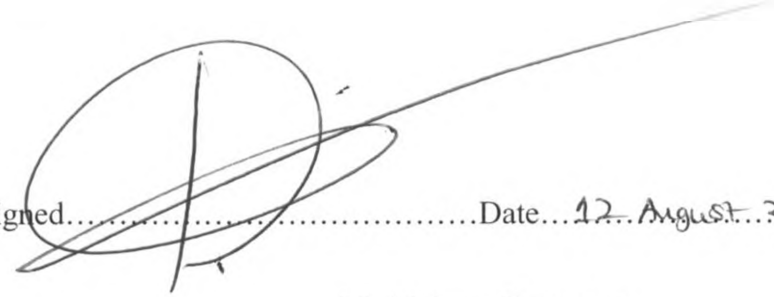
This work is my original work and has not been presented for a degree in any other university.

Signed..... Date...12th August 2002....

Catherine Waithera Gateri

(Candidate)

This thesis has been submitted for examination with my approval as a University Supervisor.



Signed.....Date...12 August 2002

Mr Mairura Omwenga

(Supervisor)

Acknowledgement

This work could not have been possible without the help of very many people some of whom I acknowledge:

The government of Kenya, for paying my fees

My supervisor, Mr Mairura for his guidance, comments and encouragement

My parents, Gateri and Kimani, whose total dedication led me to this institution of higher learning

Other academic members of staff in the department particularly Prof. Ngau and Mr. Maleche, Eric and Kivaa for their support when the 'thesis' task felt impossible

My little sister Judy for typing this work and repairing my computer, always there whenever I needed her

My husband Kimani for printing my work and providing equipments

My classmates who made the two years what they were and especially Elizabeth for her constant criticism and proofreading my work, Karisa for guiding on the sketches and Daniel for accompanying me to the field.

Leah Akinyi Anyango for adopting me in the absence of her children, her kindness I can never repay but I pray to God that He does.

Ruiru Municipal Council works officer, Silas Ndungu who never got tired of my frequent visits and questions.

Other officers in Ruiru Muncipal Council, Thika lands office and Nairobi lands office who spared time to answer questions related to this research and for that matter I am grateful to them.

While the success of this work is a product of the joint efforts by my benefactors and myself any shortcomings are my sole responsibility.

LIST OF ACRONYMS

NMGS: Nairobi Metropolitan Growth Strategy

CBD: Central Business District

UNCHS: United Nations Centre for Human Settlements

NLU: Native Lands Unit

NR: Native Reserves

CA: Central Unit

NGO,s: Non-Governmental Organisation

ABSTRACT

Development planning and development control challenges are not new in our current urban scenarios. They have been there ever since man started urbanizing and industrializing. Currently urbanization trend has been on the increase resulting in urban expansion. But the authorities charged with the responsibility of managing urban growth and controlling developments have not been able to perform their duties effectively so as to manage the urbanization. The result has been unsustainable urban growth not guided by any means whatsoever leading to urban decay and environmental degradation. This has manifested itself in the deplorable state of urban infrastructure and services coupled with the increase of unauthorized developments and the inherently low levels of compliance with the requirements of plans and policies.

The study aimed at looking at the development planning and development control challenges facing satellite towns of Nairobi with Ruiru Municipality as a case study.

The research methodology employed included the use of primary and secondary data. In the collection of data from the primary sources, structured questionnaire for 73 households was used, a scheduled interview for the municipal council and for Thika Physical Planning Officer. Secondary data was collected from Thika District Physical Planning Office, Land Buying Company Offices, Ruiru Municipal Council Offices and Ministry of Lands Offices in Thika and in Nairobi. Other tools applied included informal discussions, personal discussion, photography and traffic count. Collected data was analysed using the Statistical Package for Social Sciences, after which generated outputs were used as inputs to generate graphs and charts. Analysed data is then presented using frequency tables, piecharts and bargraphs.

The study found out that development planning and development control are totally non-existent in Ruiru Municipal Council.; developments supercede

planning. The Municipality does not provide any services and even municipal council officials admitted that they have been overtaken by events. The existing infrastructure services are as a result of personal initiatives. There are very many development agencies in this area. Some agencies have taken it upon themselves to control developments in their areas and the result has been a beautiful environment with very high land values.

The study also found out that various tools of development control are not enforced. The Ruiru Municipal Council does not have a current local physical development plan, but has one that was prepared in 1978, which covers only 17% of the total municipal area. But this local physical development plan has not been implemented to the letter. The council has not zoned this area at all. The Physical Planning Act is not enforced. Ruiru Municipal Council is empowered by law to prepare by-laws for its area but it has not done so. The council instead, has adopted by-laws from the mother county council, which are outdated, rural in character and cannot serve a rapidly urbanizing area like Ruiru Municipality. The planning standards have been ignored totally and the building code adoptive by-laws, which the municipality uses have not been enforced.

The study further found out that the main development challenges facing the municipality are a combination of many factors which include: existing legal and institutional frameworks, administration and enforcement of the various development control tools, lack of financial resources, land matters and rapid urban growth.

The study concludes that there is widespread lack of planning and planning services are not highly regarded. Integrated regional planning for metropolitan areas does not yet exist.

It is on this basis that the study recommends adoption of smart growth solutions to curb urban sprawl. These include channeling growth to areas with

existing infrastructure, using greenbelts to designate urban growth areas, and creation of municipalities based on proper research, ability to provide services and infrastructure and not population. To solve the problem of urban land use planning, the study recommends preparation of local physical development plans and zoning schemes before any developments take place, preparation of land inventories, local authorities to establish planning institutions and to be taken as key participants both in plan preparation and implementation through seminars and training programmes. To solve the challenges caused by legislation, revision of building standards, building by-laws and amending and harmonizing planning conflicting laws and the institutions that govern the use and planning of land to facilitate efficient operations of all the actors and to reduce existing conflicts is recommended. Recommendation for the metropolitan influence include integration of regional planning and formation of a metropolitan planning organization to deal with provision of services. To deal with enforcement problem policies and laws must be clearly stated so that there is little ambiguity in their enforcement, efficiency in approval process, involving the local residents. There is need to train the local authorities to employ modern planning methods like the geographic information systems and participatory planning approaches. Furthermore, the common man should be trained on the existing planning laws and regulations, planning standards and of their importance so that they can view them positively instead of seeing them as hindering developments. Improving service delivery is also recommended. This can be done by use of privatization and joint partnerships and improving local authority revenue collection so as to be able to provide services.

In conclusion, development planning and development control challenges can only be overcome by strict enforcement of the existing tools since they already exist and this can only be done by strengthening the local authorities.

existing infrastructure, using greenbelts to designate urban growth areas, and creation of municipalities based on proper research, ability to provide services and infrastructure and not population. To solve the problem of urban land use planning, the study recommends preparation of local physical development plans and zoning schemes before any developments take place, preparation of land inventories, local authorities to establish planning institutions and to be taken as key participants both in plan preparation and implementation through seminars and training programmes. To solve the challenges caused by legislation, revision of building standards, building by-laws and amending and harmonizing planning conflicting laws and the institutions that govern the use and planning of land to facilitate efficient operations of all the actors and to reduce existing conflicts is recommended. Recommendation for the metropolitan influence include integration of regional planning and formation of a metropolitan planning organization to deal with provision of services. To deal with enforcement problem policies and laws must be clearly stated so that there is little ambiguity in their enforcement, efficiency in approval process, involving the local residents. There is need to train the local authorities to employ modern planning methods like the geographic information systems and participatory planning approaches. Furthermore, the common man should be trained on the existing planning laws and regulations, planning standards and of their importance so that they can view them positively instead of seeing them as hindering developments. Improving service delivery is also recommended. This can be done by use of privatization and joint partnerships and improving local authority revenue collection so as to be able to provide services.

In conclusion, development planning and development control challenges can only be overcome by strict enforcement of the existing tools since they already exist and this can only be done by strengthening the local authorities.

TABLE OF CONTENTS

List of Maps

List of Tables

List of Figures

List of Plates

List of Figures

List of Plates

CHAPTER 1
INTRODUCTION

1-1 Overview

This chapter aims at introducing the reader to the whole study. It opens by outlining the basis on which the study was carried out thus giving the background of the problem being investigated. After the statement of the problem the objectives, assumptions, scope and justification of the study are spelt out to make the reader aware of what the study sets out to accomplish & its relevance to planning in Kenya. The next section looks at the research methodology, the study limitations, definition of terms and concludes by outlining the thesis organisation.

1-2 Introduction

Urban growth is determined by rural urban migration, high natural increases in urban areas and the reclassification of previously rural areas to urban areas. As the urban area increases, it exerts a lot of pressure on the demand for land. Land subdivision is the main process by which rural land enters the urban market on the way to eventual conversion to urban use. The land sub-division should be guided and controlled to avoid haphazard land sub-divisions and uncoordinated growth. However, this has not been the case in most Kenyan urban towns and in the study area in particular.

Urban growth needs to be planned so that it is sustainable. Development planning assumes the application of rational and ordered choice to develop activities, especially economic affairs. It is taken to be "an organized, intelligent attempt to select the best alternative to achieve specific goals"(Waterson, 1965). If this is the case, then planning assumes a logical sequence of events as selection of general objectives and their subsumed goals and targets: identification of available resources to serve the selection of appropriate means including various types of policies. Its main techniques will be written statements, supplemented as appropriate by statistical projections, mathematical representations, quantified evaluations and diagrams illustrating

relationships between different parts of the plan. It may but need not necessarily, include exact physical blueprints of objects (Maleche, 1992). However, this type of planning is lacking. In most satellite towns, development supersedes planning.

Development control is the process of managing urban land uses to conform to a desired pattern or structure. Development control aims to achieve, through regulation, growth of a town in a planned and orderly manner. Development control has temporal and spatial implication on the evolution of the entire urban landscape. The rationale behind development control in urban development is to regulate development and use of land for public interest (Ministry of lands and settlement, 1973). This implies impartial application of instituted planning policies and guideline to cater both for individual and the public at large. The basis of this impartiality is the acceptance that in planning and designing physical structures as well as amenity, provision of a healthy environment in the interest of all, should be maintained.

Development control is therefore first operationalised at initial stages of planning. During this stage, the planners apply the concept of planning standard, zoning, policies, laws and regulations. Area zoning at plan making stage involves provision of specification and regulation of percentage plot coverage. It is adherence to these planning provisions that development control seeks to maintain.

Development control of the urban land use, as it relates to plot size and coverage by physical structures and land subdivision, is an indispensable component of the urban development process that gives shape to individual structures and provides a harmonious form, not only in the entire townscape, but also in a given section within it. The prevalent planning ideology within which development control takes place in any single urban center is reflected by functional efficiency, relationship and harmony of planned physical environment. (Mwangi 1988)

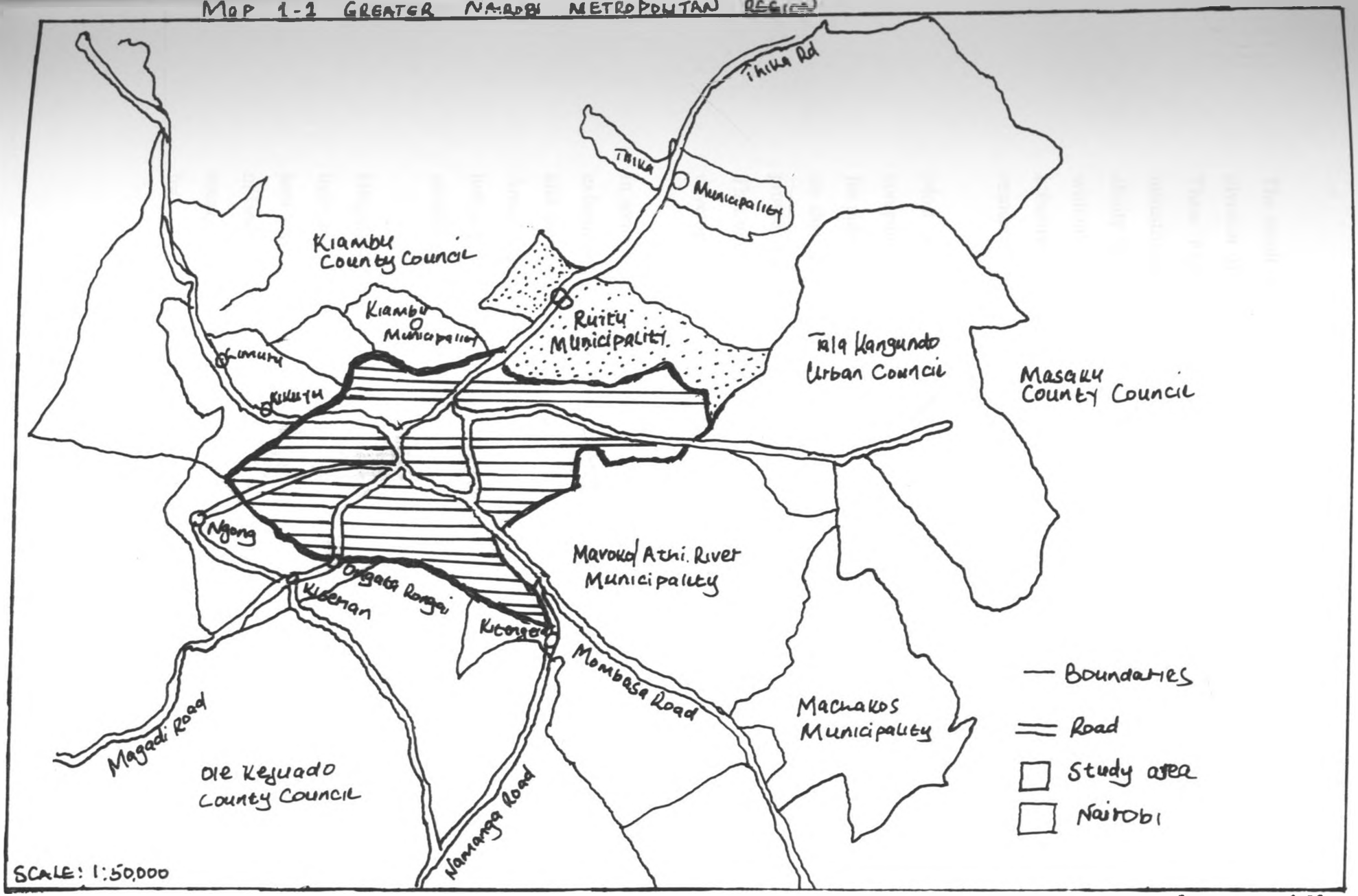
1-3 Problem Statement

A town is an organism and it is supposed to grow in an organised manner without any conflicting land uses as guided by a development plan. However, this has not been the case in Kenyan satellite towns. Most satellite towns of Nairobi are experiencing urban growth with no accompanying development planning policies to guide development. As urban growth increases, it creates demand for more land. However, land is fixed and since increased demand leads to increased prices the tendency is to move from the central area where land values are higher to that part of the urban area where land is a available and prices are reasonable. This has led to the growth of satellite towns. In this case Ruiru municipal has been experiencing increased growth because of movement of people from Nairobi. It has been observed that Ruiru municipality has expanded its boundaries after a lot of subdivisions have taken place thus absorbing more land that was initially meant for agriculture. These subdivisions are prompted by the current high rate of urbanization.

In his study on the development of satellite towns, Mwangi (2000) has noted that the satellite towns of Nairobi have in the last 15 years witnessed varying degrees of land use changes. The influence of the urban areas has continued to expand into the surrounding rural land bordering satellite towns. In a characteristic growth, Nairobi and the immediate adjoining rural and urban centers have acquired disorderly physical arrangements with existing transport network, social services and utilities that are not able to cope with the population needs

The areas forming the satellite towns, which are within the greater Nairobi metropolitan region are; Kitengela, Athi- River, Ongata Rongai, Ngong, Kiambu, Kikuyu and Ruiru. (Map 1-1) Increased accessibility to the satellite areas due to improved transportation has triggered off land use changes and increased land values. This has led to the conversion of user from agricultural based activities to developments such as residential constructions.

MAP 1-1 GREATER NAIROBI METROPOLITAN REGION



Source: Nairobi Metropolitan Growth Strategy, 1973.

The result has been increased demand for land in these areas leading to sub-division of land without effective control by the respective local authorities. These expansions experience haphazard developments with no attendant infrastructure services. Developments have overtaken the local authorities ability to plan for them with the result that most of the areas are developed without a plan. The authorities can't be able to provide the necessary infrastructure for these areas since they are not planned and the available resources are scarce.

Most of the current subdivisions have been undertaken by land buying companies. When subdividing land they are supposed to set-aside some land for public use and hand it over to the municipal council. However, they didn't do that in some areas like Kahawa Sukari and therefore the council can't provide public services like schools or hospital unless it purchases the land. This would not have happened in the first place, if the council had enforced development control.

In some areas, the density of development is very high and it overwhelms the existing infrastructure services. The planning standards have not been observed and even areas without sewers have been developed as high-density areas. Areas zoned for low-density developments have been developed with high-rise buildings. Some properties do not have vehicular access and the living conditions are in a deplorable state

Height (Vertical) control in residential areas is required to maintain adequate light and air as well as to control the proportionality of height floor. Similarly, area zoning in residential housing plans is meant to limit usable building area of land surface, front space, rear space and side space (Webster, 1958). In some areas, in the study area especially Githurai, none of these spaces is provided for.

Ruiru's development is characterised by extensive residential and commercial activities that are concentrated in comparatively small areas. These building activities have taken place in a comparatively high rate and thus overwhelming existing institutional capacity for effective physical planning of the area. Layout of the municipality is haphazard. Ruiru is bordered on one side by Githurai, which is very densely populated, both in terms of buildings and population. On the other side you have Gituamba which is a low-density area. The distance between the two respective areas and the Ruiru CBD is very wide and mostly vacant land. This makes it very difficult and expensive for the municipality to provide services effectively.

The problem facing Ruiru Municipality is rapid development of the town with no accompanying development plan and subsequently no development control. The existing development plan of 1978 covers an area of only 50 square kilometre out of the entire municipal area of 292 square kilometres.
The problem exists in the following ways:

- Urban sprawl making it difficult to provide services,
- Rapid development of residential areas, especially towards Nairobi which are not guided by any plan, and
- Lack of enforcement of set down planning standards and by-laws.

The purpose of this study is to look at the development planning challenges and opportunities facing satellite towns of Nairobi and to propose the way ahead in an effective development and controlled growth. Ruiru municipality is taken as a case study. The following research questions will guide the study.

1. What are the development demands and challenges in Ruiru Municipality?
2. To what extent does Nairobi City influence development in Ruiru Municipality?
3. What policies, guidelines and strategies have local authorities put in place to meet the development challenges?

4. How effective are these divergent policies, strategies and guidelines?
5. What development policies and intervention measures are required to meet the development challenges facing Ruiru Municipality.

1-3-1 Objectives of the Study

The main goal of the study is to understand the nature and structure of urban development in Ruiru Municipality.

Specific objectives of the study

1. To identify development demands and challenges in Ruiru Municipality.
2. To establish the level of influence of Nairobi City in Ruiru Municipality.
3. To identify and evaluate development policies, guidelines and strategies by Ruiru Municipal Council to meet the development demand and challenges.
4. To assess the level and effectiveness of development planning and development control in Ruiru Municipality.
5. To make recommendations on improved development planning and development control in Ruiru Municipality.

Study assumptions

a. The structure of physical development in Ruiru is unplanned, not integrated and not co-ordinated.
b. The problem of uncontrolled development in Ruiru relates to absence of a local development plan
c. Ruiru Municipality does not have the capacity to control developments and provide services in its area.
d. Proximity to Nairobi has influenced the rapid expansion of Ruiru Municipality.

1-4 Scope of the Study

The geographical extent of the research is limited to Ruiru Municipality. The study will be focused on development planning and development control in this area. The study aims at suggesting possible policy measures that can be put in place to guide urban growth and development.

1-5 Justification of Research

Research on growth of satellite towns is justified on the basis that urbanization is a phenomenon that is likely to increase rather than decrease. Ruiru town is a rapidly urbanizing area experiencing the highest growth rate in the whole of Kenya. Its current growth rate is 26.1%, according to the 1989 population census. (Kenya 1989)

It is realized that land plays a complex role in society, not only as an avenue of development but also as a commercial good and a natural birthright. Ownership of land is a social institution of fundamental significance, but one, which cannot and ought not to be taken for granted as a global phenomenon. The prime mover in any decision making about land will often be the owner or his/her tenant. The owner will attempt to maximize the returns from the land and will alter the intensity and nature of its use, in accordance with circumstances. However, owners are rarely allowed to make such changes with complete freedom. Instead, all sorts of institutions have been invented for defining and prescribing the relationship between man, individually and collectively, and his land resources. Consequently, every land decision is surrounded by an array of institutional, administrative, technical, financial, cultural, environmental and political issues. These concepts have been codified as regulations that govern the delivery and management of land and therefore considerable attention is devoted to such matters. The regulations have matured slowly in institutions and land laws over several years. (Okoth-Ogedo, 1975)

When vacant land is developed, the municipality has its best and in most cases the only opportunity to obtain the pattern of land development with which it

must live to in future. The amount of money which many cities are compelled to spend annually for street widening, redesign, relocation of utility lines, slum clearance and development is great evidence of the cost of failure to develop vacant land property in a proper manner (UNCHS, 2000)

Inspite of this evidence, a number of towns have continued to expand without adequate development planning and controls to prevent likely and similar consequences. This is usually in the urban areas where development is as a result of land pressure from the centre. Uncontrolled development could lead to serious consequences for the development and growth of a town thus the need to undertake the study. This study looks at development planning and development control challenges facing satellite towns and suggests possible measures that can be put in place to guide growth.

Ruiru municipality is taken as a case study for various reasons. As mentioned earlier the population growth rate is very high. The 1989 population census registered a growth rate of 26.1%. (Kenya, 1989) Secondly, it is next to Nairobi and experiences most of the impacts of the Nairobi overspill. Thirdly, transportation routes influence growth of satellite towns. In this case the Nairobi-Thika highway which has greatly influenced the growth of Ruiru was developed much earlier than the highways connecting to other satellite towns of Nairobi. The others include the Nairobi-Mombasa highway which has led to the growth of Athi-River town or the Nairobi-Naivasha highway which led to the growth of Kikuyu or Ngong Road which opened up Ngong and Kiserian. As compared to these other satellite towns, Ruiru started feeling the impact earlier because it started developing earlier. The problems of this satellite area are noticeable in all the other satellite areas. The findings and the recommendations are applicable in all the other satellite town areas.

1-6 Research Methodology

1-6-1 Data needs

This study is a survey that aims at establishing development demand and challenges facing satellite towns. It is a descriptive study which requires the collection of quantifiable information from a sample. To obtain data for this research, various methods were utilised. A reconnaissance survey of the area to gather information on Ruiru Municipality was undertaken. The study also obtained two types of data namely primary and secondary data.

Secondary data on urbanization, urban sprawl and its causes, land supply and demand, urban development challenges, metropolitan influence region, development planning and control and the legal and institutional framework was looked at with a view to understanding the nature of the problem and how it can be rectified.

Primary data included the household sizes, education levels, income levels, plot sizes and land tenure, transport modes, types of services available and the providers, services delivered by the local authority and development control procedures by the residents. Also the challenges faced by the local authority in an attempt to plan and control developments.

1-6-2 Data sources

Both primary and secondary data provided the database for this study.

(a) Secondary Data

This involved a critical review of existing literature on the subject of study, both published and unpublished and any other appropriate literature sources. Sources of data included land registry data, records and land maps, development plans, the building code, planning standards, the various Acts of parliament, Ruiru municipality by-laws and the valuation roles. Other sources included books and journals. The information concerning land use development and approved subdivisions plans was obtained from files in the

municipality and physical planning department in Thika. Data on the growth of the municipality was obtained from the municipality records on boundary extensions. Information on the general background of Ruiru development, population sizes, employment and income was obtained from the Central Bureau of Statistics.

(b) Primary Data

(i) Direct observations

Primary data was obtained by undertaking a field study of Ruiru and recording what was of interest and significant to the study. This also involved use of the development plan to see whether it corresponds with the current developments. An observation sheet was prepared for each questionnaire. This was to determine whether the plot area, plot size, plot coverage, plot ratio and the type of development, correspond with the existing development plan. This also confirmed the accessibility of the area and the relationship of the development to other surrounding developments.

(ii) Open discussions

These were mainly informal discussions with the landowners and land buying companies. A stakeholders meeting convened by Ruiru Municipal Council to discuss development challenges facing the Municipality was attended by the researcher which provided an opportunity to get the views of all stakeholders in the meeting. The subject of discussion included problems experienced in the plots such as accessibility to social amenities, water, sewerage, and electricity connection and supply.

Discussions were also held with the local authority officials to determine whether they have any control on land subdivisions and the problems they experience. Among the key officers interviewed included; the clerk to Ruiru Municipal council, the Thika Physical Planner, land officers in Thika and in Nairobi.

(iii) Household survey

The study employed a household survey as an important tool to obtain socio-economic and demographic data, availability of infrastructure services, questions concerning land subdivisions and land ownership, the degree of awareness of development control measures and the way they follow the laid down policies, strategies and guidelines.

(iv) Institutional questionnaires

These were prepared for Ruiru Municipality office and the Thika Lands Office which is the land registry for Ruiru municipality to determine their role in development planning and control and the challenges they experience.

(v) Land subdivision survey

This targeted the landowners who had taken land subdivision recently (1990`s). This was to determine whether the laid down procedures were followed and if not why they ignored the rules.

(vi) Traffic counts survey

A traffic count was conducted targeting the Ruiru Matatus No. 145 for two days. This is for purposes of establishing the flow between Nairobi and Ruiru. The Matatus were targeted because of their reliability in terms of destination, unlike the private vehicles whose origin and destination is not easily ascertained. The count was done between 11.00 o'clock and 1.00 o'clock, for the off peak period and between 4.00 o'clock and 6.00 o'clock, for the rush hour period. This was to determine whether there is a strong Nairobi influence.

1-6-3 Sample size

Gay (1983) suggests that for correlational research, 30 cases or more are required (Mugenda and Mugenda, 1999). Based on this, a sample size of 73 households was picked which was considered adequate for this study.

1-6-4 Sampling technique

The sample of the population, to whom the household questionnaire was administered, was drawn from the whole of Ruiru Municipality. The study area was divided into four sampling zones. These zones are: Githurai, Kahawa Sukari, Ruiru East and Ruiru West. (Map 1-2)

Githurai is the furthest from the centre of Ruiru Municipality. The most unique characteristic of this area is that it falls in the periphery of Ruiru municipality but next to Nairobi City. It has experienced a rapid increase both in population size and level of developments, but the developments are not guided or controlled. Its residents are middle income earners working in Nairobi, but residing in Ruiru. The populace in this area gets their infrastructure services from Nairobi, but, administrative wise Githurai is in Ruiru Municipality. A sample size of 40 households was taken in this area.

Kahawa Sukari is an upmarket estate, which is managed with very stringent development control measures. However, this development control is not enforced by the Ruiru municipality, but by the Kahawa Sukari Land Buying Company who are the developers of the estate. It is a low-density population area and a sample size of 15 households was taken.

Ruiru East is transected by the Nairobi-Thika Highway and has experienced rapid linear developments along the highway, which are very uneconomical to service because they are not concentrated in one area. The major developments are along the highway, but the interior area is basically rural in character. A sample size of 15 households was taken from this area.

Ruiru West is the area where the Central Business District of Ruiru is located. It is also unique in the sense that it is the only area in the whole municipality that is partly covered by a development plan. It is also the area where industrial and administrative activities of the whole town are concentrated. A sample size of 20 households was taken.

1-6-5 Data Analysis

Qualitative (descriptive) and quantitative (statistical) methods of data analysis were employed. The data was analysed using the statistical package for social sciences – SPSS for windows version 6.1. This study is a survey that aims at establishing development demands and challenges facing Ruiru Municipality- a satellite town of Nairobi. The survey research is descriptive.

Descriptive statistics (mean, median, mode, minimum, maximum) of each numerical variable was computed to show the most typical observation.

1-6-6 Presentation

Diagrammatic and graphic presentation of statistical data

The purpose of using diagrammatic presentations is to make the collected data more easily understood, to emphasis any fluctuations that may exists and finally to make the material look as attractive as possible. On the other hand, these may be used for forecasting the future magnitude. The diagrammatic and graphical presentation methods used in the study include: -

- Bar Charts
- Percentage bar charts
- Pie charts
- Line graphs

Frequency tables

Frequency tables answer the question "How many" and are often in matrix form. They have been used to summarize data and present it in table form. In table form the data can easily be appreciated compared and analyzed.

Frequency distribution

Frequency distributions are obtained from frequency tables. They were used for easier interpretation in various ways such as bar graphs.

Measures of central tendency

Measures of central tendency have been used to summarize statistics and present it in a form that can be easily used for comparison.

Measures of central tendency include: -

- The mean
- The mode
- The median

The mode is the measurement that appears most in a given experiment. It is obtained by examining the score that occurs most frequently.

The median is defined as the 50^{th} percentile or ½ in a group of scores. It is the score that divides the ranked scores into two equal parts.

The mean is defined by the sum of total divided by the number of scores.

1-6-7 Limitations of Study

- Lack of information from Ruiru Municipality was a major problem. This is because the issue of development control is viewed with a lot of suspicion, especially by the local authorities who think that they will be declared incompetent. The municipality is also ignorant of land issues in its area.
- Lack of updated maps at the right scale, which would bring out the issues more clearly.
- Lack of finances to cover a larger area; Ruiru Municipality is very expansive and it was not possible to visit the whole area.
- Hostility from some land buying companies who have grabbed public utility plots.
- Suspicion from the public, who are very wary of land questions because of land grabbing.

- The time allocated for the study was not enough to exhaust the various issues.

1 -7 Operational Definitions

1-7-1 Development

Development has been defined in the Physical Planning Act section 3 as, "The making of any material change in the use of or density of any building or land or the subdivision of any land....."

1-7-2 Development control:

The term development control is used to refer to the implementation of policies through the processing and planning applications. It is the process by which legal permission is granted to a person or groups of persons to carry out development, ensuring that such development has been undertaken according to authentic plan and legal action for those who implement developments contrary to the provisions of such a plan.

1-7-3 Development planning institutions

This refers to the authorities, which have the mandate through legislation to control developments, for example, the local authorities. In this study, this refers to Ruiru Municipal Council.

1-7-4 Land subdivision:

Refers to the process whereby vacant land is divided into plots and public right of way providing sites for future building that will occupy those plots when they have been transferred to other developers.

1-7-5 Subdivision plan:

A plan approved by the Minister indicating the permitted subdivision of land use of such land together with the conditions related to the proposed users.

1-7-6 Urban growth:

Outward expansion of the town.

1-7-9 Urban area

A concentration of at least 2000 people.

1-7-7 Metropolis

Major city centre and its environs.

1-7-8 Metropolitan area

A concentration of at least 500,000 people living within an area in which the travelling time from the outskirts to the center is no more than 40 minutes.

1-7-10 Satellite towns

Small towns surrounding a larger town. In this case, the larger town is Nairobi.

1-8 Organisation of the Thesis

The thesis is presented in eight chapters. Chapter one introduces the problem to be studied, research questions, objectives, assumption, justification and scope of study, research methodology and operational definitions.

Chapter two deals with literature review. This is on urbanization and urban growth, urban fringe, urban sprawl, demand and supply of land, urban development challenges facing local authorities, metropolitan region and influence, transportation and infrastructure. Also looks at types of land ownership in Kenya since they have an influence on the kinds of development that come up.

Chapter three covers the legal and institutional framework of development control and chapter four is background of the study area and the Ruiru Municipal council organisation structure.

Chapter five covers the development structure of the town which includes the physical development structure of the town, population characteristics, the existing land uses and growth pattern, services provision, development agents and the Nairobi influence

Chapter six covers development planning and control issues which include the existing development plan and the area it covers, what is on the ground vis a vis the development plan and comparison of the physical planning act, planning standards and the public health act and the by-laws against the situation on the ground.

Chapter seven looks at the main development control challenges and chapter eight makes policy recommendations for future considerations and conclusions.

CHAPTER 2
URBAN AND METROPOLITAN DEVELOPMENT ISSUES

2-1 Overview

This chapter provided the theoretical framework of the study as it is what has been written regarding the challenges facing satellite towns. It starts by talking about urbanization, sprawl as a result of uncontrolled developments, land supply and demand, urban development challenges which include infrastructure, transport, housing, community service and finance the metropolitan region and its influence on development planning. These are all related to urbanization and resultant problems.

2-2 Introduction

Most planners and policy makers have come to regard urbanization as an irresistible force of nature whose course cannot be altered. Together with urban growth, urbanization has been sighted to be the single most important phenomenon transforming human settlements in developing countries (Johan, 1988). However, urbanization implies a social change that departs from certain traditions and norms necessitated by the need to adjust to new situations. It entails a resource imbalance coupled with weak resource mobilizations and management of capacities of urban governments. Consequently, the urban economy is rendered unable to generate sufficient employment to absorb for instance, the ever-increasing surplus labor. For instance, in Africa it is characterized by 'overcrowded living conditions, growth of insanitary settlements, homelessness, malnutrition, outbreaks of epidemic diseases such as cholera, typhoid and the many deviant behaviors such as delinquency, alcoholism and prostitution (Syagga & Kiamba, 1985). Rapid urbanization has led to growth of slums and their related squatter settlements in most developing countries.

According to Stren, (1996) the rapid urbanization of recent years has posed huge challenges for public administration. Growth has mostly occurred in urban areas whose governmental arrangements were established for much smaller populations. Moreover, the growth in populations has often taken place

at the periphery, beyond the boundaries of local government units, with the result that large numbers of people have no access to urban services. Many urban areas are fragmented into numerous local jurisdictions making a concerted approach to urban issues difficult to achieve.

This rapid urbanization needs to be guided inorder to achieve sustainable towns. Otherwise, energy wastage, air and water pollution, breakdowns in public services, political instability and social conflicts, increased poverty, decrease in purchasing power and hindrance of market expansion, which are eminent effects of urbanization will result

Cloke (1989) noted that, if land use decisions were made merely by landowners alone, then not only would there be a potentially random intermixture of uses, but also there would be no protective mechanism against wholesale changes to existing cherished landscapes or to strategically necessary land uses. Bryant (1972) has further noted that the operation of the profit motive is the normal determinant of urban expansion. There are democratic societies which manage to arrange their urban growth more effectively than say Jersey City or Chicago. It is not essentially a fact of democratic life that the outskirts of a city should consist of a mishmash of ticky-tacky boxes, gas stations, motels and God knows what.

In Kenya, many policies of the government emphasize the importance of land-use planning in urban areas. Voices have been varied against such interventions by government. Some have noted how state intervention and control can lead to corruption and discrimination. Others have pointed to expense involved in drawing up and implementing land-use plans and zoning restriction, delays which are imposed on developers by the need to obtain approval before work can start and to the drab uniformity of regulated development.

According to the UNCHS expansion of the African city into its rural hinterland not only attenuates major infrastructure elements such as piped water,

electricity, sewerage and roads to a point where their efficiency is greatly reduced, but also adds considerably to the costs of such services as health, education and social assistance. As these peripheral settlements expand and the public service resources to service them continues to contract a new approach to the planning and management of African cities will have to emerge, if they are going to survive as viable social and productive entities in the twenty-first century (UNCHS, 1997)

2-3 Urban Fringe

According to Firey (1951), the rural urban fringe is a marginal area in the sense that it represents a margin of transference between alternative types of land use if land is indifferently suited to more than one use.

Urban fringe embraces the city's suburbs including the intermittent areas upto the point from which daily commuting to the cities, major employment centres, become unfeasible. Land use in the peri-urban fringe is a complex issue and is under a lot of influence from various factors. In the peri-urban fringe residential land uses, compete heavily with the agricultural uses, although the extension of town boundaries is often seen as a way of killing urban agriculture. Quality of location may determine location of commercial activities in the area. Physical features like relief, climate, subsoils and water also influences the location of residential space in this fringe. In addition, social factors including reputation of an area and governmental influence play a major role in influencing land use (Ilia, 1993). Accessibility of the area in terms of road and railway networks also determines the location of some land uses in the peri-urban fringe.

As the built-up areas of settlements continue to expand, cities and towns continue to consume substantial portions of fringe lands for accommodating their increasing populations and as a result many cities add hundreds and sometimes thousands of hectares to their built-up areas every year. The gross residential built up area of cities will expand by 116,770 km^2 by the year 2000.

More than 80% of the expansion will take place in the developing countries (UNCHS, 1984)

Urban fringe is caused by various factors. One of them is to escape from the decaying Central Business District (CBD). This has been the case in Nairobi where the movement has been to upper hill and Westlands. UNCHS has noted that where once the central business district, with its clean, wide streets and high quality shops and offices was the focus of urban life (in both the large capital cities and in secondary cities as well), the centre of gravity has shifted. Not only are central business districts more poorly maintained and more populated with small scale hawkers and vendors than in the past, but more and more of the population is moving to the periphery of the larger cities, where land is cheaper and likely accessible, where shelter can be constructed economically using locally available materials, and where harassment from the police and restrictions of the formal planning system are rarely felt (UNCHS, 1992)

2-4 Urban Sprawl

Urban sprawl is irresponsible, poorly planned development that destroys green space, increases traffic and makes it difficult to provide services. Urban sprawl is not a new phenomenon. It started happening as far back as the beginning of 19th century when conditions in the city were experiencing decays. Many employers decided to move their businesses from the big cities to the suburban areas where they could enjoy the country life (Pendall, 1999). In Nairobi urban sprawl started as early as during the colonial days.

Kingoriah notes that land speculation in the European residential areas of upper Nairobi created problems associated with urban sprawl. Residential development spread over a wide area, which was annexed to municipality by the Fetham Commission. Leys wrote that:

"*The wider distribution of the European population of the town makes the cost of supplying its European inhabitants with roads, water, public lighting and*

sanitary services extremely high. The density of population in the European area is less than half that of the whole country of Cheshire England so that the Nairobi municipality has a task twice as hard as the regions Boroughs in Cheshire would have if they had to supply all the houses in the rural parts of the country with roads, drains, water pipes, electric cables and sanitary conservancy" (Kingoriah, 1980)

The pattern of outward expansion has frequently been described as urban sprawl. Sprawl, lying in advance of the principal lines of growth is most noticeable when urban areas in general are expanding rapidly and around the fastest growing urban areas. Expansion involving the initial improvement of vacant land is usually confined to residential and industrial land uses. The first wave of development in any peripheral zone is likely to be patchy, reflecting such factors as differences in access or amenity conditions and variations in the size of development. A major feature of outward expansion under the price mechanisms therefore, is tendency to discontinuity and thus has been termed sprawl. Low-density continuous development may be recognized as a further major form of urban sprawl (Harvey & Clark 1965). Clawson (1962) perhaps more precisely refers to it as leap flog sprawl to indicate that areas of undeveloped land separate new development from other and from the continuous build up area.

The physical process of urban growth involves the lateral expansion, infilling and internal reorganization of the existing built-up area. The cost of land at various locations relative to the costs of buildings and additional storeys set an economic limit to the vertical expansion of an urban area and pressure of demand beyond a certain point must lead to outward expansion. The existing urban area will be expanded via concentric, axial and dormitory growth. Urban sprawl is thus a form of urban growth (Muhia, 1992).

2-4-1 Causes of urban sprawl

Dickson (1951), notes that there are dormitory settlements, which depend on the large urban area for job opportunities and many retail and service facilities have an excessively high proportion of land in residential use. In addition to sporadic development, expansion follows lines of least resistance, essentially major radial roads – out of the urban areas. Ribbon development occurs when land on either side of such a main road for considerable distances, into the countryside is converted to urban use. This has been the case in Ruiru municipality where ribbon developments have occurred along the Nairobi-Thika highway.

According to Gottman, sprawl occurs because it is economical in terms of the alternatives available to those firms and households deciding on rural-urban locations. Close in is by passed by new development because of the smaller size of available land parcels and the greater cost of acquiring with existing often-unsuitable structures. Sprawl is largely determined by the scattering of manufacturing plants away from areas already too crowded by such plants and into district with good transport facilities and within easy reach of one or more large urban areas (Gottman, 1961). Ruiru Municipality has experienced this kind of sprawl where industrialists have set up industries in Ruiru away from Nairobi. The industrialists enjoy both urban and rural life because they live in Nairobi but commute to Ruiru daily. They also enjoy cheap labour relative to Nairobi.

Where all landowners seek to maximize the price or rent they can obtain for their land, it would be expected that sites adjacent to the existing build-up area will be developed first because they enjoy access advantages to existing transport facilities and urban services. The more rapid the rate of growth of an urban area, and the greater the number of developers operating in the suburban housing market, the greater will be the number of fragmented randomly located projects. Thus lack of co-ordination of the decision to speculate produces sprawl rather than the speculation itself (Firey, 1951)

Suburban topography may not be suitable for continuous urban development. Development is concentrated on those lands most readily and economically available. Site characteristics influence development costs. Therefore sites with developmental handicaps, such as liability to floods or excessive slope, are avoided and those with positive qualities such as red soils are preferred. Many of the physical characteristics making land available for agriculture also make it attractive for urban use.

Harrees (1967), states that each new development in the outward expansion of an area need to be served by transport routes and utility lines. These latter generally follow a corridor out from the urban area and their cost of provision depends in part linearly on the distance from the existing development. It also depends on the amount of development in that area since this determines the use of indivisible factor units and hence scales economy benefits.

A recent study prepared for the Brookings Institution found that changes in Metropolitan patterns are induced by highways (Bearnet, 2000). The Maryland Public Research Group found a "magnet effect" as well as a ripple effect whereby new highway construction not only attracted new development but that this effect became more pronounced as distance from an urban area increased (Brad, 2000). In other words, the further we extend roads and other infrastructure from existing communities, the further this tends to increase sprawl.

2-4-2 Effects of urban sprawl

Firstly, sprawled or discontinuous suburban development even at densities comparable to existing settled areas is more costly and less efficient than a more compact form of urban expansion. Many costs depend on maximum distance or maximum areas and if this could be reduced by more continuous development, cost per unit and per capita would be lower. Small fragmented developments may hinder progress towards optimum units in the provision of

local public utility services. Ribbon development can lead to congestion of radial routes and consequently to higher transport costs (Mayer 1962).

Where new development at the periphery is to a lower density than other settled areas, there is more extravagance use of land. This coupled with the by passing of large areas of usable land in the outward expansion means the urban area may grow unnecessarily large and then transport utility and public services may all become less efficient and less economic. Intervening areas of unused land appear to be wasted and there is lack of public open space. The speculator appears guilty in social terms cost of forcing up transport costs because urban residents have to pass his vacant land and have to bring utility pipes and wires further out (Muhia, 1992).

The greater the percentage changes in population growth of the central city and urbanized area, the greater the percentage appreciation in land values. This also contributes to high total housing costs. The chief impact is to put great pressure on republic land use plans. As cities grow outward, it is difficult to just know what sort of development patterns people would prefer if they had a choice (Schimidt, 1992). Urban sprawl is a burden on local government because it forces limited resources to be allocated to the creation of new infrastructure rather than to maintaining existing infrastructure.

2-5 Land Supply and Demand

The land problem arises from two fundamental characteristics. In the first place, it has long been acknowledged that land is fixed in supply differing from the other factors of production, labor and capital. It is also generally accepted that land is specific in location and sites are immobile. As a result their character and value often owes as much to the use which is made of neighboring sites as to their inherent qualities. (Kingoriah, 1987)

The simple fact is that land is not a product. The laws of supply and demand can't operate satisfactorily in the land mostly because the supply side has

element of monopoly built in by nature. In a normal market, an unusual increase in prices sooner or later calls for increased supplies of the product concerned and a readjustment of prices to normal acceptable levels. This cannot happen with land. The supply is fixed by nature. Both transportation costs and the quality of land have been found to influence the supply of land available for various purposes. (Syagga, 1989)

Cities the world over experience acute problems in providing an adequate supply of land at the right place and at the right time. The demand for urban land is growing, yet the supply is both genuinely and artificially limited. As the pressure of urban development increases, rural and agricultural land on the edges of the city is developed. The emerging trend has been that the growth of cities and towns has on most occasions overshot the jurisdictional boundaries of the same cities and towns, firmly lodging itself in the peri-urban fringe. (UNCHS, 2000)

This unprecedented urban growth is more pronounced in the peri-urban interface of the urban centres. The situation is further aggravated by the complexities of accessing land within the city boundaries where land values are influenced by the dictates of market forces and are often exorbitant making it difficult for most residents to have access to the same. This situation radically increases demand for land on the urban fringe and irrationally distorts patterns of urban growth and development. But there is little evidence that there exists the institutions or the techniques to deal with the larger land-use planning needs of the peri-urban area. Hence, as the world has becomes more and more urbanized, the effective control of urban land resources has become critical. (Devas, 1992)

2-6 Urban Development Challenges

The massive transformations taking place in the global economy which results from trade liberalization, privatization and enhanced telecommunications are posing formidable challenges for local authorities. They are being faced with the results of economic shifts that dramatically affect the economic health of their municipalities and the livelihood of their residents, but often without legislative or fiscal tools at their disposal to deal effectively with the issues. It is a priority for local authorities to recognize the trends and challenges they bring and to grasp the opportunities presented by the emergence of new roles for cities and their governments. This requires local authorities to work closely with their national governments and the private sector in a concerted effort to cope with the necessary transformations (Richard, 1996)

As Kiamba has noted, the growth of urban centers both in number and populations, poses a great challenge to planners. Experience in the last three decades shows an uneven process of urban growth and a rapid growth of urban population that has led to some problems in these areas. These problems include, among others, inadequate provision and access to low income housing, inadequate health and educational facilities, transportation problems and generally a lack of adequate physical and social infrastructure (Kiamba 1992)

Coping with growth, change, and uncertainty remains a central task of metropolitan management. It must strive progressively to improve its ability to understand and resolve the many problems posed by rapid urbanization, massive population increase, and radical social and economic transformations. An understanding of the principal tasks arising from these problems is a first step in the process of improvement. (UNCHS, 1993)

2-6-1 Housing

According to a study by the U.N in 1971, a thousand million people are living in substandard housing. Many countries have found themselves unable to provide even one-fifth of the required number of houses in the past decade. The

task of housing the current generation and even more the generations to follow, presents a monumental challenge. It is not always realized that proper attention to the housing sector is not only a key to development, but also a breeder of development; a vital element of the local modernization process (U.N. 1971). This situation has not changed, if anything it has deteriorated.

Danida noted that the problems related to existing slums and squatter areas have often been addressed by clearance, but bulldozing derelict parts of the cities have proven increasingly costly and not very effective; the population moves to other existing slums and squatter areas as the only affordable alternative. During the last two decades many governments have committed themselves to so-called public housing programs. But the provision of housing is expensive and has only met a fraction of the nation's total housing needs (Danida, 1989)

Housing supply has not been able to match the demand and this has been instrumental in the proliferation of sub-standard urban settlements, which lack the essential (basic) services such as water, sanitation and community facilities (Syagga, 1989). An urban survey done in 1983 indicated that of the estimated total number of housing in urban areas, 41.5% were classified as semi-permanent or temporary (Maina, 1991). Urban housing has therefore received much emphasis as the government's objective stipulated in the Sessional Paper No. 5. Housing policy of 1966/67 was to provide essential housing and healthy environment to urban dwellers at the lowest possible cost (Syagga, 1989).

In Nairobi, high rate of rural-urban migration, coupled with the natural rate of population increase and a high inflation rate, have complicated the housing demand and supply situation to make the rent of low-cost housing so high that the low income families cannot afford the so called 'decent houses' (David, 1989)

In 1965, the U.N noted that housing needs and aspirations continue to increase. Economic development does not necessarily lead to increased housing supply. The movement of urbanization is particularly rapid. The African towns are growing at least twice as fast as the total population whilst the capital and their suburbs are expanding even more rapidly (UN 1965).

Housing consists of the structure, land and the amenities available in the adjoining land or on the subject land where the housing is located. (Kingoriah, 1987). The urban housing stock consists of mainly two parts, namely, licensed dwelling units located in planned sections and unlicensed dwelling units in the fringe of cities.

Housing market holds a prominent position in urban economic policy making by both central and local governments. Housing conserves a large proportion of central and local government budgets as they attempt to improve the living standards of urban dwellers. It forms a part of general social welfare policy. In addition, housing is one of the greatest urban land users. Over ¾ of all build up land in Nairobi is used for residential purposes and residential amenities. In most cities, over 35% of all urban land area are residential land. (Kingoriah, 1987)

Housing with its characteristics as a shelter and means of contemporary life in a healthy environment, is a common field of interest for all societies. However, the characteristics of the problem differ according to the level of development and socio-economic structure of the countries. Countries of the third world with lowest income are in search of developing solutions to accommodate millions of half starving families without sufficient income; even for food, with their limited resources (Suard, 1988).

The high population densities in the peri-urban fringe have been caused by the increased demand for land in the inner urban areas causing the escalation of the prices/values of the land in the city. For instance, the prices of residential land

in the inner city areas are very high. Plots measuring about 0.0625 acres are currently fetching about Kshs 9,000,000 in Nairobi in the open market. The scarcity of land in inner cities of urban areas, problems of congestion, high densities, high land values are among the factors that are driving people and families away from the urban areas to settle in the peri-urban fringe.

The first comprehensive housing policy for Kenya was enacted in 1966/67 as sessional paper no. 5. At that time, Kenya's population was just over a million people growing at a rate of 3% for the whole country and 5-6% in the urban areas. The annual housing requirements then were 7,600 and 38,000 new units in both urban and rural areas respectively. The policy directed the government to provide the maximum number of people with adequate shelter and a healthy environment at the lowest possible cost (Kenya, 2001)

The policy further encouraged mobilization of resources for housing development through aided self-help and co-operative effects. Enhanced coordination was also emphasized to increase efficiency in programmes and projects preparation. Other areas addressed by the 1966/67 paper were construction techniques among others. In the cases of civil servants housing, priority was given to home ownership schemes in urban areas as well as institutional and poor housing schemes in remote sections (Kenya, 2001)

Although a considerable volume of housing construction has been realized since the 1966/67 policy, the demand for housing still far outstrips supply. High rate of urbanization, increasing poverty and escalation of housing costs and prices have made the provision of housing, infrastructure and community facilities one of the most important challenges in socio-economic development of the country. The situation has been aggravated by socio-economic reforms especially the structural adjustment programmes (SAPS). (Syagga,2000)

Syagga further notes that the estimated current urban housing needs are 112,000 units per year. This level of housing is difficult to achieve given the

scarcity of resources and implementing capacity in both public and private sectors. It is estimated that the current production of new housing in urban areas is only 20,000-30,000 units annually, giving a shortfall of over 80,000 units per annum. This shortage in housing is met through proliferation of squatter and informal settlements and overcrowding.

2-6-2 Infrastructure

Stein (1988) notes that public infrastructure has major impacts on a community's quality of life, patterns of growth and products for economic development. He further notes that community facilities especially water and sewer systems can be powerful tools in influencing the rate, direction and type of land developments. When infrastructure services are constructed in advance of actual need and when utility extensions & connections are granted in accordance with an adopted plan, a community's development patterns can be effectively controlled. Thus a strong relationship exists between infrastructure and land use planning.

Ramachandran (1992) notes that provision of basic infrastructure that is water supply, sanitation, drainage and solid waste disposal is essential for safeguarding health, protecting the environment and promoting the efficient operation of human settlements. These services also create opportunities for residents of low-income neighborhoods to generate income and hence providing incentives to low-income households to improve their shelter and settlements.

Provision of water, sanitation, drainage and the safe disposal of waters are obviously central to good housing and living conditions and to health. They and other forms of infrastructure are also central to prosperous economies; for instance, roads, ports and railways, electric power and telecommunications. If considerations given only to what might be termed 'economic infrastructure' that does not include education and health care, the services associated with it usually account for between 7 and 11% of a country's GDP. Investment in

infrastructure was found to represent around 20 % of total investment in a sample of low – and middle-income countries and to account for 40 to 60% of public investment (UNCHS, 1997)

A World Bank report on infrastructure has noted that in theory, demand for infrastructure accompanies economic growth so the two can support each other. What has proved difficult for most governments is developing the institutional means to ensure that the two go together. This includes the means to raise the funds for infrastructure investment, to ensure sufficient funding for operations and maintenance and to develop the capacity within municipalities, cities and regions to make the best choices over which forms of infrastructure receive priority in each location and how best to charge those who benefit from such investment. It is also difficult to predict how demand will change for many forms of infrastructure, although large infrastructure investments require many years for planning and construction (World Bank 2000)

As the urban population increases, investment requirements in infrastructure utilities also increase "at least proportionally if not faster due to rising expectations by urban inhabitants for improved services" (Kenya 1999). Unfortunately, recent trends show a declining level of investment resource commitment per urban resident in the utility sector. These budget cuts have led to the postponement of urban projects awaiting funding and increased the backlog of unmet demand for water and sewerage among other services, a rise in population and the growth of urban centers will create.

In addition, most of the countries in the South that have undergone economic problems during the last 10-15 years also underwent structural adjustment that was often accompanied by a marked deterioration in infrastructure and a cut in provision for its maintenance. Capital spending on investment is often among the first items to be cut with operations and maintenance not far behind (JICA, 1988)

The idea of settlements preceding infrastructural facilities is not only in Ruiru town. As noted by Kingoriah, infrastructural developments in Nairobi township during the 1920's and 1930's was dictated by necessity. Residential developments in the suburbs occurred in a haphazard manner and formed urban sprawl. The functional arrangement of the township had taken place through legal and administrative actions of the central and local governments. When infrastructural amenities were provided they were meant to serve the already established functional zones. No record is available in support of the alternative idea that infrastructure may have dictated the spatial arrangement of the basic functional zones of the town. All evidence shows that residential areas and even townships were established before there were sufficient infrastructural amenities serving them (Kingoriah, 1980)

As the urban areas grow in population and in land area at very high rates, governments face increasing pressures to provide efficient services and effective infrastructure and to co-ordinate and manage a wide range of public and private sector activities at the local level. As the urban population increases, investment requirements in infrastructure utilities increases proportionately, if not faster, due to rising expectations by urban inhabitants for improved service (Kenya, 1983)

Unfortunately, Kenya has been faced by an economic decline resulting in major cuts in development expenditure. As Mairura has noted, very little budget allocation is channeled towards infrastructure development and management. For example, capital investment in urban infrastructure as a share of gross capital formation fell from 14.3% in 1970s to 12.1% in the early 1980s (Mairura 1992). Infrastructure development which is usually a very expensive undertaking has suffered as a result. The effect of this is felt in all urban areas whether big or small. In the big towns, the effects are felt more due to the big population that has overloaded the existing infrastructure services. The population has increased without resultant increase or expansion of these services.

The situation is pathetic in Nairobi which is the capital city of Kenya. The following observation from 'the Nairobi We Want Convention', portrays the state of some of the infrastructure services.

" Perhaps no sector epitomizes better the collapse of the City of Nairobi than the state of the transportation infrastructure. Potholes on all major roads, moonscape like craters in the industrial area, broken pavements, gaping manholes, monumental traffic jams at peak hours, increasing air pollution, broken down sewers and inadequate stormwater drainage, non-functioning traffic signals and broken down street lighting" (Karuga, 1993)

The responsibility to provide these services lies with the local authorities. These local authorities are bundled with various problems. Rapid and uncoordinated creation of new local authorities has greatly outstripped their capacity to administer their areas effectively and efficiently. While the authorities have grown in numbers, they have definitely not done so interms of increased power, competence and resource bases. Instead they have become weaker urban institutions, unable to cope with ever increasing and demanding urban management challenges. Urban residents are increasingly getting disillusioned by the poor performance of local authorities in terms of provision and management of urban services. (UNCHS, 1994)

Ruiru town has experienced its own share of urbanization as a result of rural urban migration, natural increase and municipal boundary extension. The situation is compounded by its nearness to Nairobi. Due to population pressure in Nairobi, there has been a movement of people towards Ruiru, which has acted as a "dormitory town." Ruiru Municipality is expected to develop and manage infrastructure for its residents but the municipality has not been able to fulfill this obligation.

(a) Water Supply

An adequate and reliable supply of clean water in both urban and rural areas is an essential requirement in all sectors of the economy. Despite considerable progress in improving or extending water supplies in the South, during the international Drinking Water Supply and Sanitation Decade that began in 1980, by the end of the decade, 245 million urban dwellers and over one billion rural dwellers still had no alternative but to use contaminated water or water whose quality is not assured. Although there has been a considerable increase in the number of people with access to safe drinking water during the early 1990s, the latest estimates (for 1994) suggest the number without suitable water services had increased to about 280 million for urban dwellers while the number of unserved rural dwellers had been reduced to 835 million (UNCHS, 1997)

Access to piped water supplies does not necessarily mean adequate or safe supplies. For instance, in 1990, close to half the urban population in the South and more than 90% of its rural population still lacked a water supply piped into their home. The quantity of water available to a household and the price that has to be paid can be as important to a family's health as its quality. Thus, while those served by public standpipes, boreholes with handpumps and protected dug wells may have access to uncontaminated water, the difficulties in getting access to it and the distance that the water has to be carried often limit water use so the full health benefits are not enjoyed (Mbogua, 1997)

Current estimates of Kenyan water supply indicate that 75% of the country's urban population has access to safe drinking water while only 50% of the rural population has access to portable water from various schemes. In both urban and rural areas water supply is generally inadequate for domestic, industrial and commercial uses (Kenya, 1999)

This means that much less was achieved during the 1980s than had been hoped. One of the most important achievements of Habitat 1, the first UN Conference on Human Settlements in 1976, had been to highlight the importance of

improving water supply and sanitation. The enthusiasm among government representatives and international agencies led finally to the United Nations General Assembly proclaiming the period 1981-90 the International Drinking Water Supply and Sanitation Decade. The primary goal was to ensure full access to water supply and sanitation to all inhabitants of the South by 1990. But in 1990, at least 30% lacked access to safe water and at least 40% were without adequate sanitation. In addition, unless governments and international agencies substantially change their approach and their commitment, the numbers lacking access to safe water and adequate sanitation will grow rapidly during the 1990s (UNCHS, 1994)

For urban areas in the South, an assessment in 1991 suggested that around half the population had water piped into their homes while around a quarter were supplied through less convenient means for example public standpipes, yard taps, protected dug wells and boreholes/handpumps. The remaining 350 million or so urban dwellers did not have a safe, protected water supply. They usually relied on one of two sources: water from streams or other surface sources that in urban areas are often little more than open sewers; or water purchased from vendors whose quality is not guaranteed. Often at prices per litre which are between 4 and 100 times the amount paid by richer households for publicly provided piped water. For instance, pavement dwellers in central Bombay pay twenty times more for water per litre than the municipal rate charged to other residents of the city. Water-vendors probably serve 20 or more percent of the South's urban population (UNCHS, 1997))

(b) Sanitation

According to Mairura, there are three obvious criteria by which to judge provision for sanitation. The first is convenience and hygiene for the user; people need a toilet that, if not in their home, is at least very close and available. The second is the extent to which human contact with the excreta can be avoided. The third is the extent to which the facility is easily maintained.

Different kinds of provision can meet these criteria depending on the size, nature and density of the settlement.

The problems with sanitation are often most apparent in urban centres where the size and density of settlements make defecation outside difficult or impossible, for women it is dangerous. There are also the obvious conflicts whereby as those living or working in and around areas where many defecate in the open object to them doing so. High concentrations of people also make the cheaper and easier sanitation solutions such as simple latrines less appropriate. In high-density residential areas, it is generally only sewers or toilets connected to septic tanks that can ensure adequate provision for sanitation. Most cities in Africa and many in Asia have no sewers at all. This is not only the smaller cities; many major cities with a million or more inhabitants have no sewers. Most of their inhabitants also lack connection to septic tanks. Most human excrement and waste end up in rivers, streams, canals, gullies and ditches, untreated. Where there are sewers, rarely do they serve more than a small proportion of the population; typically, they are located in the richer residential, government and commercial areas (UNCHS, 1996)

(c) Solid Waste Collection

Most city governments are facing mounting problems with the collection and disposal of solid wastes. In high-income countries, the problems usually center on the difficulties (and high costs) of disposing of the large quantities of wastes generated by households and businesses. In lower-income countries, the problems are more to do with collection. In most cities in the South, between a third and half of the solid wastes generated within urban centres remains uncollected. Such wastes generally accumulate on open spaces, wasteland and streets and bring with them serious health and environmental problems. Much of this waste is organic matter and when it rains, it ends up being swept into water bodies. In many of the urban centres in the lowest-income countries, perhaps only 10 – 20% of solid waste is collected. For instance, in a survey of

34 municipalities in India, more than three-fifths of the municipalities collected less than 40% of the wastes generated daily (UNCHS, 1997)

UNCHS further notes that among many municipalities in the South, solid-waste collection and management often consume as much as 20-40% of municipal revenues and it often suffers more than other municipal services, when budget allocations and cuts are made. The agencies responsible for the collection and disposal of household wastes are often understaffed and under-funded. Since virtually all have to use collection trucks that are imported, there are often serious problems with collection trucks out of use, because of lack of spare parts. Too little attention to servicing and maintenance adds to this problem.

(d) Community Services

As African cities continued to increase in size during the 1980s and 1990s, their declining economic situation led to a precipitous decline in the supply of basic infrastructure and urban services. In many African cities, most refuse is uncollected and piles of decaying waste are allowed to rot in streets and vacant lots.

Schools are becoming so overcrowded that many students have only minimal contact with their teachers. A declining proportion of urban roads are tarmacked and drained; and many that are not, turn into virtual quagmires during the rainy season. Basic drugs (once given out freely) have disappeared from public clinics while professional medical care is extremely difficult to obtain, except for the rich. Public transport systems are seriously overburdened, more and more people are obliged to live in unserviced plots in 'informal' housing, where clean drinking water must be purchased from water sellers at a prohibitive cost and where telephones and electrical connections are scarcely available (UNCHS, 1997).

The population density in the urban centers and cities present dangers to human health interms of epidemics, waterborne diseases and the concentration of wastes. Sewerage disposal and air pollution are alarming health hazards. Most slums and squatter settlements have such high population's densities that they have become a health hazard. The clinics and hospitals available in most cities and urban centres cannot satisfactorily serve the urban population, as they are few and strained (Chege, 1992).

(e) Transportation

A transportation network that caters for all individuals of different communities in the urban centre, whether a schoolchild, a civil servant or a businessman who rely on public transport, is necessary. Transport must always be constantly available without prolonged delays (Mwangi, 1988, Nyambok, 1988). However, this has not been the case; most people in the cities depend on a public mode of transport, which cannot keep pace up the growing population. This means that commuters are inconvenienced or mistreated (especially school children and women). Nairobi suffers from this problem as evidenced by the congestion in buses and 'matatus'.

2-6-3 Uncontrolled development

Most urban areas in Kenya experience uncontrolled developments. Linear developments, which follow the major transportation networks, are allowed to take place inspite of their planning implications. This leads to an urban sprawl, which makes it more expensive and difficult to provide the necessary social and physical infrastructure.

There has also been a tendency to mix incompatible land uses. For instance, the location of industrial and residential land uses in the same area. (Athi River urban centre and the Eastleigh Air Base, in Nairobi City, are good examples.) The Kiboswa-Vihiga-Kakamega zone, can also be seen as a good example of the urban sprawl. Although many of the consequences have been negative, it is

noted that urbanization, especially in less developed countries, is a condition for rapid economic growth and national development (Ominde, 1974).

Danida notes that the idea of controlling and redirecting urban growth has inspired planners to develop numerous spatial strategies. But, attempts in developing countries to manage landuse on a city scale have not satisfied the needs of the rapidly increasing urban population. The reasons are: institutional deficiencies in establishing proper planning, lack of coordination, infrastructure planning and implementation of land-use and lack of trained staff for supervision and monitoring (Danida, 1989).

2-6-4 Finance

With rapid urban development, the demand on local authorities expenditure has been increasing beyond their financial capacities. Populations in Kenya have been increasing at an average rate of 6.5% per annum (Kenya, 1997) This growth has resulted in an increased demand for urban services, thus derived demand on local authority expenditure. However, there has been a mismatch between local tax revenues and local expenditure. The mismatch occurs because the desired spending on local public goods has been rising faster than the tax base. In effect, local authorities have not been able to provide required services. Development of infrastructure utilities has been at odd terms with the growing urban needs mainly due to the declining commitment of financial resources to the sector. This has led to the deterioration of services in urban areas in Kenya (Agevi 1992)

Part of financial constraints facing many municipalities springs from the mismanagement in these local authorities. Within the last 10 years or so, all the 137 gazzeted local authorities including Nairobi have been mismanaged and their funds and resources misappropriated. Their performance has declined to the point that they are unable to maintain the basic infrastructure (Gachuru, 1995). Nevertheless, there is inadequacy of resources and lack of elastic revenue base. It has been estimated that Kenya government spends only 5% of

the total GNP on local authorities. The problem is compounded by the fact that the central government owes money to several municipalities, especially for water and land rates. The major impediment in the provision of infrastructure services is the inability to fully collect revenue which is as a result of poor management of local authorities; they have no specific machinery to enforce rates collection (Olima, 1995)

To ease the problem local authorities usually put advertisements in the local newspapers, appealing to ratepayers to remit their payments (Daily Nation March 1995). This is an indication that local authorities are unable to collect all their due rates. The weak or ineffective administration has resulted in a high rate of default. For example, in the period between 1976 and 1979, the Kenya Railways Corporation owed the Nairobi City Council about 1.8b Kshs in rates (Ogero, 1981). In 1990, a total of about Kshs 300m in rates was owed to Nairobi City Council, representing about 40% of rates due (Daily Nation February 1990). In 1995 the Municipal Council of Mombasa was owed a total of Kshs 20 m in rates (Daily Nation March 14, 1995).

Smaller local authorities with weaker administrative structures have proportionate large sums of arrears in rates collection. The situation is worse in Ruiru, which has got no new valuation roll; the current valuation role is outdated. The municipality commissioned the Ministry of Lands valuation department to prepare a valuation role for them, but this has not been accomplished because the council cannot raise the funds to buy the necessary plans.

Local authorities need all the revenue they can generate from various sources, however, sources are few. The rate tax is potentially the major source of income for financing local government expenditure. The tax has been developed over the years to supplement and bridge the gap between other revenue sources and the budgeted expenditures. However, its development as a means of providing, improving, maintaining and expanding services within the

urban centres, has had minimal impact. The land rate is a major source of revenue in hands of local authorities, which has some degree of flexibility and independence from central government authority. It's the only source that can adequately be manipulated within the legal framework to increase the revenue earning capacity of local authorities (Gachuru and Olima, 1998)

2-7 Metropolitan Influence

2-7-1 Metropolitan Dimension

To the ancient Greeks, the term "metropolis" meant the Mother City and principal seat of government of a state or colony. Urban geographers and planners now tend to use the term "metropolitan" to refer to a large identifiable area of continuos urbanization consisting of several administrative jurisdictions. Demographers today often classify cities with populations of more than 1 million people as metropolitan, and in common usage the term is widely employed to symbolize social, economic, and political status. All of these characteristics apply to the city of Nairobi (Sirav, 1986) Large cities may be defined by their physical extension by the absolute numbers of their relative size in comparison with other urban areas in the same geographic region or by a combination of these criteria.

Metropolis 1890-1940 implies that the metropolis in its traditional form, the great city, immense and immensely rich has reached its peak and indeed has possibly passed it, already beyond our ability to cope with it, already bearing the seeds of its own decay. Today we are more aware of the problems of the metropolis than its achievements and we may well have to invent new administrative structures for it or devise new forms of the built environment to allow it to flourish.(Jones, 1990)

Very high density and overcrowding are a regular pattern of metropolitan life. The metropolis as a distinctive form of human settlement consists of a large number of people living in and around one or more centres of high density. Within the metropolis these centres are much more thickly settled and

intensively used for urban activities than any other sub-areas. Moving out from the centre one finds a graduated decline in the density of settlement and the intensity of use until one leaves the metropolis altogether either for open countryside or the outskirts of another urban centre or perhaps another metropolis. Metropolis area is most commonly understood to mean a city with it suburbs as distinct from city or city proper. (Miles 1970)

Interest in metropolitan decentralization is widespread and longstanding. The rapid and sustained growth of large cities has created previously unimaginable problems of planning, finance and management. Data provided by national census and international agencies concerning the growth of large cities have for years raised understandable fears of a collapse, not just of the physical fabric, but of the social and political structure of societies in rapidly urbanizing countries.

UNCHS, (1986) has observed that this has led to urban management being beset by unprecedented problems far beyond the historical experiences and capability of established institutions. Socially, because of rapid migration on a very large scale from distant as well as surrounding areas, the linguistic and cultural diversity of cities increased, the age and sex structure of their populations skewed progressively in favor of males and young persons, family life and the stability it promotes deteriorated and irreversible changes occurred in the organization of urban life in general. Physically and functionally, old city boundaries were quickly eroded by the rising flood of people, which overwhelmed existing health, sanitary environmental, and educational facilities and services. Moreover as the cities grew, congestion and the lack of access to industrial and commercial locations became serious problems. Furthermore, despite the employment provided by organized trade and industry, and the few new jobs created by small-scale and unorganized enterprise, unemployment and poverty escalated because the labor force was steadily expanding. (UNCHS, 1986). Although this statement refers to cities in South East Asia, it might as well have been written to refer to Nairobi.

The conventional machinery of public administration was thus confronted with social, physical, functional, and economic crisis demanding urgent large-scale and unconventional responses. The physical and functional problems were plainly visible, particularly the conflicting and chaotic use of land and the fast-spreading slums, to which an immediate response needed to be made. City officials therefore felt an urgent need to build huge numbers of dwellings and to provide related services. The urban infrastructure that had been assembled slowly over several years had to be doubled and in some cases trebled within a decade. The daily upkeep of basic services; whether of water supply, drainage, transportation, street cleaning, or refuse removal, became almost an impossible task. The scale altered the very nature of the problem.

2-7-2 Primate cities

According to Jefferson, (1939) the Primate City not only represents an intense concentration of people but also a concentration of resources and of national influence. It is the embodiment and expression of a society and culture. Being at the top of a hierarchy or the first ranking city in a particular urban system does not necessary mean greatness. But there are arrays in which there is an enormous quantitative leap between the first city in the system and the next, an immense step in the hierarchy. This indicates a city quite disproportionately greater than any other in the system and this is sometimes called a primate city.

The disproportionate size of the Primate City is an expression of self-sustaining growth based on national pre-eminence. As an example London is seven times larger than the second city in Britain and encompasses all that is important in the economic and cultural life of the country: it is a primate city. Paris is another example from the western world but primacy is found more particularly in developing countries in which the capital city has a disproportionate share of the states economic and political activities e.g. Cairo with 5.1 Million people three times the size of Alexandria its nearest rival. (Jones, 1990)

of the big city by gradual transfer of its industries and population into such satellite cities each being a self contained unit of definitely limited size while the surrounding open country could easily accommodate whatever traffic arteries might be needed. . (Spreiregen, 1976) This is the case of satellite towns of Nairobi especially Ruiru, Athi-River and Kikuyu

2-7-4 Transportation and growth of satellite towns

Two main factors which have been held to influence private-sector locational preferences are transport and production costs. In the 1920s Weber (1929) accorded primacy to transport costs though later studies by Moses (1958) and others developed a more comprehensive approach which recognized the importance of production costs. Both these factors have been influential in the development of Bombay and Cairo. In Bombay new industrial development has been strongly influenced by market forces and has been concentrated near railway nodes which form the backbone of the city's transport system and where water and electricity are also available. In Cairo development has tended to follow the new highways out of the city and has not taken place as planned in the new cities, where both transport and production costs were too high to attract private investment.

Flow and sprawl of the urban entity are tied to transportation and traffic. Transportation is fundamental to the matter of sprawl and when speaking of location the term accessibility is usually of prime concern. This indicates the paramount position of transportation and what it does to land use and modes of life in urban areas. (Gottman, 1967)

Modern transportation and communication has enabled lower-density development to spread so that the former distinction between "urban" and "rural" is much less significant than previously. Rarely, if ever do municipal boundaries coincide with the limits of the built-up urbanized areas; municipalities are commonly "under –bounded" the limits of the urbanized area extend well beyond the boundaries of the central municipality. Modern

transportation and communication have greatly reduced the former distinction between territory which is "urban" and that which is "nonurban" or "rural".

The city's extent, form and internal pattern are the resultant of spatial differences in relative accessibility as reflected in land costs and transportation costs. In theory then by changing the spatial pattern of transportation we can, in the course of time as existing facilities are amortized and replaced control to a large degree the spatial pattern and thus also the density of urban areas by manipulating the spatial pattern of transportation (Mayer 1967)

With the development of effective highway transportation the outwardly expanding tentacles of urbanization radiating along the major transportation routes from nearby metropolitan centres tend to reach toward one another and eventually overlap forming more-or-less continuous "corridors". Where transportation by rail highway or both is particularly fast or frequent lineal alignments of cities tend to develop with intermediate areas accessible to several such cities. Such a geographic pattern is sometimes called a 'corridor'. Residents in or near these corridors may have access to employment and other opportunities in two, three or even more nearby metropolitan areas and the overlapping has made a clear-cut separation for purposes of planning, administration, and even perception and orientation very difficult. (Ibid)

2-7-5 Attempts to solve the metropolitan influence problems

Data from other countries also lend support to the view that metropolitan cities have received a larger than average share of both public and private investment than secondary cities or rural areas. Richardson (1973) argues that agglomeration benefits not just the citizens of metropolitan centres, but the economy as a whole, since it is invariably in the largest cities that the rate of innovation is highest. Echeverria-carrol (1988) quotes several analysts who have argued that metropolitan cities in Europe and North America tended to introduce innovations which were then spread hierarchically. The spatial policy developed to cope with the process was to accelerate the process of

technological diffusion through reduced congestion in metropolitan centres and improved communications between large and smaller cities. In this way, the agglomeration economies were increased in smaller and secondary cities whilst reducing dis-economies in the larger cities.

Another factor affecting the discussion of urbanization patterns has been the notion of "balance development". This has proved notoriously difficult to define, though Friedmann (1981) argues that it provides a sense of systematic inter-relation between countryside and city in which their notorious differences in levels of living and opportunity will become progressively less pronounced.

(a) Decentralization policies

Harris (1992) has noted that decentralization is commonly understood to be a spatial process – movement. Spatial decentralization may be accompanied by a reallocation of power, resources and responsibilities, or merely the removal of unwanted, surplus or additional activity to peripheral locations. It may be intended to ensure that the urban sector works efficiently and to change the existing distribution of population.

Turning specifically to metropolitan decentralization, Rondinelli (1983) notes that some developing countries have attempted to halt the growth of the largest metropolis and disperse economic activities to smaller centres. He notes, however, that most observers have concluded that this strategy has either been ineffective or extremely slow to produce results.

A prominent feature among decentralization policies is that of growth poles. They have been adopted, for example, in Thailand where the National Economic and social Development plan for the 1980s involved two major objectives. First is to limit the growth of the metropolitan area at some appropriate level so as to check urban congestion and improve the existing environment and second "to develop regional growth centres and upgrade small and medium size towns" (Rondelli, 1983)

A second feature of many decentralization policies is that of small or secondary urban centers. These commonly include settlements ranging from expanded villages as in the Algerian and Tanzanian programs, to cities of over 100,000 in countries like China and India. Such intermediate or secondary urban centres have received considerable attention from governments. To governments formulating decentralization policies, a major attraction of smaller urban centres is that the economic, administrative and physical foundations for growth already exist. The costs of expanding such centres is therefore relatively small compared with those of planning completely new settlements in undeveloped areas.

Among analysts of decentralization policies Rondineili (1983) is foremost in recommending that governments should built the economic and administrative capacities of existing secondary cities. He also advocates that they should develop small towns and market centres to perform urban functions more effectively and strengthen the links between secondary cities and their rural hinterlands to stimulate a pattern of deconcentrated urbanization that can invigorate rural economies developing world.

(b) Regional planning concept

Mayer (1976) has noted that it has long been clear, with respect to many characteristics, the city or municipality, is not the significant spatial unit and that another type of region would constitute a much more adequate delimination of planning purposes. This led to the establishment of planning regions. Implicit in this structure of governmental units is the knowledge that some problems and functions involve areas larger than those within the boundaries of a local jurisdiction but smaller than the nation as a whole.

In America, the regional concept metropolitan and otherwise was well established by the 1930s when the Tennessee Valley Administration and other regions formed the basis of organizations superimposed upon the existing units of government spatially for treatment of problems, such as water management,

which were not contained wholly within any local subnational unit of government. (Ibid)

The countries of South and East Asia sought answers to these problems in the experience of already developed countries. As they studied the technology and administrative and financial methods used elsewhere to deal with these problems, the governments of this region adopted a project-oriented, sectoral approach, along with the appropriate technology, managerial machinery, and financial procedures that such an approach implied. They were encouraged to do so by the international aid agencies. (UNCHS 1986)

An alternative multi-sectoral response has been to create metropolitan governments with spatial provincial powers and status. Such governments have been established in Tokyo, Jacarta (1964), Karachi(1973), Bangkok(1972), and Manilla. They are engaged mainly in metropolitan management. The sectoral response to the metropolitan challenge in Asia was successful in many respects. Although social and economic issues received relatively little attention, no city succumbed to the onslaught of urbanization. Nevertheless, some institutional, financial, and political weaknesses in this response soon became evident.

The Bangkok Metropolitan Administration for example was created as a metropolitan government with an elected assembly and governor. Six years later its autonomy was severely curtailed, and since then it has been engaged mainly in looking after street cleaning, street lighting, primary education, and health care services normally handled by more localized municipal authorities. Sectoral organizations created for housing, electricity industrial estates, and water works have continued to act independently, programming and executing their own major capital investments. (Ibid)

Similarly, Karachi's Metropolitan Corporation has a limited range of functions; furthermore, its performance has been adversely affected by a fragmented

organization and inadequate revenue base, and its relationship with the Development Authority has been ambiguous. Although the Metropolitan Manila Commission is sometimes referred to as a metropolitan government, its responsibilities continue to be restricted to only a few capital programs that are metropolitan in scope. (Ibid)

By contrast Tokyo's metropolitan government exercises the powers of both a city and a prefecture over twenty-three special wards, seventeen cities, twelve towns, and one village. Not only has the metropolitan organisation provided for widespread public representation and participation (including a 120-member metropolitan assembly), but it has also enabled the metropolitan government to control and supervise non-national sectoral authorities as well as submetropolitan local governments units. Only recently has a problem developed between agencies (outside of transportation), because the population has spread into adjacent prefectures. The organizational experiments carried out thus far demonstrate a deep reluctance on the part of national and provincial governments in the region to confer significant political and financial powers on metropolitan institutions rendering solutions to their problems more complicated. (Ibid)

2-7-6 Growth centre policy in Kenya

In Kenya growth centres were first mentioned in the second Development Plan (1970-74). Their initial aim was to decentralize (future) urban growth to the designated growth centres, away from Nairobi and Mombasa. To begin with, seven centres, viz. Nakuru, Kisumu, Thika, Eldoret, Kakamega, Nyeri and Embu, were selected (designated) with the aim of giving them priority in public works. In the third Development Plan (1974-78) Meru and Kitale were added – all the nine were to be alternative destinations for migrants to the two cities. (Kenya 1969, 1973)

The centres were selected by virtue of their large sizes with potential for one or more specialized growth functions. Some of them are strategically located

relative to existing or potential population distribution, resource development and transport networks, their existing economic organisation and level of infrastructure and centres of education and administration. This has created locational advantages for initiation of "growth pole" industries.

Some of the centres were selected because of the administrative commercial and/or industrial potential. Availability of infrastructure like water, sewerage, electricity and communication network were also of major consideration. The selected centres were also favored by agricultural potential and population densities around them – they could be important trading centres with small – and medium – scale agricultural processing industries. (Kiamba, 1982)

Inspite of such considerations some of the growth needed government and private development initiative to achieve a level of self-sustaining growth. After the initial stage of government assistance and guidance they will be able to generate additional employment and investment opportunities – leading to a process of cumulative and self –sustaining growth. The nine designated centers were thus seen to have the highest growth potential, which could further stimulate growth activities around themselves.

In Kenya the centers are encouraged by provision of some basic physical and socio-infrasrtuctural services to serve the population living in their hinterlands. This is felt a sure way of making them alternative population interceptors, which further helps to avoid the problems arising from the excessive concentration in the two major towns i.e. Nairobi and Mombasa. The policy may also be seen as a measure to decentralize urban activities to achieve a more equitable distribution of (urban) services. It has therefore been government endeavor to intensify service facilities to make the centers serve their catchment populations more effectively. Development of a center would stimulate development of its hinterland in the event of offering job opportunities and market for local produce – which in turn supports the

development of the center. This way a mutually reinforcing relationship between the center and its hinterland is established.

However, Ruiru was not designated as a growth centre and its growth was not encouraged by provision of services. The movement of growth to this area caught the town unawares and added the burden of services provision to this area unlike Thika which was designated and encouraged. This may partially explain the poor state of affairs in this area.

For effective distribution of services, and hence accelerated rural development, a planned network of designated service centers has been adopted. It is to complement and stimulate integrated rural development alongside the selection and development of the few strategically located growth centers. This suggests that in Kenya a distinction is made between growth centers and service centers, an examination of which seems necessary.

2-7-8 The Nairobi Metropolitan Growth Influence

Nairobi has had a major influence on the growth of Ruiru municipality. The Nairobi metropolitan growth strategy has recommended that the growth of Nairobi, to a population of 3,000,000 be accommodated within an area of growth from Kikuyu in the west towards Thika in the northeast. Ruiru municipality falls within this area.

In the Nairobi metropolitan growth strategy study, Ruiru was among the areas outside the Nairobi City boundary that was identified to have some degree of inherent development potential. It was set out as that area bounded by Kahawa (Kenyatta College and Kahawa barracks) on the west and Ruiru town on the Northern side. Of the total population of 3 m projected by the study for Nairobi in the year 2000, Ruiru area was projected to have 557,000 people (NMGS, 1973). There is a market driven force to develop land for residential use for the population working in Nairobi, but can't be accommodated there. The local

market driven force cannot be stopped. The local authorities are not strong enough to combat such force.

According to the Nairobi Metropolitan Growth Strategy, Nairobi's potential for growing included the Ruiru area. Agricultural land was to be conserved in areas defined by the ministry of Agriculture which runs from Kikuyu to Kiambu the North side of Thika road from Ruiru to Thika. The Ministry wished to see urban development discouraged here. Note that this did not include the southern side of Ruiru which consists of Githurai and Kahawa Sukari. This has been one of the major influences of growth.

The Nairobi Metropolitan Growth Strategy (NMGS) looked at this area as an opportunity of growth and urbanization. It proposed that in the northeastern segment of the city an equally strong development trend is desirable. In this case, the trend has been more official in the sense that substantial approved development of industrial and other uses, strongly influenced by the upgrading of the Nairobi-Thika road to dual carriageway standard, the presence and location of the railway, the development at Thika and the high density agricultural settlements further north on the slopes of Mt. Kenya. Here again considerable urbanization is not only inevitable but should be encouraged to make the best use of existing investment in public infrastructure. Again, Ruiru falls in this category.

Further, the NMGS has contributed to urban sprawl in Ruiru by recommending lineal growth along the Nairobi Thika highway, which consists of a large part of Ruiru municipality. It also set out the Ruiru area as a housing area for Nairobi population. Apart from the old city area and its surroundings, the major areas for development would be Dagoretti, Karen-Lang'ata, the Eastern area and the areas outside the northeastern city boundary around **Ruiru.**

As far as industries and commerce are concerned, apart from the central industrial area, land would be made available at Wilson airport, Dagoretti,

Karen Langata, Dandora, Kasarani and both north and south of **Ruiru**. Out of all these areas only Kasarani and Ruiru have developed as Industrial areas. Ruiru developed much earlier than Kasarani and the influence is more here.

2-8 Types of Land Ownership

There are various types of land ownership in Kenya as illustrated in Table 2-1. These include land ownership under public land and private land.

Table 2.1 Types of land ownership in Kenya

PUBLIC LAND	PRIVATE (FREEHOLD) LAND
Government land	Individual Ownership
Trust Land	Company Land
Communal Land	Cooperative land
Wayleaves and Reservation Land	N/a
Easement	Groupland
Lease land	N/a

Note: n/a means not applicable Source: Mwangi 1994

Government land

The Commissioner of Lands controls Government land. Government land includes gazetted forests, wild life sanctuaries and parks and lease land used for agriculture and urban development .The Government Lands Act (GLA cap 280) gives powers to the Commissioner of Lands to administer the allocation of land to potential developers, collects land fees and controls its development.

Trust land

This is land held by local authorities in trust for people living within their jurisdiction. The local authorities are expected to have direct influence in its administration and development. Most Trust Lands were part of the Native Land Units (NLU) and Native Reserves (NR) set aside between 1915 and 1963 under the Crown Land Ordinance of 1915. Portions of NLU and NR that are

registered as being part of local authority trust areas became communal lands. Communal land is administered under African customary law and rights (Wanjala, 2000), but those who occupy and use it have no registered rights.

Easements and Wayleaves

These are transportation corridors. They also include land earmarked for physical infrastructure. Reservation land is set aside for a specific development by a government department or corporation.

It is noted that urban land ownership systems in Kenya lack appropriate urban planning policy processes. Continued ineffective policies on planning and management of urban land development is degrading the urban environment. The activities of the central government and local authorities are reactive and consider the continued demolishing of unplanned urban developments and the restricting of hawkers as planning and management measures (Macharia, 1990).

Furthermore, physical planning in Kenya focuses on public land, while freehold landowners are left to plan and develop their land outside established benchmarks of urban physical development. As a response to these inadequacies and to problems of urbanization, the need to translate economic policies through land use plans becomes a reality. This is a significant departure from the earlier narrow view of urban land use planning of allocating land for mere physical development including buildings, engineering, mining and other operations.

Implementation of urban land use plans is through other types of plans. Urban development plans (UDP), structure plans (SP) and part development plans (PDP), are the technical instruments and policy documents for implementing urban land use plans. Each represents a level of urban land use and development policy (Singler and Breede, 1977) and indicates the role of private landowners and developers during implementation. The assumption in the

preparation of these plans is that the governmental planning authority is legitimized by the public (those who will be affected by the plans). There is also an assumption that the public (especially the local communities), is involved in the plan preparation.

There is an assumption in urban development plans, that landowners and developers will submit their development proposals to local planning authorities. Due to weak enforcement practices, even if the plans were submitted and approved, landowners may not strictly implement the conditions of approval.

CHAPTER 3

INSTITUTIONAL AND LEGAL FRAMEWORK

3-1 Overview

This chapter looks at the institutional and legal framework put in place to achieve development planning and development control. Development planning and development control issues can only be discussed and implemented within an established institutional and legal framework. Broadly speaking development planning and control is predominantly a domain of public institutions of the government i.e. central government, local government or quasi government institutions. These institutions are Director of Physical Planning, the Commissioner of Lands, The Minister of Local Government, The Director of Land Adjudication and Settlement, the Local authorities and the Local Communities. Few agencies take it outside the public domain for example non-governmental organization and the neighbourhood organizations, which address issues on neighbourhood units.

The workings of these institutions must be within a defined legal set up. These institutions powers and duties must be within established statutes. They can't be left loose because they have got very serious implications on what one can do. e.g. try to inhibit the freedom that individuals, private sector might want to do and can't be left loose to change everyday and to the whims of personalities. This requires making very firm commitments thus statutes have come up. These are the Constitution, Local Government Act, Physical Planning Act, Government Lands Act, Land Control Act, Building by-laws, Registered Lands Act, Registration of Titles Act, Trust Land Act, Land Acquisition Act, Public Health Act and the Land Titles Act. The earlier planning legislations have been looked at because they have had an impact on the current planning system. These include the Town Planning Act of 1931 and Land Planning Act of 1968. However these Acts were repealed by the Physical Planning Act of 1996 which is the current law governing planning in Kenya.

This section looks at development control which is the implementation of the various laid down policies, guidelines and strategies by the various institutions mandated to do so under the above legal and institutional framework.

3-1-1 Historical background of planning

There has arisen a series of traditional wisdom as to why planning systems have been generated which provide a framework for the decisions of landowners and land users.

Held and Vissex (1984), advance various roles for land-use planning

a) To discourage certain uses which could be incompatible with existing uses.
b) To achieve greater efficiency in the use of land resources in the area.
c) To reduce or eliminate certain hazards.
d) To preserve or to protect desired elements of the existing environment.
e) To control the aggregate allocation of land among alternative uses
f) To achieve particular levels of output, particularly in agriculture.
g) To control the intermixture of uses to provide a pleasant and safe environment.

Urban planning itself has its roots in the search for reform of urban environment. It was the ideas of social reformers and philanthropies that worked towards creating more humane urban environments in ways which have met limited success.

Town planning, which is variously known as town and county planning, environmental planning, land use planning or physical planning, is an innovation of 19th century. It was at this time that governments started to intervene in planning. In Britain, for example, some measures of control over canal and railway development was effected, new statutory regulations governed working conditions in industry; public health authorities were set up and a public health service instituted legislation dealt with insanitary housing and gave powers to build dwellings for the working classes. (Claire, 1973)

Claire further notes that before this period, much of private industry and the commercial sector were insignificantly affected by government, either central or local. Prevailing political philosophies gave full reign to private initiative and vigorous, uncontrolled economic expansion took place with little reference to other responsibilities in the wider community. Thus, social housing, health and environmental problems ensued, and it was frequently left to private individuals to deal with. It was often individuals initiative and effort, which began to point the way to new forms of community development and urban management.

Protest literature exposed the problems, which so far had been inadequately tackled: poor housing, high densities, overcrowding, ill health, large families, low pay and unemployment. Although these issues were commonly most felt in the older parts of the cities, it was not uncommon also, to find them in suburban district where sanitary and building controls existed. In the absence of regulations, the way in which the land was laid out was uncoordinated and hence the problems for the future accumulated. The term town planning was first used in 1906 in Britain. (Maleche 1992)

The attention given to urban planning started in European countries. Planning in most of these countries is the product of the last 150 years; a period characterized by the major transformation of the industrial revolution and its aftermath. During this time a variety of methods have been evolved to deal with the problem thrown up by unparalleled economic and technological developments, which have left their mark on many aspects of the social organization and environment. The physical environment is structured and adapted by man over long periods of time. Protection of people from harm or disadvantage has been necessary over the past years. The aim has been to give them better health and education and to ensure that urban development is, on the whole, beneficial in various ways to the community. Planning tries to deal with expected problems and to avoid unwanted problems. For this reason, it

has been important to plan ahead for various sectors of land use. (Chapin, 1976)

3-1-2 Early Planning Legislation in Britain

Town planning in Kenya has been very much influenced by the British planning experience. For this reason, it is necessary to look at the legislation which has influenced planning in Britain.

(a) Town Planning Act 1909

Town planning took its statutory root in response to an Act of Parliament in Britain; the Housing, Town Planning Act of 1909. The actual origins owe much to events in Birmingham where the idea was pioneered of securing low-density, cheap housing for the working classes in suburban areas through the device of "town expansion plans', later to be known as 'town planning schemes'. The Act of 1909 permitted local authorities under close supervision of the local government board to prepare such schemes for 'land in course of development or likely to be developed. The schemes regulated the layout of land, density of and space between dwellings and reserves for new highways. It did not apply to built-up land or non-urban land and so in effect merely regulated new sub-urban development. This was followed by a succession of Planning Acts and legislation.

(b) Housing and Town Planning Act 1919

The 1909 Act was, however, relatively little used. It was followed by the Housing and Town Planning Act, 1919 which made it obligatory for local authorities above 20,000 population to prepare twin planning schemes for their building land. This was one way of ensuring at least some planned layout of land at low densities and co-ordination of new highways. The Town and Country Planning Act, 1932 was the first planning legislation to include the word "country". Schemes could henceforth be prepared by authorities of any size in urban or rural situations although the obligatory requirements of the 1919 Act were relinquished and the preparation of schemes reverted to a

permissive power. Other Acts followed later, all to make statutory town planning effective in Britain.

(c) The Town Planning Act of 1931

It was only in the early 1930's that legislation relating to the use and development of land (especially on an urban scale) began to emerge. The Town Planning Act, 1931 is one of the three main sources of current town planning legislation in Kenya. The other two are; The Development and Use of Land (Planning) Regulations 1961 as enacted by The Land Planning Act, 1968 and the Local Government By-laws.

Until recently, urban planning in Kenya has been understood as defined in the Town Planning Act, 1931. This extended planning powers to almost any type of land whether developed or undeveloped. The Act provides for the preparation of Town planning schemes by a "preparatory authority".

Section 3 (1) states that a town planning scheme may be made in accordance with the provision of this Ordinance (Act) with respect to any land with the general object of improving land and providing for the proper development of such land to the best possible advantages and of securing suitable provision for traffic, transportation, sites for public buildings and disposition of ships, residence and factory areas, proper sanitary conditions and of making suitable provisions for the use or other purposes.

Section 23 of the Act provides that government owned land not within a municipality cannot be sold or leased for more than one year, unless a Town Planning Scheme is approved for its site area; where such a scheme is considered inadvisable or unnecessary, the land may be leased or sold in accordance with development plan approved by the commissioner of lands. This law in effect requires the commissioner of lands, in the case of government land outside of municipalities to abide by the uses proposed on a development plan, which he has approved, when he is determining the use

conditions for the leases. For one category of land (government owned), it places his customary practice of allocating land according to a plan on a legally binding basis. This has been widely abused in the current government to allocate even forests.

Section 24 of the Act is often interpreted as stating in essence that no land within a municipality or township shall be subdivided without the express permission of the Commissioner of Lands and then upon the conditions he shall specify therein. The activities of both were limited to Gazetted townships. The Governor approved plans prepared within townships while the Commissioner of Lands approved those prepared outside. Some of the plans prepared during this period included a Master Plan for the city of Nairobi (1948). Since local authorities did not have adequate planning expertise, consultants prepared the plans.

In the Town Planning Act, the Governor in Council was empowered under Section 2 to do all things necessary for enforcing the observance of approved schemes. This he did by ordering the Commissioner of Lands to enforce the scheme and charge the preparatory authority or executive authority for expenses incurred as a debt to the crown

(d) *The Town and Country Planning Act: 1947*

The 1947 Town and Country Planning Act brought almost all development under control by making it subject to planning permission. But planning was no longer merely a regulatory function. Development plans were to be prepared for every area in the country. These were to outline the way in which each area was to be developed or preserved. In accordance with the wider concepts of planning, powers were transferred from district councils to county councils. The smallest planning units thereby became the counties and the county boroughs.

This Act set out the detailed procedures for the preparation of Development Plans by the Local Authorities. These plans were required to show;

- The manner in which the land covered by the Plan is to be used.
- The stages by which the development is to be carried out.

(e) Local government regulations (1963)

The local government regulations of 1963 empower every municipal and county council to plan, control and prohibit the development and use of land in the interest of proper and orderly development. However, most local authorities lack adequate staff and hence this legislation's has not been effective. They have not been able to set their own planning by-laws. Probably Nairobi is the only council, which adopted a comprehensive set of planning by-laws. Other councils from time to time enact individual by-laws to cope with particular situations.

Regulations 201 empowers local authorities to pass their own by-laws and under regulations 210 the local authorities may adopt by-laws which may be made by the minister. Under this legislation, most councils have adopted building by-laws of which Grade II by-laws are an example. Grade II by-laws are adopted for specific areas where the higher Grade 1 standards are not required. The model Grade 1 by-laws do not contain a section controlling land use as in the case with Grade 11 by-laws section 4.

(f) The Land Planning Act of 1968

Regulations on planning and use/development of land that had been put in place in 1961 were later re-enacted into the Land Planning Act (Cap303), of 1968. The Act set out to provide guidelines on the preparation and approval process of plans such as area plans, town plans, and subdivision schemes etc. This Act extended planning to peri-urban areas – 5 km from the municipal boundaries and 40 ft from the highways. The Act also established Interim Planning Authorities (IPA) and the Central Authority (CA). Local Authorities were supposed to constitute themselves into Interim Planning Authorities. No

such authorities were declared, but local authorities assumed the role. Where a preparatory authority existed as per the Town Planning Act, then it would cease to have any powers. The powers of an IPA ranged from plan preparation and the consideration and determination of planning and development applications. All persons carrying out development were required to seek the permission of the IPA. The major plans prepared under this framework include Provincial Plans (for established provinces) and the Human Settlement Strategy (HSS).

The Central Authority's role was that of controlling development. This role contrasted with that of local authorities. The CA was composed of senior officers from relevant government departments such as the Commissioner of Lands, Agriculture, Health, Public Works, Economic Planning and a Town Planning Advisor. The CA received development applications in areas where IPA's did not exist and refer them to the relevant local authority. Similarly, the CA referred applications for change of user of agricultural land where the plot of land concerned exceeded 20 acres to the Divisional Board (a creation of the Land Control Act).

Another central player in the Land Planning Act was the Minister responsible for spatial planning. His/her role was to prepare town plans, area plans or subdivision and use plans in respect of unalienated government land. He/she was also responsible for approving plans and ensures enforcement and compliance with the same. The minister performed the latter role through local authorities. Through powers delegated to them by the minister, the Central Authority, Interim Planning Authority and Local Authorities could issue an enforcement notice where a developer had developed without their consent. Aggrieved persons were also required to appeal to the minister who in turn would expedite on the matter conclusively.

This is the Act governing land planning in Kenya until 1996 when it was repealed by the introduction of the Physical Planning Act.

3-2 Current Institutional Framework

3-2-1 The Director of Physical Planning

The Director of Physical Planning or the District Physical Planning Officer is mandated to initiate the preparation of any plan in consultation with the local authorities concerned and other relevant stakeholders. In initiating the plan preparation the problem to be addressed or the purpose of the plan must be made clear not only to the Director but also to the other stakeholders. The department acts as a preparatory authority.

The office of the Director of Physical Planning, established under the Physical Planning Act, acts as the chief Government advisor on matters relating to physical/spatial planning and is responsible for the formulation of national, regional and local physical development policies, guidelines and strategies, among other functions. The office initiates or undertakes studies and plan preparation processes. It also facilities the legal translation of these plans and oversees the implementation of proposals therein.

3-2-2 The Minister in Charge of Planning

The Minister in charge of planning is the one who has final approval submitted by the director of planning. According to Section 20(2) the Minister may approve any regional physieal development plan, either without or subject to such conditions or modifications as he may consider necessary or may refuse approval in which case he may require the Director to prepare a new plan for his approval taking into considerations the proposed modifications or the ground for refusal.

3-2-3 The Commissioner of Lands

The office of the Commissioner of Lands is responsible for the administration and management of land in the country. This office is therefore a major

stakeholder in the planning process. Prior to the enactment of the Physical Planning Act, this office facilitated the legal translation (approved and ensured compliance) of plans prepared by the Department of Physical Planning.

The Commissioner of Lands may initiate the preparation of a Part Development Plan on Government Land as provided under section 9 of the Government Lands Act (Cap 280) for purposes of land alienation either by directly requisitioning for the same to the Director of Physical Planning or indirectly through the District Plot Allocation Committees. Irrespective of where the decision to prepare a Part Development Plan may have emanated from, it is only the Director of Physical Planning who has the mandate to prepare one.

3-2-4 The Minister of Local Government

The Minister in charge of Local Government is also another key partner, especially in translating planning proposals into development projects.

3-2-5 The Director of Land Adjudication and Settlement

The director of Land Adjudication and Settlement can initiate preparation of Physical Development Plans in areas where the adjudication process or settlement schemes are under preparation. In both situations it is desirable that the Director of physical planning is consulted for purposes of ensuring harmony in the human settlement endeavors.

3-2-6 The local authority

Local Authorities can initiate the preparation of both regional and local development plans in consultation with the Director of Physical Planning. When the decision to prepare the plan has originated from the local authorities, the Director will need to be furnished with such details as the purpose of the plan, objectives and scope of the plan and information as to whether the plan is to be prepared by the Director, Local Authorities themselves or commissioned registered physical planners.

The major roles of local authorities are that of implementing the proposals of plans and ensuring that the requirements therein are complied with. Under the Local Government Act and the Public Health Act, Local Authorities have wide-ranging powers to control and guide development in their areas of Jurisdiction. In addition, Local Authorities also use various by-laws to control a wide range of activities. The new Physical Planning Act (1996) gives added legal authority to the Local Authorities in the implementation of physical planning proposals and decisions. They are mainly implementing and development control agency. According to the Act, each local authority shall have the power,

a) to prohibit or control the use and development of land and buildings in the interest of proper and orderly development of its area.
b) to control or prohibit the subdivision of land or existing plots into smaller areas.
c) to consider and approve all development applications and grant all development permissions.
d) to ensure the proper execution and implementation of approved physical development plans.
e) to formulate by-laws to regulate zoning in respect of use and density of development.

All Local Authorities (County, Municipal and Town Councils) however, do not often have the technical capacity to play their role effectively due to lack of skilled personnel and elaborate enforcement machinery.

3-2-7 Local Communities

Local communities, through community based organizations and NGOs, land owning companies, cooperative societies and individual landowners can initiate the process of plan preparation either as advisory plan or land-subdivision schemes. Such plans initiated by local communities can be

prepared either by the Director of Physical Planning or Registered Physical Planners in private practice.

3-3 The Legal Framework

3-3-1 The Constitution

This is the greatest instrument in development control to guide everybody. Police powers are contained in the constitution. You have ownership but the government has police powers over the ownership of that land. It has more rights. The government is the people.

3-3-2 Local Government Act (Cap 265)

The Local Government Act (Cap 265) section 18 empower every municipal and county council to plan, control and prohibit the development and use of land in the interest of proper and orderly development. However, most local authorities lack adequate staff and hence this legislation's has not been effective. They have not been able to set their own planning by-laws. Nairobi is the only council which adopted a comprehensive set of planning by-laws. Other councils from time to time enact individual by-laws to cope with particular situations.

Regulations 201 empower local authorities to pass their own by-laws. Under regulations 210, the local authorities may adopt by-laws which may be made by the minister. Under this legislation, most councils have adopted building by-laws of which Grade II by-laws are an example. Grade II by-laws are adopted for specific areas where the higher Grade 1 standards are not required. The model Grade 1 by-laws do not contain a section controlling land use as in the case with Grade II by-laws section 4.

The Act stipulates that for the plan to take effect the Town Planning and Works Committee should formally adopt the plan, to be followed by a resolution of the Full Council. Thereafter, the Local Authorities in consultation with other relevant authorities and with reference to the plan will be required to enact

planning regulations for purposes of implementing the plan. The regulations should be detailed and comprehensive covering the whole of the planning area.

3-3-3 The Physical Planning Act of 1996

The main law that currently governs spatial planning in Kenya is the Physical Planning Act (PPA) of 1996, which repealed both the Town and Land Planning Acts. The provisions of this Act shall apply to all parts of the country except such areas as the Minister may by notice in the Gazette specify. It provides the legal basis for the preparation and enforcement of different physical development plans and requirements.

The Act establishes the office of the Director of Physical Planning, who is the chief Government advisor on all matters pertaining to physical (spatial) planning. The provisions of this Act shall apply to all parts of the country except such areas as the Minister may specify by notice in the Gazette.

The Act vests responsibilities of the preparation of all physical development plans in the Director's office. Through its sister legislation the Physical Planners Registration Act, it opens up room for the participation of the private sector in plan preparation activities through the establishment of the physical planning profession and registration and licensing of qualified planners. This represents entirely new plan preparatory authorities, a departure from the trend in the above two laws.

Depending on the type of plan, the Minister/s of Lands is responsible for the approval of plans. The relevant authority approves subdivision of land, building plans and plans relating to the change of user and extension of lease. Here again, the role of local authorities in sanctioning development decisions is made clear and direct as opposed to the previous system where only their opinion was sought. When determining development applications, local authorities may grant or refuse to grant permission depending on various criteria. They also attach conditions to any approvals in order to ensure

compliance with approved development plans. If any development application requires subdivision or the change of user of any agricultural land, the Local Authority shall require the application to be referred to the relevant Land Control Board.

The Act also stipulates development control measures that can be taken in order to ensure compliance with the plan's proposals and requirements. The registrar shall refuse to register a document relating to the development of land unless development permission has been granted as required under this Act

It empowers local authorities to regulate and exercise control over physical development decisions and activities. In so doing, the local authority sanctions all development applications and issues an enforcement notice where a developer has proceeded to develop without grant of permission. It also gives express authority to local authorities to do whatever they deem necessary to ensure compliance with approved plans. This may include the charging of fines, and/or demolition of illegal structures. This represents a further reinforcement of powers already given through the Local Government Act.

The Act also creates National, District and Municipal Physical Planning Liaison Committees. In addition to being arbitration bodies on disputes arising from physical planning decisions made by various institutions, these liaison committees act as avenues through which the public can also be referred to for determination.

Some of the notable achievements of the Physical Planning Act have to do with the separation of powers. Under this Act, the preparation of plans is left to Registered Physical Planners (including the Director of Physical Planning and his officers). The role of approving plans is shared between the Minister and Local Authorities. Plan implementation and enforcement becomes an entirely local matter, the role being vested in local authorities. The office of the

commissioner of lands ceases to prepare and approve plans and takes on the role of documenting and administration of matters relating to land.

3-3-4 The Government Lands Act (Cap 280)

The act establishes the office of the Commissioner of Lands, who administers all government land on delegated power of the President. It regulates the alienation, use and development of government land. In undertaking these functions, the commissioner consults various stakeholders including local authorities, the Physical Planning Department and other relevant sectoral departments. It is on the basis of this Act that government land is leased and enforceable conditions imposed.

3-3-5 The Land Control Act (Cap 302)

This act controls use of agriculture land by establishing Land Control Boards to vet and approve transactions relating to land such as subdivision, sale and transfer. The Act establishes boards at the Divisional and Municipal levels. All applications for subdivision of land are to be accompanied by a plan prepared by a registered physical planner under the Physical Planning Act, before consent is granted. In the past, perhaps owing to the simplicity of procedures it offers, some land transactions that do not fall within the jurisdiction of this Act have been processed through it. This has led to numerous planning problems especially where this involved the subdivision of agricultural land into urban type/size parcels. This anomaly among others is what the Physical Planning Act seeks to reduce.

3-3-6 The Building by-laws (Grade I & II)

These were formulated by the Government in 1968 to regulate the character and nature of buildings and other associated works. The Grade 11 by-laws were revised in 1995 to facilitate the development of low-cost housing. Local Authorities then adopted them by a resolution. The main weakness with the by-laws is that they are not Acts of parliament and it is hard to enforce them.

3-3-7 The Registered Lands Act (Cap 300)

The substantive and registration law for land formerly held under customary law was codified in the Registered Land Act of 1963 Cap. 300. The Act which is supposed to replace all other related laws in Kenya is an expression of the agronomic arguments for individualization of tenure. It is also an embodiment of English Property Law. Section 27 and 28 of this Act confer upon the registered proprietor absolute and indefeasible title to the land. Land registration is an expression of the type and nature of tenure operative in a given society, while on the other hand it is an information or databank.This act establishes the office of the Chief Land Registrar, who is empowered to register all interest on land after the settlement process, grants subdivisions of private land and large society and cooperative farms into portions of less than 20 acres.

3-3-8 The Registration of Titles Act (Cap 281)

This act establishes the office of the Registrar of titles. Like under R. L. A., the office registers all interest on land. This act was used to register most land in the former 'white highlands'. In planning this act has been very useful in that all subdivision is consented to following proper planning.

3-3-9 The Trust Land Act (Cap 288)

The act considers interests on land formerly designated 'native reserves'. These were later renamed as Trust Lands i.e land held in trust by local authorities for the people. It determines individual interest and sets aside land for public and government use. The parcels are registered under the R.L.A. It gives Local Authorities considerable control over land within their jurisdiction.

3-3-10 The Land Acquisition Act (Cap 295).

This act empowers the Government and Local Authorities to acquire private land in accordance with sections 117 and 118 of the constitution of Kenya. Acquired land is compensated at market rates plus 15% of disturbance allowance. This Act has been very useful especially where land needs to be

acquired for public use. Similarly, the government has often found it more convenient to acquire land for urban development, which in turn gives it a greater influence in terms of planning and development control. Although the various Acts stipulates what is considered appropriate, it is unfortunate that some of them have been abused. For example, the Land Acquisition Act has been used to acquire land without demonstrating that the said land will be used for the "Public good".

3-3-11 The Public Health Act (Cap 242)

This is the strongest instrument in development control. It cuts across all the sectors. It is concerned with the well being of the person using the space, drainage, air, noise, nuisance control, air, noise, size of the room, windows, ventilation to be provided, e.t.c. The Public Health Act has been interpreted into codes and by-laws. The building code is the major instrument in the Public Health Act.

3-4 Procedures for Plan Preparation, Approval and Implementation

While the Physical Planning Act vests the responsibilities of preparation of most development plans to the Director of Physical Planning, it does provide room for consultation with all relevant stakeholders, including the local people. Part IV of the Act defines the types of plans to be prepared, outlines the content of each, the procedures to be followed in plan preparation, the nature of public participation and approval processes. The step by step procedure in the preparation and approval of physical development plans preparation involve the following aspects

- Notification of the relevant local authorities and other stakeholders of the decision to plan, indicating the purpose of the plan, its scope and the area to which it relates.
- Convention of a meeting or a series of meetings at which all stakeholders are invited to participate by giving their views and suggestions on the various aspects of plan preparation. Amongst the

groups of stakeholders to be involved are local authorities, Government Ministries, Business community, Regional Development Authorities, Public Service Providers, NGOs, Farmers groups, etc. The purpose of these stakeholders meetings is to realize the localization of land use planning and management.

- Data collection, field surveys, analysis and actual plan preparation.
- Circulation of the completed plans to all local authorities for comments
- Publication of the Notice of Plan Completion in the daily papers, the Kenya Gazette and exhibition in public notice boards for comments on the proposals made in the Plan. The time allowed for this aspect is 60 days.
- Comments and/or objections from persons aggrieved by any plan proposals are forwarded to the Director or local liaison committees for consideration.
- On full consideration of the comments objections raised by the stakeholders, the plan is then submitted to the Director for certification and onward submission to the Minister for approval.
- Upon approval of the plan by the Minister, the Director has to publish a Gazette Notice to the effect that the plan has been approved, which in essence declares it a public document.

Once approved, the plan shall have the full force and effect in the area to which it applies and all development proposals must comply with the requirements of the approved plan. Any amendments to the approved plan can only be effected through the process as above (section 27).

3-5 Types of Physical Development Plans

The various plans that may be prepared under the Physical Planning Act include the Regional Physical Development Plan and the Local Physical Development Plan. These may be long-term or short-term in scope and may be prepared for purposes of renewal or redevelopment.

3-5-1 Regional physical development plan

This is a plan prepared within the area of authority of a County Council for purposes of improving the land and providing for the proper physical development of such land and securing suitable provision for transportation, public purposes, utilities and services, commercial, industrial and residential areas, including parks, open spaces and reserves and also the making of suitable provision for the use of land. The matters, which may be dealt with in a regional physical development plan, are further outlined in the first schedule of the Physical Planning Act.

In Kenya, the administrative District or County is considered to be the planning region. However, such plan may also be prepared for an area with unique development potential or problems irrespective of whether such an area lies within or outside the area of local authority. This area is designated a special planning area by declaration through a Kenya Gazette notice. The implementation of a regional development plan may be either the responsibility of a local authority or a regional development authority as in the case of a special planning area.

3-5-2 Local physical development plan

The local physical development plan is prepared with reference to any government land, trust land or private land within the area of a city, town or urban council or with reference to any trading or marketing centers. It may be for long-term or short-term period.

Functions:

- Interpret national and regional physical development policies in terms appropriate to district resource potentials and development opportunities, priorities and constraints.

- Identify service and growth centres together with an appropriate transport network to facilitate movement of people and from the centres.

- Provide a policy framework for guiding and controlling the use and development of land by, say, fixing space for different use, e.g urban, agriculture, recreation, afforestation, conservation e.t.c.

- Provide a framework for integration and co-ordination of physical and socio-economic facilities and services.

- Provide a framework for programming and prioritising district development projects, whose purpose is to guide and co-ordinate development of facilities and services.

3-5-3 Long-term plans

These are plans prepared for purposes of interpreting and articulating government, local, national and regional development policies in terms appropriate to the local area. They provide a framework for detailed policies and proposals for subsequent short-term plans for the area. They also indicate action areas for immediate intervention and provide a coordinated basis upon which various implementing agencies develop their individual programs of work for which they execute responsibility, for example housing, transportation, water supply, electricity supply, sewerage development, etc. They also provide a long-term basis for development control. The plans allocate resources and assign a time frame within which the proposals are to be implemented (normally between 20 and 30 years). In addition, they outline the communication network to serve the area over the same period.

3-5-4 Short-term plans

Short-term plans are of various types. They include Action area plans, Subject plans, Advisory or Zoning plans and Part development plans.

Action Area Plans: These are meant for comprehensive planning of areas selected for intensive development, which is to commence within a specified period. At both scales, techniques of multi-sectoral investment planning can be used to prioritize and define a capital plan. The particular form of integrated urban development will vary according to the country and city context. The critical variables will include the degree of decentralization of decision making and financial autonomy, the relative roles of the public and private sector and the health of the macro – level and local economies.

Subject plans: These are detailed treatments of a particular planning aspect; for example residential, commercial, transportation, water supply etc. in part or all of the long-term plan.

Advisory or zoning plans: These indicate the permitted subdivision, use or density of development.

Part development plans: These indicate precise sites for immediate implementation of specific projects including land alienation purposes.

3-5-5 Renewal or Redevelopment Plans

These plans are prepared to provide a broad land use framework, illustrating a coordinated policy of renewal and guiding both public and private redevelopment activities. They provide a pattern of road and traffic network designed to improve vehicular access and parking space and also facilities segregation of vehicles and pedestrian. These plans provide a basis for determining development applications on extension of leases, extension of users and change of users.

3-6 New Approaches to Development Planning

As a reaction to the shortcomings of traditional master planning and more recently to address the needs of sustainable development, various countries

have adopted new process and approaches to urban plans. These countries include Malaysia, Indonesia, Tanzania, China, Sri Lanka and the U.K. (UNCHS, 1997)

More recently, Kenya has been experimenting with various new approaches to planning such as the Strategic Planning, and Participatory Environmental planning approaches. The anticipation is that the urban planning process in Kenya will benefit from the strengths of these two approaches especially in improving the current approaches.

3-6-1 Strategic planning

The key characteristics of strategic planning are:

- Cross- sectional coordination and integration.
- Financial feasibility
- Agreement on comparative advantage of public and private sectors in urban development and management.
- Enabling role of public sector in support of private sector.
- Inter-and intra-sector choice mechanisms
- Linkages to and from national policy issues
- Concern with rural-urban relationships
- Resolution of conflicts among participants
- Regular monitoring and evaluation.

Strategic planning is increasingly being seen as a participatory approach to integrated urban development to achieve growth, management and remedial actions at both the city – wide and local scales. The output of the process is not just a physical development plan for the city, but a set of inter-related strategies for city development (including land, infrastructure, finance and institutions). These strategies aim at enabling all public and private initiatives to promote economic growth, provide basic urban services and enhance the quality of the environment. At the city-wide scale, the process involves multi-sectoral co-

ordination of spatial planning, sectoral investment plans, financial resources and institutional framework to meet inter-sectoral city development objectives over a longer time period of say 10-15years strategic planning. At the local scale, the process involves co-ordinated processes of intensive change limited area over a shortime period (2-5yrs).

3-7 Development Control

Development control is the point at which development plan integrates with the physical environment. Development control or development guidance is the means by which individuals can be prevented from doing certain things or in certain places and implicitly encouraged to do other things or in other places. Development control is the process by which legal permission is granted to a person or a group of persons to carry out development ensuring that such development has been undertaken according to authentic plan and legal action for those who implement development contrary to the provision of such a plan. The concept of development is the basis of the meaning of development control. Its meaning is functional in relation to urban physical development objective.

Essentially, the meaning of development control in Kenya involves applying for permission from a planning authority. Hence, any development should only take place after consent has been granted. Consequently carrying out any development without consent is an offence against the written law.

Control over land and the property development process is crucial in creating a better environment. The quality of the build up environment affects us all and is central to our evaryday lives. To achieve a good and economical living environment, proper control of developments is crucial. It aims at securing the proper/efficient use of the land resource by ensuring conformity with approved physical development plans and adherence to planning standards, regulations and procedures. Other purposes include the prevention of development

injurious to man and natural environment and the deterioration of areas surrounding the proposed development.

Development control is a major operational component of the town planning profession and practice. It aims at ensuring that the right kind of development goes to the right place and at the right time. It is the formal instrument for plan implementation by planning authority regarding such matters as permitted density, height limitations, user restrictions, access and outstanding building preservation or conservation orders of one kind or the other (Ratcliffe, 1978).

Development control sets standards and regulations guiding the bulk and use of structures as well as space around buildings. The need to control urban development has been felt in virtually all the countries of the world. Most advanced industrial countries have found it necessary to institute some degree of control over land use and physical development. The rationale for this control is to ensure economic efficiency in the use of space, environmental health, safety and general welfare. Chaplain has called these interests of the local citizens (Wisher, 1975).

The open market fails to allocate the costs and benefits of such operations accurately and because this is the case, there has been an increasing tendency for governments to restrict the rights of private owners to use their land, as they wish, in the interest of society at large. This is done through the land use planning and guidance system. The Government of Kenya has a wide array of instruments for regulating land use. These range from the detailed application of such specific devices such as building codes to the full gamut of physical planning legislation. These instruments are further fortified by a complex institutional arrangement that is mind-boggling and forever remains a puzzle to the ordinary Kenyan. Indeed, it has been observed that government laws, statutes and provisions are more far reaching with respect to land than any other commodity (Goldberg and Chinloy 1984).

In guiding development, the Physical Planning Act requires any person wishing to carry out development within the area of a local authority to apply for development permission from the relevant local authority. The application must be accompanied by such plans and particulars as are necessary to indicate the purpose of the proposed development. In determining development applications submitted to it, the local authority must have due regard to any relevant and approved physical development plan, standards and regulations and to any comments received from the office of the Director of Physical Planning. It may also consult with various Government officers, authorities and the general public for their comments. The local authority may then grant or refuse to grant development permission and notify the applicant of the same (Kenya, 1996).

In a case where a development has been or is being carried out without development permission or where the conditions of development permission have not been adhered to, the local authority issues an enforcement notice, specifying the measures as may be required to be taken within a specified period. In case of non-compliance with the enforcement notice by the developer, the local authority undertakes the said measures and recovers the cost from the developer.

The Physical Planning Act preserves the right to appeal for developers aggrieved with decisions in enforcing, compliance as in the case above. This is through the system of Physical Planning Liaison Committees. Although development guidance has previously been understood to mean control or prohibition (both by definition and practice), emphasis is being placed on local authorities playing a more facilitative role through the creation of awareness and stakeholder participation in planning and decision-making processes.

Planning for residential areas involve the design of houses with emphasis on sizes, types and density, while taking into consideration the socio-economic characteristics or the eventual occupants. Space standards define levels, and

minimum plot sizes indicate the sizes of individual housing units within an area. The number of housing units per room specifies occupancy ratio while the number of persons per acre is a standard for population's density.

Another aspect of this dimension at planning stage is that related to technological and performance standards. These define the quality of environment to be maintained within a residential area. They include, quality of services to be offered, quality of construction and type of materials to be used.

3-7-1 Tools of development control

(a) Development plans

Development plans are intended to provide a broad framework for development control and they can help to ensure clarity and consistency in the exercise of that control. But, local planning authorities must recognize that development plans are only one of the material considerations to be taken into account in dealing with applications. They should not be written as though they were written on tablets of stone. They should not prevent sensible decisions being taken on particular cases. Development plans may be overtaken by events and they cannot be expected to anticipate every circumstance.

(b) Land use zoning concept

Zoning is a device employed in land use planning to ensure the separation of land uses and hence avoid mixed development. Zoning may be defined as the physical division of an urban community into "districts" (zones/areas) for the purpose of regulating the use of land and buildings, height and bulk of buildings, plot coverage and density of population. It is a legal instrument and is therefore enforceable.

An area might be zoned as residential in which case any application to develop a non-residential activity such as a factory or an office could be refused. The

idea behind land zoning is to control and co-ordinate the different part of a town for convenience and to protect property values by separating areas designed primarily for residence, commerce and industry.

Objectives of Zoning

The main purpose of zoning is to direct and regulate development or redevelopment of a town in appropriate directions and ensure proper uses of land and building with a view to creating a healthy, efficient and stimulating, living environment.

It includes in its scope the following aspects:

1. Broad land uses permitted in different 'district' of the city with a view to providing adequate space for each type of development and in appropriate position.
2. The percentage of the plot (site/lot) that may be covered or built on
3. The maximum permissible height of buildings in each "district"
4. The maximum size of front, rear, and side yards.
5. The minimum size of courts/courtyards/piazzas, and;
6. The maximum permissible density/intensity of development in terms of:
    i. persons per unit area (acre or hectare)
    ii. dwelling per unit area
    iii. habitable rooms per unit area; or
    iv. persons per habitable room

Zoning may set up use restrictions on different portions of a town or a city. Zoning regulations may also establish the minimum size of the parcel of land in different parts of town or may limit the height and overall size of buildings. Area zoning in residential housing plans is meant to limit usable building area of land surface, front space, rear space and side space (Webster, 1958).

Land use zoning is also more important in certain other countries and particularly in North America, where in practice it has often been used to prevent the infiltration by the poor, often, black urban dwellers into surrounding middle class communities. The wealthy middle class communities, through their local government have achieved this. (Muhia, 1982). Zoning and cognate procedures have been most strongly and successfully implemented in urban fringe zones, where the political will to stem the tide of urban expansion has generally been strong. (Cloke, 1989)

Previous studies have shown that the implementation of zoning has become increasingly problematic for example in the U.S.A., where ideological attachment to negative planning controls is weak, there is a tendency for zoning objectives to be frustrated by localized amendments and exceptions. Decisions are made by politically vulnerable local planners, who are particularly susceptible to local demands for an expanded tax base. Moreover, there is little co-ordination between local authorities thus rendering any idea of regional zoning strategies unworkable in many cases. Other problems with zoning are noted in the cases of Japan and New Zealand. In the former, overlaps have occurred between incongruous zoning with some areas classified as city planning area, forest zone and agricultural zone. (Strong, 1981)

(c) Planning standards

Planning standards have evolved from experience gained from the practice of urban planning. Planning standards are widely used as regulatory mechanisms to ensure that development is in accordance with certain minimum requirements. Some standards are imposed by the Central Government and are obligatory on all Local Authorities, whereas at the extreme some standards are entirely at the discretion of the Local Authority (Maleche 1992).

Density standards are used to prevent development at either so high a density that they lead to overcrowding or so low that they result in the wasteful use of land. It is necessary to ensure that when buildings are erected, they will be able

to receive adequate amounts of daylight and sunlight and that they do not result in obstructing the already existing buildings from receiving adequate amounts. Daylight and sunlight standards are particularly important for areas of tall buildings.

(d) Sub-division plans

The objectives of controlling sub-division plans include ensuring that resultant subplots are accessible, ensuring that proposed population density is in accordance with available services for example water, sewer, roads, and drainage, ensuring that there is planned and coordinated developments and ensuring that proposed use(s)is compatible with surrounding use.

Planning Considerations

Factors considered in determining subdivision proposals include proposed use of subplots in accordance with provision of an existing development plan or zoning regulations for the area, proposed subplots are adequately accessed, size and density of subplots are in accordance with zoning regulations for the area, boundaries, dimensions and acreage of subplots are clearly indicated, open spaces and social infrastructure are adequately provided, favorable impact on the environment and level use of existing facilities such as roads, water and sewage disposal and provision of 6 metres greenbelts along ring roads and by-passes. (Physical planning handbook)

(e) Building code and by-laws

Building code is important because it is concerned with the safety of the built environment. Buildings and physical infrastructure are prone to hazards during construction and after the facility is in use, so that it is desirable that measures be taken to eliminate, prevent and control such hazards. There are at least four types of hazards which building code and by-laws can serve to prevent or control, namely:

- Damages to structure: In construction, the durability and safety of structures largely depends on adherence to stipulated principles and practices. If certain principles of construction are ignored, the result is structural risk, varying from superficial damage to total collapse. Sometimes, the impact of unsafe construction may have immediate consequences of structural damage or collapse, but, in other instances, deterioration may be a gradual process spanning several years, often noticed but ultimately leading to a total failure of the structure. Building acts, regulations and codes can help remove these hazards by ensuring that the correct principles and practices are adhered to in construction. Even where a faulty structure has already been erected, it is possible, through certain provisions in codes and regulations, to rectify the error and thus, forestall a potential calamity.

- Fire: Through errors in electrical and mechanical installations, buildings can be exposed to fire hazards which can lead to loss of life and damage to property, including irreparable damage to the building itself. Sometimes, a fire outbreak may result from misdeeds not related to errors in construction, but, even in such a case it is essential that a building provide some minimal protection for life and property. Building Acts, regulations and codes can promote good construction practice to minimize fire hazards and can, as well, help ensure that, if ever there is a fire outbreak, there will be an opportunity to save lives and salvage property.

- Natural disasters: Disasters, such as earthquakes, cyclones and floods, are natural occurrences, which can be destructive to buildings and property in general. Damage to construction resulting from such disasters is often severe and even if reparable, can be crippling in cost to the national economy. Even though disasters can hardly be prevented, it is possible to minimize the damage to construction

property and lives through the application of appropriate regulations and codes. Some disasters are mild, occurring infrequently and their effects can be mitigated by adherence to simple standards construction practices. With severe disasters such as earthquakes or volcanic eruptions, several types of regulations can be applied to minimize damage. For instance, by limiting the height of buildings, the risk of structural damage can be reduced.

- Risks to construction workers: Construction workers are exposed to occupational hazards which, in some instances, could lead to loss of life or permanent disablement. Some hazards on site occur as a result of unavoidable accidents, but many occur as a result of incompetence or ignorance. Building acts, regulations and codes can minimize hazards on construction sites and thereby, ensure reasonable protection for construction workers.

UNCHS (Habitat) has long been aware of the need for radical reformulation of building regulations in most developing countries. However, the role of international organizations in this area must be limited, since no global set of building standards can fit every case. Each country must develop its own performance codes based on its own resource endowments and its own socio-economic policies, but such a task is often beyond the limited technical and administrative skills available. The comprehensive reformulation of building regulations is a complicated and time consuming exercise, and there are not many successful examples to serve as guides. (UNCHS, 1992)

(f) Public interventions

Formal and informal approaches are also used by governments in their public-private and public-public efforts to direct land use practices. Informal techniques are emphasized when public officials use their powers of persuasion and negotiation or opportunities to influence public opinion to secure desired

ends. More formal approaches are exercised when they use the following state powers:

- ❖ Taxation

Government does not only have powers to levy taxes and collect revenue for public purposes but also to:

- ❖ Encourage intensive land utilization
- ❖ Attain conservation and environmental goals
- ❖ Promote ownership as a tenure goal (preferential tax rebates such as housing bonds, owner-occupier tax remissions).
- ❖ Favor particular types of investments.
- ❖ Enhance property values.
- ❖ Discourage undesirable practices.

Most common land tax levied in Kenya is the site value rating, but other taxes include stamp duty, death duty, capital gains, income tax, ground rent.

- ♦ The Spending Power

Governments have an inherent right to spend money and do sometimes use the power of the purse to influence uses made of land resources notably, the provision of infrastructure to open up development areas.

- ♦ Proprietary Power

This involves the right of the government to acquire, develop, manage and dispose of properties. This power provides a potent tool for securing desired land-use objectives, but if not properly used it can generate a lot of misgivings amongst the public as is the case with alienation of public land in Kenya or reservations for public use.

- ♦ Eminent Domain Power

The concept involves the power of the sovereign to take property for public use without the owner's consent. Its exercise is necessary for the orderly

acquisition of sites needed for highways, streets, utilities and other public improvements. Without it, individual property owners could block the will of the majority simply by refusing to sell land needed for desired public developments. (Syagga, 1998)

This power is guaranteed under section 75 of the Constitution of Kenya, 1969 and is exercised under the Land Acquisition Act, which ensures that prompt and fair compensation is paid to the dispossessed owner. It is also exercised under sections 117 and 118 of the Constitution for the purposes of setting apart Trust Land.

3-7-2 Objectives of development control

The objectives of development control as outlined in the physical planning handbook is to ensure the implementation of development projects in conformation with plan proposals and recommended enforcement actions, incase of contravention's against plan proposals and certain standards. To encourage the preparation of land zoning for all urban centers in the country, advisory and sub-divisional plans and long term plans as they are part of the development control tools that ensure safety, amenity, welfare, convenience, efficiency and public interest. To give greater freedom to harmless development, but at the same time guard against harmful development by carefully assessing and processing all development applications. To ensure that planning standards, regulations and procedure are regulated from time to time inorder to accommodate the changes that might otherwise bring conflict. To ensure that strong controls are exercised so that surrounding areas particularly to individual zones do not suffer or deteriorate as various developers carry out their activities and to ensure the use of land. It ensures that planning powers are made to do things which, though proper and desirable, are outside the scope of planning.

3-8 Conclusion

Although the written law in town planning and building control has a wide-scope and it is on paper (very strict), the means for enforcing that law are generally ineffective. Low income people defy the law and erect shanties, while the more prosperous, change from one use to another and annex public land irrespective of what the law says (Yahya, 1980).

The rate of urban growth has outstripped capacity, financial resources and even information on the urbanization process itself. Perhaps most critically of all the physical environment is suffering from gross misuse and an absence of long term planning (Stren & White 1988).

A global assessment of these land regulations and institutions reveals troubling evidence that many government urban land policies are ineffective and frequently result in significant adverse impacts on social welfare and economic productivity.

CHAPTER 4
THE STUDY AREA

4-1 Overview

This chapter looks at the background of the study area in terms of the spatial area and its characteristics. These include physical characteristics where the development activities take place and historical background to help us understand the origin of Ruiru and factors determining its growth. It also looks at the people who make up the municipality and they are the ones we plan for. This is in terms of the population size, employment and incomes. Infrastructure services that are put in place for use by these people are also looked at. Ruiru municipal Council which is the body that manages this area is also analysed here in terms of its organization, management capability, revenue and expenditure. This is to determine its capacity to provide services and control developments.

4-2 Introduction

Ruiru town is located in Kenya's Central Province within Thika District, 20 km from Nairobi City. (Map 4-1) It is the second most populated urban centre under the jurisdiction of Thika District. The town is bordered to the SouthWest by Nairobi City and to the northeast by Thika Town. (Map 4-2) Ruiru is accessible by both railway and national trunk roads and has a fertile hinterland. The town is situated on an international highway connecting Kenya to her northern neighbors of Ethiopia and Somalia.

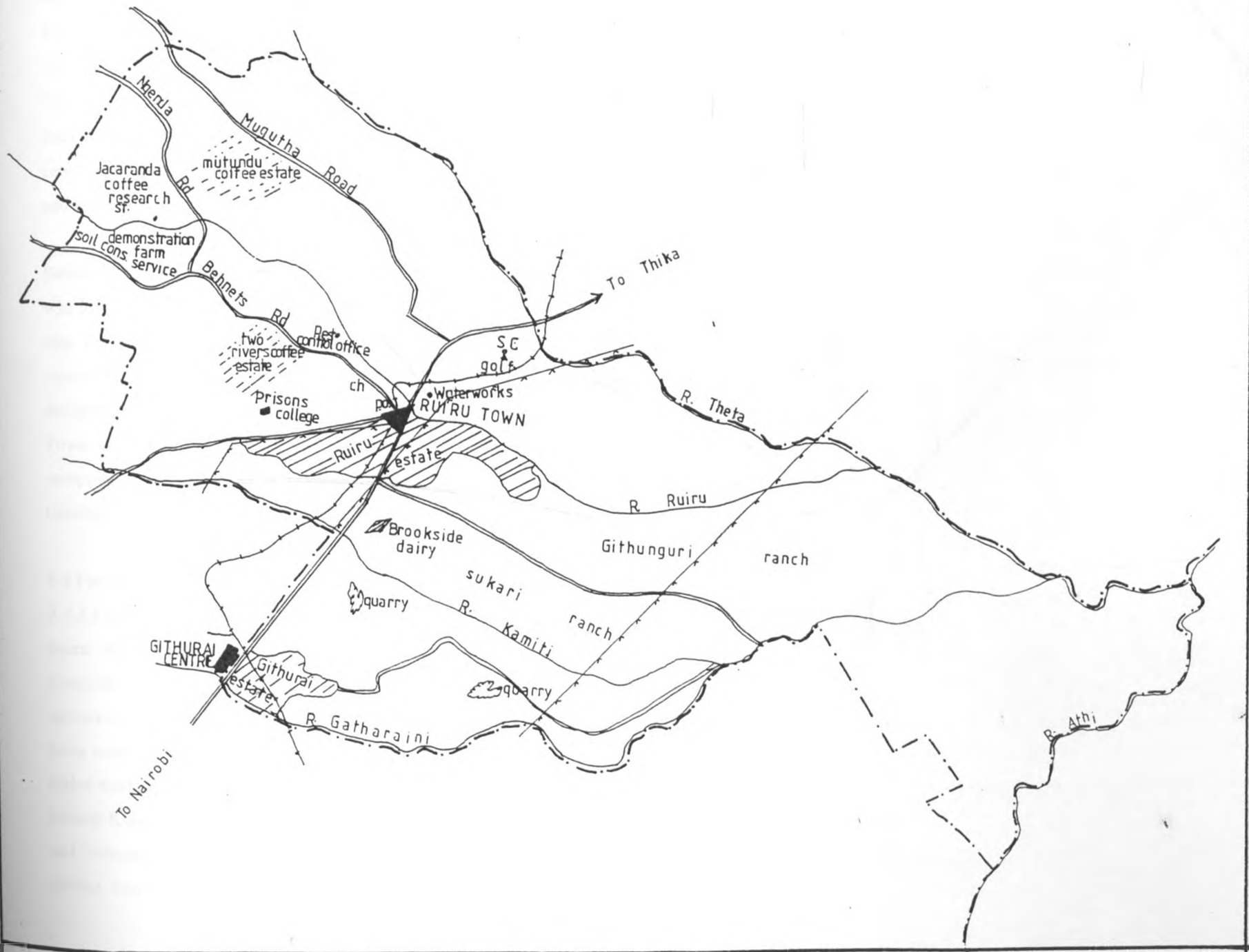
4-3 Historical background of Ruiru municipality

The development of Ruiru town owes much to the construction of Nairobi-Nyeri road. The road was constructed in 1908 in form of a track linking the capital city with administrative centers of Thika, Murang'a, and Nyeri respectively (LADP 1999). The railway line was opened up in 1913 and subsequently a sub-station was opened up in Ruiru. Thus, the town developed as a focal point, linking the hinterland with the major transportation routes i.e. the railway and the road.

KENYA ADMINISTRATIVE DISTRICTS THIKA DISTRICT

Map 4-1 - Thika District in Kenya

RUIRU MUNICIPALITY



LEGEND

MUNICIPAL BOUNDARY
ROADS
RIVERS
RAILWAY
POWERLINE
SC SPORTS CLUB
CH CHURCH
PO POSTOFFICE
SC SPORTS CLUB
ADMINISTRATIVE BOUNDARIES

SCALE 1:100,000

RUIRU MUNICIPALITY STUDY MAP 4-2: RUIRU ADMINISTRATION BOUNDARIES

Source: SURVEY OF KENYA
Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001—2001

With the building of the railway and construction of the road, the area became open for European settlement. European types of farming e.g coffee, sisal and ranching were started on the leased large chunks of land (Map 4-3) As a result, Ruiru grew from a substation town into a service center, providing services to the settler population as well as to the hinterland areas. The development of the Nairobi-Thika road first by bituminisation and later through construction of a dual carriage highway enhanced the growth of Ruiru as an important service center, not only to the settlement population but also to many people of middle and lower areas of Githunguri and Gatundu Divisions (Kibinda 1981).

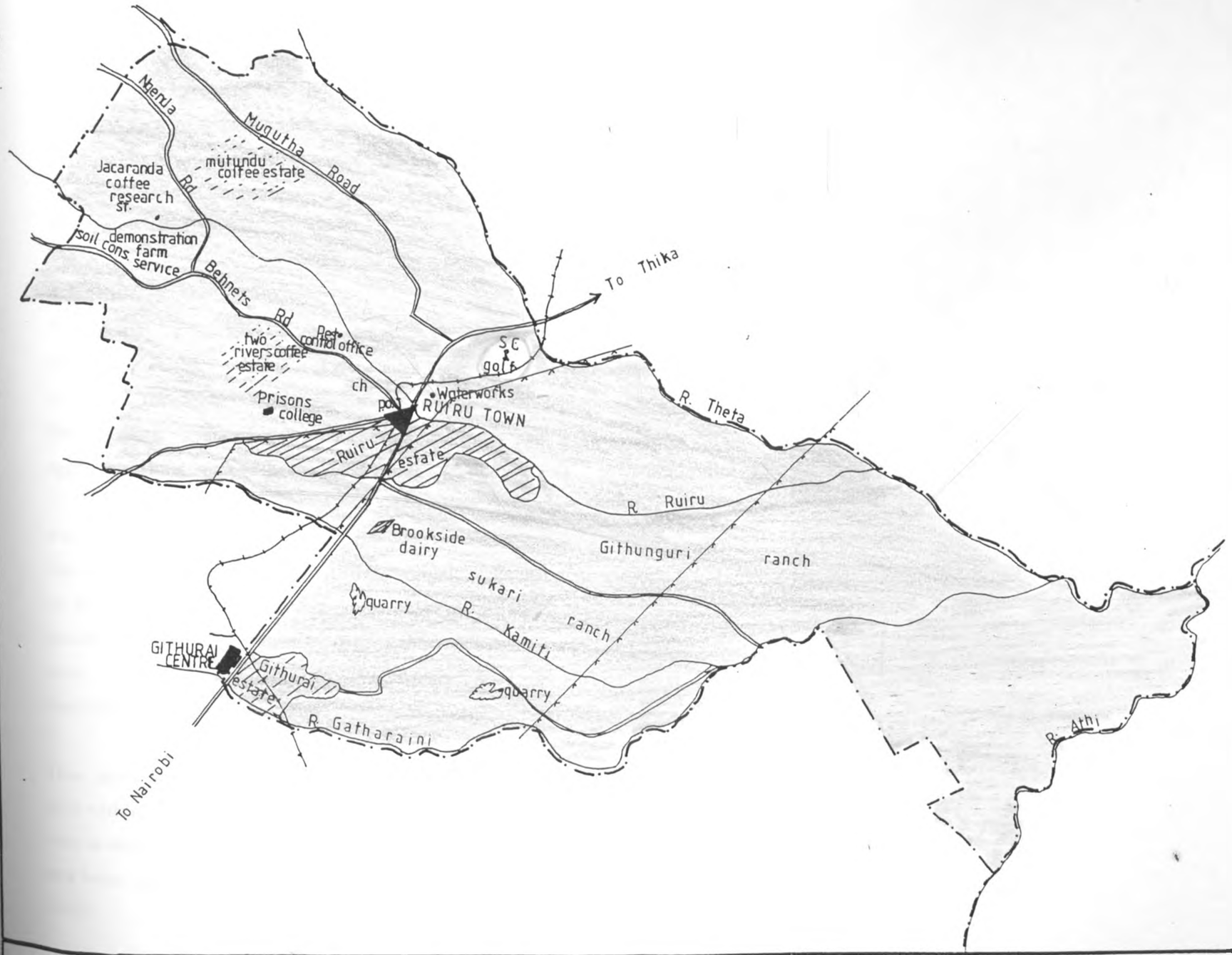
Before independence, Ruiru was administered by Nairobi County Council and was known as the Western Rural District. When the Nairobi county council was dissolved after independence, the town came under Kiambu county council. In the 1974-78 National Development Plan, Ruiru became a designated urban center. In 1986, the urban center was upgraded to Ruiru Town council. In 1997, it was elevated to a Municipal Council, which comprises of nine electoral wards, namely: Biashara, Viwanda, Gitothua, Gatongora, Murera, Theta, Jacaranda, Kahawa sukari and Githurai kimbo.

4-4 Physical characteristics

4-4-1 Location and size

Ruiru Municipal Council is located roughly on 0.5^0 S latitude and 37^0E longitude lines. The town stands on the Nairobi-Thika highway, which is a section of the A2 Nairobi-Addis Ababa trunk road. It is 18 Km from Thika town center. The Municipality covers an area of 292 square kilometre. The major roads crossing the town are Nairobi-Thika highway, Kenyatta highway joining Kiambu and Ruiru Municipal Council and Kwa-Maiko joining Ruiru and Githunguri. In terms of administrative boundaries, it is located in Thika district, Ruiru location. (Ralph, 1983)

RUIRU MUNICIPALITY



LEGEND

- MUNICIPAL BOUNDARY
- ROADS
- RIVERS
- RAILWAY
- POWERLINE
- SC — SPORTS CLUB
- CH — CHURCH
- PO — POSTOFFICE
- SC — SPORTS CLUB
- COFFEE
- SISAL
- RANCHING
- TOWN

SCALE 1:100,000

RUIRU MUNICIPALITY STUDY MAP 4-3 : ORIGINAL RUIRU

Source : SURVEY OF KENYA
Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001 — 2002

4-4-2 Topography

The Municipality is located on the transitional zone of the upper Athi Basin and the kikuyu dissected plateau. The land is gently undulating with a general drainage pattern towards the Athi River Basin. Ruiru River divides the township into two parts. Generally, the town is situated 15,000m above sea level. At a micro level, the town's topography is generally steep in the areas dissected by Mukuyu and Ruiru rivers. The area between the central Business District and the Majengo Estate is trough shaped and liable to floods during heavy rains. (Ibid)

4-4-3 Geology

The geology of the town as observed from the National Atlas of Kenya, comprises of tertiary volcanic rocks, the most important being what is termed as the "Nairobi Stone". This is extensively used for building purposes. The Nairobi stone is underlain by dark ashes and tuffs and is overlain by aggrometric tufts, some of them welded. (Ibid)

4-4-4 Soils

The soil types in this area is derived from volcanic rocks that generally occur on level lands between 1,200 metres and 2,000 metres above sea level. The general nature of the soils ranges from shallow yellow/brown to red friable clays. In geological terms, these are youthful soils formed after the removal of black clay by erosion process, however there are patches of black cotton soil.

Thus, apart from the areas with black cotton soil, the other areas have high soils with high safe-bearing capacity which can support building foundations even at shallow depths. The soils also support shrub vegetation and hence the area being zoned as of medium potential and favorable for urban development. (Ibid)

4-4-5 Climate

The type of climate found in Ruiru is generally characteristic of the climate of Nairobi-Thika region. Here, the rainfall averages between 850-1,000mm per annum and falls in two maximas i.e. the short rains from October to November and the long rains from March to May. The temperatures are generally high, the mean maximum temperature being about 26^0c while the mean maximum temperature is around 14°c. (Ibid)

4-4-6 Existing Settlement Pattern

The existing settlement patterns are scattered all over the municipality (Map 4-4)

1) Some settlements are encountered on the central core ridge, where the main town lies. This nucleus concentration is characterized by storey buildings, which are coming up reflecting the problems of land availability.

2) The other dense settlement is situated in Githurai area which is situated in the periphery of Nairobi city council and Ruiru Municipality. It is very densely populated both by people and buildings, which are as high as ten floors.

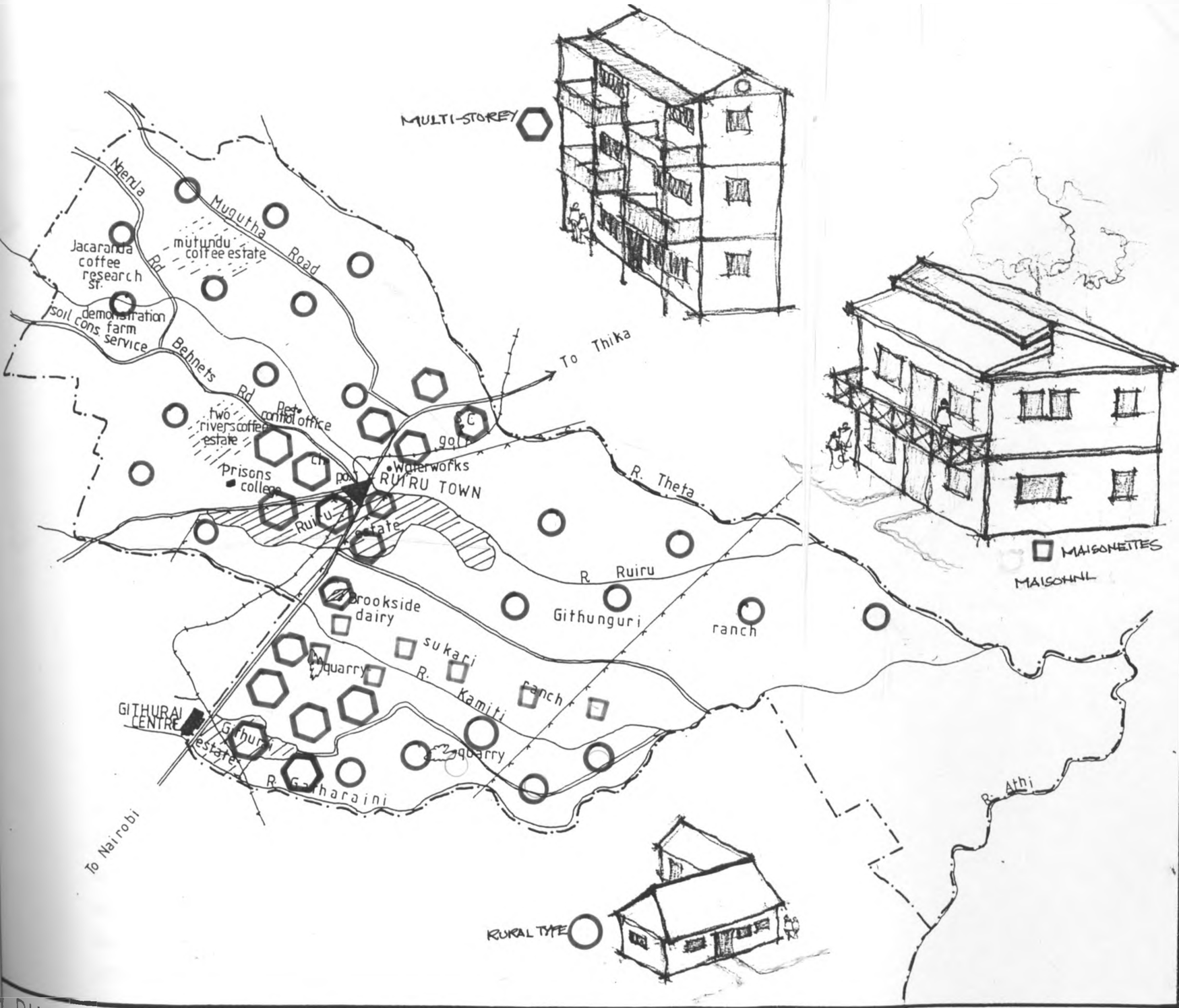
3) The third settlement pattern is linear along the Nairobi-Thika highway, which is, characterized by both high rise buildings and single storied buildings. The high-rise buildings are near the main road and are mainly rental.

4) There are very many pockets of undeveloped land in between these settlements, which makes it very difficult to provide services to these areas effectively.

5) The other settlement pattern is in agriculture land, which is situated in the interiors as one moves further away from the major communication routes. The main type of agriculture practice is coffee farming and subsistence farming.

Other existing patterns are minor and scattered along the busy roads. Elsewhere, mostly in the agricultural estates, the settlements are few and scattered over great distance.

RUIRU MUNICIPALITY



LEGEND

MUNICIPAL BOUNDARY
ROADS
RIVERS
RAILWAY
POWERLINE
SC SPORTS CLUB
CH CHURCH
PO POSTOFFICE
SC SPORTS CLUB

N

SCALE 1:175000

RUIRU MUNICIPALITY STUDY MAP 4-4: EXISTING SETTLEMENT PATTERN

Source: SURVEY OF KENYA
Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001 – 2002

4-5 Socio- Economic Base

4-5-1 Commercial sector:

There are two main commercial areas in the Municipality. These are the Central business District and Githurai shopping centre. The commercial activities in Ruiru Town are concentrated in the town centre and around the market area. There are various commercial activities that are undertaken within the council. These includes banking facilities, which is provided by four banking companies; Kenya Commercial bank, Barclays Bank, National Bank and Post office Bank. Other commercial activities are Postal Services, Wholesale and Retail services, Restaurants etc. As compared to the other centres in the hinterland, Ruiru Municipal Council has a production of higher order goods and services and thus it serves as the source to other smaller centres.

The large numbers of retail shops signify the role of the town in meeting the town's environs population day to day needs. Goods for sale are available from the wholesale shops or purchased from Nairobi. Numerous commercial and wholesale businesses supply common merchandise such as soaps, bread, sugar, grains, hardware, clothing, housing essentials, refreshments and electronics. There is a booming informal sector in the town. Services in the informal sector range from vehicle repair, bicycle maintenance, carpentry and blacksmith, shoe repair, tailoring to welding.

4-5-2 Industrial Sector

The Municipal Council does not have any part of the town that is located for industrial use. This is a major problem since industries and factories are located all over the town making it difficult to control industrial development within the town and provision of services. The industrial landuse in Ruiru town covers 21% or 64 hectares of the townland. Much of the industrial land (40%) has been developed. Most of the areas where these industries are located have encroached on residential land, with no buffer zone dividing the two land uses

and thus any noxious fumes emitted by the industries might have negative effects to the housing areas as illustrated in the development control section later in the text. Availability of land, water and power, plus ideal and reliable means of communication, are some of the factors that made Ruiru ideal for industrial location. Ruiru proximity to Nairobi has made it possible for industries based in Nairobi to have branches in Ruiru or new industrialist to locate their industries in the town. The industries located in the town are as follows;

- Gnanjiran wire Galvanising Mills.
- Spinners and Spinners Ltd.
- Sona Industries.
- Henkel Chemicals.
- Drum and Containers.
- Alpha Knit Ltd.
- Mediate Products.
- Tropical Sunshines.
- Mytrade Ltd.
- Kenya Sterrile Ltd.
- Kenamin Ltd.
- Reclaimed Rubber.
- Wheat Bee Bakery
- Jetlak Foods Co. Ltd

4-5-3 Agriculture Sector

Thika district is predominantly agricultural with a combination of small and large farms. The main cash crops produced throughout Thika district are tea, pineapples and other horticultural crops.

Cattle rearing is carried out in the higher elevated dairy zone in form of zero grazing units. Dairy produce is transported to Nairobi but some is being processed at the Brookside Dairies and a significant amount is sold raw for domestic consumption. Other local livestock activities include the rearing of

and thus any noxious fumes emitted by the industries might have negative effects to the housing areas as illustrated in the development control section later in the text. Availability of land, water and power, plus ideal and reliable means of communication, are some of the factors that made Ruiru ideal for industrial location. Ruiru proximity to Nairobi has made it possible for industries based in Nairobi to have branches in Ruiru or new industrialist to locate their industries in the town. The industries located in the town are as follows;

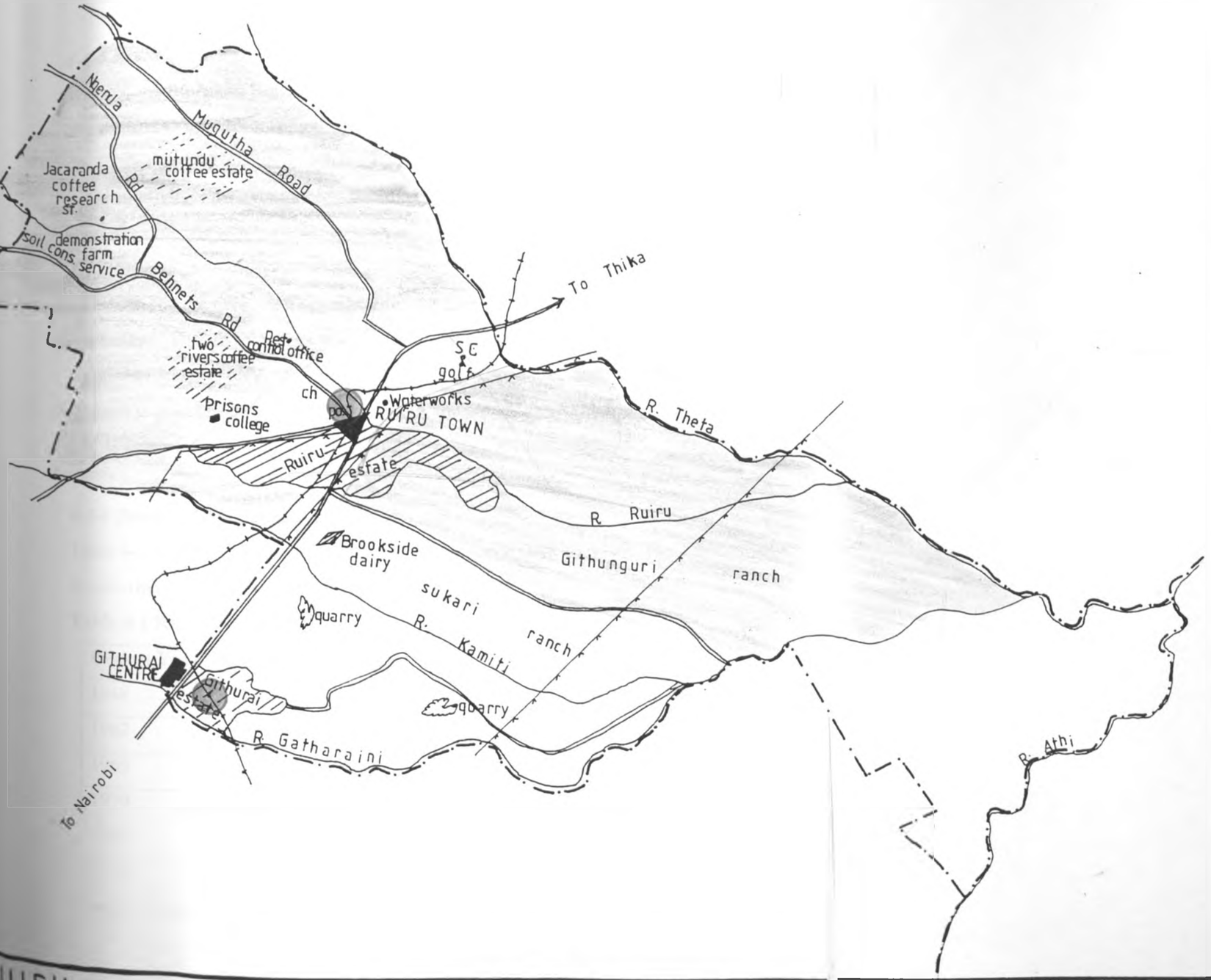
- Gnanjiran wire Galvanising Mills.
- Spinners and Spinners Ltd.
- Sona Industries.
- Henkel Chemicals.
- Drum and Containers.
- Alpha Knit Ltd.
- Mediate Products.
- Tropical Sunshines.
- Mytrade Ltd.
- Kenya Sterrile Ltd.
- Kenamin Ltd.
- Reclaimed Rubber.
- Wheat Bee Bakery
- Jetlak Foods Co. Ltd

4-5-3 Agriculture Sector

Thika district is predominantly agricultural with a combination of small and large farms. The main cash crops produced throughout Thika district are tea, pineapples and other horticultural crops.

Cattle rearing is carried out in the higher elevated dairy zone in form of zero grazing units. Dairy produce is transported to Nairobi but some is being processed at the Brookside Dairies and a significant amount is sold raw for domestic consumption. Other local livestock activities include the rearing of

RUIRU MUNICIPALITY



LEGEND

MUNICIPAL BOUNDARY
ROADS
RIVERS
RAILWAY
POWERLINE
SC SPORTS CLUB
CH CHURCH
PO POSTOFFICE
SC SPORTS CLUB
AGRICULTURAL LAND
MARKETS
QUARRY

SCALE 1:100,000

RUIRU MUNICIPALITY STUDY

MAP 4-5: AGRICULTURAL LAND IN MUNICIPALITY MARKETS LOCATION AND QUARRY

Source: SURVEY OF KENYA
Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001—2002

goats, chicken and pigs. Ruiru Municipal council has two open air markets and is supported by the agricultural marketers. Several other small scale market operations function throughout the town and outside the immediate urban area.

4-5-4 Residential

The major land use in Ruiru Municipality is residential. This has taken up most of the former agricultural land like Sukari ranch and Githunguri ranch. Even the former coffee plantations have disappeared and the remaining ones are being subdivided for eventual residential purposes.

4-5-5 Mining

There are several quarrying operations in the municipality, primarily for stones and ballast. The district does not import stones or hard core for construction purposes, because they are locally available in abundance and consequently revenue is generated in exporting hard core and stones to neighboring districts. Stones cutting is an additional employment source for local residents.

4-5-6 Demographic Factors and Trends

Table 4-1 shows the population census for the years 1948 to 1999. The table reveals that the population has been increasing rapidly.

Table 4-1 Ruiru municipality population census

Census Year	Population
1948	612
1962	1624
1969	1674
1979	1718
1989	23,393
1999	109,574

Source: Central bureau of statistics

According to the 1979 population census, Ruiru Township had a population of 1,718, which then later shot up to 23,393 people in 1989. The 1989 population census revealed that the town had the greatest intercensal population growth rate of 26.1 % (Kenya 2000). As compared with other satellite towns (Map 4-6) this is the highest and also for the whole country. Up to this period, the town had not been elevated to municipality and the boundaries had not been extended. The population was distributed within an area of $50km^2$ This gave a density of 37pp/ km^2

In 1994, Ruiru township attained its municipal status followed by extension of municipal boundaries to include an area of about 292 km^2 This was followed by an increase of the total population which grew almost five times.

Table 4-2 and 4-3 gives a breakdown of the 1989 and 1999 population census respectively. The 1999 population census registered a total population of 109,574 persons.

Table 4-2 Ruiru Municipality 1989 population census by location

1989	Male	Female	Total	Households	Area km^2	Density
Ruiru	26,961	2,478	48,439	14,619	289	168
Kiu	7,903	6,984	14,887	4,242	150	99
Mugutha	4,138	3,476	7,714	1,912	67	114
Ruiru	13,504	9,889	23,393	7,570	49	477
Theta	1,416	1,129	2,545	895	23	111

Source: Central bureau of statistics 1989

According to the 1979 population census, Ruiru Township had a population of 1,718, which then later shot up to 23,393 people in 1989. The 1989 population census revealed that the town had the greatest intercensal population growth rate of 26.1 % (Kenya 2000). As compared with other satellite towns (Map 4-6) this is the highest and also for the whole country. Up to this period, the town had not been elevated to municipality and the boundaries had not been extended. The population was distributed within an area of 50km^2 This gave a density of 37pp/ km^2

In 1994, Ruiru township attained its municipal status followed by extension of municipal boundaries to include an area of about 292 km^2 This was followed by an increase of the total population which grew almost five times.

Table 4-2 and 4-3 gives a breakdown of the 1989 and 1999 population census respectively. The 1999 population census registered a total population of 109,574 persons.

Table 4-2 Ruiru Municipality 1989 population census by location

1989	Male	Female	Total	Households	Area km^2	Density
Ruiru	26,961	2,478	48,439	14,619	289	168
Kiu	7,903	6,984	14,887	4,242	150	99
Mugutha	4,138	3,476	7,714	1,912	67	114
Ruiru	13,504	9,889	23,393	7,570	49	477
Theta	1,416	1,129	2,545	895	23	111

Source: Central bureau of statistics 1989

KENYA 1:100,000

NAIROBI & ENVIRS

RUI 109,574

KIAMBU 60,605

KIKUYU 156,131

NGONG 20,701

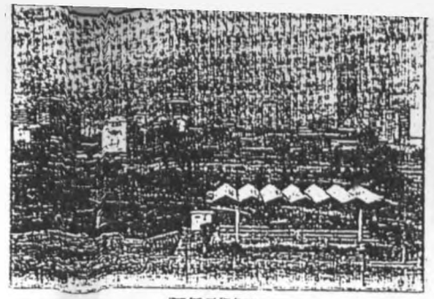
ONGATA RONGAI
35,871

ATHI RIVER 27,168

THIKA

NAIROBI

SCALE 1:100,000



NAIROBI & ENVIRONS

SCALE 1:100,000

ADMINISTRATIVE BOUNDARIES

CENTRAL PROVINCE

NAIROBI PROVINCIAL AREA

EASTERN PROVINCE

RIFT VALLEY PROVINCE

Published by Survey of Kenya
P.O. Box 30046 Nairobi

REFERENCE

ABBREVIATIONS

ALTITUDE TINTS

SOURCE: SURVEY OF KENYA

MAP 46: POPULATION OF NAIROBI SATELLITE TOWNS

Table 4-3 Ruiru Municipality 1999 population census

1999	Male	Female	Total	Households	Area km^2	Density
Ruiru	56,982	52,592	109,574	34,274	290.8	377
Kui	28502	27,887	56,389	16,780	149	378
Mugatha	6,868	6,330	13,198	3,656	66.4	199
Ruiru	20,138	17,246	37,384	12,861	50.2	745
Theta	1,474	1,129	2,603	977	25.2	103

Source: Source: Central bureau of statistics 1999

As can be seen from Table 4-2, the original Ruiru, which is the current CBD, has continued to grow in population steadily with the current population density being 745pp/km^2 as compared to 1989, which was 477pp/km^2. The population density has almost doubled within the ten-year period.

Kiu sub-location covers the current Githurai area and Kahawa Sukari. The census revealed that the population growth rate in this area has been very rapid. It has grown from 14,887pp/ to 56,389 people. The density has increased from 99pp/km^2 to 378 pp/km^2. This population growth rate is mainly caused by the Githurai and Kahawa Sukari housing estates, which have cropped up recently. These were mainly land buying companies, which subdivided their farms and sold to private individuals. The population in this area has mainly migrated from Nairobi to reside in Ruiru but is still working there.

4-5-7 Future population projections

The task of making projections is flout with many difficulties because of insufficient knowledge regarding certain demographic dynamics which influence the pattern of growth of the population. Certain constraints are encountered in making future population projections with the use of inter-censal data for example effects of migration on population growth of the town and change of boundary between one census and the other.

As with the case of projecting urban populations, as in this study, the role of migration component in influencing the growth of population is of crucial importance. The problems with regard to migration component in population forecasting is that it is difficult to predict it, since migration changes from time to time between areas. Through observation of the past population growth trends and with statistical data it becomes possible to make forecast of the population which can be used for future planning purposes. Population trend of the municipality has been very rapid with the rate going as high as 26.1 %. The population growth rate using the geometric method for the years 1989-1999 is 63%. This is an abnormal growth rate.

Several factors can be used to explain this phenomenon though not with certainty. One is the subdivision of former ranching schemes bordering Nairobi. These are Githurai and Kahawa Sukari and subsequent settlement into these areas. The second factor is the government's policy of Dictrict Focus for Rural Development strategy which saw industries move to Ruiru from Nairobi creating employment and in migration. The third factor is the extension of the Municipal boundaries in 1997 from $50km^2$ to $292km^2$ However the fact that the boundaries were extended to rural land rules out such a high population increase. It is difficult to project the future population growth rate of this area because of the unstable growth rates for the two intercensal years. However the researcher has used 26.1% which was quoted by CBS for 1989 period.

Table 4-4: Ruiru Municipality future population projections

Year	1999	2002	2005	2010	2015	2020
Pop^n	109,527	219,095	438,272	1,391,865	4,420,281	14,307,916

Source: Field study 2002

4-5-8 Employment and Incomes

Table 4-5 gives the household income levels in Ruiru Municipality. According to the table, majority of the people earn between 0-10,000 Kshs per month. The

incomes are generally high as noted from the table with 22% earning more than 50,000 Kshs. per month.

Table 4-5: Household income levels in Ruiru Municipality

INCOME (Ksh)	Frequency	%
0-10,000	21	28.8
10,001-20,000	18	24.7
20,001-30,000	11	15.1
30,001-40,000	7	9.6
Over 50,000	16	21.9
Total	**73**	**100**

Source: Field household survey, 2002

4-6 Infrastructure Services

4-6-1Water

Ruiru Municipal council is not a water undertaker. Water in the municipality is provided by the Ministry of water development and the deficit is met by private boreholes. Table 4-6 gives the projected water demand for the municipality. The figures are overwhelming for a local authority that does not provide water currently.

Table 4-6Ruiru water projected demand

Year	Population	Projected Water Demand (cubic m) per day
2005	438,272	32870400
2010	1,391,865	104389875
2015	4,420,281	3315210075
2020	14,307,916	1073093700

Source: Field survey 2002

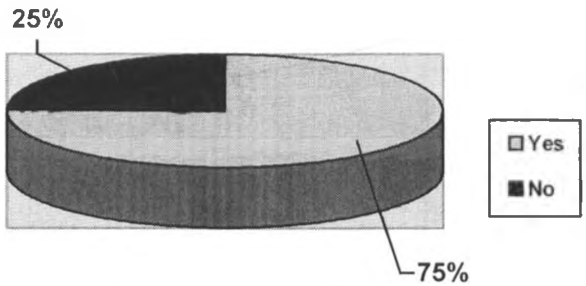
4-6-2 Sewerage

Ruiru town has no developed water – born sewer. However the town is served by ten septic tanks which are distributed throughout the town. The emptying and servicing of these tanks is undertaken by Ruiru Municipal Council. The other areas are served by pitlatrines which is a health hazard due to very high population densities.

4-6-3 Electricity

Ruiru Town has a permanent electricity supply, from the Kenya Power and lighting sub-station, which is located within the town. (Map 4-7). The rural electrification program has been responsible for extensive electricity distribution throughout Thika District. Most factories and service areas are connected as well as all public institutions, trading centres, and coffee factories. This is further confirmed by Figure 4-1 which shows that 75% of the interviewed population is connected to power supply.

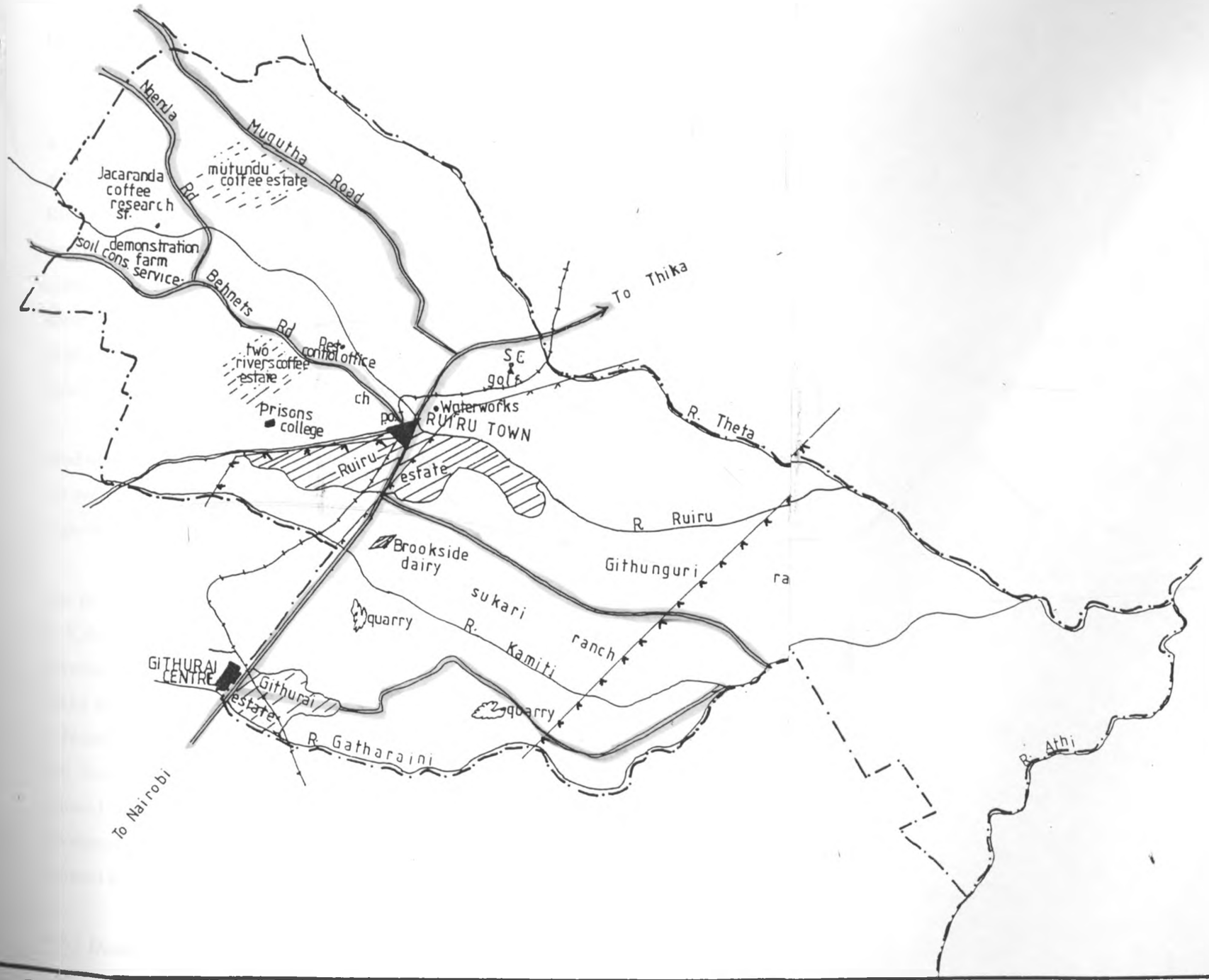
Figure 4-1 Availability of electricity



4-6-4 Roads

The main traffic routes are constructed to permanent standards (bitumen). These roads are as shown in Map 4-7. The roads are maintained by the Ministry of Works. Only Githunguri/ Theta road is in good condition, while the condition of the other roads is deteriorating.

RUIRU MUNICIPATY



LEGEND

MUNICIPAL BOUNDARY

ROADS

RIVERS

RAILWAY

POWERLINE

SC SPORTS CLUB

CH CHURCH

PO POSTOFFICE

SC SPORTS CLUB

POWER LINES

ROADS

SCALE 1:100,000

RUIRU MUNICIPALITY STUDY MAP 4-7 ROAD NETWORK AND POWER GRIDLINES

Source : SURVEY OF KENYA
Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001 – 2002

4-6-5 Bus park

The council has provided a bus park, which is strategically situated within the town centre. It has a parking capacity for 37 matatus. The facilities provided at the buspark are not adequate. No lorry park is provided. No traffic control arrangements i.e. traffic lights or parking metres are provided.

4-7 Community Facilities and Services

4-7-1 Housing

Ruiru Municipality has high, medium and low-density housing. The high density consists of Majengo and Githurai estates. Majengo estate has 100 units contained in 50 blocks of flats. The units comprise of three bedroom houses, comprising of kitchen, bedroom and livingroom. From the field survey, it was evident that majority of the units in the estate were occupied by more than one family.

Medium density housing comprise 20 maisonetes in Kangangi Estate. There are two bedroom units, which are occupied by the middle and sometimes the high-income groups within the town.

The private sector has come in to satisfy the housing shortage in Ruiru. There is Kahawa Sukari Estate, formerly Sukari Ranch, Githurai Estate, Kahawa Wendani, Githunguri Ranching and private residential areas along the Nairobi-Thika highway. The housing demand for Ruiru cannot easily be assessed due to Nairobi influence. However, the number of housing development companies that have bought land for subdivision into housing plots point to the high demand for housing. Beyond areas that have been designated unsuitable for development, there is seemingly enough land available to meet the housing demand for over five-year period.

4-7-2 Health

There is only one public health centre in Ruiru in use, while the others are private. There are numerous clinics with a concentration of five in the town

centre. There are also public clinics at the General service Unit camp and another one in Ruiru Prisons Training School. However, no health facility is provided by the council.

4-7-3 Education

The town is well catered for in education. There are 50 pre primary schools, 40 primary schools and 7 secondary schools. The proximity of the town to Nairobi City has double advantages. Children from Ruiru attend schools in the city while some city residents send their children to Ruiru schools. However, the municipal council provides only teaching services in terms of paying teachers manning its three nursery schools. It has employed eight teachers. The nursery school buildings belong to the local community. The council provides no secondary or primary education facilities.

4-7-5 Other facilities

Ruiru Municipality is served by one post office which is adequate. The Ruiru Municipal Council has provided very few community facilities. This is evidenced by lack of social halls, mortuaries, cemeteries, fire stations or a recreation area. The only facility provided for is a stadium, which is neither built nor fenced. This is one of the activities that the council needs to develop in order to serve the community better and earn revenue from such facilities like stadium and social hall.

4-8 Administrative Functions of the Town

The District officer's office is located within the town's center. Various government departments are represented in the office. At the Council level the following are the main services administered and provided by the Council

1. Maintenance of roads, lavatories, market, bus and 'matatu' parks.
2. Policy formulation, co-ordination and implementation of development within the Municipality.

These include roads, sanitation, education, social activities etc. Apart from the D.O. offices, there are other government ministries and parastatals located in the town. They include:

- Ministry of Public works which maintains roads within the region
- Ministry of Land Reclamation, Regional & Water Development (MLRRWD), providing water to the town residents.

4-9 Institutional Capacity

4-9-1 Ruiru municipality

Ruiru municipality is a local authority. Local authorities derive both their existence and powers from the Central Government, through statutory and legislative authority. In Kenya, the Local Authorities derive their powers and functions from the Local Government Act (Cap. 265). Under this statute, Local Authorities are granted authority to administer and provide services in designated areas. There are two categories of services, which are compulsory and mandatory and voluntary or permissive services. The compulsory services are those which all local authorities are by law expected to perform (LGA Cap 265). For Ruiru municipality, it is expected to provide primary education, roads and public health.

4-9-2 Constitution of the council

Sections 12,13 and 14 of Cap 265 explains that the councils consist of such a number of councillors as may be elected, nominated or appointed. Ruiru Municipal Council consists of 9 elected councilors and 3 nominated councilors inclusive of the area district officer. To enable the council to perform its functions effectively and efficiently, committees are appointed. The council exercises its powers by discussing, debating and resolving issues through the committees. The law provides for appointment of committees for general or specific purposes, as the Local Authorities may deem fit for the better regulation and management of its functions. The number of committees to be appointed by a local authority depends on the size of its council and the type of the local authority. Under section 92 of the Local Government Act, all Local

Authorities must have a finance committee and every councilor must be elected to at least one committee. This enables every councilor to participate in policy formulation. Ruiru municipal council has the following committees:

- Finance, staff and general purpose committee
- Town planning, works and housing committee
- Education, public health, and social services committee
- Environment committee

At the committee stage, the matter is discussed, analysed and disposed of. After a committee has resolved on a particular issue or motion then the motion is put before the full council for its approval. The committee resolution may be rejected and re-submitted to the committee for consideration.

4-9-3 Management capability

The Council has a work force of 130 people, headed by the Town Clerk, who is the Chief Executive of the council. Section 107 of the Local Government Act provides that unless the minister otherwise directs, there shall be appointed by the Public Service Commission to every municipal council a town clerk. He is responsible for implementing all council decisions with the help of various departmental heads.

The council has various departments. These are:

(i) Town Clerks Department

This department is charged with the day to day functions and the coordination of all council affairs. It is headed by the Town Clerk who is the Chief executive. The senior administration officer assists the town clerk.

(ii) Treasurers department

The town treasurer, who is in charge of the finances, heads this department. The department is in charge of the management of payments and the collection

of the council revenues such as land rates, licenses, market gate fees, plot rent, etc.

(iii) Works Department

The works department is mainly a service department, which is charged with all the maintenance and repairs of council buildings and roads. This department contains the enforcement and inspectorate sections. It is the department undertaking development control in Ruiru Municipality. Though the department is well equipped, it does not function optimally due to the high cost of maintaining the equipments, as they require much capital which is in severe shortage. The works department headed by the works officer experiences internal conflicts between the enforcement and inspectorate sections. This department is very ineffective in enforcing development control as illustrated by the number of uncontrolled developments in this municipality.

(iv) Social Services Department

This department deals with social development matters, women's groups, social welfare, sports, cultural development and nursery schools. The department has social workers who carry out their work at grass-roots level.. The department which is is supposed to work at the grassroots level, but is not effective because of inadequate personnel and finances, is headed by a social worker

4-9-4 Council revenue and expenditure

Ruiru Municipal Council has never had its books of accounts audited, since its inception. All accounting records are maintained in their primary state mostly in form of summaries and schedules. Both receipt and payment cashbooks are maintained and bank reconciliation statements are prepared regularly. The treasurer, who is the council chief finance officer, manages the council finances in the treasurers department. The Council over the years, has been having a surplus budget with a balanced budget in the 1997/98 financial Year. The Council has not done any financial assessment or any revenue potential

study. The exercise is deemed to be important since the council revenue generation has stagnated over the years. No business census, bus survey or market census has been conducted. The revenue collected from these major sources is unrealistic and falls short of potentials of respective sources. Cases of cheating and stealing due to loopholes in control systems and supervision have been reported. Most of the revenue collectors are not trained on basic cash management and this necessitates in-house training of revenue collectors to improve on their efficiency in revenue collection.

The major revenue sources are as listed in table 4-7. The council also expects to boost its revenue from crop cess income since the Government has re-introduced the policy of channeling crop cess income through the council. Crop cess income in 1996/1997 financial year, accounted for over 60% of the council's total income.

Table 4-7: Ruiru Municipal Council income 1993/94 to 1997/98 (Kenya Pounds) one Kenyan pound, k£=kshs20

INCOME/YEAR	1993/94	1994/95	1995/96	1996/97	1997/98
Coffee Cess	191089	189086	383740	112207	–
Tea Cess	11087	36201	46500	36436	35778
Buildings and Plans	3899	3899	15100	32199	23787
Service Charge	311282	257025	408000	450000	139512
Land Rate & plots Rents	40334	40334	177550	107195	5654
Market Gate Fees	50354	50354	106120	173605	179750
House Rent	22182	22955	60000	25821	69468
Licenses	67187	67187	138200	157563	178706
Nursery School	1134	2610	3100	1692	1725
Hire of Service	14378	14378	22100	34934	25954

Source: LADP- Ruiru municipal council: 2001

The Council spent Kshs.4 m in infrastructure project management in 1997/98 financial year. This is the most recent capital project and it was financed by income from service charge. This was in opening earth roads and patch potholes in the CBD. Another capital project financed by income from service charge is the expansion of the office block. The Council will require improving on revenue generation to enable them to have more capital projects and maintain the existing infrastructure. Although the municipality is currently enjoying a budget surplus income as shown in table 4-8, it is not enough to undertake major developments. The table also indicates that there was a major revenue decline between 1996/97 and 1997/98 from Kshs 1,684,286 to Kshs 662,863, which should be a major concern for the local authorities because their responsibilities are increasing with increased population and not viceversa.

Table 4-8: Ruiru Municipal Council income and expenditure (Kenya Pounds)

Year	Income	Expenditure	Surplus/ Deficit
1993/94	760084	592742	167342
1994/95	701187	859827	158640
1995/96	1094830	1801351	707521
1996/97	1684286	914657	769629
1997/98	662863	574397	88466

Source: LADP- Ruiru municipal council: 2001

Table 4-9 shows the Ruiru municipal council expenditure. The total expenditure was spent on maintaining the council, but no major development project was undertaken. This is despite the fact that the council was enjoying a budget surplus. If the current trend of declining revenue continues, even running the council will be a problem.

Table 4-9: Ruiru Municipal Council Expenditure by Department (Kenya Pounds)

Expenditure	1993/94	1994/95	1995/96	1996/97	1997/98
Clerk Dept	149438	160676	295804	40685	43617
Cess	-	-	393740	101388	-
Treasurers Department	46890	48359	196090	138245	147273
Building Works and Planning	23177	219050	502349	62788	37568
Nursery S. and social Services	15106	15231	62977	36007	44681
Market and trade	16343	32679	47386	78424	26623
Water and sewerage	45035	39818	74910	45833	45714
Service charge Dept	-	257025	-	300731	104686
Housing	240073	22955	60000	-	-
Licenses	-	-	8000	-	-
Land rates and Plot rents	-	-	13000		-
Conservancy Parks and Gardens	56680	64034	14095	110556	124235
Totals	592742	859827	801351	914657	574397

Source: LADP- Ruiru municipal council: 2001

4-9-5 Council assets

The council inherited most of the assets from Kiambu County Council and the former land buying companies. However, there has never been official transfer of the assets and land title deeds to the council. Most of the title deeds are

either with the Kiambu county council or they had not been obtained from the Ministry of Lands. The council had also inherited pieces of public utility land from the land buying companies. The title deeds to these pieces of land have not been forwarded to the municipality. The council has taken the initiative to start the process of obtaining these title deeds and official transfer of all the assets. An inherited NHC loan from the county council, which was for the office block construction is the only debt the council is serving. It is very important for the council to be the custodian of all its properties and to maintain an inventory for this is a major source of revenue for the cash strapped local authorities.

CHAPTER 5

RUIRU DEVELOPMENT STRUCTURE

5-1 Introduction

This chapter looks at the development structure of Ruiru Municipality. It gives an analysis of development planning in the Municipality by looking at the population characteristics in terms of densities and distribution because in planning developments we plan for the people. Their settlement pattern influences the structure of the municipal council and the level of infrastructure required. Land issues are looked at interms of tenure because the kind of land tenure and ownership influences the developments that will take place and the level of control the municipality can exercise. The plot sizes have an impact on development planning because very small plot sizes means more people and thus more services demanded. They also indicate where the council can move in and stop further subdivision. They are also an indicator of intensity and direction of growth. There is a nexus between landvalues and planning. A planned area has higher land values than an unplanned area. Land values also indicate direction of development because highly developed areas have high landvalues than undeveloped areas.

The chapter also analyses provision of services which is a developments planning issue. The level of services provision also indicate the effectiveness of the council to provide services. Ideally, a planned area should have all the services in place and not a situation where developments precede services. The chapter also looks at development agents in the municipality, which are land buying companies because they also shape the development structure of the municipality. The organization structure of these development agencies influences development planning and control. The last section of the chapter looks at the influence of Nairobi in physical development of the municipality. This is because the direction of growth of Nairobi City is towards Ruiru.

5-2 Population Characteristics

Population growth rates and projections have been discussed in chapter four. The major characteristics to be discussed here are the densities and distribution. This is in relation to their impact on service provision and physical development structure of the municipality.

5-2-1 Population density

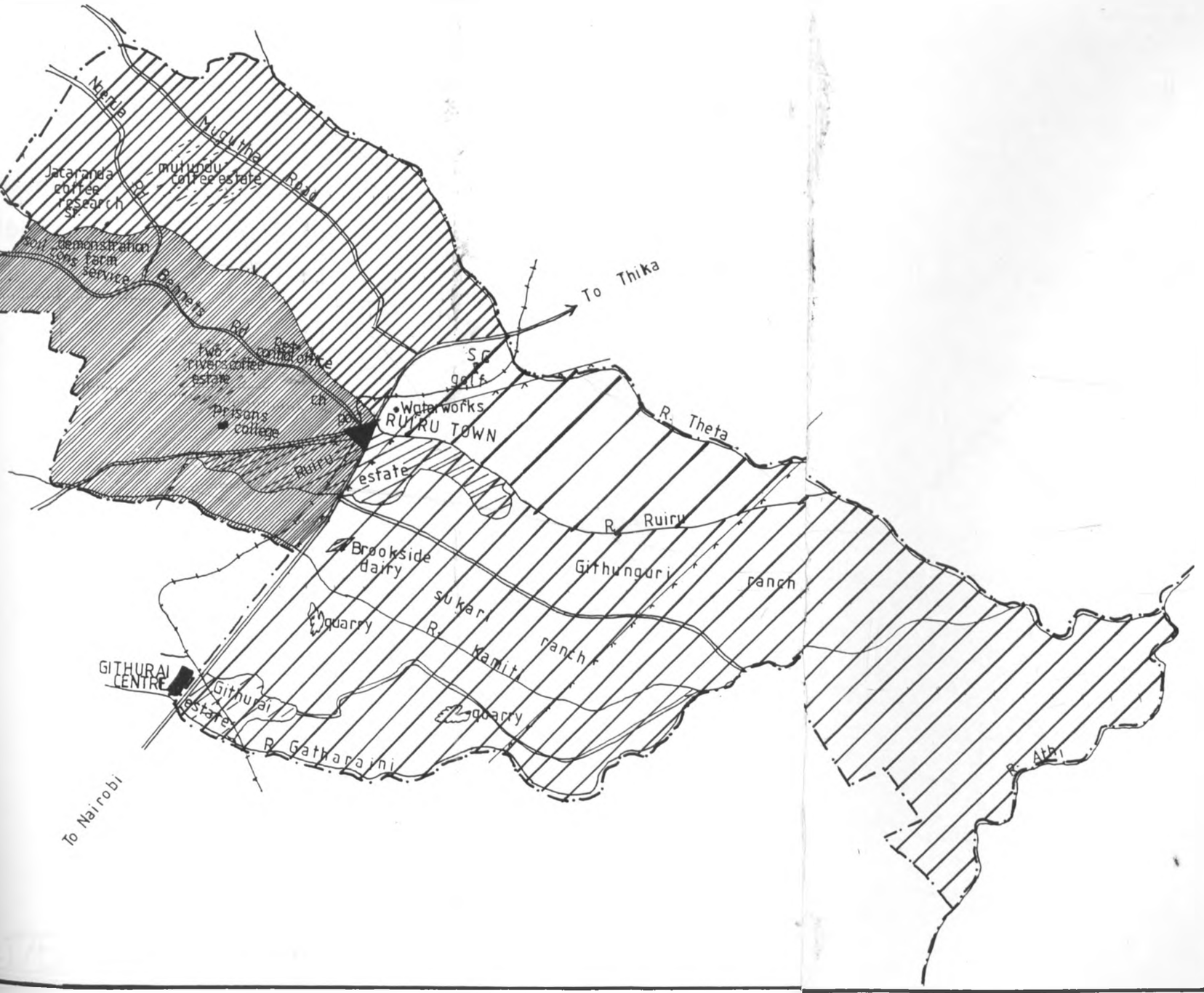
Map 5-1 shows the population densities of Ruiru Municipality. As shown in the Map, Ruiru Business District and the immediate surrounding areas have the highest population density (745p/km^2) followed by Kiu (378p/km^2). Kiu consists of Githurai and Kahawa Sukari. However Kiu has more households (16,780) than Ruiru (12,861). This portrays its residential character and the fact that Githurai has very many high-rise buildings which accommodate very many people has led to these high densities. This is also the area bordering Nairobi and the fact that there are very many households portrays that it is a dormitory area of Nairobi. Mugutha with a density of 199p/km^2 is basically a coffee growing area and even the subdivided areas have not been settled. This is one area with very many pockets of undeveloped land. The same case applies to Theta, which has the lowest density. This can be attributed to the fact that it is an agriculture area with rural characteristics. There is need for the local authority to preserve these two areas as agriculture land since they have retained their agriculture characteristics without any control.

5-2-2 Population distribution

Population distribution is a guideline in planning for services because it indicates areas of greatest demand, which are priority areas and which areas should be set-aside for urban agriculture and future urban growth.

Map 5-2 shows the population distribution of Ruiru municipal council. As can be seen from the map, the population is not evenly distributed over the whole municipality area. The areas near the main roads and the major centers have more people than the areas near the interior. This is due to the fact that these

RUIRU MUNICIPALITY



LEGEND

MUNICIPAL BOUNDARY
ROADS
RIVERS
RAILWAY
POWERLINE
SC SPORTS CLUB
CH CHURCH
PO POSTOFFICE
SC SPORTS CLUB

RUIRU LOCATION
MURERA LOCATION
KIU LOCATION
THETA LOCATION

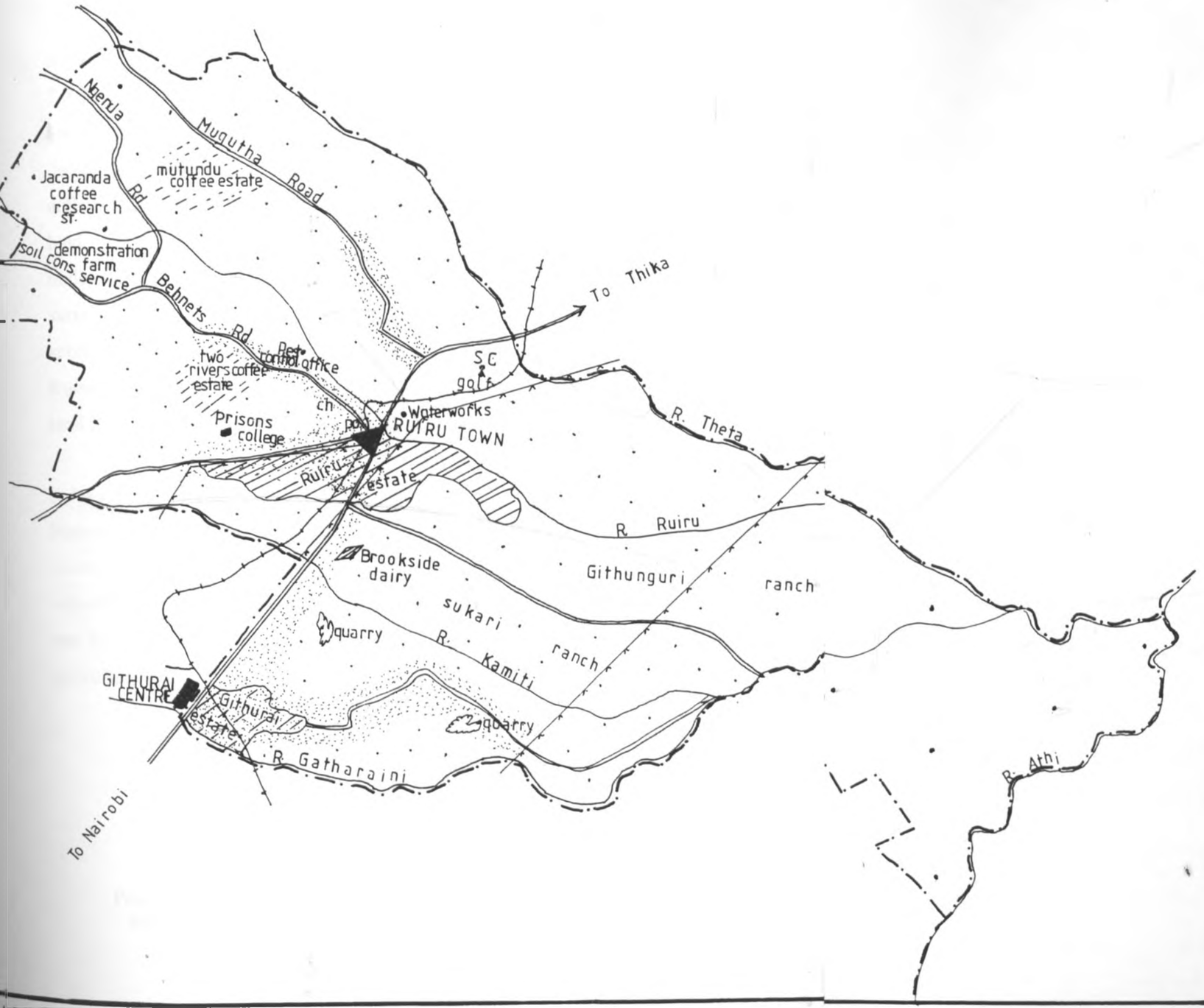
SCALE 1:100,000

RUIRU MUNICIPALITY STUDY MAP 5-1 POPULATION DENSITY

Source: SURVEY OF KENYA
Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001 – 2002

RUIRU MUNICIPALY



LEGEND

MUNICIPAL BOUNDARY
ROADS
RIVERS
RAILWAY
POWERLINE
SC SPORTS CLUB
CH CHURCH
PO POSTOFFICE
SC SPORTS CLUB

DENSE DISTRIBUTION
MEDIUM DISTRIBUTION
SPARSE DISTRIBUTION

N

SCALE 1:175000

RUIRU MUNICIPALITY STUDY MAP:5-2 POPLON DISTRIBUTION

Source SURVEY OF KENYA
Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001—2002

areas have more services and are easily accessible. These areas should be adequately provided with services so as to be the major growth centres and the areas without more people should be preserved for agriculture.

5-3 Land Issues

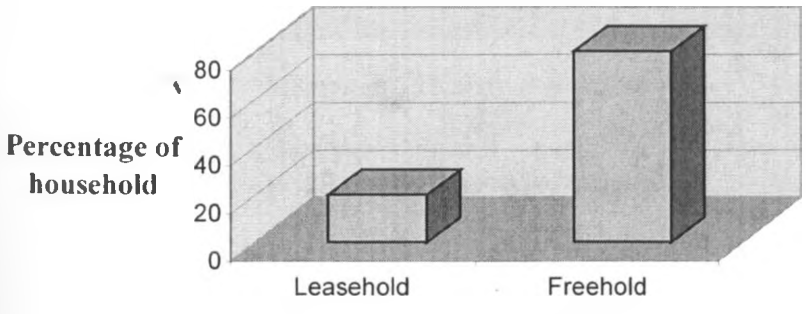
5-3-1 Land ownership

Land within Ruiru municipality falls under various categories according to ownership. These categories are: Government land, Trust land held by the local authority and privately owned land. Government land is currently developed land. The deferred plots have been allocated for private development. It is under leasehold tenure. Municipality land is the land which has been surrendered by the various land buying companies or ranching schemes as they subdivide their land according to plan. The municipality land is also located in Ruiru town. This land falls under both freehold and leasehold tenure. Private land is land held by private individuals and land buying companies

5-3-2 Land tenure

Figure 5-1 illustrates the various types of tenures in the municipality. According to the figure most of the municipality falls under freehold tenure with 85% of the interviewed population holding land under freehold titles. This can be attributed to the recent expansion of the municipality into former agriculture land which usually falls under freehold tenure.

Figure 5-1: Land tenure

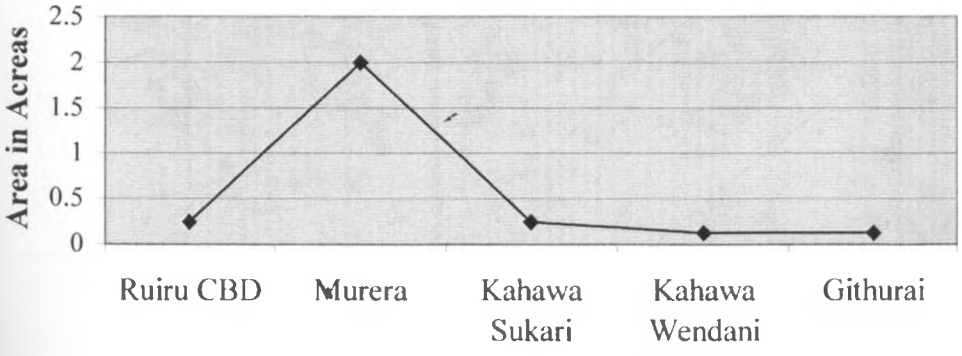


Map 5-3 shows the land tenure distribution. The freehold land is concentrated on the interior of the Municipality as one moves further away from the town center. Large tracts of land are under plantation agriculture on freehold tenure. Within these areas, there are no services such as the shopping facilities, schools, health facilities, transportation etc. Population densities are low because the very nature of land use does not encourage intensive settlement of the land. Urbanization of the area would require more intensive settlement of people to justify investment on development of urban infrastructure.

5-3-3 Plot sizes

Figure 5-2 shows the distribution of plot sizes. The areas near Ruiru town have small plot sizes than the areas into the interior. But as one nears Nairobi the plot sizes become increasingly smaller with Githurai area having the smallest plot sizes of 250m^2. This is a major indicator of growth trends of this Municipality. It is a major indicator of how and when to provide which services. It also guides the local authority on where to move in and prevent further subdivisions into small uneconomical sizes, which would be detrimental to the environment.

Figure 5-2: Decrease of plot sizes with distance



RUIRU MUNICIPALITY

LEGEND

MUNICIPAL BOUNDARY
ROADS
RIVERS
RAILWAY
POWERLINE
SC SPORTS CLUB
CH CHURCH
PO P.O STOFFICE
SC SPORTS CLUB
Leasehold
Freehold
Lensehold + Freehold

SCALE 1:100,000

RUIRU MUNICIPALITY STUDY MAP 5-3: LAND TENURE DISTRIBUTION

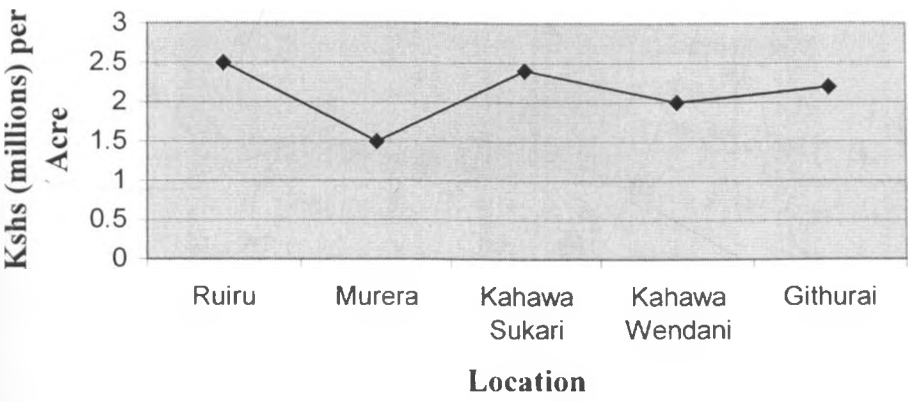
Source: Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001— 2002

5-3-4 Land values

Figure 5-3 shows land values distribution in the municipality. Land values are the highest in the township declining towards Nairobi along the Nairobi-Thika highway but they increase as one approaches Kahawa Sukari and decline towards Githurai and then start increasing towards Nairobi. Along the Ruiru Kiambu road the land values are highest in Ruiru municipality and decline as one moves towards the interior.

Figure 5-3: Land values variance from Ruiru CBD.



5-4 Services Provision:

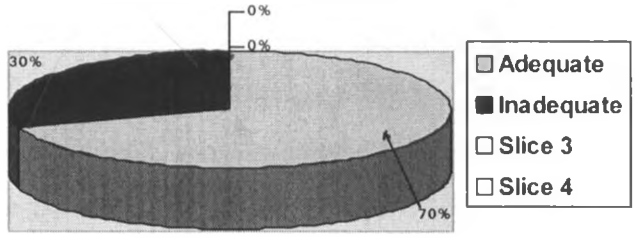
5-4-1 General position

Provision of services by the municipalities in our country has been very poor. 80% of them provide almost no services and even the ones who are in a position to provide are not delivering. There has been a public outcry regarding the performance of local authorities and service deliveries. Nairobi city council, which should set a good example for the other municipalities is a very bad example riddled with corruption; where services are only offered after salaries and wages have been paid. (Karuga, 1993). Ruiru municipality is a typical example of all the other local authorities. Judging by the services it delivers; it does not qualify to be a municipality.

5-4-2 Water

Figure 5-4 gives a breakdown of water situation in Ruiru Municipality in terms of its adequacy. Of the total interviewed population, 70% indicated that the water is enough. However, this is in total contrast to their demand that their first priority for the local authority should be water provision. This can be attributed to the fact that people have resorted to other water sources other than waiting for the local authority.

Figure5-4: WATER QUANTITY



Of the total number of interviewed population, 42.5% indicated that water provision should be one of the major duties of a Local authority. Ruiru Municipality is not a water undertaker. Water provision in this area is provided as shown in Table 5-1.

Table 5-1 Location and water sources

Water source / Location	Municipal	Private	Borehole	Communal Tap	River	Nairobi City	Total number of interviewed residents
Githurai	-	2	7	2	-	22	22
Kahawa Sukari	-	2	10	-	-	-	-
Ruiru East	-	1	14	-	2	-	-
Ruiru West		2	9	-	-	-	-
Total number interviewed		**7**	**39**	**2**	**2**	**22**	**22**

Source: Field survey 2002

Water is a major problem in Ruiru. The ministry of water is reliable interms of quality because their water is treated. But, their quantity is not enough. There is a danger of water contamination by septic tanks from the town, which are always overflowing. The ministry is limited by the size of the treatment works. The current demand for the whole area is $822m^3$ and the available quantity now is $500m^3$.

Water from the private boreholes is not reliable and chances of contamination through seepage are very high. This is because boreholes in some areas are located close to the septic tanks (about 600m). According to analysis obtained from the ministry of water, samples from a borehole in the area gave the results shown in Table 5-2

Table 5-2 Water contamination levels: Total viable count per ml 7.5×10^3

Parameter	Result	Required	Status
Total viable count	7.5×10^3	20 max	Fail
Coliforms	Present	Absent	Fail
E.coli per 250 ml	Nil	Absent	Pass
Sal moneilae per 250ml	Nil	Absent	Pass
Pseudomonas rear	Nil	Absent	Pass
Ginosa per 250ml	Present	Absent	Fail
Iron sulhide reducing Anaerobes per 50ml	Nil	Absent	Pass

Source: Ministry of water-Ruiru office: 2000

The sample failed in three out of the seven parameters tested and is therefore not suitable for human consumption. The public is not aware of the dangers of using borehole water in an area where there are so many pit latrines. They argue that the borehole water is cleaner than the water from the ministry because the overflowing septic tanks drain into the river where the ministry draws its water. The ministry has denied this claim and argues that even if the septic tanks are draining there, they treat their water unlike the water from the private boreholes.

Kahawa sukari:

Water in this area is provided by Thika waters, which is a private company servicing their water from a borehole. This water is very expensive and also very erratic. The residents pay a blanket cost of Kshs 2, 000/= per month. Water is only available three days in a week for only 2 hours. So, for a total of 24 hours in a month, the cost is Kshs 2,000/=. The residents have incurred extra costs in buying storage tanks for the rest of the time when there is no water. The Kahawa Sukari welfare association is lobbying for water provision from the Nairobi City Council. This will create a major conflict when it comes to paying rates because residents feel they should pay rates to the service provider and in this case it is Nairobi and not Ruiru.

Githurai

Water in this area is sourced from the Nairobi City Council. This is not a major problem for the residents who are near the road where the water pipe passes. But for the residents in the interior water is not available. The cost of connecting from the mains is too high (Kshs 40,000) and the cost of sinking boreholes is very high because they have to dig very deep to get to the water table which is low in this area. Most of them depend on their neighbors who have boreholes. The residents have formed Kahawa Kimbo water project whereby they pay Kshs 38, 000/= per person to get connected. This includes the piping and the works. This amount is too much for the 60%, who are not connected.

5-4-3 Sewerage

It is recommended that sewage collection and sewage treatment plants be considered for all urban settlements with a population of 3,000. In settlements where an integrated sewage scheme is not provided, provision should be made for septic tanks (Ministry of lands 1992). For development densities with a minimum plot size of 0.5 acres septic tanks are recommended. Beyond 30 persons per hectare a conventional sewer system is recommended. According

to Table 5-3, the main means of waste disposal is the pitlatrine with 80% of the residents using it. The remaining 20% of the respondents use septic tanks.

Table 5-3: Means of waste disposal

Waste Disposal	No. of households	% number of households
Pit latrine	58	80
Septic tank	15	20
TOTAL	**73**	**100**

Source: Field survey 2002

Pit latrines and septic tanks are also widely used in Kahawa Sukari area. All the area is served by both modes because of water problem. Emptying of these septic tanks is a private affair. The Municipality charges them Kshs.1,700 per trip and they prefer to make private arrangements because of efficiency. They pay Kshs 3000 to the private companies.

The Municipality does not have waterborne sewer. The township and the surrounding area are served by septic tanks. The Municipality has 10 septic tanks of which 2 serve the council and its estate. The other 8 serve the rest of the township. The septic tanks only serve the old Municipal boundaries and there has not been any expansion after the boundary extension (1994). However, even these 10 septic tanks are poorly managed. They are always overflowing posing a health hazard. Plate 5-1 shows the overflowing septic tanks. The ones near the stadium are always overflowing and the area is generally swampy because of this. The local residents think that this is rain water because the overflow has been there ever since. This portrays the inefficiency of the municipality because they have one exhauster which can efficiently empty the septic tanks but they use it to make money by renting it out to other users. It is a major income earner. Outside Ruiru, the charges are Kshs 9,600, meaning it makes more than Kshs10, 000 per week.

The only sewage system in Ruiru town is made up of a series of shallow flow ways diverting sewage from given parts of town. Problems which preside pertaining to sewage treatment are not only site specific, but also a common occurrence throughout urban areas where sewage and sludge are not receiving proper disposal. Runoff is ultimately ending up in local rivers and is contributing to high pollution down stream. For the disposal of liquid waste, most buildings in town use septic tanks, cesspits or pit latrines or sometimes a combination of septic tanks cesspits and pit latrines. Some premises owners are discharging waste water into town roads that adjoin other premises.

Githurai area is the worst hit by lack of this service. This is because of the high-density developments meaning that the users are many. The private developers around Githurai centre have septic tanks, which require regular emptying, and are very expensive. The tendency has been constant overflows. This is one area, which should not be served by septic tanks but by a water borne sewer. The septic tanks are a major health hazard. The interior areas, which are sparsely populated, are not really affected by this problem because the pit latrines are efficient for their purpose. Githurai residents are desperately in need of a sewer. This is shown by their willingness to meet half the cost of the sewerage system. This was revealed in a stakeholder meeting for local authority transfer fund (LATIF) money.

5-4-4 Roads

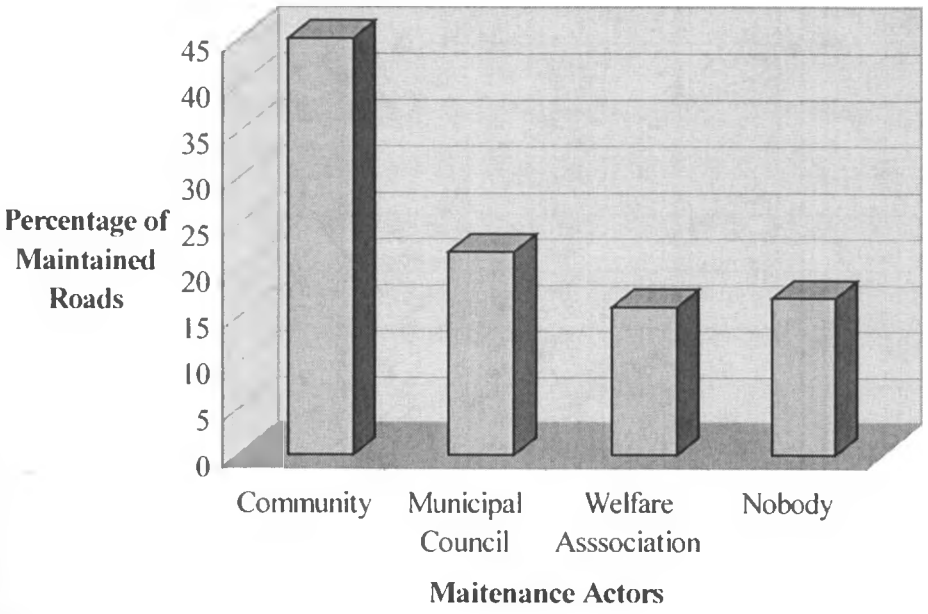
Figure 5-5 shows the number of actors involved in roads maintenance. As can be seen from the graph maintenance of the roads is mainly done by the community (45%), while the municipal council maintains a few areas (22%) and the welfare association maintains 6%. It is also clear from the graph that of the interviewed population 17% indicated that nobody maintains the road.

Plate 5-1: Overflowing septic tank.

Plate 5- 2: Poor maintained roads.

Ruiru municipality does not undertake any major construction, repair or

Figure 5-5:Roads Maintenance Actors



maintenance of roads leading to a poor state as shown in Plate 5-2. They have one grader, which is used in a "partnership kind of system". This is whereby, the residents who are interested in repairs and maintenance of their roads contact the council for the grader but they have to pay for fuel because the council claims that it has got no money. The access roads are in a poor state and are inaccessible during the wet season.

5-4-5 Solid waste management

Solid waste management has been one of the major duties that all local authorities have abdicated. Table 5-4 shows the various means of solid waste disposal in Ruiru Municipal Council.

Table 5-4 Solid waste management:

Disposal method	Number of households	% No. of total respondents
Pit	9	12.3
Open ditch	10	13.7
Composite heed	45	61.6
Private	2	2.7
Burn	3	4.1
Other	4	5.5
TOTAL	**73**	**100.0**

Source: Field survey 2002

As can be seen from the table, Ruiru Municipality does not manage solid waste for its residents. The municipality undertakes this service only in the CBD, where the staff sweeps and in the two markets where garbage is collected but not at the household level. Garbage is not a major problem to the residents who are outside the CBD and the Githurai CBD because they have large plots and these are areas with a rural setting. The garbage is either burnt or used as compost manure. Even the garbage from the market is not a major problem because it is bought as manure. One lorry goes for one thousand shillings and it is in great demand. What can't be used as manure is used to rehabilitate the quarry area.

5-4-6 Market

This is an area of major interest for the municipal council because it is a major revenue earner. In Ruiru town, there are two open-air markets, though even these ones are not improved. The current operations of the open air markets in Ruiru are inadequate for the needs of marketing. Another market in Githurai 10 Km away complement marketing activities in Ruiru. There are two market days when the town is bustling with activity; Thursdays and Saturdays. On

average there are 700 attendants selling goods on market days. Ruiru market has 100 open makeshifts. Sellers pay a market fee of Kshs20 per day and annual fee of Kshs2340 for stall rental.

There are small sub-stationery markets in the town offering foodstuff on a small scale. It is believed that they have developed out of convenience to commuters, because one is situated along the Nairobi-Thika road at a makeshift bus stop and the other is located in the opposite part of town away from the primary market. The operators need stalls to shelter them from the weather vagaries.

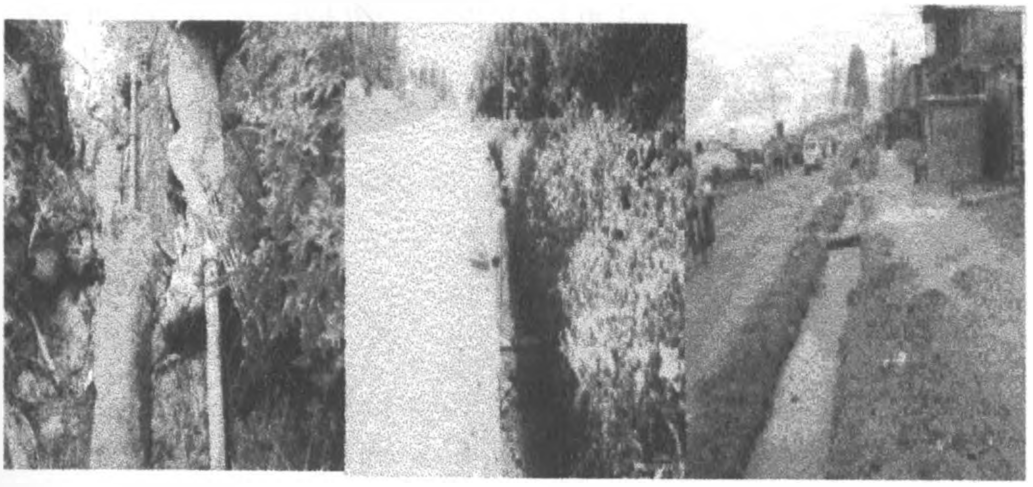
The main problem with the markets is that the council has not made any efforts to up grade them to permanent structures. In the stakeholders meeting, the residents from the wards asked the council to construct permanent stalls. Githurai operators complained of the market being small and very overcrowded. It is also made of temporary structure and due to its location (on a slope) it is almost inaccessible during the rainy season.

Road reserves paths leading to the market are congested with makeshift market structures and contributes to its limited accessibility. This is greatly due to poor road conditions within the town centre and developments along the road reserves. Improper drainage and sewage disposal makes operations difficult, particularly within the rainy seasons. Sellers are being forced to manually transport their goods as a result of roads inaccessibility. Upgrading Ruiru market at Githurai is a top priority in the development of this town. The residents have requested the council to expand the market by purchasing the land from the surrounding area. But this will be a very expensive exercise.

5-4-7 Drainage system:

The drainage system is totally lacking making the roads almost impassable during the rainy season (Plate 5-3) and the council does not have immediate

Plate 5- 3: Unmaintained drainage.



plans to improve. The council does not provide even simple things like culverts. The maintenance of existing trenches is carried out when it rains as they are usually clogged which should not be the case. Maintenance should be a continuous process because people are always using water of which 80% ends up as wastewater but cannot flow as it should. At present the council has no regular cleaning schedule for local drains and stagnant wastewater is contributing to breeding grounds for malaria transmitting mosquitoes.

5-4-8 Slaughter house

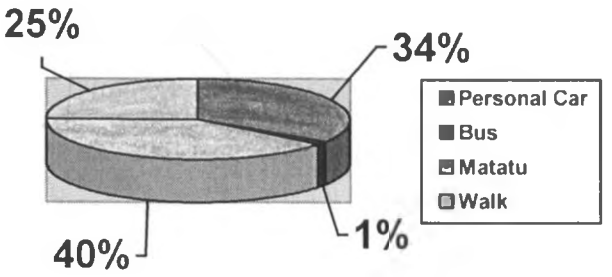
Ruiru has no public slaughterhouse, which facilitates the slaughtering of animals inspite of an effective demand for meat. There is one privately owned slaughterhouse that does not meet the demand neither the specifications of a modern slaughterhouse. Most butchers source their meat from Nairobi. In the very near future, there is a need for the council to identify a suitable site for a new slaughterhouse at some distance from the town centre where proper facilities for liquid and solid waste disposal are included.

5-4-9 Bus park

Figure 5-6 shows the main transport modes in the municipality. According to Figure 5-6 the major mode of transport in the area is public transport which accounts for 41% of the interviewed population. This calls for proper terminal facilities. But currently there is no bus

park in Ruiru. The existing terminal facilities are inadequate and not maintained. Loading and unloading of passengers is done in four areas throughout the town of Ruiru.

Figure 5-6: Transport mode



Githurai is the worst hit by lack of this service. This is because of influx of traffic from Nairobi and Ruiru. As a result the Githurai roundabout is a major congestion area.

About 100 passenger's service vehicles conduct daily operations within the immediate area. The largest influxes of public transport vehicles are servicing Nairobi City. The primary locations for matatu loading and unloading are in central location at site designated as a matatu / bus park. There are two other collections points within the town centre, which are virtually extensions of the road reserve and are just large enough to capacitate vehicle collections. Local community entrepreneurs have expressed concern about these substandard locations, stating that the congestion is a hindrance to their business operations.

5-4-11 Street lighting

There are no street lighting services within Ruiru. This is because the bill for the CBD remains unpaid ever since the council was part of the Kiambu county council. A few scattered night-lights exist on the properties of private entrepreneurs as security measures. Street lighting improves the security situation after nightfall and can also contribute to an increase of community activity at the same time.

5-5 Other Planning Agencies

Ruiru municipality is made up of very many development agencies. These are mainly land buying companies who bought land in this area and later

subdivided and sold to individuals who developed. The way these landbuying companies are run determines the kind of developments that come up.

5-5-1 Kahawa Sukari Land Buying Company: LR NO. 10901/20

Kahawa Sukari is situated along Nairobi Thika road 13 kilometers from the city centre. It was acquired from Mama Ngina Sukari Ranch and comprises of 1,200 acres. It was bought for Khs. 100,000,000. The 1,200 acres was subdivided into 3,433 ¼ acre plots which were being sold for Kshs 35,000 each.

Objectives of the scheme

To satisfy a housing need which was not being met by Nairobi city council. The council was not providing sufficient housing to the Nairobi residents. The company was playing a supplementary role for housing demand.

Provide opportunity for individuals to own their own homes.

To provide a change from monotonous housing schemes where houses are a direct replica of each other by allowing free architecture style.

Development planning guidelines for residential areas

The directors of the company came up with building guidelines and were responsible for enforcing them. The goal was to avoid construction of high rise buildings and flats that would make the area high density. They planned for a medium density area with high status. By regulating the development planning guidelines, they have attracted large number of people wishing to have their own style and this has helped the land values to appreciate. As a rule, there should be only one main house with a maximum of 2 roomed servants quarters to be constructed in each residential plot.

Development planning guidelines for commercial plots

For commercial plots, the plans are supposed to specify clearly what buildings are intended for, provide ample car parking within the compound and provide service yard. This is intended to discourage developers from developing

socially unacceptable buildings within the area. To achieve the rural setting of the estate, the buildings are not supposed to exceed three floors including the ground floor. Maximum plot ground coverage has been fixed at 50% while the plot ratio has been maintained at 0.75. This discourages anyone trying to develop high rise buildings from doing so.

Enforcement of development control

The developer buys a plot and gets the building guidance from the company. The developer gives the guidelines to their own architect who draws their desired house plan based on the overall guidelines provided by the company. The developer submits the plan to the company for stamp approval. The company has an architect who inspects the building plans. The directors approve the plans and give them back to Ruiru Municipality and Thika District physical planning officer for final approval. After they have been approved, the developer takes a copy of approved plan to the company before they are allowed to start construction. The company has personnel on site to ensure that before a building is started, the developer has adhered to the company's rules. This is very useful because they have ensured development control from the initial stages. In case a developer contravenes the plan, he is forced to demolish before he goes too far. Measures to control development are taken at an early stage instead of waiting until it is too late and demolition would mean incurring a lot of losses. The company has negotiated with Nairobi City Council to provide piped water to this area even though it is in Ruiru municipal council and therefore plans are under way to provide the water. Table 5- 5 shows the land allocation by user of Kahawa Sukari estate. Allocation of public utility sites has been done in accordance with the planning standards.

Table 5- 5: Land user allocation of Kahawa Sukari estate:

Total acreage 485.62 Ha (1200 acres)		
3433 plots (30x30)	900 sq.m each	763.48Acs
17 plots	10 acres each	170.0 Acs
5 plots	5 acres each	*25.0 Acs*
6 nursery schools	*0.5 acres each*	*3.0 Acs*
3 primary schools	*6.0 acres each*	*18.0 Acs*
1 secondary school	12 acres each	*12.0 Acs*
3 community centers	*0.5 acres each*	*1.5 Acs*
3 shopping centers	*2.0 acres each*	*6.0 Acs*
1 market		*1.0 Acs*
2 church sites	*0.5 acre each*	*1.0 Acs*
2 health centers	*1.0 acre each*	*2.0 Acs*
1 post office	*0.5 acre*	*2.0 Acs*
1 police station	*2.0 acre*	*2.0 Acs*
5 light industrial plots	*1.0 acre each*	*5.0 Acs*
Lagoon sewage treatment		*5.0 Acs*
Roads		*168.4 Acs*
Footpaths 3m		*1.9 Acs*
Riparian reserve		*1.6 Acs*
Open spaces		*8.7 Acs*
1library site		*0.5 Acs*
1 purpose site		*1.3 Acs*
Power wayleaves		*1.6 Acs*
1 Petrol station plots		*0.5 Acs*

Source: Kahawa Sukari land buying company 1994

5-5-2 Lang'ata development company

Langata Development Company was formed in 1978 and owned 202.2 acres of land. The land was subdivided into plots of 60 by 40 feet and was then sold to 2402 buyers. Share certificates that would later become the basis of issuing the titles were given to the buyers by the management of the company. In this company, the sale of land was followed by the development of plots depending on the financial ability and housing designs of the owners. The management committee of the cooperative society had no dealings with the members. The members were left to develop the plot the way they wanted.

In Langata Development, the officials of the company ensured that standard plot sizes were 60 by 40 feet and that land for community facilities was set aside. But even this plot size is far below the building code; adoptive by-laws recommended plot size standards, which is 252 m^2. (Kenya, 1968) One wonders what criterion was used to approve the subdivision scheme in the first place.

The sub-division plan confirmed that there were twenty-one plots set aside for shopping and commercial buildings, a nursery school, a local health centre and a church. At the time, only the church was built at the site through a community self – help project program. The other plots were reallocated to private developers through the current land-grabbing era; and whether they will be developed to their intended use is another issue. These areas will develop without these public facilities because the private developer will be after profits and if a facility like a school is developed by the private developer the cost will be high and not affordable to the common man.

5-6 Nairobi Influence

5-6-1 Introduction

The growth of Ruiru town has a lot to do with its bordering Nairobi. Ruiru municipal council has experienced a lot of outward expansion towards Nairobi. The direction of highest growth is the side bordering Nairobi and the level of

land subdivision increases as one moves from Ruiru to Nairobi. The Nairobi influence can be depicted interms of area of migration, work place and services provision.

5-6-2 Migration area

Table 5-6 gives the various areas the residents migrated from. As shown from the table 44% of the interviewed population migrated from Nairobi compared to 21% who migrated from Central province where Ruiru is located.

Table 5-6 Migration areas

MIGRATED FROM	Number of residents	% number of total residents
Central Province	15	20.5
Western Province	7	9.6
Eastern Province	5	6.8
Nyanza Province	7	9.6
Nairobi Province	32	43.8
Coast Province	2	2.7
North Eastern	1	1.4
Rift Valley	4	5.5
Total	**73**	**100.0**

Source: Field survey 2002

5-6-3 Place of work

The place of work is an important indicator of the influence of Nairobi in as far as work place and area of residence is concerned. Ideally, people would like to reside near their work places so as to reduce on their transport costs unless there are other factors influencing their movement to other areas.

Table 5-7 gives the location and workplace situation in the municipality. It is worth noting that 45% of the interviewed population works in Nairobi. This is

also in total contrast to the 29% who are living and working in Ruiru. Of the total population interviewed in Ruiru, 64% work in Nairobi. Kahawa Sukari has a higher (75%), working in Nairobi. The percentage decreases with distance as one moves away from Nairobi towards Ruiru with Ruiru East having 29% and Ruiru West 27%.

Table 5- 7: Location of residence and work place

Workplace / Location	Nairobi	Kiambu	Ruiru	Thika	**Total No. of residents**	**% total working in Nairobi**
Githurai	21	2	7	3	**33**	**67%**
Kahawa Sukari	9	2	-	1	**12**	**75%**
Ruiru East	5	-	7	5	**17**	**29%**
Ruiru West	3	-	7	1	**11**	**27%**
Total	**33**	**4**	**21**	**8**	**73**	

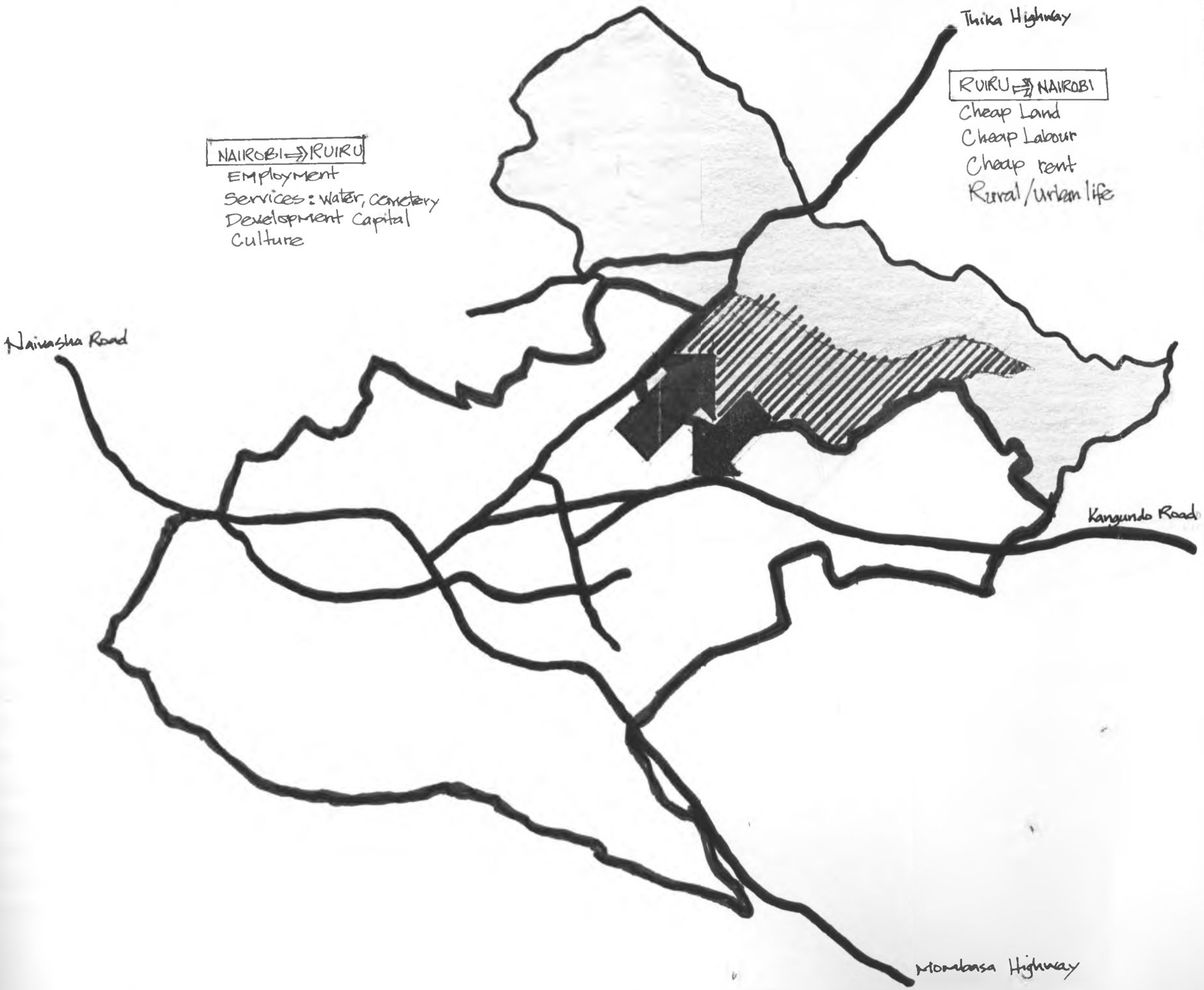
Source: Field survey 2000

Ruiru can be said to be acting as a dormitory of Nairobi. This can be attributed to the fact that most of these people work in Nairobi but bought land in this area which was relatively cheap compared to Nairobi and constructed their own houses. Rents are also relatively cheaper in Githurai as compared to Nairobi and many Nairobi workers prefer commuting. The transport network is also very efficient with very many matatus plying the route.

5-6-4 Services provision

As earlier discussed, Ruiru municipal council obtains some of its services from Nairobi. According to the field survey, 30% of the interviewed population gets its water from Nairobi. Nairobi supplies water to the whole of Githurai and Kahawa Wendani.

MAP 5-4 : NAIROBI METROPOLITAN INFLUENCE



Source : Field survey 2005

CHAPTER 6

DEVELOPMENT PLANNING AND CONTROL CHALLENGES

6-1 Introduction

This chapter looks at the various guidelines, policies and strategies put in place to meet development demands and challenges in Ruiru Municipality and how effective they have been. By planning developments the concerned local authority is able to guide growth of its area and also to guide developers on where to develop what. Development planning shapes the form of a town and where developments are planned incidences of urban sprawl and haphazard developments are unheard of. Development planning issues are looked at in form of zoning pattern of the municipal area, the existing local physical development plan and the area it covers.

Reasons as to why we should control developments include enhancement of space functionality, provide orderly development, conserve and preserve the city landscape, enhance the city design and provide for safety and public health.

According to Section 32(3) of the Physical Planning Act, the local authority shall, when considering a development application submitted to it under sub-section (1) have regard to the health, amenities, and conveniences of the community generally and to the proper planning and density of development and landuse in the area. Taken in this regard development issues will be looked at in their various aspects and if they fall into the above criteria then development control system is not effective. The various tools of development control will be looked at in this section to find out how effective they are. This will include Ruiru municipality by-laws, the development plan, the physical planning act, planning standards, and the building code which the municipality has adopted for building constructions.

6-2 Development Planning

6-2-1 Development Zoning Pattern

Map 6.1 next page shows Ruiru municipality structure is determined by the pattern of development and the zoning pattern. The development pattern is characterized of urban sprawl as explained earlier. There are areas with very dense developments, whereas others are not developed at all and others are coffee estates.

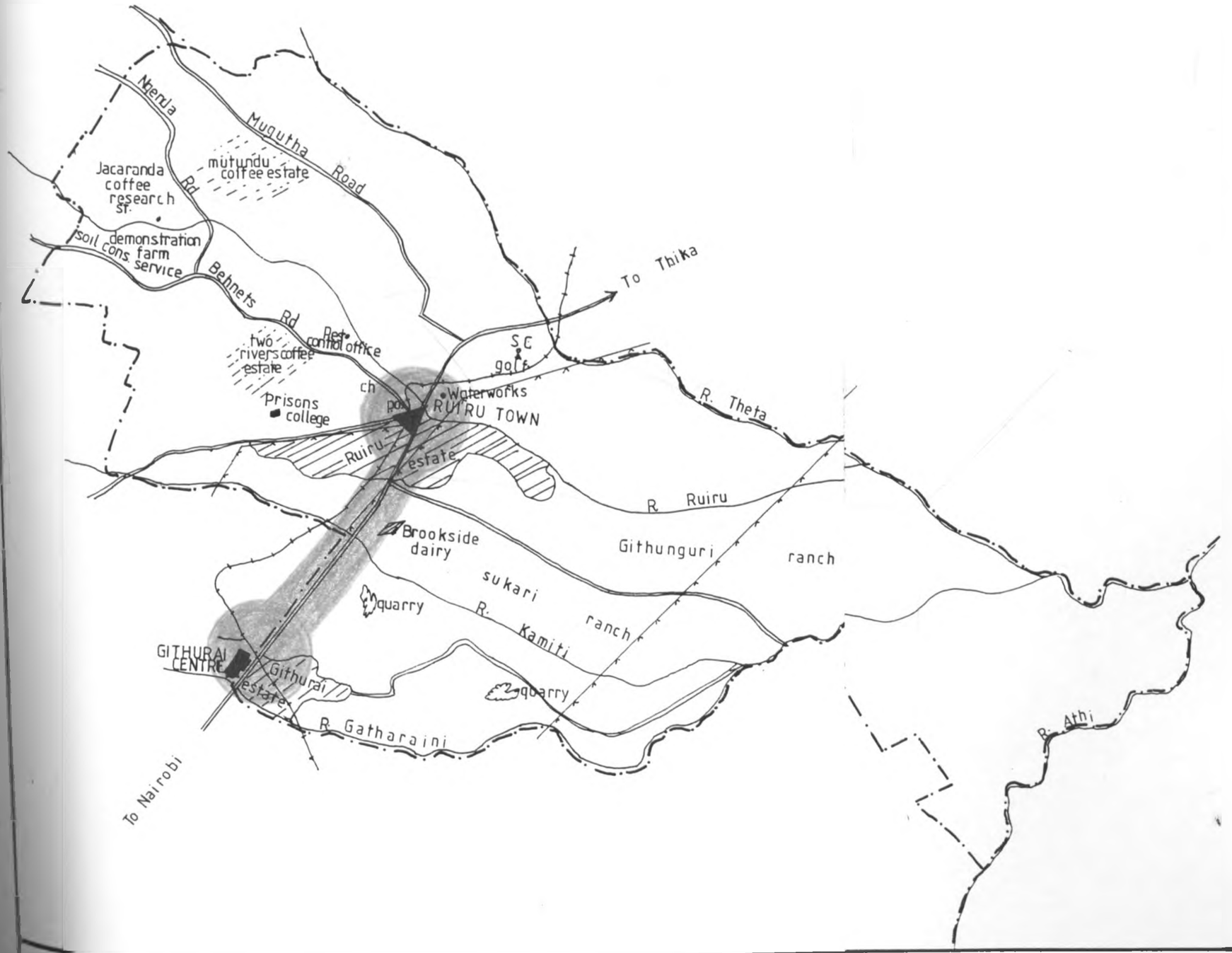
Ruiru municipality has experienced a linear type of growth along the major roads and concentrations in two nodes. This can be summed up as urban sprawl. Ruiru town has developed rapidly along the Nairobi-Thika corridor. The major areas of growth as shown by the map are Ruiru CBD and Githurai center. There is linear development along the major transportation corridors.

The other kind of structure is a mix of high-rise buildings and single dwelling units because the municipality has not zoned the area into high density, medium density or low density. (Plate 6-b). This is a major problem for the people who invest heavily on single dwelling units only for the private investor to construct high rise buildings next to their houses. The common man is not protected in this case.

Zoning in Ruiru is non-existent. The only area that is zoned is Kahawa Sukari as low-density area. This area is however zoned by the Kahawa Sukari land buying company. The other areas have experienced a mixed kind of density depending on housing demand. This has lad to mix in landuses as shown in plate 6-1.

Due to lack of zoning, the council has continued approving sub divisions in the areas without a proper basis of approval. As a result there is a mix of different densities with no basis. The plot ratios and plot coverage are not determined and people are putting up buildings occupying more than 90% of the plot sizes. This has an impact on infrastructure required in future including sewer

RUIRU MUNICIPALITY



LEGEND

MUNICIPAL BOUNDARY

ROADS

RIVERS

RAILWAY

POWERLINE

SC SPORTS CLUB

CH CHURCH

PO POSTOFFICE

SC SPORTS CLUB

LINEAR GROWTH

NODES OF GROWTH

SCALE 1:100,000

RUIRU MUNICIPALITY STUDY MAP 61: NODE AND DIRECTION OF GROWTH

Source: SURVEY OF KENYA

Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001—2002

PLATE 6-b - Tall buildings towering over short buildings

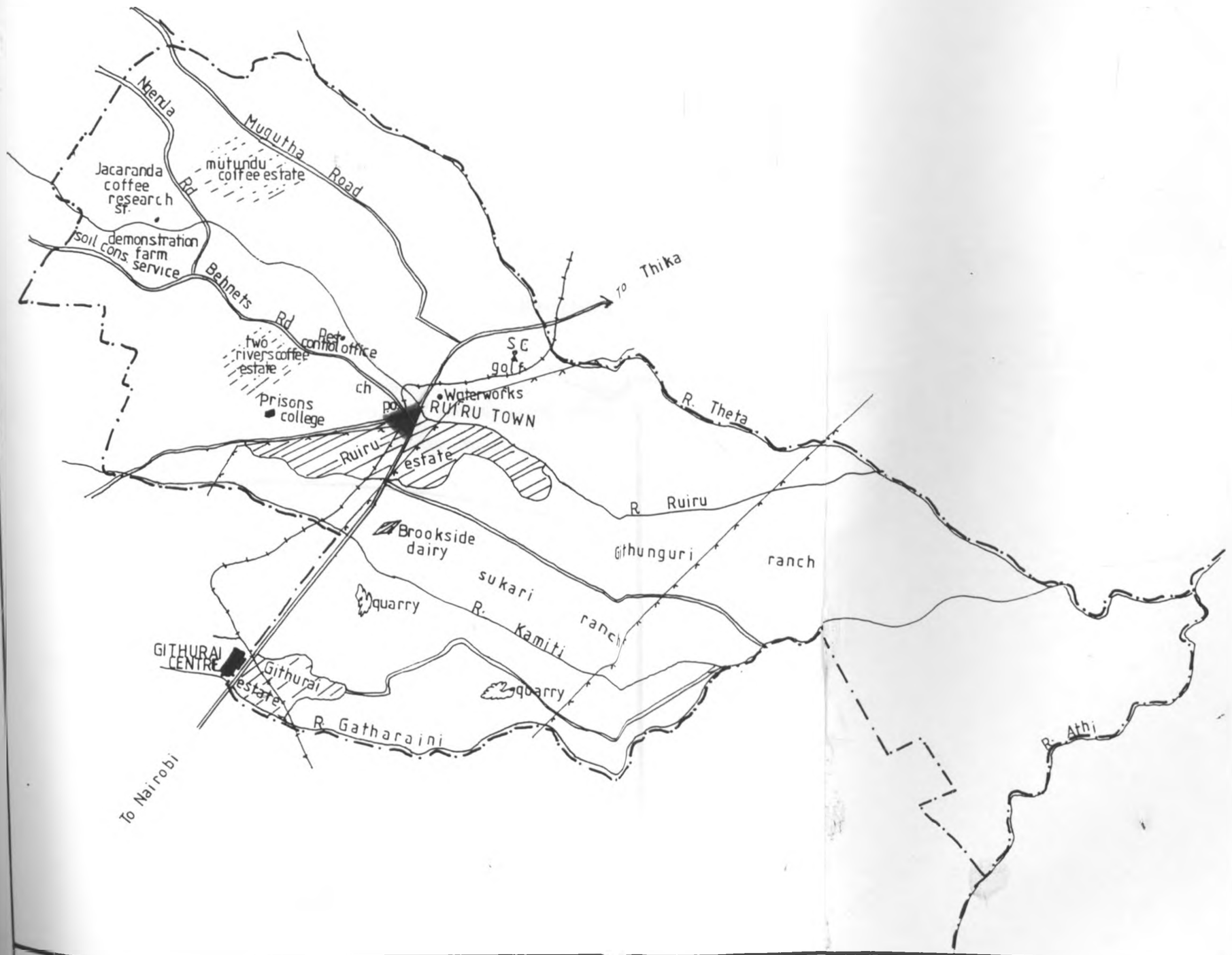
Plate 6- 1: Industrial area adjoining residential area.

Plate 6- 2: Cattle grazing in town centre and rural nature area.

MAP 6-2 INDUSTRIAL LAYOUT

SOURCE: RUIRU LOCAL PHYSICAL DEVELOPMENT PLAN 1978

RUIRU MUNICIPALITY



LEGEND

MUNICIPAL BOUNDARY
ROADS
RIVERS
RAILWAY
POWERLINE
SC
CH
PO
SC
LPDP AREA

SPORTS CLUB
CHURCH
POSTOFFICE
SPORTS CLUB

SCALE 1:100.000

RUIRU MUNICIPALITY STUDY MAP 6-3: AREA COVERED BY LPDP

UNIVERSITY OF NAIROBI
DURP
YEAR 2001—2002

Source: SURVEY OF KENYA
Topo Sheets 148/2 & 149/1 of scale 1:50000

6-3 Development Control

6-3-1 Ruiru Municipality By-laws

Ruiru municipality has not formulated any by-laws of its own but has adopted from the mother county council Kiambu. However, these by-laws are rural in character and are not suitable for a rapidly urbanizing area like Ruiru municipality. They mainly deal with public markets, licensing, general nuisances, hawkers, crops and produce cess, hides and skins, conservancy, control water supplies, universities, commercial colleges, private schools and day nursery schools and nuisances.

(a) Conservancy by-laws 4

According to this by-law, all refuse for disposal shall be placed on a receptacle for collection by the councils refuse collection service. The council violates its own by-laws because it does not offer this service to its own residents. The by-law further states that any person, who, without lawful authority intentionally interferes with or empties out the contents of a receptacle shall be guilty of an offence. (Ruiru, 1987) This is an outdated by-law meant for a time when the council used to collect refuse but according to the study findings this service is no longe available. As far as this by-law is concerned, the residents should live with their full receptacles until time immemorial.

(b) Game animals by-law

This by-law stipulates that any person who shall, except with the written permission of the clerk and subject to such condition as he may deem fit, keep within the Municipal a game animal or a reptile (other than a lizard) or an ass, mule, ox, bull, cow, goat, camel, sheep or pig shall be guilty of an offence. Any animal, reptile, poultry or bird which wanders on a street in such a manner as to cause obstruction or inconvenience to traffic shall be guilty of an offence.

Any person who shall, except with the written permission of the municipal clerk and subject to such conditions as he may deem fit, permit any animal of the species referred to above to graze within the municipal shall be guilty of an

offence. (Ruiru, 1987) Ruiru municipality has a larger part of its area practicing pure agriculture. The residents have not sought any written permission from the municipal council. The municipal council extended its boundaries into formerly agricultural land and this by-law is not effective in this area. Furthermore, the local authority has not bothered to enforce this by-law even in urban markets like Githurai. Plate 6-2 shows cattle grazing in the town center and demonstrates the rural character of the municipality.

6-3-2 Development Plan

A development plan is a tool of development control. When it is implemented there is total development control but if not implemented, then there is no development control. The existing local physical development plan does not correspond with what is on the ground. The situation is so bad such that one is tempted to believe that there is no need of a development plan. This is usually the case in areas set aside for public utilities and the implications are grave. The following public utility plots have been allocated to private developers.

- Refuse disposal controlled tipping – spinners and spinners
- Proposed fire station – private developers.
- Proposed sewage works – private developers
- Existing and proposed water works – church, Jua kali Sheds, residential building and only 2 water tanks
- Cemetery – privatized

Map 6-4 shows disparities on the ground vis a vis the existing development plan.

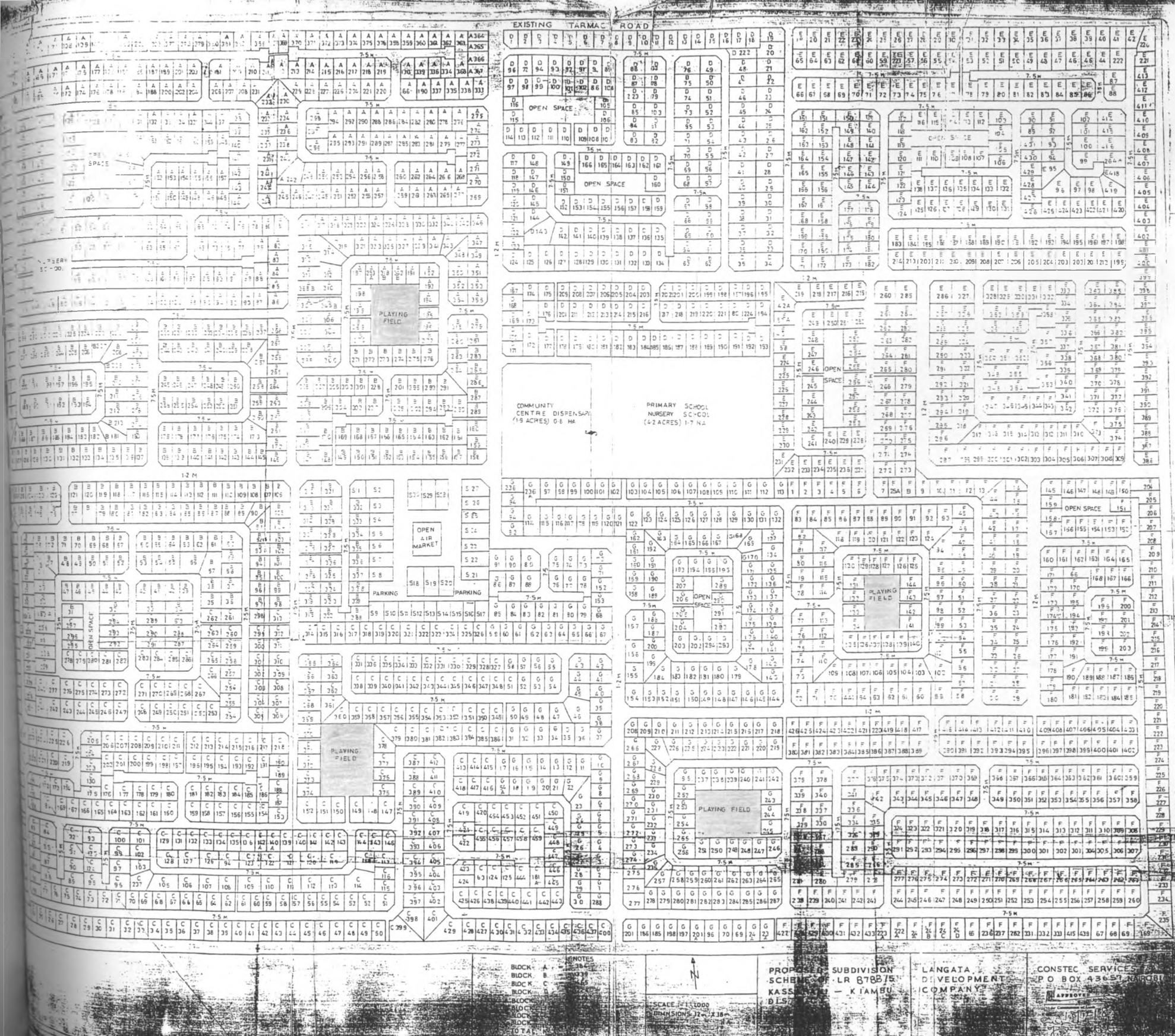
Map 6-4: Disparities on the ground Vs Development Plan

Source: Ruiru Local Physical Development Plan 1978

The situation is the same in land buying companies land whereby public utility plots are allocated to private developers as shown in Map 6-5. Planning is meant to protect the public interest, but this has not been the case in this municipality. The fact that land meant for public utilities has been allocated to private developers means that private interests come first and nobody is bothered about public interest. A simple analysis of the implication of these allocations presents a grave situation as follows:

Refuse disposal controlled tipping – The issue of a dumping site might not be a problem now because most of the municipality is agricultural land and the waste is used as composite manure, but given that the population growth rate is very high, solid waste management will be a major problem in the future. The municipality does not consider lack of this service a major problem. But this is because they have abdicated on their duties of collecting garbage and left it to the residents to do it for themselves. The municipality is faced with a problem of non-collection of waste & the residents would like the council to privatize that service. Currently, garbage from Githurai is disposed off in Dandora. But Dandora site in Nairobi is changed for use officially though practically, it is still being used. The municipality should provide a site for dumping even if they do not dump. Currently, Githunguri ranching scheme set aside 5 acres for dumping but since the council has not even acquired a title for it, chances are that it will be allocated to private developers.

Proposed fire station – Ruiru municipality does not have a fire station and yet developments are many. In case of fire, assistance has to come from Nairobi, which is also not very efficient or otherwise, the residents have to put out the fire by themselves. Given the current trend of growth of this area, the municipality should have plans to construct a fire station. But this will mean incurring extra costs on buying the site and the municipality is not performing other duties because of lack of money. Yet, the land was allocated to only one person.



MAP 65:
LANGATA DEVELOPMENT COMPANY
PUBLIC UTILITY PLOTS ALLOCATED FOR PRIVATE DEVELOPMENTS

SOURCE: LANGATA DEVELOPMENT COMPANY

Proposed sewage works – As earlier mentioned, the kind of development in this area requires water borne sewer and not septic tanks. According to the planning standards, an urban area with more than 3000 people is recommended for a sewer, but this is totally non-existent in Ruiru. (Ministry of lands, 1999). The land set aside near Ruiru town was allocated to private developers, yet it would have been cheaper to construct a sewerage system there to serve all the residents upto Githurai. The current proposal of constructing one in Githunguri ranching scheme where the council was allocated a site recently will be more expensive. The same applies to the second proposal of connecting their sewerage system to Dandora which is even further and the costs are more.

Ruiru council is not a water undertaker and may be that is why they never deemed it fit to protect the land set aside for water works. The municipality is now proposing being a water undertaker not so much to serve the residents, but to accrue more revenue because water is a major revenue earner. The only problem is lack of land for water works which they have to buy from private individuals and it will end up being a very expensive undertaking.

The cemetery which was located next to a health center has been allocated to private individuals. The municipality might not have a problem with burying the dead now, because of the rural character of the area but with urbanization increasing and agricultural land diminishing, a cemetery will be a major necessity. The other reason the municipality is not faced with this problem is because Githurai residents are very much dependent on Nairobi for many services and use the Langa'ta cemetery. If all the municipalities surrounding Nairobi would take responsibility of burying their dead, they would ease the burden of Nairobi city council.

In conclusion, it is very important to protect land set aside for public utilities because eventually, they will be needed and will have to be acquired at a cost. There is an urgent need to reverse the current trend of allocating public utility plots to individuals

6-3-3 The Physical Planning Act

The physical planning act is the main tool for planners and others in development planning and development control. The various clauses relating to development control will be looked at in this section to verify how effectively they are implemented.

(a) Building development approvals

The physical planning act stipulates that all developers should get approval from the relevant local authority before developing. But as shown in Table 6-1 only 21 %, which represents eight out of thirteen respondent landowners sought planning services from Ruiru municipal council. These are mostly residents from Kahawa Sukari estate, who are required to do so by the land buying company. According to the works officer, only 1% of the building plans are submitted to the council.

Table 6-1: Response to development permission requirement

Development Permission	**Number of households**	**% No. of total households**
Sought permission	8	21.3
Didn't seek permission	50	78.7
Total	**58**	**100**

Source: Field survey 2002

This is in deep contrast to the 64% level of awareness of the need to seek development approvals from the council as illustrated in Table 6-2.

Table 6-2: Awareness of building plans approvals requirement

Building plans approval awareness	**Number of households**	**% No. of households**
Yes	64	91.8
No	3	7.2
Total	**67**	**100**

Source Field survey 2002

This situation is not only prevalent in Ruiru municipality only but also in other local authorities. According to Nairobi city council officials, only a third of the developers submit their plans for approval. Out of this third, a third of them are already constructed and just need confirmation but not approval. 2/3 are constructed without approval. Various reasons were given for not seeking approval. These include delays in approving the plans, demand for bribes by the local authority officials inorder to approve the plans and the fact that nothing will be done even if they don't get permission. The developers are also aware that planning permission will not be granted especially where they do not meet the required standards and continue without plan approvals.

(b) Subdivision approvals

Table 6-3 shows the developers awareness to the requirement for a subdivision approval from the local authority before subdividing land. According to the table, 86 % of the interviewed population is aware of the need to seek approval to subdivide land from the local authority. But the field survey revealed that only 12% of the developers had sought this service.

Table 6-3: Awareness of sub-division approval requirements

Land subdivision	Number of households	% No. of households
Yes	59	86.3
No	6	13.7
Total	**65**	**100**

This can be attributed to the rural nature of some of these areas, where people will just subdivide land to their children or among brothers. Most of these subdivisions are done by the village elders as opposed to the requirements of the Physical Planning Act. Land buying companies have also done a lot of subdivision in these areas. But, although they have sought the necessary approvals, some of the subdivision planning requirements have not been met. Planning standards have been ignored with impunity and yet approvals have

This situation is not only prevalent in Ruiru municipality only but also in other local authorities. According to Nairobi city council officials, only a third of the developers submit their plans for approval. Out of this third, a third of them are already constructed and just need confirmation but not approval. 2/3 are constructed without approval. Various reasons were given for not seeking approval. These include delays in approving the plans, demand for bribes by the local authority officials inorder to approve the plans and the fact that nothing will be done even if they don't get permission. The developers are also aware that planning permission will not be granted especially where they do not meet the required standards and continue without plan approvals.

(b) Subdivision approvals

Table 6-3 shows the developers awareness to the requirement for a subdivision approval from the local authority before subdividing land. According to the table, 86 % of the interviewed population is aware of the need to seek approval to subdivide land from the local authority. But the field survey revealed that only 12% of the developers had sought this service.

Table 6-3: Awareness of sub-division approval requirements

Land subdivision	Number of households	% No. of households
Yes	59	86.3
No	6	13.7
Total	**65**	**100**

This can be attributed to the rural nature of some of these areas, where people will just subdivide land to their children or among brothers. Most of these subdivisions are done by the village elders as opposed to the requirements of the Physical Planning Act. Land buying companies have also done a lot of subdivision in these areas. But, although they have sought the necessary approvals, some of the subdivision planning requirements have not been met. Planning standards have been ignored with impunity and yet approvals have

This situation is not only prevalent in Ruiru municipality only but also in other local authorities. According to Nairobi city council officials, only a third of the developers submit their plans for approval. Out of this third, a third of them are already constructed and just need confirmation but not approval. 2/3 are constructed without approval. Various reasons were given for not seeking approval. These include delays in approving the plans, demand for bribes by the local authority officials inorder to approve the plans and the fact that nothing will be done even if they don't get permission. The developers are also aware that planning permission will not be granted especially where they do not meet the required standards and continue without plan approvals.

(b) Subdivision approvals

Table 6-3 shows the developers awareness to the requirement for a subdivision approval from the local authority before subdividing land. According to the table, 86 % of the interviewed population is aware of the need to seek approval to subdivide land from the local authority. But the field survey revealed that only 12% of the developers had sought this service.

Table 6-3: Awareness of sub-division approval requirements

Land subdivision	Number of households	% No. of households
Yes	59	86.3
No	6	13.7
Total	**65**	**100**

This can be attributed to the rural nature of some of these areas, where people will just subdivide land to their children or among brothers. Most of these subdivisions are done by the village elders as opposed to the requirements of the Physical Planning Act. Land buying companies have also done a lot of subdivision in these areas. But, although they have sought the necessary approvals, some of the subdivision planning requirements have not been met. Planning standards have been ignored with impunity and yet approvals have

been granted. For example, plot sizes are below $252m^2$ and the open spaces and social infrastructure are not adequately provided for.

The land buying company officials are very crafty. When applying for subdivision approvals, the requirement is for them to surrender the necessary land for social amenities either to the local authorities or to the commissioner of lands. They prefer surrendering the land to the commissioner of lands because it is easy to be reallocated the same land for development. What has been happening is that they surrender the land to the commissioner and then collude with officials from the ministry to have the files disappear until they are ready to reapply and with the help of the same officials, they get the same land on condition that the user remains the same. They then sell the land to private developers who put up private amenities like academies which are very expensive for the common man. The issue of public interest and amenity provision is not taken into account. The losers are the land buying company members who surrendered the land in the first place but end up with no land for public utilities. This is a major problem in the dense Githurai area, where the land set aside for a market place was reallocated and the remaining area is very small causing congestion and no room for expansion. Play grounds and open spaces have been taken by land grabbers. But this is the case in the whole of Kenya. Playgrounds and open spaces which are supposed to be the ventilation areas of human settlements have been developed and there are no ventilation areas, which is detrimental to the human environment. Children in the estates play on the roads posing a major risk from motorists.

(c) Change of user

The physical planning act details out the various kinds of user change requiring approval from the council. But the field survey revealed that developers are not bothered about local authority approval unless it is a major development which is conspicuous and will attract attention like a petrol station. Extensions onto existing dwellings units are constructed everyday, but no change of user is sought for. The same case applies to a situation where the area is meant for

single dwelling units but developers put up multidwelling units for rental purposes. (See plate6-3). The same applies to public utility plots, for example, land meant for a nursery school in Ruiru was allocated to a private developer, but there was no change of user. The user still remains nursery school according to plan, but the real user is a block of flats.

6-3-4 Development Planning Standards

(a) Electricity power lines

The physical planning handbook stipulates that in all cases, the distance between the power line and the ground below must not be less than (6) metres. Furthermore, high-tension lines must not be passed over buildings constructed in the path of such lines. (Ministry of lands, 1992) However, the situation on the ground is totally different. As shown in plates 6-4 power lines are just a few inches above buildings.

(b) Riparian reserves

The primary and therefore the main drainage system is made up of the natural valleys for any area being planned. So we don't develop it but leave it as provided by nature. We should respect it and retain it as such. It is the backbone drainage of an area. These should be identified and left clear. It should be 60m wide for flooding and for permanent enjoyment by the people. But as revealed from the field survey this has not been the case. The situation is illustrated in Map 6-6. Houses are constructed in the reserve. Plates 6-5 shows a building constructed near the river with 10 houses for rental purposes but no sewer or septic tank. Sewage is channeled into the river. The house is located ¼ km from the Ruiru municipal council office, meaning that the officials are aware but no action has been taken. This is because the house belongs to a former local councillor.

Plate 6-3: Multi-dwelling unit for rental purposes on a single dwelling unit plot.

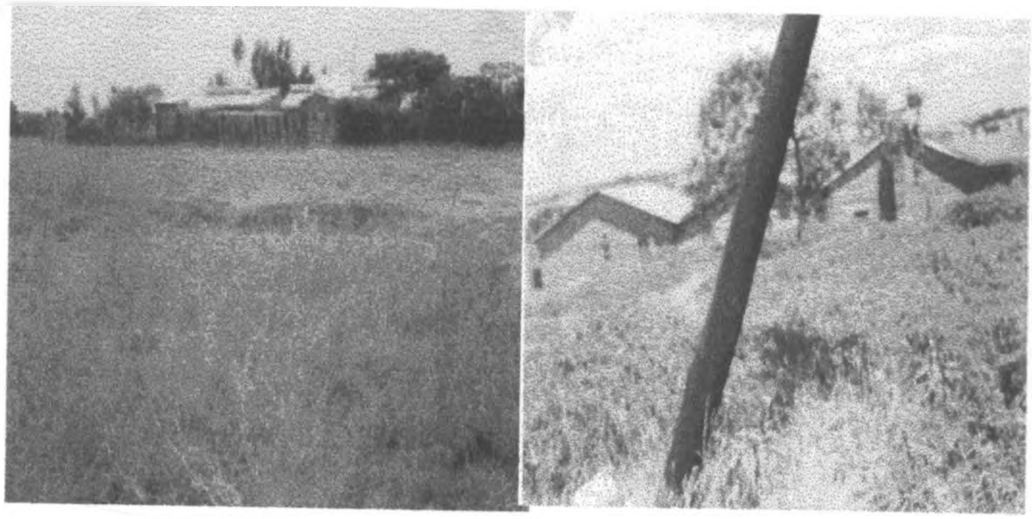
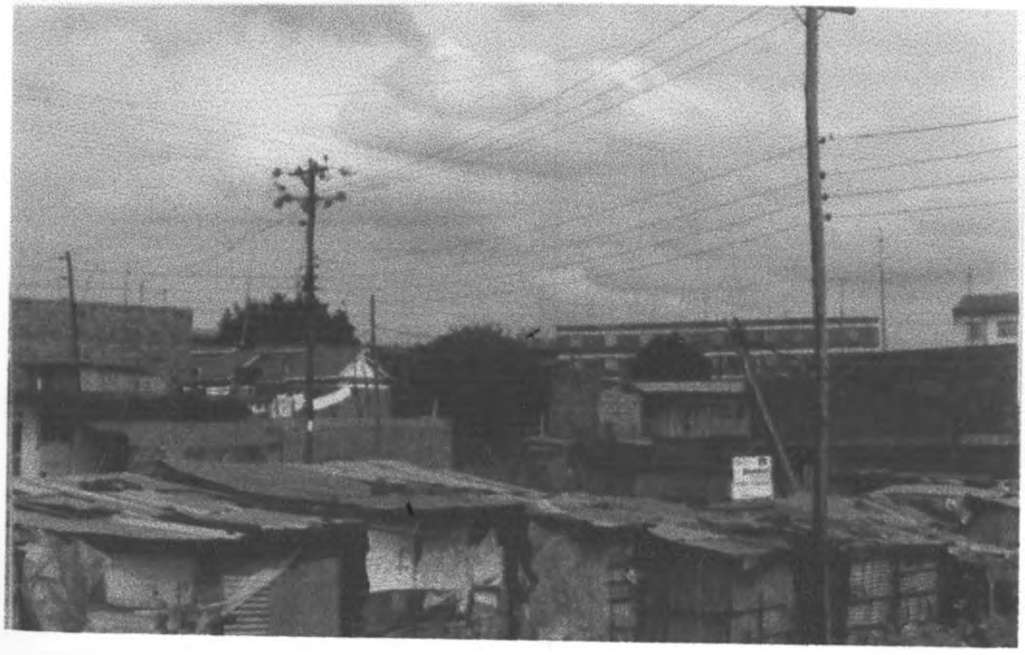
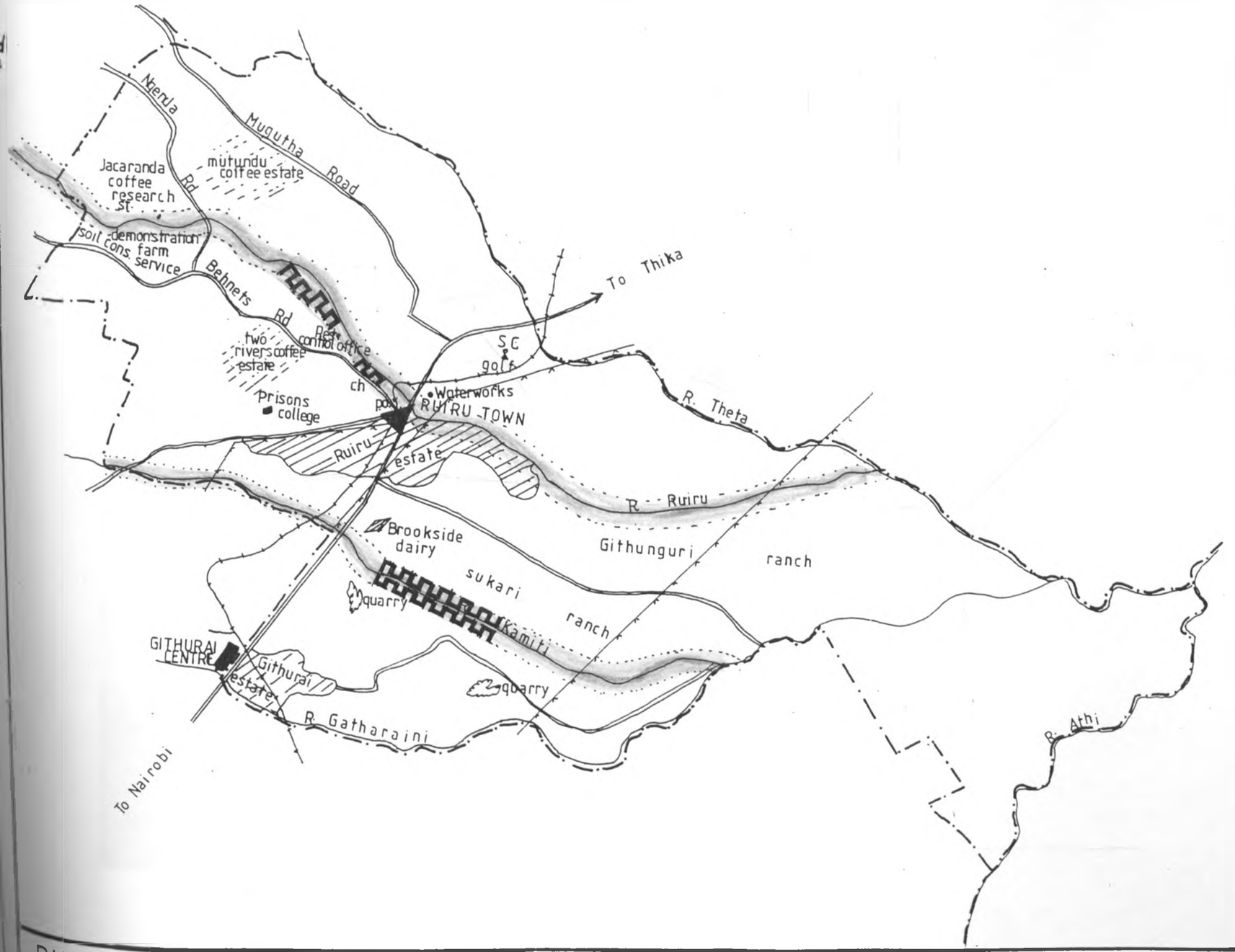


Plate 6- 4: Power lines hanging a few meters from the roof.



RUIRU MUNICIPALITY



LEGEND

MUNICIPAL BOUNDARY
ROADS
RIVERS
RAILWAY
POWERLINE
SC SPORTS CLUB
CH CHURCH
PO POSTOFFICE
SC SPORTS CLUB

RECOMMENDED WIDTH

STRUCTURES

ENCROACHMENT OF RIPARIAN BELT

RIPARIAN BELT

SCALE 1:100,000

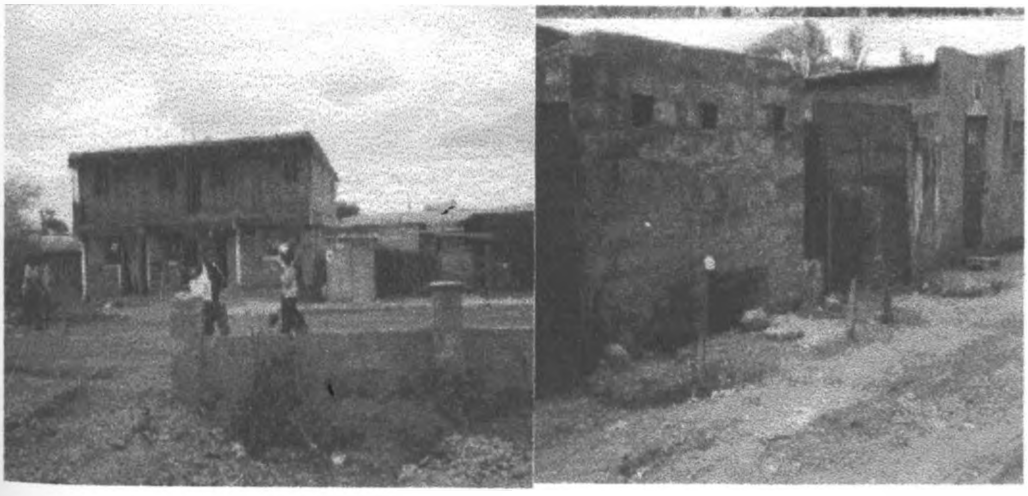
RUIRU MUNICIPALITY STUDY MAP 6-6: RIPARIAN RESERVE ENCROACHMENT

Source: SURVEY OF KENYA
Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001 – 2002

Plate 6-5: Riparian reserve encroachment.

Plate 6- 6 & 6- 7: Hundred percent plot coverage and a plot fronting a sanitary lane.



(c) Plot size standards

The key factor that determines plot size is its capacity to accommodate a livable and functional housing structure unit. The minimum plot size is generally determined by the user, type of waste disposal system, availability of water and the applied building technology. The other important factor that determines residential plot size is the layout design of the buildings; raw housing, semi detached or detached units. (Ministry of lands and settlement 1992)

Table 6-4 shows the recommended minimum plot sizes for different urban residential areas in Kenya.

Table 6-4: Recommended minimum plot sizes for different housing areas.

	Minimum Plot sizes, M^2		
Types of Housing	**Detached**	**Semi-Detached**	**Row Housing**
Slum Rehabilitation and upgrading	223.2	148.8	111.6
Low cost housing	334.8	223.4	167.4
Normal housing development	465	309.7	232.5

Source: Ministry of Works, Housing and Physical Planning (1987)

a) The Building Code

The building Code (1968), Local Government Adoptive by-law, say 28000 square feet (equivalent to 252 m^2 as the minimum rendered plot size.

But, the situation on the ground is not totally correspondent. Plot sizes are generally big more than (¼ acre) in most of the Municipality area except for Githurai and Kahawa Wendani where sizes are generally smaller than those stipulated by the adoptive by-laws. This can be attributed to its close proximity to Nairobi and the high demand for land. This has very serious implications because it impacts negatively on the provision of services. The means of waste

(c) Plot size standards

The key factor that determines plot size is its capacity to accommodate a livable and functional housing structure unit. The minimum plot size is generally determined by the user, type of waste disposal system, availability of water and the applied building technology. The other important factor that determines residential plot size is the layout design of the buildings; raw housing, semi detached or detached units. (Ministry of lands and settlement 1992)

Table 6-4 shows the recommended minimum plot sizes for different urban residential areas in Kenya.

Table 6-4: Recommended minimum plot sizes for different housing areas.

	Minimum Plot sizes, M^2		
Types of Housing	**Detached**	**Semi-Detached**	**Row Housing**
Slum Rehabilitation and upgrading	223.2	148.8	111.6
Low cost housing	334.8	223.4	167.4
Normal housing development	465	309.7	232.5

Source: Ministry of Works, Housing and Physical Planning (1987)

a) The Building Code

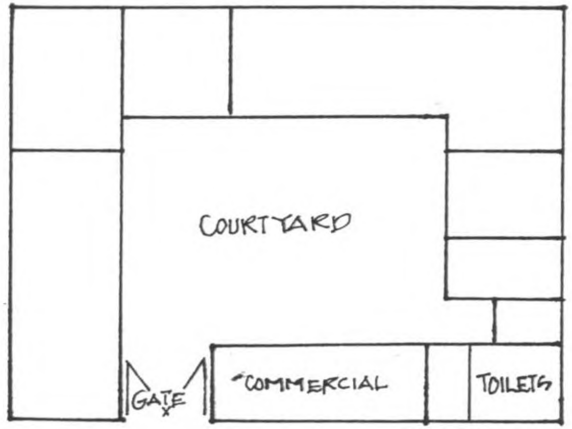
The building Code (1968), Local Government Adoptive by-law, say 28000 square feet (equivalent to 252 m^2 as the minimum rendered plot size.

But, the situation on the ground is not totally correspondent. Plot sizes are generally big more than (¼ acre) in most of the Municipality area except for Githurai and Kahawa Wendani where sizes are generally smaller than those stipulated by the adoptive by-laws. This can be attributed to its close proximity to Nairobi and the high demand for land. This has very serious implications because it impacts negatively on the provision of services. The means of waste

disposal is a pit latrine and the water source is a shallow well. Sketch 6-2 illustrates the plot layout of such a plot. The most interesting thing to note is that land owners are still applying for further subdivision and when denied permission, they go ahead and do it anyway, since the authorities will never know. Table 6-5 shows a subdivision scheme meant for one dwelling house, but some land owners have even constructed two dwelling houses on the small plot. This is due to the hard economic times making the plot owners look for a source of income, irrespective of what the standards say. The implication of this is very high densities with no accompanying services and a poor living environment. What is really worrying is the fact that high rise buildings will be the next option as further subdivision is not even economical. But the subdivision was meant for single dwelling units. The best thing would be for the local authorities to move in and ensure that the area remains a one dwelling unit zone but as the local authorities indicated they don't have the resources to do that. Table 6-5 shows the subdivision scheme for Mwihoko-Githurai and brings out the issue very clearly where 413 of the plots are below the recommended standards. The rural character of the area encourages illegal subdivisions where sons are given a small parcel of land (inheritance).

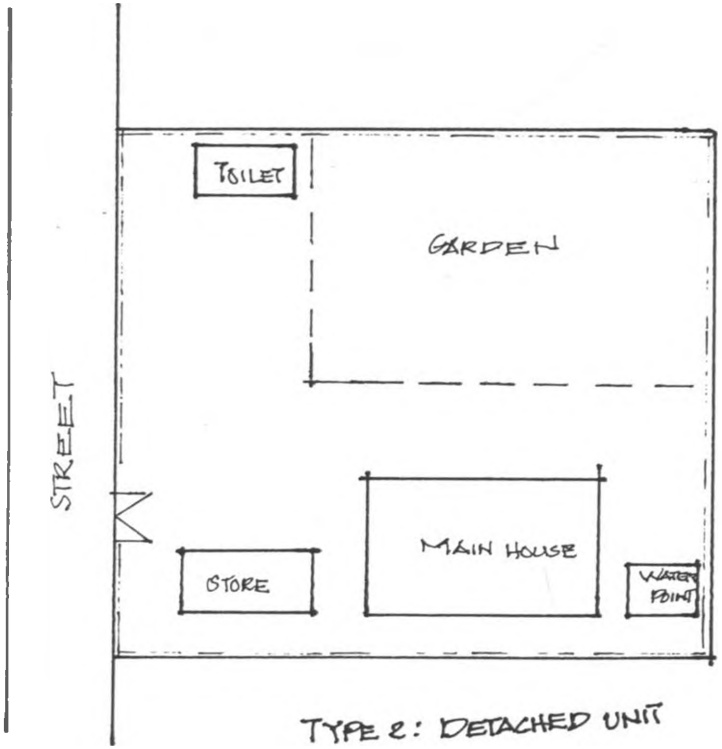
Sketch 6-2: Plot layout

TYPICAL HOUSE LAYOUTS



STREET

TYPE 1: COURTYARD UNIT

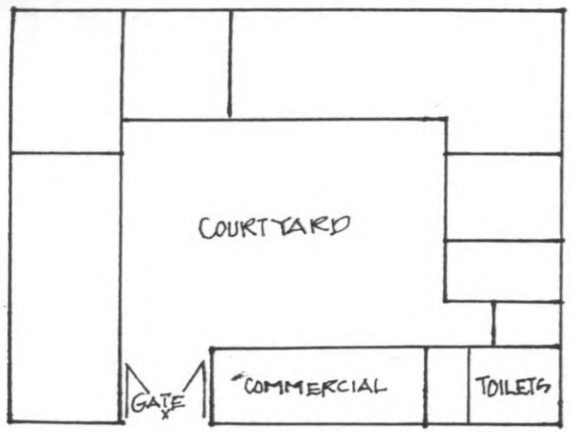


TYPE 2: DETACHED UNIT

Source: Field survey

SKETCH 6-2: PLOT LAYOUT

TYPICAL HOUSE LAYOUTS



TYPE 1: COURTYARD UNIT

TYPE 2: DETACHED UNIT

Source: Field survey

SKETCH 6-2: PLOT LAYOUT

Table 6-5 Mwihoko- Githurai Sub-division scheme

Residential Plot	Plot Size (m2)	Total Number of plots
1 Private dwelling House	170-215	2
"	250 below recommended sizes	413
	250-300	29
	340-350	9
	400	8
	450	2
	500	50
	600	1
	700	3
	833	1
	1000	8
	1500	2
	1856	1
Commercial plots	315-350	8
	386	5
	472	1
Church	1	
Dispensary	843	1
Nursery School	2000	1

Source: Ministry of lands and settlement, 1995

In some cases the approved plan is different from what is on the ground meaning that no inspection takes place after approvals. The land buying company subdivides the land and leaves it to the local authority to ensure that the development is according to plan. But this does not happen. The field study revealed some cases whereby the approved plan is different from what is on the

ground as earlier illustrated in plate 6-2.

The situation is like this due to lack of development control. The implications are very grave for an area that is planned for one dwelling unit but ends up with very high densities. Water and sewerage services will not cope leading to very high incidence of diseases like typhoid and dysentery.

(d) Plot coverage

Plot coverage sets the limit of the plot area that can be covered by buildings. Plot coverage requirement is aimed at improving a healthy environment, air circulation, infrastructure development and social amenities. The permitted plot coverage has influence on the plot size. (Ministry of lands, 1992). The recommended plot coverage for different urban residential areas in Kenya is shown in Table 6-7.

Table 6-7 Allowable maximum residential plot coverage.

Types of Residential Development		Minimum Plot Coverage, %	
	Detached	Semi-Detached	Row Housing
Slum Rehabilitation and upgrading scheme	50	65	65
Low cost housing	50	60	65
Normal housing development	40	50	60

Source: Ministry of lands and settlement, 1987

This table is in total contrast with the existing developments. In the study area, no developer seems to have heard of the term plot coverage, except, in Kahawa Sukari where the development agency has put its own rules and ensured that they are followed. In Githurai, plot coverage is 100% (plate 6-6) which causes a

problem with air circulation and lighting. This maximum plot coverage has led to very high densities with some areas having as many as 100 people but the means of waste disposal is a sewer. There is a very little space between two buildings. In case of fire it would spread very fast because the buildings are wall to wall.

(e) Plot frontage

All residential plots must have proper and sufficient frontage to a street, such a street should not be a sanitary lane or passage. The recommended minimum frontage for residential plots is outlined in Table 6-6 and illustrated in Figure 6-2. Plate 6-7 gives a contrast of the situation on the ground.

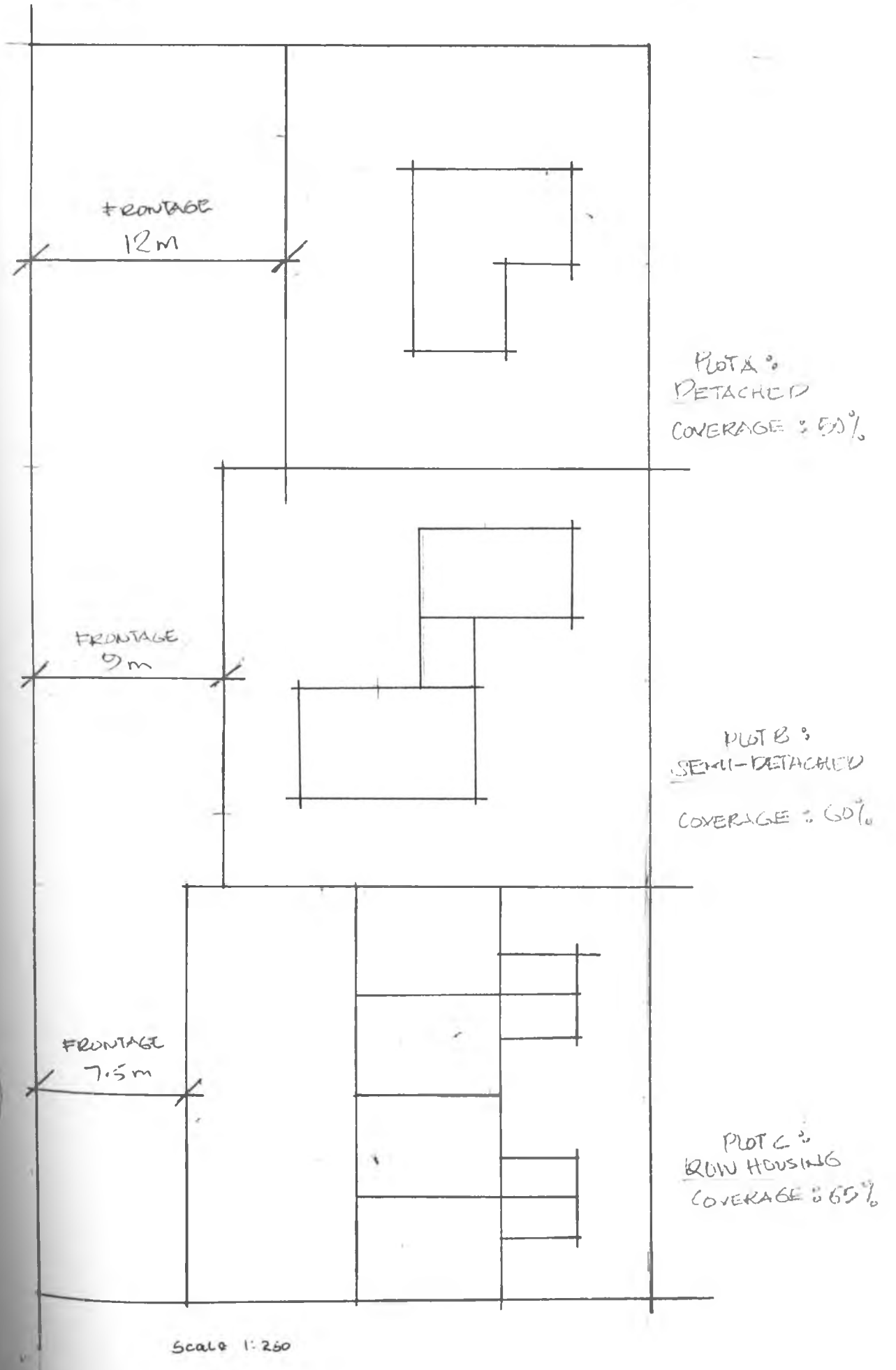
Table 6-6 Recommended minimum residential plot frontage by type of housing

Type of residential Development	**Minimum Plot Frontage, Metres**		
	Detached	**Semi-Detached**	**Row Housing**
Slum Rehabilitation and upgrading scheme	9	7.5	6
Low cost housing	12	9	7.5
Normal housing development	15	12	9

Source: Ministry of lands and settlement, 1992

(f) Building line (Setback line)

The building line or setback line sets the limit within the plot beyond which no building structure may protrude. This limit is aimed at controlling density of building development and ensures sufficient privacy, access, lighting and air circulation. The building line can often set limit building development both horizontally and vertically (Skyline height limit). Table 6-8 shows the recommended residential set back line from plot boundary line.


FRONTAGE
12m
PLOT A :
DETACHED
COVERAGE : 50%
FRONTAGE
9m
PLOT B :
SEMI-DETACHED
COVERAGE : 60%
FRONTAGE
7.5m
PLOT C :
ROW HOUSING
COVERAGE : 65%

Scale 1:250

Table 6-8 Minimum allowable residential building line distance.

Type of Residential Development		Minimum Setbacks, M	
	Front	Side	Rear
Slum Rehabilitation and upgrading scheme	2.5	1.5	3
Low cost housing	3	1.5	4.5
Normal housing development	4.5	3	6

Source: Field survey, 2002

Table 6-9 gives the situation as it is in the ground.

Table 6-9 Existing residential building line distance.

Type of Residential Development		Minimum Setbacks, M	
	Front	Side	Rear
Low cost housing	1.5	0	0
Normal housing development	3	0	1.5

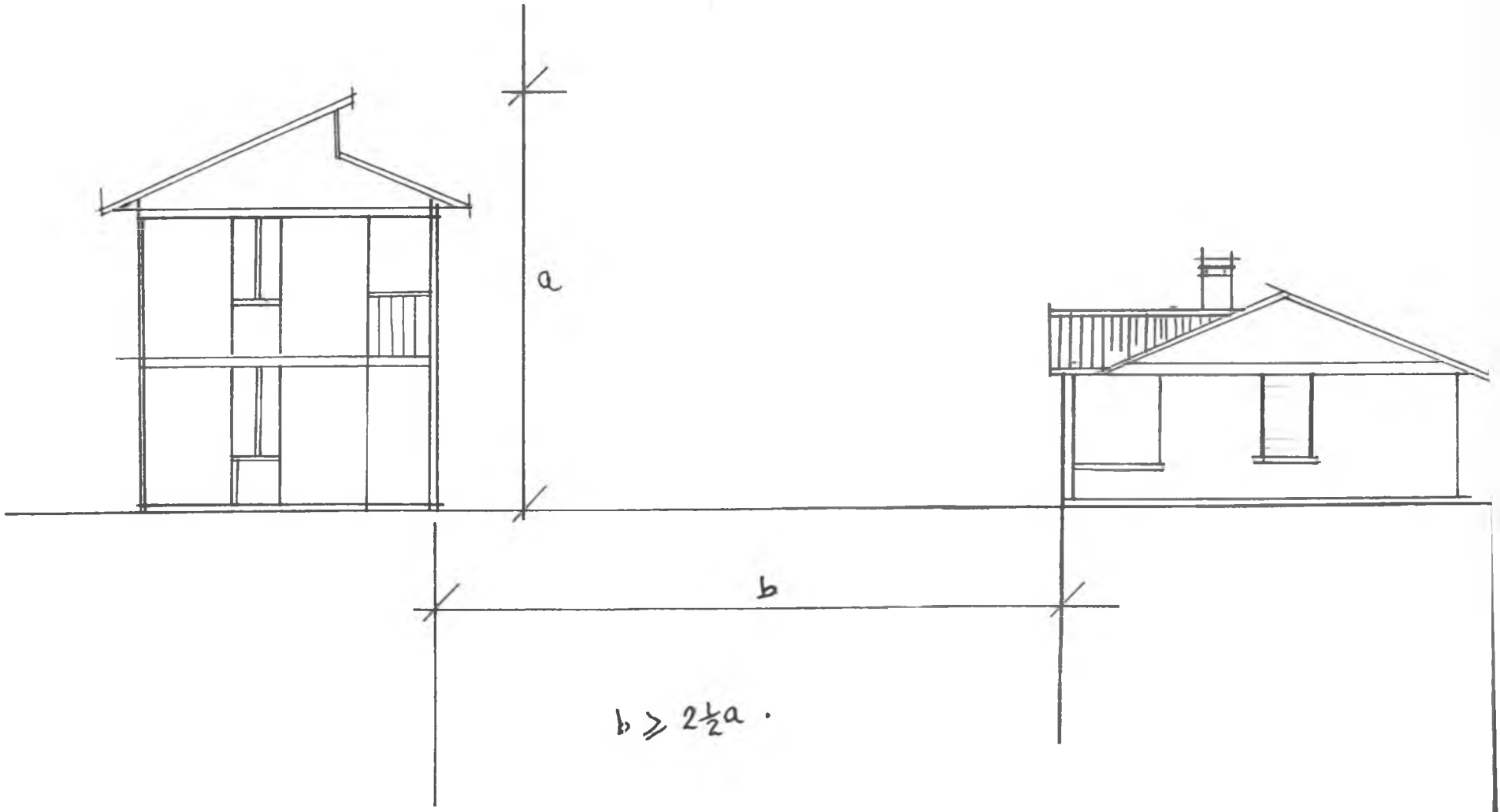
Source: Ministry of lands and settlement, 1992

(g) Distance between buildings

The distance allowance between buildings also has an influence on plot size. The allowable minimum distance between urban residential buildings in Kenya is outlined below:

(i) Front to front distance

The minimum distance between any two residential buildings, front to front, across a street, walkway or open area shall not be less than 2.5 times the total height of the taller building as shown in Figure 6-3. Plate 6-8 illustrates the situation on the ground with a very short distance between the two buildings.



$b \geq 2\frac{1}{2}a$.

Plate 6-8: Front to front distance.

Plate 6- 9: Back to back distances.

(ii) Back to back distance

The minimum distance between any two residential buildings, back to back, across property line (except in courtyard type of residential housing) shall not be less than the allowable minimum shown in Table 6-10 and illustrated in Figure 6-4.

Table 6-10 Allowable minimum back to back distances between any two residential buildings.

Type of Residential Development	Minimum Distance, M.
Slum Rehabilitation and Upgrading Scheme	6
Low Cost Housing	9
Normal Housing Development	12

Source: Ministry of lands and settlement, 1992

This requirement has been ignored with some back to back distance being zero as shown in plate 6-9. This is a major risk especially incase of a fire outbreak, which would spread very fast to all the surrounding buildings.

(h) Shape of plot

The shape of a plot also has influence on the area of the plot that is functional and habitable. The current guidelines that shape residential plots are outlined below:

- Residential plots shall be regular in shape. Rectangular plots are normally preferred to square plots.
- The plot width/depth ration shall not be less than 1-1.5 and not exceed 1 to 3.
- Irregular shaped plot should be avoided. Where provided, they should be a minimum dimension of at least 4.5-m on one of the sides.
- Triangular shaped plots are not permitted.

Ministry of works, housing and physical planning (1987)

FIGURE:6-4 Back to back Distance

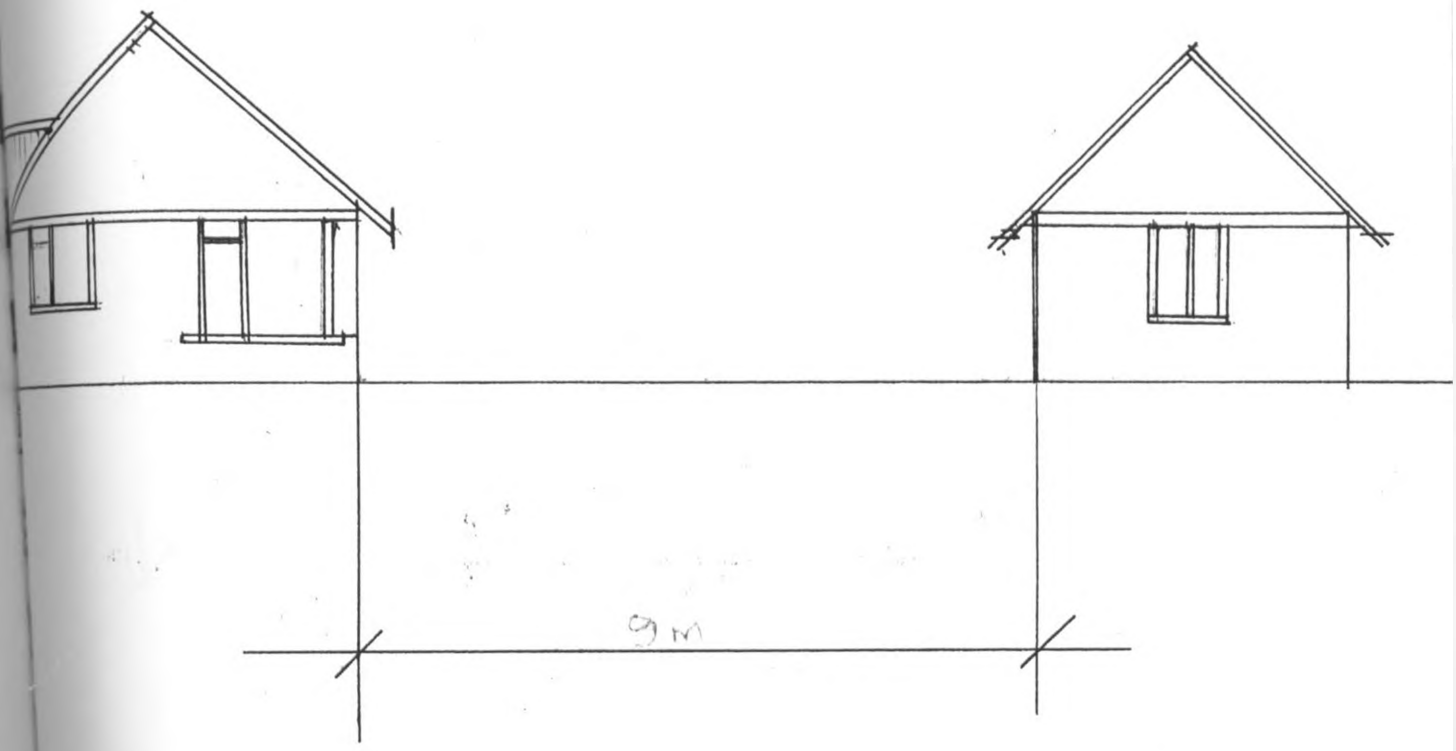


Plate 6-10 shows developed triangular shaped plots. This inhibits the space functionality and distorts the landscape which is generally developed with rectangular shaped plots.

(i) Courtyard size

A residential plot may also be developed to accommodate more than one family dwelling. In this case the residential building is designed to have an internal courtyard of shared and common open space. The standards that govern the courtyard are outlined below and illustrated in Figure 6-5:

i. The minimum area of the courtyard shall be $9.3m^2$.

ii. The minimum dimension of the courtyard shall be 2.5 m wide. The windows opens not more than two sides of the courtyard.

iii. The minimum dimension of the courtyard shall be 3m wide. The windows open onto the court from opposite walls or where the roof overhang is more than 0.6m.

Ministry of works, housing and physical planning (1987)

(j) Skyline

Height (vertical) control in residential areas is required to maintain adequate light and air as well as to control the proportionality of height floor ration. In zoned areas, the skyline is uniform, if development control is enforced to the latter like Kahawa Sukari. But in unzoned areas or areas without development control, the skyline is not uniform and some buildings do not receive enough light because they are shadowed by other taller ones. Githurai in Ruiru municipality has such a skyline as illustrated by Sketch 6- 2

(k) Access and circulation

Roads and access routes in a residential area must provide efficient, safe and adequate access to pedestrian and vehicular traffic. Access routes must also provide adequate space for infrastructure service lines like water supply, sewerage, storm water drainage, electricity supply, street lighting and communication lines. This is illustrated in Figure 6-6. Access and circulation

Plate 6- 10: Triangular shaped plots

Plate 6- 11: Access and wayleaves encroachment

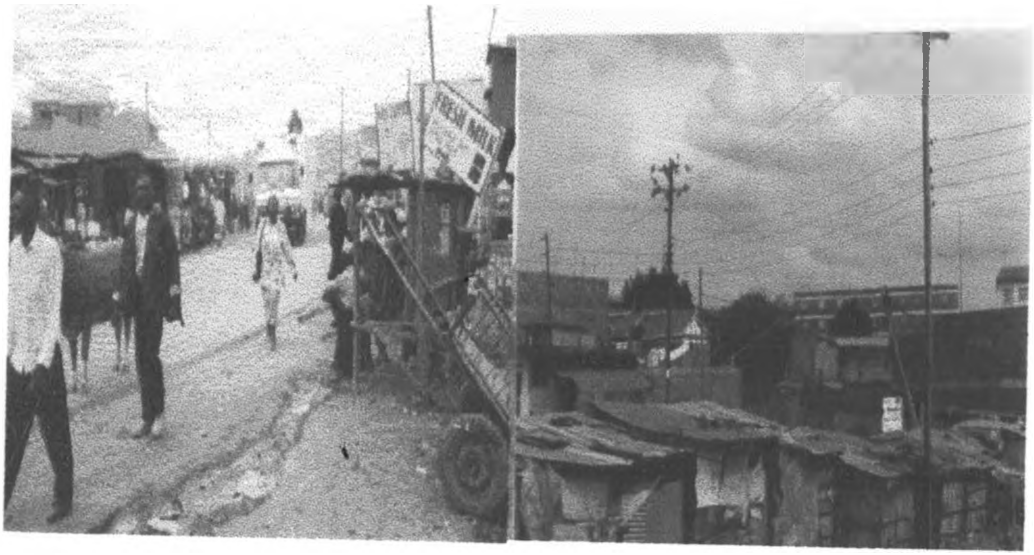
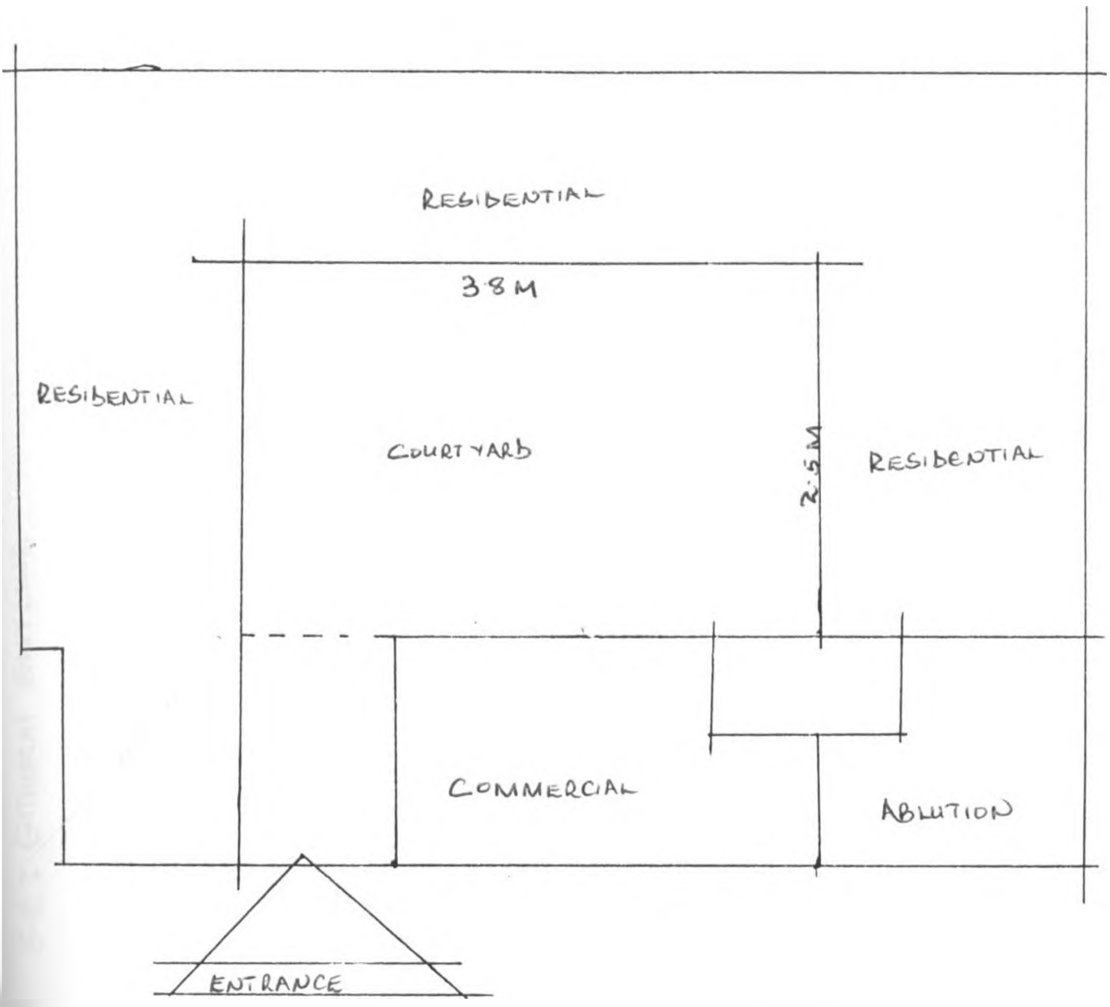


FIGURE 6 FIGURE 6-5 COURTYARD DIMENSIONS



MINIMUM AREA 9·3M²
MINIMUM DIMENSION 2·5M

SKETCH 6-2 : GITHURAI SKYLINE

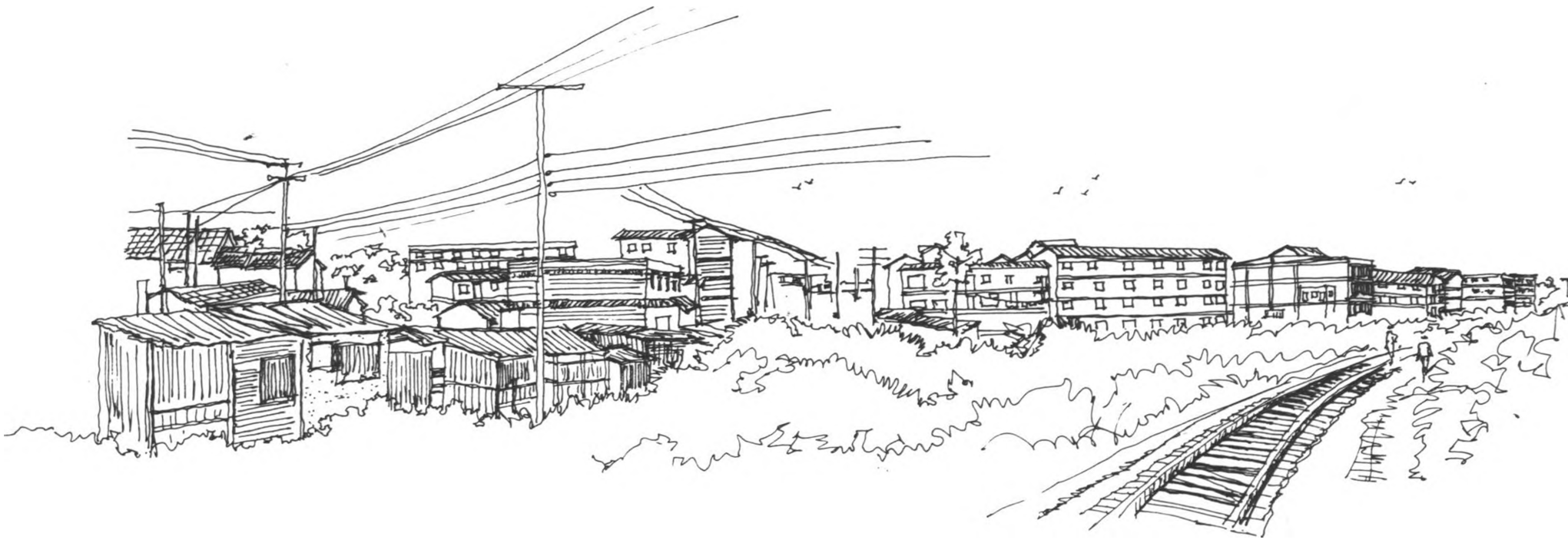
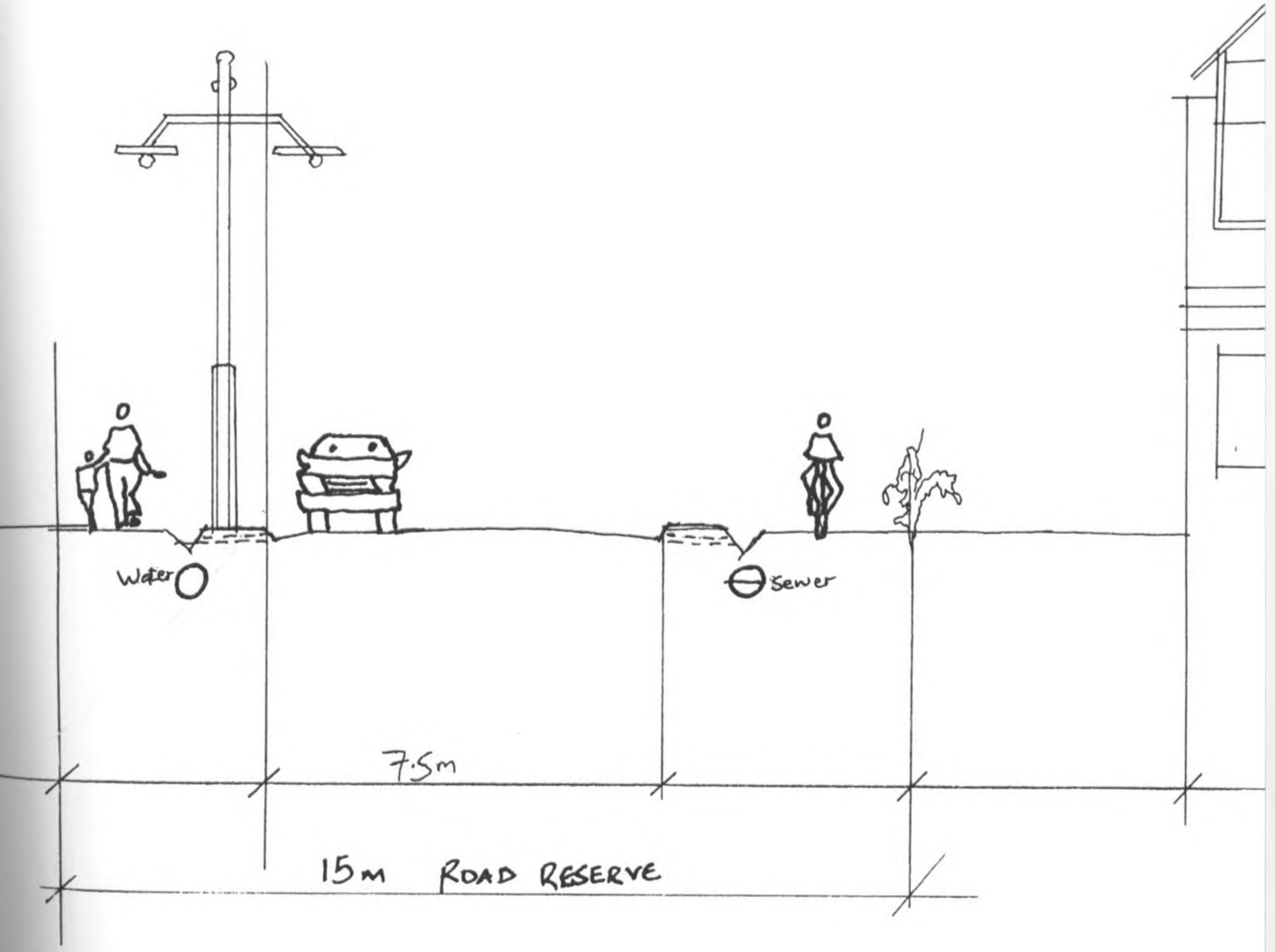


FIGURE 6-6 : ACCESS & WAYLEAVES DIMENSIONS



routes constitute a significant component of any residential neighborhood development. The allowable minimum width of street or access lane in a residential area is 6 m or a road reserve of 12m. The allowable minimum sizes of residential streets in Kenya is outlined below (Table 6-11).

Table 6-11 Minimum width of street in residential area

	Type of Street	**Width, Metres**	
		Carriageway	**Road Reserve**
1.	Spine or major street	12	25
2.	Local distributor road (No vehicular plot access)	9	18
3.	Major access road (exceeding 150 m long)	7.5	15
4.	Cul de Sac or short street (Road not exceeding 60 m long)	7.5	12
5.	Footpaths	3	6

Source: Ministry of works, housing and physical planning (1987)

The problem with access and circulation in the study area is that the access roads are not made; they are provided for but are not easily accessible. Where they are made, there is poor maintenance making them inaccessible. The other major problem is encroachment of these access and circulation routes by other activities like informal businesses as shown in plate 6-11.

(l) Land user allocation

A residential area must always be planned as a spatial neighborhood unit. The neighborhood concept aims at integrated and wholesome residential development together with day to day community and social services, recreation, transport and communication system. The share distribution among

the various land use activities influences the standards of development plots and the plot size.

The residential neighborhood in Nairobi shows the following land use allocation for the various activities (Table 6-12).

Table 6-12 Land use allocation in residential neighborhood development.

Land use Activity	Percentage of Developed Area		
	High Density	**Medium Density**	**Low density**
Dwelling Plots	40-60	64-74	80-90
Recreation	21-29	7-16	-
Community Facilities	5-20	9-10	0.1-1
Roads and Streets	4-15	6-8	8-8.8
Others	1-7	3-4	0-2.2

Source: Ministry of works, housing and physical planning (1987)

(m) Educational Facilities

- Nursery and primary schools should be located within a walking distance of 250-300 m.
- Secondary schools should be located within a walking distance of 500-600m.
- Minimum area required for single stream primary school is 1.2 Hectares and 2.0 Hectares for a double stream.

(Ministry of lands and settlement 1992)

Plate 6-12 shows a primary school located on a 0.25 acre plot. The space requirements are totally ignored. There is no playing field and the courtyard acts as a playing field and a dining room. The entrance to the school is via a foul water drainage which has turned green because it is stagnant and has been there for a long time. This is a major cause of diseases like malaria, cholera and typhoid.

Plate 6- 12: A school on a quarter acre plot and foul drainage Entrance.

In Githurai, there were very many subdivision schemes but the land meant for the schools was allocated to private developers, who have either put up private schools or converted it to residential. The nearest public school is in Kahawa Sukari, which is 5 Km away.

As indicated by Table 6-5, in the Githurai-Mwihoko subdivision scheme land was set aside for a nursery school but not for a primary school. Based on the average household size of 5 persons per household, the expected population of Mwihoko area is 2645 people and based on the above standards a population of 2500 and above should be provided for any area.

The same case applies to other facilities. Land buying companies in this area did not set aside enough land for a market and the council had no control over the area because it was outside their area of jurisdiction.

(n) Petrol stations location

Motor vehicle fuel service stations owners would like a service station at almost any point on almost every busy road so a clear planning policy in regard to their location is always needed. The factors to be considered are what effect would a service station have on traffic flow and road safety?, is the proposal in variance with development and in particular is the neighboring landuse compatible with service stations?, what would be its effect on amenity?, are the location, layout and design of the station satisfactory? Incompatible landuses increases potential for fire and community health hazard. The planning standards stipulate that the distance between service stations to be determined by traffic flow although a minimum distance of 200 m should be observed. Ministry of works, housing and physical planning (1987)

The field survey observed that some stations located next to each other (Plate 6-13) inhibiting traffic entering or leaving either of the stations.

Plate 6-13: shows two petrol stations within 200 meters

Plate 6-14 Filling station outside a cereals shop in Ruiru town.

As earlier mentioned, service stations are highly inflammable and therefore compatible with very few activities. But the field survey observed a filling station located on a verandah outside a cereals shop (Plate 6-14) and risks of food contamination are very high. Cars fuelling park on the road. The space covered by the station is less than an eighth of an acre instead of the stipulated 0.25 acres.

6-3-5 By-laws provisions (Building code)

Ruiru's municipality by-laws were adopted from the mother Kiambu county council and are not meant to deal with a rapidly urbanizing area. For building constructions, the municipality has adopted 1968 by-laws.

(a) Applications

A person who intends to erect a building shall submit a written application in such a form as the council may require completing all details required therein so far as they apply to the proposals. The application should be signed by the developer and attached to any plans or documents submitted (By law 4)

But as earlier mentioned this bylaw exists only in writing. The developers do not see the reason as to why they should apply to develop. In any case the application involves payment of fees, which is an added cost.

(b) Notices and inspections

Any person who erects a building shall give to the council a notice in writing on a "notice of inspection" card, obtainable from the council. This is to allow for inspection in the various stages of construction. But as shown from Table 6-13 none of the developers had submitted this card or had their buildings inspected at the various stages of construction.

Table 6-13: Notice of inspection

Notice of inspection	No. of developers	Percentage
Submitted	0	0
Not submitted	56	100

Source: Field survey 2002

(c) Certificate of completion

The developer should also notify the council in writing of the completion to enable a final inspection to be made and a certificate of completion to be issued. No person shall occupy, use or permit the occupation or use of any building before a certificate of completion has been issued by the council in respect thereof. A building should also be inspected regularly in the various construction stages. (By law 16). But as shown in Table 6-14 none of the developers had obtained a certificate of completion from the local authority. The developers do not involve the local authority in the various construction stages. Some of the buildings are occupied while still in the construction stage and no certificate of completion is issued by the council.

Table 6-14: Certificate of completion

Certificate of completion	Frequency	Percentage
Issued	0	0
Not issued	56	100

Source: Field survey 2002

The works officer confirmed this issue. According to him the council never receives any inspection card and has never issued any certificate of completion because they are not involved at all in the construction process.

(d) Siting of buildings

All new buildings shall be so sited on a plot to ensure hygienic and statutory conditions and to avoid, as far as possible, any nuisance or annoyance to the owners or occupiers of neighboring plots (By Law 24).

(e) Disposal

Every domestic and public building and building of the warehouse class shall be provided with approved means of refuse disposal.

Unless alternative means of refuse disposal satisfactory to the council are provided, refuse chutes shall be installed in a block of dwellings exceeding three storeys in height and any other building where an upper floor which requires refuse disposal service is 20 ft above the adjoining ground level (By-law 139).

This is another requirement whose existence is only in writing. Refuse disposal is a private affair and the developers do not provide for it. Refuse chutes had not been installed in any of the buildings inspected in the field survey.

(f) Staircases, ventilation and lighting

Unless the council otherwise agrees, a handrail shall be provided at each stair. The outer handrails shall be as continuous as is practicable throughout the stairway (By law 134).

All common stairs and common passages shall be adequately cross ventilated and for common stairs sufficient natural and artificial lighting shall be provided (By-law 158). Some of the areas with high rise buildings and a flight of stairs are not served by electricity and climbing the stairs at night can cause injuries.

In some buildings, the orientation of the buildings is such that they are always dark and the developers have not put any ventilation. During the day the lights are switched off to save on electricity and the stairs are a source of injury at all times.

(g) Fire escape

Any building, which exceeds two storeys in height and in which the floor of any upper storey is more than 50 feet above the surface of the street or ground

on any side of the building, shall be provided with such means of escape in case of fire as the council may deem necessary. (By-law 212).

In any public building or building of the warehouse class or domestic building, where any floor is more than 20 feet above the ground level, the council may require the provision of such fire fighting equipment as it considers necessary, including one or more of the falling, hydrants – hose, hose reels and fore appliance external connections, portable fire appliance, sprinkler-drencher and water spray projector system, water storage tanks and dry risers.

In all the high-rise buildings in Ruiru municipality, none had been provided with a fire escape. The only access to all the floors including the uppermost (6^{th} floor) is the staircase. Some of the staircases are very narrow and it would be very difficult to get people to move out quickly in case of a fire outbreak.

CHAPTER 7

MAIN RESEARCH FINDINGS

7-1 Introduction

This chapter presents the findings which are the main development challenges which face the local authorities in their day to day operations. The chapter starts by looking at a summary of the findings based on the various objectives of the study. It then looks at all the findings which are the main challenges facing this municipality.

7-2 Existing Legal and Institutional Framework

The existing legal and institutional framework faces various conflicts, which hampers efficient operations. These will be looked at in their various capacities.

7-2-1 Conflict of the institutional agencies

The type of relationship that exist between a planning agency and an implementing body, where the former acts only in an advisory capacity, is not effective due to the fact that planning agency does not have any resources to implement the plans. The physical planning department serves in an advisory capacity only. It monitors the plans and also co-ordinates with the development agencies during the implementation. There is a close relationship between planning process and development process. The planner comes in development control but he lacks control on development process. Where the relationship between planning process and development process is weak there is no effective direction of the plan and the enforcement of planning standards by the planner becomes ineffective. Uncontrolled development is witnessed in many urban centres in Kenya. The department does not have power to prevent such kind of development. The local authorities, in whose hands such power is vested, may be unwilling to stop such kind of development because of political reasons or because they do not have enough manpower to go around.

The council allocates trust land, under the trust land act chapter 288. Development of trust land is however administered by the COL as an agent of local authorities. This has led to land set aside for future development being allocated by the COL to private developers for example land for a dumping site in Ruiru allocated to spinners and spinners by the COL. There is an overlapping of functions between the central government and the local government.

The internal structure of the council is also a problem. The various departments are meant to work together, but they work independently and do not inform each other, for example, the licensing department gives license instead of people getting change of users.

There are also internal problems within the council whereby the inspectors who are supposed to monitor developments are bribed and will not carry out their duties effectively. Structures are in effect fuelled by the council itself because they license them.

The officers of the local authority encounter difficulties as they work with councillors and most of their good ideas are not accepted by the councillors. A case in point is the suggestion by the Ruiru works officer to employ people on commission basis to ensure that before a developer starts construction he submits a plan. This will ensure that developments are controlled from the initial stages and the fees earned from these plans will pay the extra officers. But the Ruiru mayor objected to this saying he does not want to upset his electorates. The officers work under very difficult circumstances with councillors who look down on them.

7-2-2 Conflicts of the legislations

The physical planning Act1996 contradicts previous legislation's such as the Registration of Titles Act Cap 281 section 23(1), which states that once a

proprietor has been issued with a certificate of Title by the registrar, that title shall be taken by the courts as conclusive evidence that the person named in as proprietor of land is the absolute and indefeasible owner. The owner has a right to use the land for the purpose it is registered. In addition, the Registered Land Act Cap300 section (4) states that except otherwise provided by the Act, no other written law and no procedure relating to land shall apply to land registered under the act so far as it is inconsistent with the Act. The Physical Planning Act does not recognize these Acts and this has created a conflict making it hard to implement it. It does not recognize the rights of the landowners despite the fact that other laws that give power to the landowners within legal provisions preceded it. This gives the owner the right to use land as he deems fit. It is only the Attorney general who can revoke the registration of any registered farmers when carrying out their activities, but the physical planning Act enacted in 1996 conflict with them. Recent laws that do not recognize what is catered for in the previous laws have brought about this conflict. There is a need to harmonize these laws.

Failure to coordinate institutions: There appears to be no nexus between the institutions which are in one way or another concerned with land registration in Kenya. These institutions are those that are concerned with land control, land planning, land adjudication and consolidation, land surveying, agricultural and extension services e.t.c. All these institutions are heavily departmentalized such that there is little co-ordination and rationalization of their activities.

7-2-3 Lack of a Comprehensive Housing Policy

Kenya has got no housing policy both at the local and national level. From the 1980s, the government stopped investing in housing. There is the deteriorating housing conditions countrywide and a housing deficit arising from demand that far outstrips supply, particularly in urban areas. This situation has been aggravated by rapid urbanization, widespread poverty and escalating costs within the building industry. The shortage of housing is manifested in

overcrowding, proliferation of slum and informal settlements in peri urban area as well as poor quality housing in rural areas.

7-3 Administration and Enforcement of Development Control Tools

The problems facing local authorities in development planning and development control are not due to lack of operation tools, but poor administration and enforcement of these tools. The various tools are analyzed here to find out what ails them.

7-3-1 Administration and enforcement of acts, regulations and codes

The normal system of enforcement presupposes a comprehensive array of skilled personnel to ensure that every single construction project has a building permit, prior to erection of the structure. In addition, there must be adequate skilled staff to visit all sites proposed for construction before granting a building permit and most important of all, the construction site must be visited at various stages when construction is in progress, to ensure conformity with the approved design. However, practically all enforcement agencies are under staffed, both numerically and in skills and the minimum resources required to perform these functions, such as vehicles and surveying instruments, are rarely available. What happens in reality is that most of the operations which are supposed to take place outside the offices of the enforcement agencies, such as site visits are ignored, although these activities form the very foundation of the enforcement system. In the absence of site visits, enforcement becomes a simple and routine procedure of office approval of drawings.

Weakness of enforcement capacity is aggravated by the adoption of procedures which are cumbersome and time-consuming. There are many cases of builders who take advantage of the weaknesses of the enforcement agencies to put up illegal structures, but there are still more builders who become victims of these cumbersome processes and because of the delays in obtaining a building permit, have to absorb inflationary trends in construction costs.

Ruiru municipality does not have a physical planner and rely on the district physical planner to prepare plans for them. Up to now, Ruiru does not have a physical development plan. The existing development plan is outdated and invalid since it was prepared in 1978. The municipality is still waiting for the district planner to prepare one for them. But, according to the district planner, his main priority is Thika and he is not in a hurry to prepare one for Ruiru. He also has to deal with Gatundu and Gatanga. Without their own planners, their work is delayed.

Resources to monitor developments in the area are scarce. According to the works officer in the area, it is very difficult to monitor developments because the inspectors are very few and usually they will visit a site and find that a building is going as per plan, but by the time they revisit, they find that everything has changed and it is too late to demolish the building. An officer is supposed to inspect until completion when the developer gets certificates of occupation, but there are neither vehicles nor officers facilitate inspection. This is coupled by total lack of ethics where the officers are compromised. This leads to weak enforcement machinery. Where there is strong surveillance, like Kahawa Sukari, the plan works.

7-3-2 Loopholes of the physical planning act

The Act is a handicap as far as enforcement is concerned for example the developer, within 90 days, shall if it is the decision of the local authority restore the land to its original state. If upon the expiry of the 90 days notice the developer will not have complied then the local authority shall restore the site to its original state and recover the costs incurred from the developer. However, the Act does not specify how the local authority will recover its incurred costs from the developer, so local authorities avoid incurring costs.

7-3-3 High planning standards

One of the most intractable difficulties faced by the housing sector in developing countries has been the restriction placed on shelter production by

inappropriate building regulations. Many of these regulations have been inherited and therefore they typically specify materials and techniques, which originate from developed countries. Commonly, they actually prohibit use of materials which are indigenous to the country and which are used for most construction purposes.

Planning standards are too high, for example, 6 metres building line is not linked with practicality, thus people will do anything to dodge such requirements. Land is a scarce commodity and the tendency is to use it to the maximum. The planning standards are high both in construction and in planning. There is a conflict in the slum areas, which do not have standards and cannot be controlled yet they are there.

The planning law requirement that every home be built with permanent building materials such as quarry or concrete blocks, makes home building prohibitive for an average home owner. Such standards increase the cost of land development and discourages people from seeking planning services. By ignoring to formalize development of their land through existing planning framework and planning authorities, the landowners avoid the high costs.

There has been a great deal of argument about building standards and regulations in recent years because no local authority has found a way to exert total or even in some cases, partial control. Rising costs, increasing complexity and the growing diversity of the duties of local government force the authorities to transfer the responsibilities to the private sector which means that there must be specific compulsory standards which are beyond the resources of many of the people moving to the cities and also to exceed minimum requirements for sanitation, safety and comfort. As a result, there have been conflict and violation of the regulations and the controls set up by the local authorities have proved to be ineffective and insufficient. The settlers have resorted to forms of invasion or to plans offered by unscrupulous landholders, ignoring local regulations.

The same case applies to physical development plans. Plans prepared have remained physical in nature failing to capture the multi sectoral dynamics of urban development. The plans have been seen as products depicting a desired end state as opposed to a process that is understood by various actors and is flexible.

7-3-4 Outdated by-laws

According to the physical planning act section 29 (e), the municipal council should formulate by-laws to regulate zoning in respect to use and density of development. There are no zoning by-laws Ruiru Municipal Council and therefore control is hampered as no zoning has been done to determine what areas should fall under what activity and what should be the minimum land sizes. Due to lack of zoning, the council has continued approving subdivisions in various wards without a proper basis of approval. As a result, there has been a trend of encroaching residential and commercial activities in agricultural land, but no accompanying infrastructure.

7-3-5 Use of part development plan

The planners use part of development plans which are not integrated. The area might be having a structure plan, but the part development plans are never put together to come up with one whole and this has led to incompatible developments.

7-3-6 Culture

No action is taken against developers who don't comply with the laid down planning laws and regulations. This has to do with poor enforcement of development control. Nothing will be done with the lawbreakers even if they don't comply. This attitude has contributed to a lot of the uncontrolled developments in many urban centres because the council is seen as a dog that barks but does not bite. If the local authorities were to act immediately, an illegal structure comes up this would be a warning to would be offenders. It is

very hard even for the local authorities to demolish a finished building. Developers are aware of this and they capitalize on it. The local authorities should learn from Kahawa Sukari, where it is demolished immediately.

7-3-7 Weak Instruments

According to the physical planning act, offenders can only be prosecuted by the attorney general. This prevents the local authorities from acting. Also the fines are very minimal and do not serve, as a deterrent measure to would be offenders. The legal proceedings are also very long and developers usually go ahead with their developments and wait for the outcomes.

The by-laws are not Acts of Parliament and they do not give powers to the council thus hindering the prosecution of offenders.

7-3-8 Lack of Community and private sector participation

The community is sidelined in the planning process and is only involved in the implementation process. There is no social base for implementing standards where the community was never involved in their formulation. The society, which is supposed to be using the standards, do not know them or even understand the logic behind them.

The private sector participation is missing in the whole process. The private sector participation would come in hardy where the local authority is inefficient and especially in the provision of services. Where the private sector is fully involved like in Kahawa Sukari the plan is fully implemented.

7-3-9 Politics

Councilors have the powers to defer decisions of the council officials. This deference hinders development because in case a developer has borrowed money and wants to develop quickly, he will go ahead with the development without permission because the deferments are time consuming. Some councillors defer decisions out of malice.

Politics is also a major challenge in development control where land is concerned. The politically correct will elect illegal structures, but they are not answerable to anybody. Petrol stations are constructed on wayleaves on top of water pipes. Land grabbing of public utility sites is the order of the day by the politicians who have taken the law into their hands.

7-3-10 Corruption

The planning department sits on the plans so that they can be bribed. If one refuses to bribe, the plans will never be approved and so, small developers go on without the plan approval rather than pay the bribes.

7-3-11 Poor communication

The members of the companies and cooperatives societies were left to develop their land without any form of guidance. In the absence of such guidance, planning and development of land lacked coordination. From the interviews and discussions with the officials, it was clear that after approval of subdivision plans, effective communication between the cooperatives and the commissioner of lands or between the cooperatives and Ruiru local authority was not maintained. The Ruiru local authority was responsible for the coordination of land development in Langata Development Company, but failed due to lack of communication. Communication between the officials of the companies and the cooperative societies and their members was also weak. There were *adhoc* meetings that were convened when there were serious issues related to infrastructure for discussion. Often, they would not resolve the issues because developments such as building of roads are beyond their capacity to finance.

Landowners and developers did not provide essential services on their properties and did not rehabilitate the sites after development. For plan approval, they will be required to guarantee landscaping, pay for the provision of water, sewer and access to the proposed development. When developers

were applying for plots, the land buying companies promised to tarmac the roads after complete sale, but they did not do this. They just left the residents to make the roads and maintain them for themselves. Successful implementation of the housing programs depends on an effective policy on planned and managed urban land development. The local authority was not able to put mechanisms in place to facilitate planned and managed land development in view of the diversity of land ownership and development interests within its jurisdiction. This finding seems to confirm the fact that although the authorities have legal jurisdiction over local planning, because of ambiguities in the planning law they never get fully involved.

7-4 Lack of Financial Resources

The situation has come about due to a combination of various factors which include genuine lack of financial resources, due to limited revenue base, general mismanagement of funds by the local authorities and the economic decline of the general economy. The following subsection gives a brief analysis of these factors.

7-4-1 Lack of financial resources

Financial resources to provide services to the residents are not available. This leads to lack of essential service like sewerage which is very expensive. This has also hindered purchase of equipment and recruitment of staff.

Financial resources also affect the developer in as far as paying for the planning services. The cost of planning is high because of the high professional fees. They would rather develop on their own other than pay for these services. The main emphasis in the enforcement of codes and regulations is on a builder obtaining a building permit. Once this has been approved, all requirements are deemed to have been fulfilled. An example of procedure for obtaining a building permit is that fees for a building permit have to be paid to the local council, a certificate of ownership of the plot has to be provided and a site plan, topographic plan, sketch design of construction and accompanying working

drawings have to be submitted. Other details specify that building plans must be signed by a person registered by the local body of architects. This is very expensive because of the professional fees and developers will do their best to avoid it.

7-4-2 Mismanagement of funds

The council may not be having enough funds, but even the little that it has is not put to proper use. The council draws the budget but does not follow it. The public is tired of paying rates and service charges to the council when the council does not respond by providing services. As a result, there is generally bad blood between the councils and the residents. The money collected is put into other users like paying council salaries, financing councilors trips and general misappropriation of funds.

7-4-3 General Economic decline

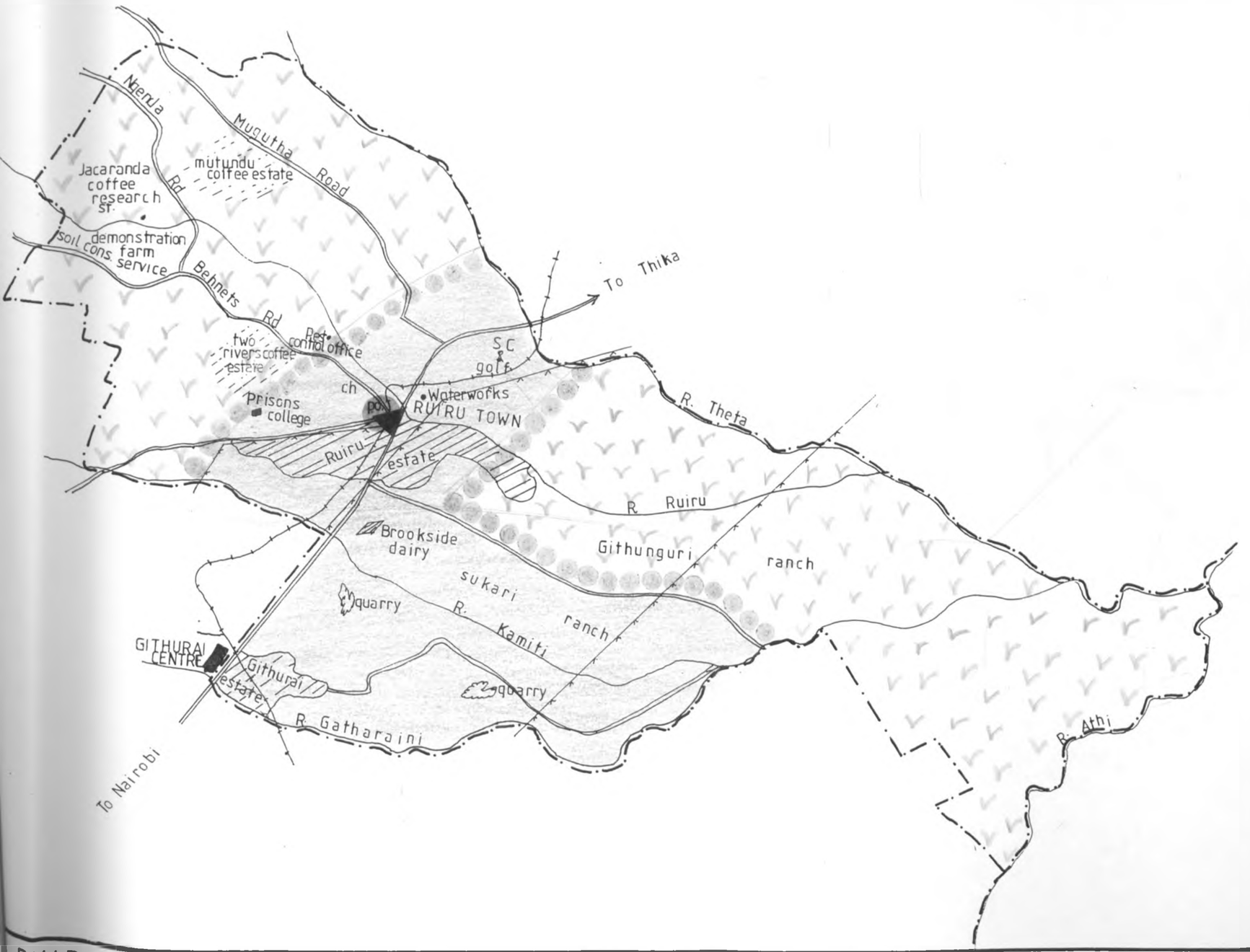
Retrenchment of workers in all sectors has impacted negatively on development control. People have to earn a living, so they put up kiosks. People want to use the land to the maximum because of the hard economic times. They will not follow the set out planning guidelines and rules because they limit the use of the land. It also means that paying for these approvals, as fee approvals are other added costs.

People are paying so much to finance their mortgages. Usually, the council will not grant permission for change of user in residential area especially if the intended use will be a nuisance to the other residents. As a result, the developers change the use illegally.

7-5 Rapid Urban Growth

Urban areas are growing so rapidly, overtaking the capacity of the local authorities to provide services or even to monitor their growth. Areas, which were initially rural areas with no basic infrastructure services, are residential housing which are not accompanied by the necessary basic infrastrural

RUIRU MUNICIPALITY



LEGEND

MUNICIPAL BOUNDARY
ROADS
RIVERS
RAILWAY
POWERLINE
SC SPORTS CLUB
CH CHURCH
PO POSTOFFICE
SC SPORTS CLUB
GREEN BELT
EXISTING TOWN CENTRE
PROPOSED DEVELOPMENT AREA AND SERVICE PROVISION

SCALE 1:100,000

RUIRU MUNICIPALITY STUDY MAP 8-1: RECOMMENDED GROWTH MODEL FOR RUIRU

Source
Topo Sheets 148/2 & 149/1 of scale 1:50,000

UNIVERSITY OF NAIROBI
DURP
YEAR 2001 — 2002

services. It is very hard to control development here because they are usually in the periphery of municipality boundaries and thus outside the planned area.

This rapid urban growth has brought about social change. Social change is generated by factors independent of planning. Not all change is acceptable in the public interest. Planning tries to make change acceptable. Change for all its benefits has produced some monsters. Slums waste, depletion of scarce resources, ugliness and pollution, were the unintended, unforeseen and unwelcome byproducts of changes ambitions. Change is unavoidably unreliable and predictably surprising. What it leaves in its wake cannot be anticipated. We can only respond after the event.

Since independence a lot has happened in economics and social lives of the people posing a challenge to development control. The whiteman was for a small city. After independence, the council has not invested in anything (infrastructure, housing) and people have taken things into their own hands. Resources are few and the local authorities have not been able to deal with the change. Government inability to provide services; the introduction of SAPs led to government withdrawal.

7-6 Land Matters

7-6-1 Land ownership

Land in Ruiru Municipality is held under freehold tenure and leasehold tenure. The area under freehold is not controllable because the owners have absolute ownership. Land is also owned by land buying companies who are a major drawback to control by the authorities. The local authority has got no say over what the companies do with their land. Land buying companies work on their own and are not accountable to the council. They subdivide land oblivious of the impact their own schemes have on the surrounding areas and their impact on infrastructure services.

7-6-2 Lack of land inventory.

Ruiru municipality does not have a proper inventory of what type of land lies under which tenure or under which uses. They do not have a reliable information system and this works negatively towards the municipality because they cannot collect revenue effectively if they are not aware of the various land uses. The development of a satisfactory information base is essential to the planning process and as such can be regarded as part of the process. The present information base is extremely inadequate in most countries.

Information is also very important in the planning process. Although the need for planners to communicate with the general public is sometimes seen as a problem of information, information for the planner, on the peoples needs and information for the people on the planners proposals and the reasons for them the problem is really more subtle. Each planner needs to know what other planners are doing and each group among the people needs to understand the various interests of other groups. In the formulation of goals and plans, and in the implementation and evaluation of plans the better the quality of communication in every direction the better planning.

CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS

8-1 Overview

This chapter presents the conclusion and recommendations which are drawn based on the study findings that arose from data analysis made during the fieldwork. The focus of the study was to look at development planning and development control in relation to the set out standards and guidelines. This section gives suggestions which could improve development planning and development control in Ruiru Municipality. The study was carried out under the following hypothesis.

- The structure of peri urban development in Ruiru is unplanned, not integrated and not co-ordinated.
- The problem of uncontrolled development in Ruiru relates to absence of a local development plan.
- Ruiru Municipality does not have the capacity to control developments and provide services in its area.
- Proximity to Nairobi has influenced the rapid expansion of Ruiru Municipality.

8-2 Conclusions

Managing metropolitan areas is a challenge that is likely to magnify with time other than reduce. As the rate of urbanization increases especially in developing countries, planning for these areas will demand more dedication and resources. It will involve a combination of ideas and the ability to change with the times.

The study concludes that there is widespread lack of planning as planning services are not highly regarded in all the areas except Kahawa Sukari. Development of land without consulting the planning authorities suggests the need for more effective enforcement of planning regulations in the implementation of development proposals. Such regulations have to be applied

within the context of planning law provisions, which addresses the planning needs of developers. At the same time, the provisions must safeguard against the landowners and developers implementing their development proposals without regard to the development needs of their communities in particular and society in general.

The challenge of planning is not only how to contain urban growth, but also how to marshall human, financial and technical resources to ensure that social economic and environmental needs are addressed within urban growth. The challenge of planning is to make the activity be seen as a process that ensures that social, environmental and economic goal are seen as a process rather than as an 'end –state' activity. Simpler and more effective land use regulations, which respects local socio-economic conditions, household income levels and the limited resources of the city to implement and enforce regulations, should be considered.

Planning should be seen less as development control and more encouraging and supporting the multiplicity of private initiatives from citizen groups, NGOs and local, national and international enterprises that make a settlement prosper. There is also a much greater stress placed on integrating social economic and environmental goals.

In reviewing land for urban expansion, the important consideration should not be so much ownership, but the determination of how physical and social balance in the growth of cities can be attained. In allocating lands, the condition should be inserted that the developments should follow the prescribed way. There is need to strengthen local authorities by infusing them with more efficient administrative, technical and legal personnel. Sustainable and cost effective land use management, proper utilization and administration would lead to well planned and co-ordinated settlements. Hopefully, the enforcement of the physical-planning act will enhance housing development and ensure a sound human settlement environment.

8-3 Recommendations

8-3-1 Recommendations for urban sprawl

Pendall found that **smart growth solutions,** which focus on channeling growth into areas with existing infrastructure, were effective at slowing sprawling growth regardless of its cause. Pendalls recent study found that smart growth tools which require that infrastructure like roads and sewer lines be fully paid for before new developments moves forward are very effective. Bruce and Rodgers (2001) research bears out the effectiveness of a strategy that demands that growth should pay its own way. People should pay for the public services they receive. The local authorities cannot afford to copy wasteful and inefficient growth patterns of the past. Along with rethinking our public investments, people must be held directly accountable for the costs they impose through individual landuse decisions.

Another key smart growth solution that has proven very effective in the developed world is the use of greenbelts. Greenbelts create designated growth areas with distinct boundaries and protection of open spaces outside of those areas. They fix urban growth boundaries. Future metropolitan growth should be redirected inward instead of outward. Specifically the fully developed area should be made more attractive to new development by eliminating current obstacles and introducing new incentives for development. Map 8.1 illustrates ideal growth model for Ruiru Municipality.

The creation of municipalities should be based on proper research and should be preceded by a prepared physical development plan after identifying the extent to which a particular town is likely to grow at a given duration of time. The ability to provide infrastructure and services and not population, should be the criteria.

Any area before gazzetment should be served with the necessary infrastructure services that can support the urban growth.

8-3-2 Recommendation for land use planning

The local authority should establish zoning regulations, which form the basis for the preparation of a local physical development plan through liaison with the physical planner. This will guide developers.

Local authority should also establish the minimum acceptable land sizes within areas zoned for residential use.

Once zoning and preparation of a physical development plan is done, the local authority should develop infrastructure such as road construction and improvement of the existing, provision of water and sewage system.

Geographic information systems and other computer tools are extremely useful for visualising and planning. The local authorities should adopt these modern technologies. Currently, Ruiru municipality is not even computerized.

Local authorities should be encouraged to develop capacities to plan by having their own planning institutions so that they can implement development control

Local authorities should be trained on participating planning approach and be taken as key participants both in preparation of the plan and its implementation. Training programs and regional and interegional seminars should be encouraged to highlight the rapid growth of uncontrolled developments together with possible solutions and to bring to the attention of the public and the policy makers the dangers of uncontrolled urban developments.

Other factors to be looked into include working out the level of resources required to prepare a plan to assist the government in budgeting for it. The government should be given tangible figures and budget

8-3-3 Recommendations for legislation

The process of applying building standards needs to be revised so as to make them more realistic, more adaptable to changing circumstances and more enforceable. They should be limited to basic aspects and should be flexible enough to enable the supervisory broad limits. Formulation and adoption of realistic and performance oriented building standards especially in low-income settlements would go a long way in solving the problem.

Through a process of reviewing building by-laws and planning regulations, importance should be attached to promotion of socially acceptable local building materials and appropriate technologies. Reviewing and updating housing standards and regulations on a continuous basis taking into consideration technological and socio-cultural values is highly recommended. Standards governing housing development should, where applicable, be performance oriented allowing enough flexibility to suit the various socio-cultural, economic and climatic situations of different local regions.

There is need to amend and harmonize the planning conflicting laws. The ones which are unresponsive to the current development needs and trends should be amended. The physical planning act should be amended to take care of the landowner rights. It should also be given more teeth to bite. The local authorities should be given more powers to prosecute offenders.

The planning unit should be defined in Kenya to avoid confusion and multiplicity of roles and duties. Currently the planning units are so many and are not unified.

8.3.4 Recommendations for metropolitan influence

The problem of uncontrolled developments can be dealt with in the long run only in the context of regional planning, involving not only the urban centers, but also the region of which it is a part, including the surrounding rural areas and townships. The major problem is that truly integrated regional planning for

metropolitan areas does not yet exist. A regional approach allows local planning to effectively address issues that transcend local boundaries. To be fully effective, such regional planning must go beyond traditional town planning or physical planning. It must integrate social, economic and physical environmental planning. This is especially important because most of the uncontrolled developments are first outside municipal limits and municipal governments are powerless to deal with the situation. It also may lead to more efficient delivery of public services in a wider area. This would really work in Githurai, which is better served by Nairobi city council.

Counties and joint planning districts must coordinate their plans with the plans of neighboring counties, cities and districts, including the metropolitan council for communities within and adjacent to each other. Counties also must coordinate with the cities and towns within their borders. Likewise, cities and townships must coordinate their plans with the plans of the county and of neighboring communities. Landuse policies will continue to fail until decision makers and citizens understand that landuse is an integrated and interdependent regional system.

A **regional metropolitan planning body** should be formed to manage the metropolitan area. This body should be Known as the Greater Nairobi Metropolitan Regional Planning Authority. The body should set up regional offices in the various satellite towns. The body should be charged with the responsibilities of service provision, which include transport, water supply, and infrastructure. However, the administration issues should be left with the local authority inorder to avoid resistance and resentment from local authorities due to power struggles. The mandate of the two bodies should be clearly stated.

The body should work closely with the Metropolis (Nairobi) because of the influence it has on the metropolitan area. Currently some residents in this area get their services from Nairobi through their private arrangements with the relevant authorities. The advantage of such a metropolitan planning body is

that it would be in a better position to negotiate for services for the whole region other than an individual. The planning body would also be able to solve the problems of one town by adopting successful solutions in another town since it will be well informed because of dealing with the various satellite towns.

We could borrow a leaf from the other countries that have adopted this approach. A good example is the Northeastern Illinois Planning Commission which like most metropolitan planning agencies, was concerned throughout most of its existence with essentially noncontroversial physical development projects and programs, avoiding the more controversial social issues. Its accomplishments in the fields of water resource management and solid waste disposal planning were especially significant, and in collaboration with the United States Geographical survey, it pioneered in the publication of flood hazard maps of the metropolitan area. (Claire, 1973)

8.3.5 Recommendations for enforcement

The policies and laws must be clearly stated so that there is little ambiguity in their enforcement. Laws and regulations must be enforceable, which means that the organizational machinery for their enforcement must be created. For instance, demolition of a building could be the penalty for an illegal construction which, is severe enough to guarantee some basic conformity to regulations and codes. Where the penalties are all embracing, to affect both owner and builder, regulations and codes are likely to achieve a high degree of conformity.

The local authority views the delays in approval process as the reason for failure of the landowners and developers to submit their plans for approval. The solution to the problem is efficiency in the approval process. This can be achieved by recruiting competent staff and remunerating them well. Local authorities should look for funds to employ more people. This could be done in various ways. The municipality should set up a land inventory to know what it

owns and the areas most likely to generate resources. It should also hasten to complete its valuation role, which will be a major revenue earner. An internal audit section at the council will also enhance accountability.

The council need to computerize financial record keeping to enable production of timely management information system for efficient financial management and instituting all the necessary control measures especially in expenditure patterns.

The involvement of local residents is a major emphasis of community based planning. Planning should aim to help communities involve as many residents as possible in shaping their local plan. Institutionalizing the participation approach to planning by preparing people to participate is a major requirement. This can be done in various ways which include: involvement of residents in councils decision making, holding regular dialogue with residents and considering them an integral part of the council, addressing residents problems and complaints promptly, informing residents when council meetings are scheduled to take place and formally inviting them, and communicating council resolutions to residents to keep them abreast with the councils goings on.

Educating the local authorities of the new Physical Planning Act because many of them are not aware of the powers bestowed on them by the Act is a major priority. This can be done through seminars and workshops.

The general public is also not aware of the Physical Planning Act. Increasing their awareness especially of the role of the liaison committees would help more people turn to the Act. Teaching, involving and educating people about standards will ensure that they are institutionalized. Simplifying the language used in planning to make it understandable to everybody would assist in awareness creation.

8.3.6 Recommendations for service delivery

Partnerships can work if they are encouraged. Partnership initiatives work best if they come from the people themselves and not imposed on them. This is clearly portrayed by the Kahawa Sukari and the Githurai residents who have formed the Githurai Kimbo water development and are planning to team up and provide sewer for themselves, by directing the sewage to Ruai.

Innovative partnership at local levels between the public sector agencies and private developers to provide infrastructure, land and finance for housing development, should be encouraged. The ministry in charge of local authorities should facilitate this initiative by drawing standard agreements for such partnerships.

The Ruiru Municipality has sewerage proposal for the Municipality. The proposal has identified two alternatives of providing water borne sewage to the area. One is to use the main trunk sewer lines and discharge the effluent into Nairobi city council sewer pond in Dandora. The other one is to construct their own sewer ponds in Githunguri ranching scheme where the council has 35 acres of land. The local authority should pursue the proposal made by Githurai residents of meeting half the cost of the sewer system. The local authority should go out of its way and approach the Kahawa Sukari residents who are capable of chipping in some money towards the construction of a sewer.

Privatization of services can solve the problem of service delivery of some services like garbage collection, nursery schools education, slaughter services, repairs and maintenance of roads and drains.

Joint partnerships with the community should be encouraged. The council could provide materials while the latter provides labour. Currently, there is great stress on public authorities working with the private sector and community organizations and in many aspects of their work, moving from control to enablement.

Land acquired by public authorities to legalize invasions or subdivisions that do not meet urban standards like Githurai, should be immediately supplied with public and community services by the municipality at the expense of the owners.

Hopefully the combination of all these recommendations or some of them will help manage satellite towns.

REFERENCES

Alexander Earnest R. (1969). Urban planning: A guide to information sources. Detroit, Michigan.

Aritho G.A. (1986). Commodified space, Time and Labor: Towards a New Approach to Land Development Issues in Kenya – A paper Presented at the Seminar on Interaction of man, land (space) and Environment over Time. Nairobi.

Bruce Katz and Joel Rodgers. (2001). "The Next Urban Agenda ", The Next Agenda: Blueprint for a New Progressive Movement. New York.

Brynt, R. W. (1972). Land: Private property, Public control. Canada, Harvest House Ltd.

Cas Consultants. (2000). Study on Private Sector Participation In Rural Participation In Rural Water Supply and Sanitation Sector in Africa. Nairobi.

Chapin, F (1965) Urban Land Use Planning. University of Illinois press, Illinois.

Chapin, F. (1976). Urban Land Use Planning. University of Illinois Press, Chicago.

Chebkafi, W. (1985) The Legal Framework of Physical Planning in Kenya. Unpublished L.G.B. Dissertation. University of Nairobi, Nairobi.

Chege J.C. (1977). Urban Land Constraint in Nyeri Town. Unpublished M.A Thesis University of Nairobi, Nairobi.

City Council of Nairobi. (1973) Nairobi Metropolitan Growth Strategy. Nairobi Urban Study Group, Nairobi.

Claire, W.M.H. (1973). Handbook on Urban Planning. NewYork, Van Nostrand Reinhold Ltd.

Cloke, J. (1989). Rural Land Use Planning in Developing Nations. Union Hyman.

Daily Nation. (Feb 1990). An article on Rating Tax and Local Authorities. Nation Newspapers, Nairobi

Danida. (1989). A strategy for Industrial and Urban Development. Copenhagen, Vang Rasmussen.

David E.C. (1964). Urban development. United States of America.

David, W. R. (1973). Urban Economics. New York. Harper & Raw.

Devas and Rakodi. (1992). Managing Fast Growing Cities. New Approaches to Urban Planning and Management in the Developing World. New York. John Wiley & Sons.

Dickson, R.E. (1951). Regional Relations of the City. Glencoe, Freepress.

Firey, W. (1951). Ecological Considerations in Planning for Urban Fringes, Glencoe, Freepress.

Ford Foundation. (1972). Urbanization in Kenya, New York.

Gachuru and Olima. (1998) The Revenue Rates, A Dwindling Revenue. Unpublished Paper. Nairobi.

Gottman J. (1967) Metropolis on the move. U.S.A, John Wisely & sons.

Hance, W. A. (1970) Population Migration and Urbanization in Africa. New York, Columbia University press.

Harvey & Clarke. (1965) The Nature of Economics of Urban Sprawl. Land Economics Vol. 141. New York.

Heavner, B. (2000). Paving the Way: How Highway Construction has contributed to Sprawl in Maryland. U.S.A, Maryland Public Interest Research Group Foundation.

Jefferson, M. (1939). The Law of the Primate City. Geographical Review 26. New York

Jones Emrys. (1990). Metropolis. New York, Oxford University Press.

Karuga, J.G. (1993) Actions Towards a Better Nairobi, Nairobi Kenya.

Kc Sirav and Leslie Green. (1986). Metropolitan Management: the Asian Experience New York, Oxford University Press.

Kenya, Republic of. (1931). The Town Planning Act of 1931. Nairobi. Government Printers.

Kenya, Republic of. (1948, 1962, 1969,1979, 1989 and 1999). Population Census. Central Bureau of statistics. Nairobi, Government Printers.

Kenya, Republic of. (1961). The Trust Land Act Cap 288. Nairobi, Government Printers.

Kenya, Republic of. (1962). The Registration of Titles Ordinance Cap 281. Nairobi, Government Printers.

Kenya, Republic of. (1968). The Building Code. Nairobi, Government Printers.

Kenya, Republic of. (1968). The Land Control Act Cap 302. Nairobi, Government Printers.

Kenya, Republic of. (1970). National Development Plan. Nairobi, Government Printers.

Kenya, Republic of. (1970). The Land Acquisition Act Cap 295. Nairobi, Government Printers.

Kenya, Republic of. (1972). Urban Housing Needs in Kenya 1973 – 78. Nairobi, Ministry of Housing and Social Services.

Kenya, Republic of. (1974). National Development Plan. Nairobi, Government Printers.

Kenya, Republic of. (1977). The Land Adjudication Act Cap 284. Nairobi, Government Printers.

Kenya, Republic of. (1977). The Registered Land Act Cap 300. Nairobi, Government Printers.

Kenya, Republic of. (1981). Ruiru Water Supply Preliminary Design Report. Howard Humprey and Sons. Nairobi.

Kenya, Republic of. (1986). The Local Government Act Cap 265. Nairobi, Government Printers.

Kenya, Republic of. (1996). The Physical Planning Act Cap 285, Nairobi, Government Printers.

Kenya, Republic of. (2000). Draft National Housing Policy. Nairobi, Government Printers.

Kiamba, D.K (1982) The Role of Designated Service Centerrs in Rural Development. A case Study of South Imenti Division in Meru District. Unpublished M.A. Thesis. University of Nairobi.

Kiamba, J.M (1992). Constraints to Urban Growth and Spatial Planning, Nairobi, Kenya

Kingoriah, G.K. (1980). Policy Impacts on Urban Land Use Patterns In Nairobi Kenya 1899 – 1979. Thesis U.S.A. Indiana State University.

Kingoriah, G.K. (1987) Introduction to Land Economics, Nairobi, University of Nairobi.

Maina, G.G (1991) Policy Issues, Seminar on Slum and Squatter Settlement Improvement.

Mairura, E.O (1992): Urban Infrastructure financing management in Kenya. A picture of sewerage services in secondary towns. Nairobi, Kenya.

Mairura, E.O. (1988): Development of Water and Sanitation Infrastructure in Unplanned Low Income Urban settlement of Kitui, Kanuku and Kinyago, Nairobi.Unpublished M.A Thesis. University of Nairobi.

Maleche, Z (1992) Introduction to Planning, Unpublished Teaching Notes. University of Nairobi.

Marlon, G. B. and Andrew, F. H. (2000). Do Highways Matter? Evidence and Policy Implications of Highways Influence on Metropolitan Development. Brookings Institution.

Mayer (1967) The Pull of Land and Space 1967 – John Wiley and Sons U.S.A

Mbogua J.P (1997) Assessing Regional Planning Strategies in Management of Urbanization in Eastern and Southern Africa. Unpublished Paper Presented to the UNCHS (Habitat), Nairobi.

McAuslan, P (1978) Land, Law and Planning, London, Weidenfeld & Nicolson.

Mcloughlin, J. B (1971) Urban & Regional Planning. New York, Praeger

Publishers.

Miles S.R. (1970). Metropolitan problems. Ontario Canada. Methuen publications .

Ministry of lands and Settlement (1971), Town Planning Department Handbook.

Ministry of Works, Housing and Physical Development (1987), Physical Planning Handbook. Kenya.

Mobagunje, A. L (1967) Urbanization in Nigeria. Britain. London University Press.

Mugenda and Mugenda. (1999). Research Methods: Quantitative and Qualitative Approaches. Nairobi, African Centre for Technology Studies.

Muhia. A. (1992) Land Subdivision and Its Implications for Kiambu Town. Unpublished M.A Thesis. University of Nairobi.

Mwangi 1988: An appraisal of plan implementation and development control in Nairobi. A case study of Umoja 1 Estate Unpublished M.A Thesis

Mwangi. I.K. (2000). Challenges of Urban Land Use Planning and Managing Development in the City of Nairobi and Bordering Urban Areas. Unpublished Paper.

Nebster. D.H (1958). Urban Planning and Municipal Public Policy. New York. Harper & Brothers.

Ogero, B.B. (1981). Financial Problems of Urban Authorities. A Case Study of Nairobi City Council. Unpublished, M.A. Thesis. University of Nairobi.

Okoth- Ogedo. H.W.O (1975) Property Theory and Land Use Analysis. Journal of Eastern Africa Research and Development. Volume 5, No. 1, 1975. Nairobi.

Okoth-Ogedo (1991) Evolution of Agrarian Law and Institutions in Kenya. Nairobi. ACTS Legal Studies Series.

Olima, W.A (2001). Land Use Change in the Peri-urban Nairobi. Unpublished

Publishers.

Miles S.R. (1970). Metropolitan problems. Ontario Canada, Methuen publications .

Ministry of lands and Settlement (1971), Town Planning Department Handbook.

Ministry of Works, Housing and Physical Development (1987), Physical Planning Handbook. Kenya.

Mobagunje, A. L (1967) Urbanization in Nigeria. Britain, London University Press.

Mugenda and Mugenda. (1999). Research Methods: Quantitative and Qualitative Approaches. Nairobi, African Centre for Technology Studies.

Muhia, A. (1992) Land Subdivision and Its Implications for Kiambu Town. Unpublished M.A Thesis. University of Nairobi.

Mwangi 1988: An appraisal of plan implementation and development control in Nairobi. A case study of Umoja 1 Estate Unpublished M.A Thesis

Mwangi, I.K. (2000). Challenges of Urban Land Use Planning and Managing Development in the City of Nairobi and Bordering Urban Areas, Unpublished Paper.

Nebster, D.H (1958). Urban Planning and Municipal Public Policy. New York, Harper & Brothers.

Ogero, B.B. (1981). Financial Problems of Urban Authorities. A Case Study of Nairobi City Council. Unpublished, M.A. Thesis. University of Nairobi.

Okoth- Ogedo. H.W.O (1975) Property Theory and Land Use Analysis, Journal of Eastern Africa Research and Development, Volume 5, No. 1, 1975. Nairobi.

Okoth-Ogedo (1991) Evolution of Agrarian Law and Institutions in Kenya, Nairobi, ACTS Legal Studies Series.

Olima, W.A (2001). Land Use Change in the Peri-urban Nairobi, Unpublished

Paper Nairobi.

Ominde, S.H (1974). Urban Growth in Africa, Unpublished paper presented to the Commonwealth Foundation.

Philip, A & Peter, L (1980). Housing Africa's Urban Poor, Manchester University Press, Britain.

Piyo, R. J. Defining the Rural-urban Fringe, Social forces.

Purdue, M (1977). Cases and Materials on Planning Land. London, Sweet & Maxwell.

Ralph and Schmidt. (1983). Farm Management Handbook of Kenya, Volume 11, Natural Conditions and Farm Management Information, Part B, Central Kenya. Kenya, Ministry of Agriculture.

Ramachandran, P. (1992). Housing Situation in Greater Bombay. Bombay, Tata Institute.

Richard, C. & Don, S. (1996). The Role of Local Authorities In the Urban Environment. U.K, Earthscan Publications Limited.

Rolf Pendall. (1999). Do Land Use Controls Cause Sprawl? Environment and Planning: Planning and Design, Volume 26.U.S.A.

Ruiru (1997). Farmers Guide, Special Supplement. Nairobi, Mid Africa publicity Ltd.

Schmidt A.A (1972). Suburban Land Appreciation and Public Policy "Journal of American Institute of Planners Institute.

Spreiregen Paul. D (1976) The Modern Metropolis. Its Origins, Growth, Characteristics and Planning. Massachusets Institute of Technology. Massachssets, M.I.T Press,

Stren & White. (1988). African Cities In A Crisis. Toronto Canada

Stren Richard. (1978). Housing the Urban poor in Africa. Policy, Polities and Bureaucracy in Mombasa. California, University of California.

Suard. (1984). Rural Lowcost Houses: Advice Concerning Design and choice of Materials for Rural Housing in Tanzania , Dar es salaam

Syagga, P.M & Kiamba, J.M. (1985). Urbanization and Housing in Africa. Paper presented at the ICSW Africa Regional Conference on

Social Development in the African Context. Opportunities and Constraints. Lusaka, Zambia.

Syagga, P.M. (1989). Trends in Urban Housing Strategy for Kenya in the Next Decade. Paper presented to the Workshop on Quality in Built Environment at Cardo, University of Newcastle upon Tyne, UK.

UNCHS – 1992

UNCHS (1984)- Upgrading of Inter city slums.

UNCHS (1986) Delivery of Basic Infrastructure to Low Income Settlements Issues and Options. . UNCHS (Habitat), Nairobi.

UNCHS (1997). Human Settlements and Sustainable Development. The Role of Human Settlement and Human Settlement Policies in Meeting Development Goods and in Addressing the Issues of Sustainability at Global and Local Level. UNCHS (Habitat) Nairobi.

UNCHS (1994) Urbanization and sustainable development in Third World Unrecognized.

UNCHS (1996) An urbanizing world UNCHS Habitat Global Report on Human Settlement Habitat.

UNCHS (1986) Metropolitan Planning and Management in the Developing World Spatial Decentralization Policy in Bombay and Cairo. UNCHS (Habitat) Nairobi.

UNCHS. (1984) The House That Grows – Proceedings of the International Conference on Rural Low Cost Housing – Lilongwe Malawi. UNCHS (Habitat), Nairobi

UNCHS. (1992). Supporting community based Housing. UNCHS (Habitat), Nairobi

UNCHS. (1997) An Urbanizing World. Global Report on Human Settlements Oxford University Press, Oxford

United Nations. (1965) Housing in Africa .New York.

United nations: (1971) Improvement of Slums and Uncontrolled Settlements. United Nation, New York.

Vagale, L. (1970) Development Control: Its Importance in Regulating Urban Growth, Unpublished Paper. Ibadan

Wanjala S. C (2000) Essays on Land Law The Reform Debate in Kenya; Faculty of Law University of Nairobi, Nairobi.

Waterson Albert. (1965). Development Planning Lessons of Experience Bastimore, John Hopkins press.

Webstern, D.H (1958). 1902 Urban Planning and Municipal Public Policy. New York, Harper.

Wisher, P & Rosemary, R. (1976) The Exploding Cities. Andre Deutsch Ltd.

World Bank Institute (2001) Sustainability of Water and Sanitation Programs in Kenya. Examining Impacts of Participation, Gender, Poverty and Demand – Responsive Water and Sanitation Programme, African Region, Kenya.

World Bank. (1991). Reforming Urban Land Policies and Institutions in Developing Countries. Washington DC.

Yahya, S.S. (1969). The Changing Patterns of Land Use and Land Values in Sub-urban Nairobi, Nairobi University Monograph, Kenya.

Yahya, S.S. (1976). Urban Land Policy In Kenya, Unpublished Ph.D. Thesis, University of Nairobi.

APPENDIX

DEPARTMENT OF URBAN AND REGIONAL PLANNING UNIVERISTY OF NAIROBI
HOUSEHOLD QUESTIONNAIRE: RUIRU
CONFIDENTIALITY: Any information provided for this interview will be used for academic purposes only

SECTION 1
Personal Information

1. Questionnaire number: _____ Date:
2. Location of resident
3. Plot number
4. Size of the household
5. Household structure
6. Do you own land in Ruiru? Y/N

If yes what is the size of your plot? Acre/Ha
How mush did you buy it? Ksh_____Year

7. Nature of ownership
   Freehold
   Squatter
   Leasehold
   Rented premises

If rented, how much do you pay per month?

8. What is your mode of transport to work?
   (i) Personal car (ii) Bus (iii) Matatu
   (iv) Bicycle (v) Walk
9. In which district were you born?

10. In which other town have you lived?

	Town	From 19_____ to 19
i.		
ii.		
iii.		
iv.		

11. For how long have you lived on this land?

SUBDIVISION

12. Have you ever subdivided your land? Y/N
13. When did you subdivide your land?

14. What were your reasons for subdivision?
    a. Commercial
    b. Residential
    c. Agricultural
    d. Sale
    e. Industrial
15. What procedure did you undertake before subdivision of your land?
16. Was the municipal council aware of your subdivision?
    (a) Yes (b) No
17. If not, why didn't you consult the municipal council?
18. Who prepared the subdivision plan for you?
19. Haw many times have you ever undertaken subdivision on your land?
    (a) 1 – 2 (b) 3 – 4
20. What was the initial land acreage?

PHYSICAL CHARACTERISTICS

21. What is the shape of the plot?
22. Number of dwellings in the plot?
23. Number of rooms for dwellings in the plot?
24. Construction material

Roof	Floor	Wall
Tiles	Earth	Quarrystone
GCI	Tiles	Glass
Grass	Screed	Timber
Asbestos	Others	Mud wall

25. The type of the structure
    (a) Permanent ☐ (b) Semi-permanent ☐ (c) Temporary ☐

SERVICES

26. Where do you get your water from?
    Ruiru municipal
    Private
    Borehole
    Communal tap
    River
    Roof catchment
    Shallow well

27. How adequate is the water source?
28. How much do you pay for your water per month/ per day/ per year?
29. What is the approximate distance for your water source?.....km
30. What type of method do you use to dispose human waste on the plot?
    (a) Pit latrine (b) Flush toilet (c) Sewerage
    (d) Septic tank (e) Others (specify)

31.If using septic tanks who empties it?

32. How much do you pay for emptying and do you experience any problems?

31. Where do you dispose your household garbage?

(a) Pit (b) Dustbin (municipal collection)

(c) Open ditch (d) Composite heed (e) others

32. What problems do you face regarding waste disposal?

33. Is the plot supplied with electricity?

34. Is the plot supplied with telephones?

35. Who maintains the roads?

36. Are you satisfied with your access road/parking? Y/N

If No, explain

37. Is the plot readily accessible to both vehicular and pedestrian traffic?

38. What do you consider a serious problem in this area

High rental values

Poorly maintained roads

Overcrowding

Insecurity

Others

39. Why did you move to this area and not any other?

i. Housing availability and affordability

ii. Accessibility to Nairobi

iii. Cheap land

iv. Others

40. Do you encounter any obstacles whenever you want to carry out any development?

41. Are you aware of the legal controls that guide land subdivisions?

42. Are you aware of the building bylaws which regulate the building of a house? Y/N.

If yes, did you seek any permission from the local authority for approval of your building?

43. Where do you go for the following services?

	1 or under 1 km	over 1 km
i.	Shopping	
ii.	Nursery	
iii.	Primary	
iv.	Secondary	
v.	Health	
vi.	Library	
vii.	Play ground	
viii.	Entertainment / reception	
ix.	Others (specify)	

44. What can the local authority do to improve the services?

Ruiru Municipal council questionnaire

1. What infrastructure facilities do you provide?

2. What are the sources of finance for your municipality?
3. How adequate is the revenue you collect to finance your services?
4. What problems do you encounter in your day-to-day services to the residents?
5. If not providing services adequately, why not?
6. Why did you expand the area of the municipality?
7. Which types of sanitation services do you offer?
   Sewerage/septic tanks/cess pools/pit latrines
8. What determines type of services offered?

Residential area
Industrial area
Commercial area
Institution
Income
Existing services around
Density of development

9. What is your cost recovery based on? Market rates/subsidy?
10. What are the charges on the services you offer?
    Water _____communal_____individual connection
    Sanitation _____sewerage communal _____private
    Septic tank _____cess pools
    Pit latrine _____soak ways
    Solid waste _____ Others
11. What is the revenue collected from these services used for?
    - ❖ Maintenance of facilities
    - ❖ Service staff salaries
    - ❖ Service expansion
12. How is the revenue for these services collected?
    - ❖ With water bill
    - ❖ Separately for each service
    - ❖ Flat rates
13. Do you encounter any problems in revenue collection?
    - ❖ Defaulting
    - ❖ Inadequate staff
    - ❖ High operational costs
    - ❖ Vehicles
    - ❖ Identifying users
14. Who maintains the plot connections/communal facilities?
15. Who pays for the maintenance? NCC/ individual users
16. What maintenance do you undertake?

Cleaning/blockage/exhauster emptying/breakdown repairs
What are the charges?

17. Which are the common maintenance problems
    - ❖ Poor usage
    - ❖ Storage of personnel and vehicles
    - ❖ Equipment and material
18. Do you have specific staff for maintenance of these services alone?

19. What is the capital/ maintenance cost of exhauster vehicle?
    - ❖ Capital
    - ❖ Maintenance cost per month
20. What is the size of the exhauster vehicle_____ m^3 /litres
21. How are the various cases of maintenance reported and executed.
22. Do you have staff assigned to a particular estate to look after infrastructure services?
    Yes/No
23. What is the public response? Good/bad
24. What problems do you encounter in giving your services?

Administrative/unwillingness by the people/high expenses /shortage of personnel and

Vehicles/ equipment and material

25. In what form do you disseminate information to the community? Orally during meetings/ media/literature

Development Control

1. What measures have you taken/intending to take to control development in a rapidly growing urban centre like Ruiru?
2. What problems does the council encounter in coordinating development?
3. Do you have any control on subdivision of land?
4. What criteria do you use to expand your boundaries?
5. When you expand the boundaries, do you offer any services to the extended area?
6. Give your opinion on what has contributed to rapid development in Ruiru?
7. What are the major problems experienced in development of this town?
8. In your opinion, what limits the council from implementing development control regulations?

Scheduled questionnaire for Thika district physical planner

1. What is the extent of your services as regards planning in Ruiru municipality?
2. What criteria do you use when zoning a particular area for a given land use?
3. How do you marry land use planning to the nature of land tenure of this area?
4. What criteria do you use to approve a sub division plan?
5. What criteria do you use to approve building plans?
6. What is the rate of sub division in the municipality of Ruiru?
7. What is your experience with the existing legal framework governing planning.
8. What challenges do you face as a planner in controlling developments?
9. How do you involve the community in planning?
10. What can be done to improve the existing planning situation in Ruiru municipality?