

**EFFECTS OF URBANIZATION ON THE USE AND CONTROL OF
LAND: A CASE OF NGONG FRINGE //**

By

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**A THESIS SUBMITTED IN PART FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN
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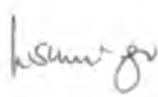
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DECLARATION

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DEDICATION

With special appreciation to
Chris Arnold,
Nabucha,
Vihenda,
Simuli
Sifa.

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ABSTRACT

One of the most significant dynamics impacting on Kenyan society is rapid urbanization. The growth of urban centres across the country is proof of this process and is now an accepted fact. Yet the track record of Kenyan cities and towns in managing the urbanization process, when measured in terms of the performance and outlook of urban environment, resulting from current planning practice is abysmal. This urbanization process manifests itself more at the outskirts of urban centres- the fringe. It is at these the fringe areas, that the dynamics of urban growth are concentrated.

The purpose of this study was to highlight the effects of urbanization on the use and control of land in a chosen fringe area of Nairobi- the Ngong area. In Ngong, the urbanization process manifests itself in sprawl and overspill from the city of Nairobi. All sorts of pulls, pushes and pressures accompany the land development process in Ngong. An effect of such events was that built-up areas had been permitted to coalesce to form 'a weak pattern of urban growth'.

The study hypothesized that low levels of controls in land uses have influenced the current haphazard growth pattern in Ngong. It was also assumed that the presence of cheap land had accelerated urban growth patterns in the area. The study's objectives were thus: to examine the impact of urbanization processes on land uses in Ngong; to identify the institutions that are responsible for controlling use of land in Ngong with a view of evaluating their efficiency; to highlight the most common problems, constraints and challenges in the implementation and administration of land control measures in the study area; and finally to propose an alternative policy framework for establishing a more effective planning and control system.

The study revealed that, an area that had been typically rural had gradually evolved into an urban environment. It was also recognized that past patterns of settlement in the Ngong area had developed without much urban planning. Planning for urbanization in Ngong was therefore admittedly out of step with the spirit in which the study area had

been founded, as a rural community. It was also found that amidst all these dynamic processes, was a static phenomena reflected in the existing institutional framework which had failed to capture the speed and nature of this urban growth by providing adequate services. Difficulty had therefore been experienced in filtering urban developments into a coherent growth pattern. The study area therefore became a place of many competing interests, which lack adequate institutions to stake the balance needed to protect the environment and maximise productivity of human resources.

A combination of constant change, complex social structure, uncoordinated institutions, and a shifting locus meant that the area must be addressed with an approach different from the one conventionally applied to rural areas and urban areas.

The study therefore recommended that there was need to coordinate all the planning institutions in the study area under one umbrella peri-urban body that would oversee and coordinate all land use planning and control activities both in Ngong but other fringe areas bordering Nairobi city. The study argued that the planning process in the area should be improved to ensure that most of the costs of urban growth be identified and the benefits retained for sustainable development and urbanization.

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LIST OF ABBREVIATIONS

LA	Local Authority
LADP	Local Authority Development Plan
LASDAP	Local Authority Service Delivery Plans
OCC	OI-kejuado County Council
NCC	Nairobi City Council
NMGS	Nairobi Metropolitan Growth Strategy
NDP	National Development Plan
GoK	Government of Kenya
CBO	Community Based Organization
NGO	Non- Governmental Organization
CBS	Central Bureau of Statistics
LCB	Land Control Board
PPD	Physical Planning Department
PPA	Physical Planning Act
PHA	Public Health Act
EIA	Environmental Impact Assessment
MOLG	Ministry of Local Government
MOLS	Ministry of Lands and Settlement

CHAPTER ONE: INTRODUCTION

1.0 Background

Over the next 15 to 20 years, the urban areas of developing countries are expected to double in size (UN, 1996). It is also true that most of this growth will be concentrated in the urban centers of the developing world. For this reason the UN projects that in 2025, over 4 billion, or 77% of the urban dwellers of the world will reside in the less developed regions. Indeed it is widely believed that by the year 2025, half the world's population will be residing in urban areas. Consequently the 21st century will be the "first urban century".

The rate at which urbanization is proceeding and pushing up demand for residential, industrial, and commercial land has no precedent, even in the history of developed countries. Cities are expected to double their built-up areas in the next twenty years.

In all this process, as in all urban growth, land is the essential ingredient. Population and economic growth does not take place in the air. It requires land, and lots of it.

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 about land will often be the owner or his tenant. The owner will attempt to maximize the returns from the land and will alter the intensity and nature of this use, in accordance with circumstance.

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 considerable attention is devoted to such matters. The regulations have matured slowly in institutions, and land laws over several years.

Yet, urban society has changed drastically in a relatively short period of time. Recent experience in many cities of the world reveal that land to support urban growth is becoming increasingly scarce.

The land problem in Kenya as is anywhere in the world arises from two fundamental characteristics. In the first place, land is fixed in supply, and secondly, it is generally appreciated that land is specific in location. All this against a backdrop of rising population, and the land problem becomes monumental.

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 overshoot the jurisdictional boundaries of the same cities and towns, firmly lodging itself in the peri-urban fringe. 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 become more and more urbanized, the effective control of urban land resources has become critical.

The peri-urban fringe is recognized as the transition zone between the well organized and recognized urban land uses and areas devoted to agriculture. This zone is variously referred to as the peri-urban, the urban shadow area, the septic fringe, the suburban areas and many others, and is the subject of this paper. Ngong Fringe area of Nairobi has been chosen to highlight the emerging planning issues. It is realized that the city of Nairobi has not been spared the rapid rates of urbanization experienced worldwide and specifically those that are typical of developing countries. Nairobi has

grown in “*leaps and bounds*” and is currently host to over 2 million residents. The emerging phenomenon has been that this growth has leapfrogged the city’s boundary leading to the concentration of vibrant human settlements around the city. Nairobi is therefore currently ringed by these fringe settlements in areas like Ongata Rongai and Ngong to the Southwest, Ruiru to the North, and Kitengela to the East.

Within Ngong fringe area for example, the pressure for land development is great but the pattern is a fragmented one with no clear sense of planned expansion from a central point. A continuous interchange goes on between the urban and agricultural sector, an interchange characterized by a secular tendency of the city of Nairobi to spread and the farms in Ngong to shrink. The interchange has also occasioned the steady increase in land values in Ngong as more and more city residents trickle in. Without strong planning intervention, city expansion invariably wins, because the farmer cannot afford to pay the urban prices for land.

In the struggle to respond to these development pressures, the local institutions both public and private are overwhelmed by a multitude of concerns.

- Will there be enough land to support urban development?
- Is the land market operating efficiently?
- How can the agricultural land surrounding the city be preserved without driving the price of land beyond the reach of low and middle-income households?
- Should the government attempt to aggressively control land development?

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 regulatory framework of control. 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).

Despite all the aforementioned, the story of Kenyan towns and cities is indeed a sad one. There has been haphazard development of towns throughout the 1970's, the 1980's and right through the 1990's showing that the arrangements so far have not been effective (Obudho, 1984). A peri-urban area that seems to be a town on its own rings each town or city. Consequently, as urbanization and an increase in the number of urban areas continues to be a dominant feature in urban land use planning, it is widely accepted that the regulation of land development will draw more policy attention and more practical planning interventions and rhetoric (Mwangi, 2000). 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. Today, most countries are thus faced with the twin problem of designing a contemporary land policy and simultaneously harmonizing that policy with inherited land regulations and institutions (Zimbabwe and South Africa are good examples). Policy-makers are beginning to recognize that land-use policy is an important facet of national economic development planning and is no longer a luxury best left to wealthy nations. It is for this reason that various governments have embodied in several Acts laws governing land development and control.

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 and has led to corruption and discrimination. Others have pointed to expense involved in drawing up and implementing land-use plans and zoning restriction, to the delays, which are imposed on developers by the need to obtain approval before work can start, and to the drab uniformity of regulated development.

Although broad legal values engrained in Acts of parliament as land laws may lie at the heart of the problem, there are also other concrete impediments which frustrate the

development and implementation of an effective land strategy at the urban fringe.

Some of the more important in Kenya include; -

- Failure of the country to define and adopt urban land policies and objectives.
- The organizational and decision making distance between the planning process and the regular governmental structure
- The non-involvement of the public in the planning process.
- The utilization of planning methods unsuited to the process.
- The belief that doing nothing is the best course of action.
- Various technical inadequacies such as deficiencies in experience, procedures and data management.

There seems to be no agreement as to how best to manage the use of peripheral land. The intermingling of different spatial need is an inevitable consequence of urbanization at the fringe. This study therefore seeks to examine the effects of such regulations in a zone that is not purely urban and is not purely agricultural namely the peri-urban fringe of Nairobi – Ngong Division.

Emerging questions therefore are;

- Should the transfer of land from agricultural to urban use be regulated despite the fact that the process may overrule landowner rights?
- What controls can be exerted over undesirable urban uses of agricultural land?
- To what degree should agriculture be protected from the outcomes of urbanization regardless of market forces?
- Which institutions should exercise the jurisdiction of planning and management in such areas?
- Which regulations should be appropriate for planning and development control in the fringe zone?

The rationality of planning responses to these issues is the interest of this paper. Questions such as these are not new. Nor will they be answered fully in this study for it is too much to hope that any single view will command general agreement. The aim is much more modest. It is to outline the major argument for the proposition that land is in short supply and it's use must be carefully controlled, and to describe the effects of such controls together with related institutions in the fringe area of Ngong. In doing

so, it is hoped that the continuing debate about land-use development and control will be better informed. It will not be concluded.

1.1 Background to Statement of the Problem

The urban problem in Kenya, has been the problem of rapid urban expansion upon general economic growth. This growth confronts the urban and regional planner with grave difficulties concerning the collective production and utilization of land bordering urban centers, -the peri-urban fringe. Because land values are astronomical in Nairobi city sometimes reaching the six-figure digit per acre, investment in urban land especially within the city's boundary remains realizable for a few wealthy individuals. The tendency has been, to look for land within the periphery/outskirts of Nairobi, which is cheaper, and invest in the same. The Ngong area on the periphery of Nairobi has attracted a hoard of such investors. This situation implies that measures for control over the use and development of land at the urban fringes have an urgent importance unknown to our ancestors.

1.2 Problem Statement

In Nairobi, the Ngong area, that is a typical fringe area has borne the full brunt of the rapid urbanization that the city is currently experiencing at a remarkable rate of 7.5% per annum (CBS 1999). Ngong town is located at the southwestern tip of Nairobi and was identified as one of Nairobi's satellite towns by the Nairobi Metropolitan Growth Strategy of 1973. It is about some 17 kilometers from the city of Nairobi. There has been a steady inflow of Nairobi residents to Ngong area over the years exemplified by the fact that the two towns of Ngong and Ongata Rongai have higher growth rates of 7.9% and 8.7% per annum respectively as compared to Nairobi's rate of 4.7% per annum (Statistical Abstract, 2000).

Nairobi, currently host to over 2 million persons is experiencing difficulties in providing adequate space for all its residents. The result has been the steady proliferation of this dynamic population into the neighbouring areas of Ngong and Ongata Rongai where there is still some promise of affordable parcels of land. Such areas also have the added advantage of being within commuting distance to Nairobi. The proliferation of Nairobi residents into the Ngong study area began as early as the

1970's. Then, those who went to Ngong were interested in large farm holdings that were easily availed by the indigenous maasai pastoralists. The trend took a different turn in the 1980's when the area attracted middle and high-income earners who wanted homes on 1 to 2 acre plots and who could enjoy by extension bask in the proximity of neighboring up market Karen. The dwelling houses that came up with lengthy driveways are witness to this. The 90's brought in residents who wanted just any space and as little as ¼ or 1/8 acre could do so long as they had what they considered to be a major investment in urban land. Lately it has attracted the private developer whose major driving force is profit. These private developers like elsewhere in the country are market driven- they build housing that is profitable to provide. When unconstrained by regulations, they respond with a product that is attractive to their investment portfolio and not to the consumer. It has thus evolved into a haven for cheap residential accommodation offered in 3-4 storied high-rise buildings. All these developments imply that the Ngong area has evolved from a rural area to an urban entity within a relatively short time. It can be correctly deduced that market forces have lead to run away land markets which have promoted haphazard and wasteful patterns of urban expansion, difficult to integrate and expensive to re-orient in this once rural set-up.

That Ngong is considered a vital part of Nairobi cannot be disputed and indeed many people mistake it to be within Nairobi's boundary. A substantial populace commutes from the Ngong area to Nairobi on daily basis. The population size has more than doubled in this once rural set-up and densities are on the increase. Yet the recognized land use still remains agricultural with attendant land use planning standards and institutions while the resulting plot sizes and land uses are not in any way reflective of agricultural land uses. For instance all land transactions in agricultural land in the area are considered null and void without consent from the area Land Control Board- a body largely meant to control transactions in agricultural land. The assumption that the regulations will cater for a homogenous population with agriculture, as their source of livelihood does not hold. Consequently, there have been emerging conflicts in land delivery, administration and development, with the existing regulations having not changed to cater for an urban need but instead vainly trying to 'grasp and control' urban uses within a rural set-up. Whether this body can handle transactions that are

mainly “urban” in nature is a question that this study seeks to address given that it is meant to control transactions in agricultural land.

Conflicts have also arisen regarding the application of planning standards for agricultural land for users that are typically ‘urban’. The most obvious aspect of the conflict between agricultural land use and urbanization comes at the fringe of the city. The resultant patchwork of small farming areas interspersed with urban development contrasts markedly at the fringe. The division of Nairobi City and Ngong country form an inconvenient pattern of administration and often the decisions taken in one place virtually affect the other area’s problem. This fact has led directly to undesirable consequences; urban infrastructure has become more costly and inefficient; and institutions and facilities have failed to provide adequate services to the population of Ngong, thus intensifying urban social and economic imbalances. It has thus become difficult to harmonize man’s activities with the components of the natural environment.

The fact that Ngong is outside the city boundary but with all urban characteristics presents two problems. First, the area cannot be taxed or rated like land in the city, although the residents are free to enjoy city services such as schools, libraries, recreational facilities and so on. It is also not possible to supply the same range of services found in the city to the urban fringe because it is outside the jurisdictional boundary of the City Council. Wide variations in quality of services tend to occur and often are influenced by one’s ability to afford certain services. The poorer sections of the community are served by an inferior quality and quantity in terms of schools, hospitals, roads and open spaces. The public interest elements of social equity and social choice are thus not met with other members of society benefiting more than others.

Secondly the City Council of Nairobi (NCC) has no control over the type and quality of development carried out beyond its boundaries and this is left to the Olkejuado County Council (OCC). Whereas majority of Ngong residents depend heavily on the City of Nairobi for service provision, they are technically under the jurisdiction of OCC for both the administrative and planning purposes. The two planning authorities

of the Nairobi City Council and the Ol-kejuado County Council seem to confusedly compete for control leading to conflict in performance and development guidance. The City Council of Nairobi is faced with the larger problem of providing services to its expanding population while the Ol-Kejuado County Council on the other hand is faced with retaining Ngong within its jurisdiction as a revenue base (by way of market charges and subdivision approvals) without the pressure to provide attendant urban services since the area is deemed agricultural. When planning issues come up, the Olkejuado County Council responds by opposing any relinquishment of authority, however unwilling or incapable it has been to exercise it. Jurisdictional conflict between the two Local Authorities (LAs) has often interfered with development processes in the Ngong area. How these governance institutions have responded to these challenges is thus the interest of this study. The fringe area as aptly described by Colledge (1962) is an “institutional desert” where the dichotomy of urban and rural land use planning institutions overlap.

The situation is aggravated by the fact that the District headquarters of the study area is located some 120 km away in Kajiado town thereby forcing the residents to travel a long distance in search of the District Physical Planner. This is not helped by the fact that the entire district which is rather expansive (covering 22,000 km²) has only one Physical Planning Officer. When the planner’s presence is diluted by distance, the planning function is relegated to “benign neglect” and it is often spasmodic at best or plainly missing at worst.

The complexity and number of institutions involved in urban land management does not help either. In the Ngong’ area alone, we have the Land Control Board, the Ol-kejuado County Council, Nairobi City Council, Ministry of Agriculture, Ministry of Water, Ministry of Environment and Natural resources, Ministry of Forestry, to mention but a few, as institutions involved in the management and development of land. Regional bodies and Non-Governmental (NGO’S) cannot be overlooked either. The situation creates a chaotic overlap of administrative territory, yet underlying this is the urgency of creating or preserving the quality of the built environment. Institutional coordination problems arise between the Ministry of Local Government

through LA's, and other Central Government departments and the costs and delays of this additional bureaucracy cannot be ignored either.

All the above conditions notwithstanding, a special circumstantial condition, special particularly to the Ngong fringe throws the planning function in disarray- the fact that land tenure in the area is largely freehold which gives the landowner limitless rights in his/her land. The County Council cannot tax, rate or control development with ease on freehold land. The result is, it is cheaper and easier to build outside the city and still have such a wide scope of individually determining your use of space with minimal interference. How possible it is to intervene on freehold land in planning terms is a question that is also of interest to this study. Limitations of this kind are usually reduced to laws, a feature that makes them impossible to change. This has impaired the ability of the planner to play an active and positive role in responding to problems of rapid urban growth in Ngong.

The resulting violations involve one or more of the following: -

- Illegal transfer of land.
- Illegal conversion of land to urban use.
- Unauthorized sub-division of land.
- Non-compliance with planning regulations.

The net effect of such inadequacies is that the majority of urban growth in Ngong is now taking place outside the "official" control systems. Thus residential and business developments rely on self help techniques ranging from illegal squatting, illegal tapping of urban services by low income households; to the provision of their own electricity, water and sewerage supply by high income households. Planning activities are thus restricted to trying to control unplanned growth. In such areas, the new planning paradigm of urban expansion is "occupation-building-servicing-planning". The much-debated question of "public participation" in the planning process does not arise because it is the public who control the whole process of land development with the planner lagging behind in approval exercises. It is not an overstatement to assert that Ngong which is experiencing intense development pressure from the expansion

of Nairobi City needs special attention from the planning point of view for it to realize harmony and orderliness- the two features that are glaringly lacking in this area.

This proliferation of valuable agricultural land in Ngong should not be treated as a short-term abnormality that can somehow be contained by official pronouncements. It is the consequence of a strategic failure to exercise control at a critical moment in time and the danger of assuming that identifying the problem takes you halfway to the solution is wrong. The fringe area urgently demands a language of diagnosis and cures for it to effectively act as an area of smooth transition and continuity into the neighbouring countryside.

1.3 Research Questions

The Research Questions were thus derived as:

- 1). Which land use changes are taking place in the Ngong area as a result of the urbanization process?
- 2). Which institutions and agencies control the use and management of land in the Ngong area and how effective are they in doing the same?
- 3). What planning and development control challenges and problems has this urbanization process led to?
- 4). What can be done to establish a more effective planning and control system for the area?

1.4 Research Objectives

- 1). To study the impact of the urbanization process on land use in the Ngong area
- 2). To identify the institutions responsible for controlling the use of land in the area and their efficiency.
- 3). To identify the most commonly found bottlenecks and constraints in the implementation and administration of existing land control measures within the present institutional arrangement.
- 4). To identify an alternative package that would include recommendations and options for establishing a more effective planning and control system for the area.

1.5 Hypotheses

This study aims at assessing the validity of the following observations.

- 1). The presence of cheap and unserviced land has contributed to the rapid urbanization of Ngong and its environs.
- 2). The absence of a unified system of control measures has contributed to the current haphazard development of Ngong fringe area.

1.6 Justification Of Study

Land is, in most forms of society the most important of natural resources required for the creation of wealth. As a direct result, control of land brings economic power, which, in turn, is often the basis of social and political power. A principle motive for war has been the struggle for place, and governments are land-based units.

Land has today, become a very sensitive issue in Kenya because of;

- The centrality of land in human life, making it the main reason for the struggle for Kenya's independence from British rule.
- The complexity of the laws governing land ownership in Kenya, and the historical genesis of how these laws were applied to different parts of Kenya.
- The abuse of existing land laws and other state powers that have allowed the irregular allocation (grabbing) of public land to a favored and privileged few.
- The disorganization, mis-management and corruption at the Ministry of lands and the various district land offices in the country including the Local Authorities.

Given the choice, people seem determined to buy as much private space as possible, and that space is most available on, and beyond the urban fringe. A major uncertainty is the role which planning will play. To some extent, planning is the institutionalization of underlying economic and social forces that shape everyday life. Some of these forces may seem to have a powerful life of their own through notions such as the market or individual preferences, but through the kind of planning we choose, we can control and direct these forces. That we should do so is important, because land development remains one of the keys to satisfying individual lifestyles and to the successful functioning of the urban environment.

The study recognizes that, there exists adequate provisions in enabling Acts of parliament to guide proper urban development and growth, but these provisions are forever embedded in bureaucratic offensives which hinder their enforcement capacities. While all these indications of commitment at the national and local level are encouraging and are necessary components of the societal commitment to land use matters, they are not sufficient. Urbanization with its maze of decisions affecting the use, development, maintenance and re-development of land is perhaps the most important determinant of the quality of the urban environment at the fringe. A major proportion of land use regulations as they are influenced by urbanization are void of purposeful concern for the rapidly urbanizing fringe.

There is a need to better understand this critical link in our commitment to the planning of a fast growing city such as Nairobi; to be aware of some of the promising efforts to incorporate urban land use planning regulations at the rural level, and to suggest ways and means of improvement. The challenge of the study is therefore both technical and institutional- to identify the extent to which urban planning tasks should or could be absorbed in the wider rural concerns for sustainable urban development and to agree on the allocation of responsibilities for implementing programmes between the urban planning system and rural or regional planning and other concerned agencies such as those representing water, energy, transport and agriculture

1.7 Scope Of Study

This study is not primarily concerned with 'land'. Thus, it is not about land resources, nor does it deal solely with land economics, the study of the way in which land is allocated among competing uses, nor is it a treatise on land reform, nor a history of land-use planning, though all these topics impinge closely upon the land problem discussed herein. Rather, the study attempts to describe the way in which the urbanization process in the urban fringe of Nairobi either encourages or hinders the planning, control and development of land in this area.

Special emphasis is on land use and the urbanization process bearing in mind that, it is the rapid growth of Nairobi city, which has largely influenced the operation, or non-

operation of the existing regulations that were originally intended for an area purely agricultural in nature. Suffice to say that the concern of this study is less with the problems of urbanization per se and more with the role of governmental and sectoral institutions in planning and controlling urban development at the fringe.

This study does not deal with the land question as relating to agriculture. Nevertheless, and more particularly, in relating the historical background, it will be necessary to refer to agrarian land issues and practices in so far as they are relevant to the principal theme, which is the relationship of land use control measures to increasing urbanization in the periphery areas of Nairobi City.

The urban fringe studies in this case refers to Ngong Division bearing in mind that there are other peri-urban fringes of Nairobi city. It is also realized that Ngong division is very expansive and the study is thus limited to parts of Ngong, which are defined by the circuitous road transport route from the city of Nairobi through Ngong Town, Kiserian centre, Nkoroi, and Ongata Rongai. This is the area that exhibits fully, the emerging conflict brought about by rapid urban development of an area that is typically rural.

Due to multiplicity of laws applied in planning, emphasis will be laid on the specified legislations that are relevant to this study. They are listed here below as:-

- The Local Government Act
- Registered Land Act
- Physical Planning Act
- Trust Land Act
- Land Control Act
- Agriculture Act
- The Government Lands Act

1.8 Organization of the Study

The main focus of the study is to examine the effect of urbanization on the use and control of land in the Ngong fringe area, focusing on Nairobi's outward growth on land development in Ngong. Chapter one, which is the introductory chapter, gives the background to the research problem, from which study objectives, justification, scope

and limitations are spelt out. Chapter one also spells out the research methodology, analytical framework and study limitations.

Chapter Two is a comprehensive literature review culminating in identification of gaps and a conceptual framework while chapter three discusses the physical and socio-economic background of the study area. Because the latter is influenced by historical factors, a brief historical analysis of the area is discussed as a preamble of the study area. It is in this chapter that the urbanization process as it affects the study area is analyzed.

Chapter Four is an analysis of planning law and related institutions applicable to the study area and in the country as a whole. It is realized that both the legal and institutional mechanisms operate and are driven by governmental policy. The policy framework for the planning function is thus analysed. How the planning practice and development control function operate within the institutional and legal setup in the study area is also analyzed.

Chapter five analyses the data collected by relating it to specific research objectives. The chapter thus examines the planning challenges experienced in the study area. Emphasis here is on visual aids such as photographs, maps, bar charts and tables.

Chapter Six on the other hand zeroes in on development control problems experienced in Ngong by relating developments and planning applications to the stipulations of the existing plan requirements with a view to highlight conformity or non-conformity.

Based on Ngong's case study, chapter seven discusses the future strategies for effective planning of land in the area. Summary, conclusion and recommendations of the study come in chapter eight.

1.9 Research Methodology

In response to the stated problem and broad objectives, the following methodology was developed:

The first step of this study was to do a thorough review of past studies on planning and development control in similar fringe areas. This formed the basis on which the study proceeded. The literature from this review gave the researcher a clearer perspective and deeper understanding of the study problem. The second step was a familiarization tour of the study area in order to have good background knowledge of

the area. Sample designs, were influenced by these observations. The third step was to administer the pre-survey questionnaires with a view of testing their applicability and relevance in the field. After this exercise, necessary amendments were made, so as to come out with a workable questionnaire. The fourth step was to administer the final questionnaires with a view of collecting desired data.

The fifth step was to analyze data, by validating it so as to easily interpret the outcome.

1.9.1 Sources And Methods Of Data Collection.

In this study both primary and secondary sources of data were used. Archival data was also used especially as it related to the historical background of the area.

Primary data collection involved the following procedures.

- a) Direct field observation by the researcher and recorded by the use of a field notebook, a field base map, and a camera. Some of the issues that could be observed directly included conflicting land uses, infrastructure services, and environmental problems and plot sizes.
- b) Personal interviews of a selected sample of respondents using standard structured questionnaires. The questions asked revolved around the land issue, constraints faced and personal views on current planning procedures.
- c) Focus group discussions and open discussions with selected personalities and groups. These were to supplement the information in (a) and (b) above.
- d) Guided interviews were administered to various public officers in the area to include Physical Planning Officers, District Officer, Area chiefs, Agricultural Officers, Forest Officer and County Council officials. The questions asked were to shed light on the institutional framework, land conversion process, existing planning policies or any public policy concerning land issues in the area

Secondary data on the other hand constituted a large part of this work and was collected by reviewing necessary literature from the following sources

- University libraries
- UNEP library
- World Bank library
- Nairobi City Commission Library

- Urban Development Department (UDD) library
- National Archives library

Both published and unpublished works mainly from the government were used. Land regulation and control policies such as Zoning ordinances, and Sub-division regulations, various planning legislation like Physical Planning Act, Land Control Act, Local Government Act, Government Land Act, were reviewed.

Archival data included minutes derived from proceedings of Ol-Kejuado County Council, City Council and from the National Archives.

1.9.2 Research Tools.

Other than the necessary writing materials such as field notebooks, pens and questionnaires, a camera and base maps were also used. A research assistant was also needed to help collect data. A guide for easy direction was also employed, as the researcher was fairly new to this area.

1.9.3 Sampling Design.

The researcher considered the total population in the study area. For this purpose the 1999 census data was used to determine the sample frame. The total population of Ngong Division is 149,771 and the number of households is 39,475(CBS 1999). It is observed that Ngong Division has a total of nine (9) locations. This study is based in the locations of Oloolua,Ngong Upper Matasia and Ongata Rongai. These are the locations that constitute the peri-urban interface of Ngong.

For household questionnaires, the location of Oloolua was chosen as the ideal one representing both urban and rural characteristics while at the same time portraying the unique aspect of bordering both Nairobi City and Kiambu District.

This area was then stratified into administrative wards of sub-locations identified as Oloolua, Bulbul and Kerarapon. These sub-locations have a total of 5174 households.

This being a descriptive study in which a maximum of 30 samples are representative, a total of 90 households was interviewed, that is 30 from each sub-location. From each stratum, starting at a random point and taking every 10th element from then on to the end systematic random sampling was applied to pick up the number of respondents to be interviewed. This method catered for various strata of the population so that each was included in the sample in sufficient numbers and thus

their responses could be divided into strata on the basis of such variables as age, sex, education, and so on.

For the building Survey, purposive sampling was used because it was restricted to areas with a physical development plan. Thus the centres of Ngong, Kiserian, and Ongata Rongai were picked. It was ensured that all buildings sampled were privately developed, the rationale being that such buildings had the greatest risk of contravening control standards as compared to public buildings. The building survey considered only residential buildings. Buildings were selected at an interval of 5 if it met the study requirements or at $k+r$ if it did not belong. For purposes of the study, $k=5$ while $r=1$. This meant that 1 in 5 buildings were selected with the allowance for selecting the 4th or 6th where there was an open space or did not qualify to be selected. A total of 35 buildings were thus surveyed.

1.9.4 Procedures of Data Analysis.

The first step after data collection was to edit that data. In order to ascertain the accuracy of data, possible omissions and errors detected were corrected. After this data was entered into the computer and the Statistical Package for Social Sciences (SPSS) Programme was used for analysis.

1.9.5 Methods of Data Analysis.

Secondary and Primary data has been analyzed through quantitative and qualitative methods in order to avoid bias involved in each method. Qualitative methods provide the in-depth explanation while the quantitative methods provide the hard data needed to meet required objectives. The subjectivity in qualitative analysis, it is hoped, will be minimized by the objectivity in quantitative analysis. Presentation is in form of graphs, pie charts and tables. Case studies are also used to draw out special areas that may not be captured in the household questionnaires or the in-depth interviews.

1.10 Analytical Framework

The main research question is to study the effects of urbanization on the use and control of land in the Ngong fringe area. Several sub-questions helped in capturing this effect and the guiding questions in developing researchable areas were;

- How urban is the study area?
- Which land uses are growing the fastest in the study area?
- Where is agricultural/urban land conversion concentrated?
- How much land is being provided with minimum services needed for urban development?
- Is there enough land to accommodate urban growth in this area?
- What are the regulations applicable in this place?
- Who regulates whose behavior?
- What should be the impact of not having these regulations?
- How is control transferred?
- Are there ambiguities and conflicts of control?
- Do those in control have the information, motives and ability to do it well?
- Is the control pattern changing?
- Are there problems, which escape control?
- Is there a consensus among users about the reality and rightness of control?
- Who might have a legitimate present or future stake in it?

To consolidate the primary data into specific aggregates of information, data was clustered to answer each of the research questions by dissecting it further into finer groups. An analysis that ensued is shown in **Table 1.0**.

TABLE 1.0. ANALYTICAL FRAMEWORK

THE EFFECTS OF URBANIZATION ON THE USE AND CONTROL OF LAND IN THE NGONG FRINGE AREA OF NAIROBI

Research Objectives	Questions for Analysis	<u>Type of Data</u>	Techniques for Analysis and Presentation	Expected Results
<p>1. To study the impact of the urbanization process on land use patterns in the Ngong area</p>	<ul style="list-style-type: none"> • What are the indicators of the process of urbanization • Which land uses are growing the fastest in the study area? • Where is agricultural/urban land conversion concentrated? • Is there enough land to accommodate urban growth in this area? • Time taken to transact in land • How much does this land cost? • How much land is being provided with minimum services needed for urban development 	<ul style="list-style-type: none"> • Emerging urban centers in area • Commuting patterns • Minimum Plot sizes • Building Standards • Densities • Population trends • Income levels • Education levels • Data on availability of services like water ,electricity • Data on accessibility of services • Dominant Land-uses • Average land sizes • Type of ownership • Area list of sub-divisions • Level of land transactions • Data on land conversion to urban uses • Comparison of land values over the years 	<ul style="list-style-type: none"> • Literature review on past trends • Photograph • Percentages • Maps • Tabulation • Matrices 	<ul style="list-style-type: none"> • Audit of land-use patterns in the Ngong area

2. To identify the institutions and agencies responsible for controlling the use of land in the area and their subsequent efficiency in doing the same.

- What are the supporting agencies and institutions for land development in Ngong
- How are they related to each other?
- Can they act in isolation of each other?
- Who regulates whose behaviour?

- Number of institutions involved in land management
- Functional relationship between these institutions
- Organizational structure of the institutions

Descriptive

- Little coordination in land management
- Integration or non-integration of spatial planning with control framework

3. To examine the planning and development control challenges and problems experienced due to the urbanization process

- What are the planning regulations applicable in this place?
- What types are commonly applied to guide development in area?
- How is control transferred?
- Are there ambiguities and conflicts of control?
- Do those in control have the information, motives and ability to do it well?
- Is the control pattern changing?
- Are there problems which escape control?
- Is there a consensus among users about the reality and rightness of control?
- What should be the impact of not having these controls?
- How are the planning regulations enforced?
- Who enforces the regulations?
- Who are the losers and winners of the existing situation?
- What is the level of awareness of such regulations?

- Zoning Principles
- Sub-division guidelines
- Densities
- Implementing authority on development control
- Conflicting users
- Level of service provision
- Land Control Board guidelines
- Current land-use plan for study area

Review of various Acts of Parliament to include:-

- Land Control Act
- Registered Land Act
- Physical Planning Act
- Local Government Act
- Trust Land Act

Maps
Photographs
Descriptive

Better planning
alternatives

4. To recommend alternative ways of establishing an effective planning and control system in the area.

- What is the existing planning policy for peri-urban areas
- What should we expect from urban planning and land-use regulations?
- What is the future of Ngong fringe area
- What are the community's views on current land planning issues?

<ul style="list-style-type: none">• Existing land policy• Existing urbanization policy• Agricultural policy• Community views• Council vision on rural land conversion.		<p>Better protection of environment Urgent need for national land policy Decentralization of the planning function</p>
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1.11 Study Limitations

The study was limited by various factors. First was time and finance. Second was the study theme, which touched a lot on land. Land issues happen to be very touchy in the country as a whole and more so in the study area with ethnicity tension silently simmering in the background. The researcher had to rely on goodwill to gather any positive responses. Thirdly, the worsening security situation in the study area made the household and building surveys almost impossible. The researcher and her assistants were first treated to a gruesome questioning session to ascertain that they were not thugs posing as researchers. At the same time, questions on building plan approvals were met with outright hostility and insolence on the basis that the researcher had no business asking how and what people did with their buildings. Fourthly, the lack of adequate cadastral and land registration system together with poor record keeping made the access to necessary information a daunting task. Thus the rate of sub-division could not be established without the patience of perusing intricate layers of files at the respective lands office.

CHAPTER TWO: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 Introduction

This chapter provides a critical appraisal of the works previously done on the subject of the study, both on theoretical and empirical basis. Contributions of past researchers will be studied and their valuable aspects, weaknesses and gaps appraised in relation to the needs of the present study. Because of the wide phenomenon of the study issues, the literature review is categorized under various sub-topics for ease of reference.

The study will thus be based on modified valuable aspects and new contributions have been sought in the light of the weaknesses and gaps identified. A resulting conceptual framework and model are conclusively given.

2.1 What is land?

The term land lends itself to a variety of definitions. To the lawyer, land is the "*surface of the earth with everything on it, under it, and over it.*" In the orthodox definition of it held by economists, land is distinguished from capital and labour because as a factor of production, it exists in the natural order of things and no labour has been expended on its production.

To the lawyer especially if he follows the schooling of the English jurists, land is far more than that. The land lawyer looks at the whole thing, improved, developed, and worked upon. It includes land as a natural resource, all that nature gives of soil, water, minerals, trees, and vegetation, and in addition all the works of man upon the natural resources. Thus to the lawyer, land means not only the natural soil or waters, the *solum*, but all buildings, roads, fences, ditches and all erections which are physically attached to or identified with the soil.

The urban and regional planners retain an imperfect view of land as the canvas upon which a plan is presented. Ratcliffe (1976), a planner, perceives it as "*a broad brush or a mosaic requiring uniformity and control*" and argues that land gives man room for his own action, to enjoy the heat, the air, and the rain that nature assigns to that area.

The architects and builders are concerned with the structural qualities of land in relation to support and drainage, while the surveyor and engineer attach meaning to land on the basis of physical performance.

Land occupies a central place in human life. It is the physical base of all human activities-one cannot easily conceive of any human occupation that would not leave its imprints on the land, from plough furrows to skyscrapers. Land is the ultimate factor in the development and progress of human races.

Four unique aspects of land, however, set it apart from all other commodities.

Land is **ubiquitous**-it is found everywhere and there is no cost of supply so that it is considered a gift of nature with no cost of creation.

Land is **unique**-no piece of land is exactly like any other piece of land and hence cannot be replaced by the other.

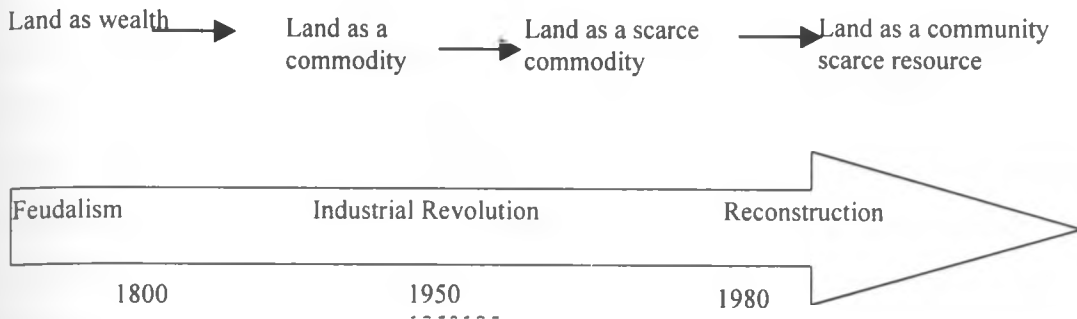
Land is **permanent**-It is indestructible. Man may use it or change it but rarely destroys it.

Land is **without intrinsic value**-It's utility is created by man and the selling price is the market place.

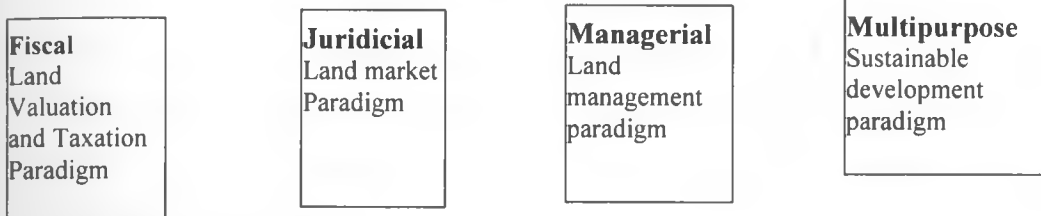
To many people, land still remains the core of their very existence. Consequently, land becomes a basic need –whereas landlessness invokes feelings of insecurity and helplessness. Indeed land has been one resource for which a lot of blood has been shed either in form of territorial expansion or in form of asserting ones rights to land as depicted in the various struggles for independence in many African states. Indeed, most governments are land-based units. Zimbabwe's conflict between white farmers and black peasants today reflects how sour land issues can get.

The relationship between mankind and land has gone through several stages as shown in figure 2.0 having its initial basis on a very simplistic pattern, that of production. It reveals that the value man holds towards land is constantly changing depending on the prevailing historical circumstances.

Fig.2.0 The Cumulative Evolution Of The Humankind/Land Relationship



(Corresponding Paradigms)/ Administrative Infrastructures



Source: Proceedings from the international conference on spatial information for sustainable development 2001

2.1.1. Attitudes to land (*Buy land, they ain't making no more of it- Mark Twain*)

In his book, Mather (1986) uses a biblical illustration of a fundamental contrast in attitudes to land. In 1 Kings chapter 21 is told the story of Naboth's vineyard. Ahab king of Samaria and personifying great wealth and power at that time wishes to purchase Naboth's land as an extension to his own property. Ahab thus regards land as a commodity to be bought and sold. Naboth, however, places a different value on his land since it is an inheritance from his family and he is merely a steward over it, so he refuses Ahab's offer.

Mather (1986; 2) uses this conflict to outline two fundamental concepts of land; He states,

“On the one hand land is simply a form of property that may be traded at will. On the other hand, land is much more than just personal private property, and it's possession is not a matter for market forces to determine -land is a form of

common property, either in the sense of succeeding generations or by extension, in the wider sense that the community has an interest in it."

It would however, be misleading not to take note of the ending of the Ahab-Naboth dispute. With Queen Jezebel urging him to act in a manner, which befitted his power status and wealth, and having Naboth put to death over some trumped-up charges, Ahab took possession of the land he coveted. This serves, as a stark reminder that contests over land usage are fought in the arena of existing power relations and the settling of conflict will often be according to the power and influence of competing forces. From the same Bible, is again a clear illustration of what should be expected in the circumstances-

"If you see the poor oppressed in the district, and justice and rights denied, do not be surprised at such things; for one official is eyed by a higher one, and over them both are others higher still. The increase from the land is taken by all, the King himself profits from the fields."(Ecclesiastes 5:8-9 New International Version.)

This shows that there will always be hierarchical power controls when land-related issues come up and no individual will be allowed to deal with his piece of land as he/she wishes.

These attitudes to land, and the power relations which underlie land use conflicts, are emphasized because any discussion of planning peri-urban land that is often rife with conflicts requires a focus around which to weave its analysis. The issue of how land is conceptualized may be seen to be at the root of wider issues of how and why landowners can or should be controlled in the use of their own property. No government can be efficient without having absolute control over the manner in which land the greatest commodity asset is to be used. For this reason several leaders have made comments on their behalf or on behalf of the communities they represent regarding land.

Gandhi remarked, "*Land is like the air, rain and the sun. It belongs to all because it belongs to no-one except to God who made it.*" Incidentally, this is also the basis of the Mosaic Law as is set out in Leviticus.

Gandhi is not going to cut much ice with most of the people in their perception of land in present day society, with the exception of Nyerere (1967) who echoed Gandhi's sentiments "*land is a free gift for all men to use both now and in future*".

To Kenyatta (1938) in Kenya, "*Land supplies people with the material needs of life through which spiritual and mental containment is achieved*".

It is for this reason that Haberson (1973) writing on land reforms in Kenya says;

"Land has always been critically important to the well-being of Kenyans because it represents their principal link with their revered ancestors as well as being the most important and tangible asset of numerous ethnic African communities".

Some twenty years down the line, Murungi (1995) commenting on the unpopular ethnic clashes of 1992 in Kenya emotionally observed,

"For the majority of the people, land is the only means of subsistence. For them, it is not a question of primitive attachment to land. It is a question of economic necessity. Ultimately, it is a question of life and death"

It is to this end that the job of any political leader in Nyerere's words is to "*convert the land we have gained into a good place for all citizens to live in*".

There are thus a bewildering variety of themes for land use planners to consider.

Fabos (1985) describes four common characteristics of land use issues;

- a) They present or generate one or more uncertainties.
- b) They can be perceived of both as a problem and an opportunity.
- c) They have a supply and demand aspect.
- d) They can be dealt with in one of two ways, either systematically or conceptually.

Consequently, in a developing country like Kenya, issues surrounding land, land use, land management, land regulations can often be categorized as "wicked problems" in contrast to Rittel's (1970) tame problems. Tame problems are understood sufficiently that they can be analyzed using an established method and it is clear when a solution has been reached (Buckingham 1997). In contrast, wicked problems have better or right solutions, not right and wrong ones and often have strong moral, political or professional dimensions.

For this reasons, land is normally seen from various perspectives some of which are categorized here below as:

- **Land as the basis of the planning system**

The planning profession, which began to emerge at the beginning of the 20th century, was concerned with aspects of urban development, but new and more pleasing forms of urban layout and a concern to protect the interest of the weaker groups in the society were central. In both of these endeavours, the use, disposition, ownership of and access to land were key factors. In short town planning was largely synonymous with land use planning. The central task was seen as “overcoming the worse aspect of the congested, and unsanitary jumble of land uses which had typified the industrial city” (Kivell, 1993:7).

A large part of the justification for a planning system is that it resolves competing claims over the use of land as a resource. In practical sense, these includes the provision of land for housing, community facilities, and ensuring that some checks are kept upon the dominant land use activities. The success of a planning systems in protecting the weak, should not be discounted either, though this ‘Robin Hood’ view is not always appropriate.

- **Land as power**

Traditionally, the ownership of occupation of land has often conferred great economic and political power. Land especially in urban areas has retained its allure as a source of wealth, power, and status. This has seen the emergence of a study growth of land owning groups to include:

- a) Institutions – Such bodies use land to accommodate their office functions and in this way they may be looking for prestige or corporate identity. Who can fail to notice for example Kenyatta International Conference Centre (KICC) or the Times Tower in Nairobi’s skyline?
- b) Public sector – These includes central and local government, public utilities and state owned industries. Their involvement in land ownership stems from two state reasons. First, to provide services, most of which require land e.g. schools, roads, hospitals, and housing. Second, for reasons of social equity and planning efficiency, public sector control may be exerted over land development and urban expansion.
- c) Individual homeowners who have been responsible for a greater fragmentation and dispersal of land holding than ever before. Their motives are two-fold. First, there is status, social advantage, and freedom, which are conferred by

home ownership. Second, there are economic benefits in the prospect of long-term financial security.

- **Land as urban morphology**

Individual cities display morphologies and land use patterns which range from the very formal and carefully ordered (for instance, Paris, Copenhagen) to apparently haphazard collection of buildings, spaces, and activities. The precise pattern is determined by age, style, scale of development, the need for different kinds of lands and nature of its ownership.

2.2 The Land Development Process

The land development process starts when urban/economic growth stimulates the need to develop land to a more intensive use. The duration of the development process may vary from a few months to decades and this in itself is partly determined by the ruling land policy.

The main participants in the land development process are the original landowner, professionals such as planners, architects, local and central government officials, the Jua Kali local artisans, and the financiers. There is thus a large and growing number of participants or 'actors' in the land use debate. Complex inter-relations between them have also evolved attracting considerable attention as to the role that government should play in land-use decisions. Figure 2.1 illustrates the resulting complexity among the various actors. Most landowners, unlike the planners and surveyors are not professionals and are thus not concerned with land dealing as a business. The result is that a wide variety of unpredictable, sometimes irrational even perverse, behaviours take place.

In Kenya, with not a clear-cut land policy, developers and speculative land brokers may begin to show interest in land on the urban fringe long before it is actually needed for development. This brings in many transactions in land with future "hope value". In developed countries like Sweden and Netherlands with firm land policies such as development control and the green belt, such speculative behaviour may not hold ground.

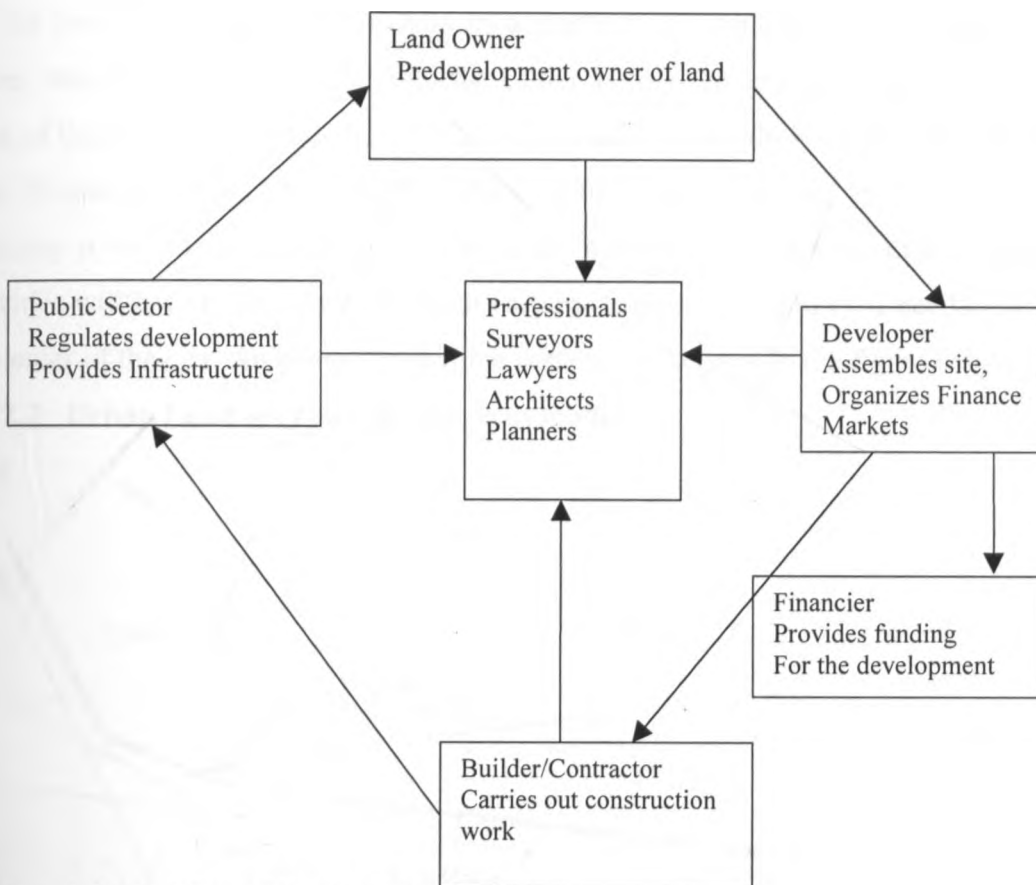
2.2.1 Key Actors In The Land Development Process

Actors often fall into a rather limited number of broad categories specified as

- **The Landowner:** The prime mover in any decision about the use of land will often be the owner or his tenant or leaseholder. According to the theory of perfect competition, the owners will attempt to maximize the return from their land, and will alter the intensity and nature of its use to suit circumstance. Most countries have constraints upon the freedom of owners to inflict injurious spillovers onto neighbouring properties through a regulatory structure.
- **Pressure Groups:** These organizations vary widely in their interests, size, resources, influence and methods, but are almost always minorities within the population. Under this, we have conservation and amenity groups like the Green Belt Movement led by the very vocal and daring Prof. Wangari Mathai. These are groups that tend to oppose change and are charitable trusts relying heavily on donations for support.
- **The Professional Advisors:** The most obvious professional with regards to land use is the land use planner. In Kenya, and for a long time indeed, the planner has operated mainly through the government machinery. The planner in theory fulfills an important role as a balancer of conflicting interests as a manager of the urban environment. Planners have too often us a two dimensional approach to land development, viewing it as a matter of zoning, networks and forecasts. However, planners are generally in favour of planning, which means that they have a bias against allowing the market to determine the use of land. Secondly, they have a professional and possible personal career interest in seeing the adoption and implementation of the plan they produce. Moreover, they are in a strong position to realize this aim, as in most cases they control the information and options put forward to decision bodies – it is therefore possible to present arguments in such a manner that laymen in the matter will feel unable to dispute the conclusions reached. Nor may planners be independent of political patronage as they appear. In addition to a planner, other specialists includes surveyors, architects, quantity surveyors, valuers, and land officers.

- **Government:** The power of government to regulate land is not unlimited. This is because private individuals and firms own most of the land. There are agencies, Commissions, Ministries, and Local Authorities at the national level who advise on the formulation of land use policy. To a large extent, government provides the institutional counterparts of the actors already identified.

Fig 2.1 Relationship between various actors in Land Development



Source: Adopted from Kivell (1993) Pp 125

2.3 Theoretical Basis of Land Use

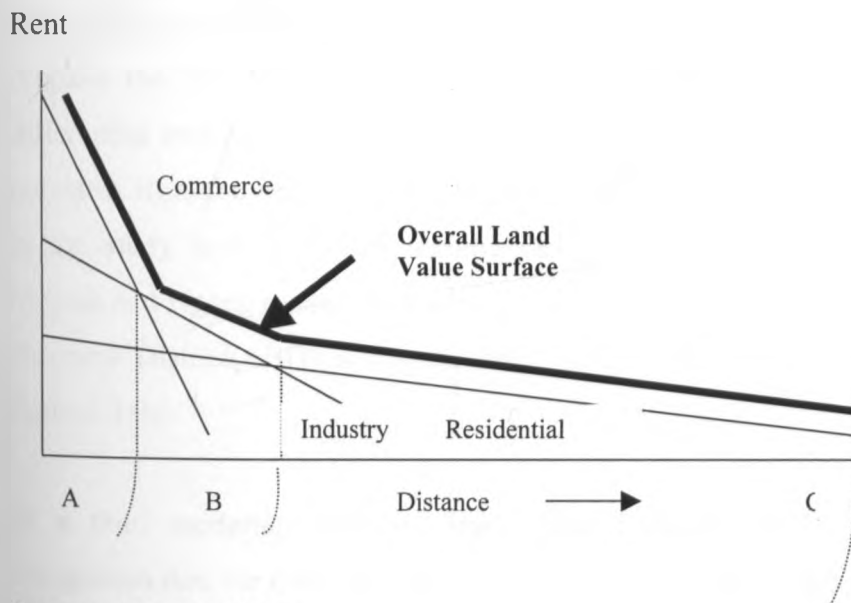
The internal structure of an urban entity is quite complex and it is because of these complexities that a number of theories have been devised in an attempt to generalize about the arrangement of land uses within an urban set-up. A theory thus becomes a simplification of the real world situation that does not show all the existing variations. Theory refers to a system of thought which through logical instruction supplies an explanation of a process (Chapin & Kaiser, 1976:21). A theory may not apply to all

situations and may be superseded by a more generally acceptable mode. For purposes of this study, models in developed countries have been supported by theoretical models in developing countries.

2.3.1 Theoretical Models in Developed Countries

Economists, Geographers and others have developed many theories and models of urban land use. Most of them can be described as bid-rent models, which assume that land use activities have different needs to locate close to the center of the city and will bid for land accordingly. This results in a gradient of intensities of land uses and prices, which decline outwards, from the center in more or less predictable manner. Most of these models can be traced back to the work on agricultural land published by Von Thunen in 1826, although it is Hurd (1903) who is usually given credit for applying it to urban areas. The model rests upon the assumption that different activities will have bid-rent curves which vary in form according to their need to be at the center of the city. An overall land value surface can be seen in the figure below.

Fig 2.2 Urban Land uses and the bid-rent model



Source: Kivell (1993)

The overriding fact is that land use seems to determine land value. Point A marks the distance from the center where a decline in commercial activities is realized and industrial uses can outbid them and thus become the dominant activity. At point B, similarly, residential uses compete successfully with industry for all activities, there will be a trade-off between the high costs of central area land and the high costs of

transport incurred by locating further out. The pattern of land use which is assumed to result provide a degree of explanation for one of the best-known models of urban structure, that of E.W Burgess (1925).

Burgess, a sociologist, did not use the rent theory as such, but derived his model from empirical observations of the way in which the city of Chicago had developed. His is, a hybrid of idealized land use patterns and urban social structure with a strong emphasis upon residential areas. The model is commonly represented as a purely concentric zone of activities as shown in figure 2.3(a).

Hoyt (1939) took up the importance of a sectoral form of development in his study of residential rent levels in a large number of American cities, including Chicago. Although there are obvious differences between these two models, there are also some similarities. The main difference is that Hoyt considered direction as well as distance, from the city centre to be important in determining land use. The arrangement of the sectors was such that high-income areas were protected from low-income districts and from industry by buffer zones of middle-income housing. This however did not disguise the fact that within the sector, Hoyt clearly identified concentric zones of differential rent and a tendency for the most fashionable residential areas to migrate outwards from the center along specific routes. Perhaps this is what is most apparent in the study area with high income earners migrating towards Ngong along the Magadi and Ngong roads. The model also goes further to acknowledge that the Central Business District(CBD) is not the only focus of the city. The model is shown in figure2.3 (b).

In a third modeling exercise, Harris and Ullmann (1945), took Hoyt's subtle recognition that the CBD was not the only focus of activity and made this explicit in their multiple nuclei model. The model incorporates elements of Burgess and Hoyt but is more flexible than either. Essentially, it implies that the city has a cellular structure within which a number of specialized areas develop- Some may be highly nucleated such as shopping centers but others may be quite large districts dominated by a single land use such as industry. In realizing the dominance of a single center, and the assumption of general accessibility to the core, the multiple nuclei model

recognizes the interaction of a number of locational factors. Figure 2.3 (c) shows this set-up. This model particularly applies to the city of Nairobi in which several nuclei have emerged both within and around the city. Consequently, Nairobi is currently ringed by a number of satellite towns such as Kiambu, Athi River and Ngong, the study area.

These three models have become so well established in the literature on urban structure that they are normally referred to as the "classical models". An attempt to refine them for the British context has been made by Mann (1965). His diagrammatic model draws most heavily upon the concentric zone and sector models, but it makes pursuing reference to separate and more specialized areas. Importantly it also makes allowance for public sector intervention in the form of local authority housing. – Figure 2.3 (d).

2.3.2 Models in Developing Countries

Developing countries have been structured by processes, which differ in nature or scale and strength to those active in developed countries. The search for a general model to explain the internal mechanisms of a city in a developing country is a long-term quest for synthesis and is not easy, even at the level of an individual city. A wide range of approaches has yielded a very considerable number of models. Two schools of thought define these models (Lowder 1988)- the descriptive and the dynamic.

The descriptive school consists of deductive models based on a single city at a specific time. They depict land-uses, population and social groups within a city and compare the distributions. Members of the dynamic school on the other hand focus on the processes that explain the allocation of social groups specific types of locality within the expanding city; the dependant variable is the land and its use. Descriptive models are still being devised, while some of the dynamic ones have been in existence for close to thirty years. Such models have been constructed for various cities in the developing world. Three examples are shown in Figure 2.4 (a, b, c).

All the three are drawn on the classical isotopic plan and are representative of different areas. The United Nations African city model, however, appears to be discussing Africa south of the Sahara, which eliminates cities of Arab origin. The

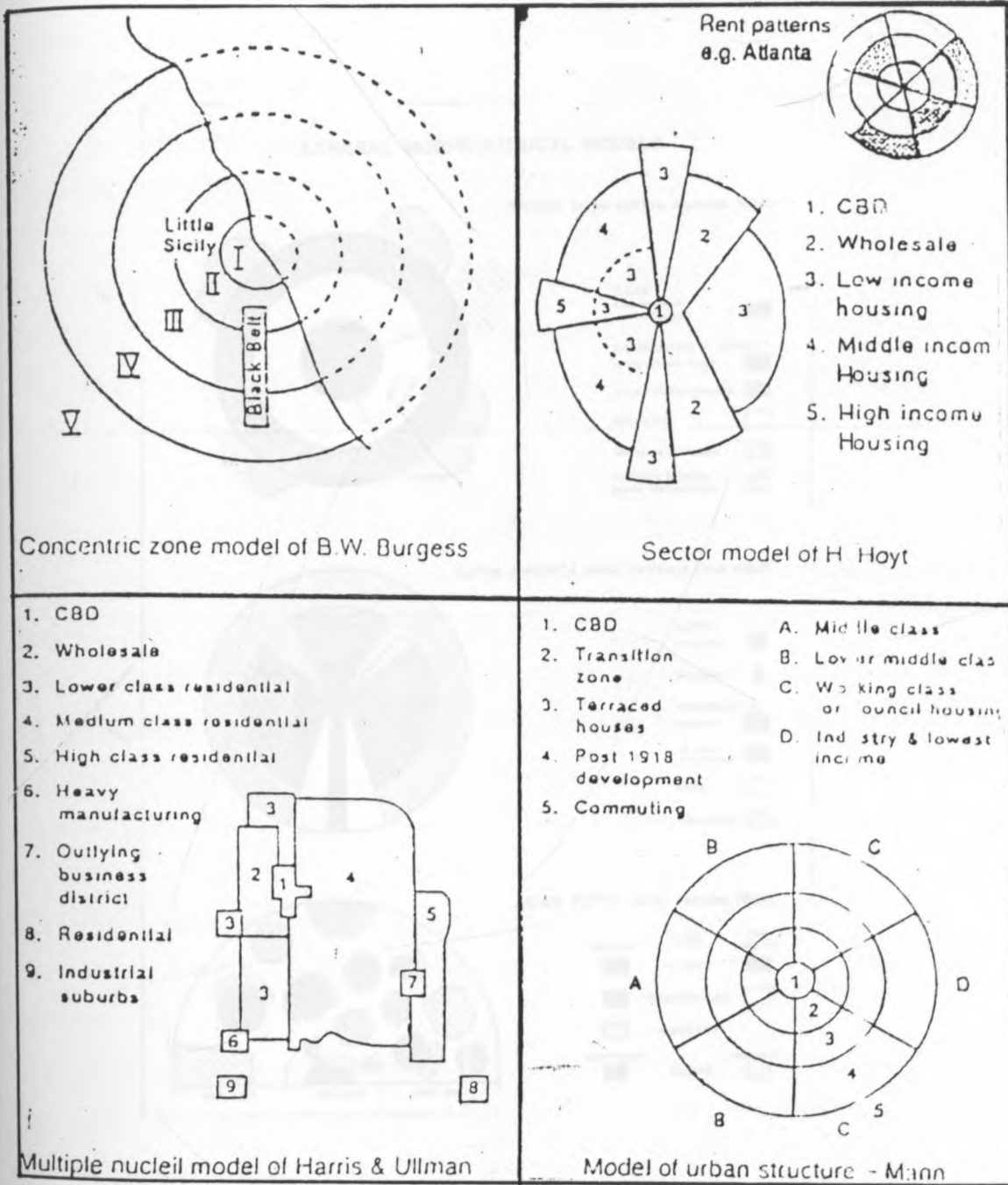
model organizes different groups through the single dimension of density. - Low density, medium density and high density. There is also emphasis on residential districts implying that production activities are concentrated at the center. Its Latin counterpart displays some of the same attributes.

Once again the residential areas seem to be arranged from dense to scarce. Services tend to diffuse from the core. New arrivals are forced to the periphery where they squat or share zones of disamenity with industrial and uncongenial uses. Asian port cities render some type of multiple nuclei model. Whereas other models take pains to avoid dividing areas according to a culturally loaded dimension, the Asian port shows that labels are not important to them but the underlying economic forces structures that characterize land use plans. Thus non-modern industry is mingled with non-modern residential zones, conveying an impression of the heterogeneity and complexity of cities.

2.3.2.1 Conceptualization

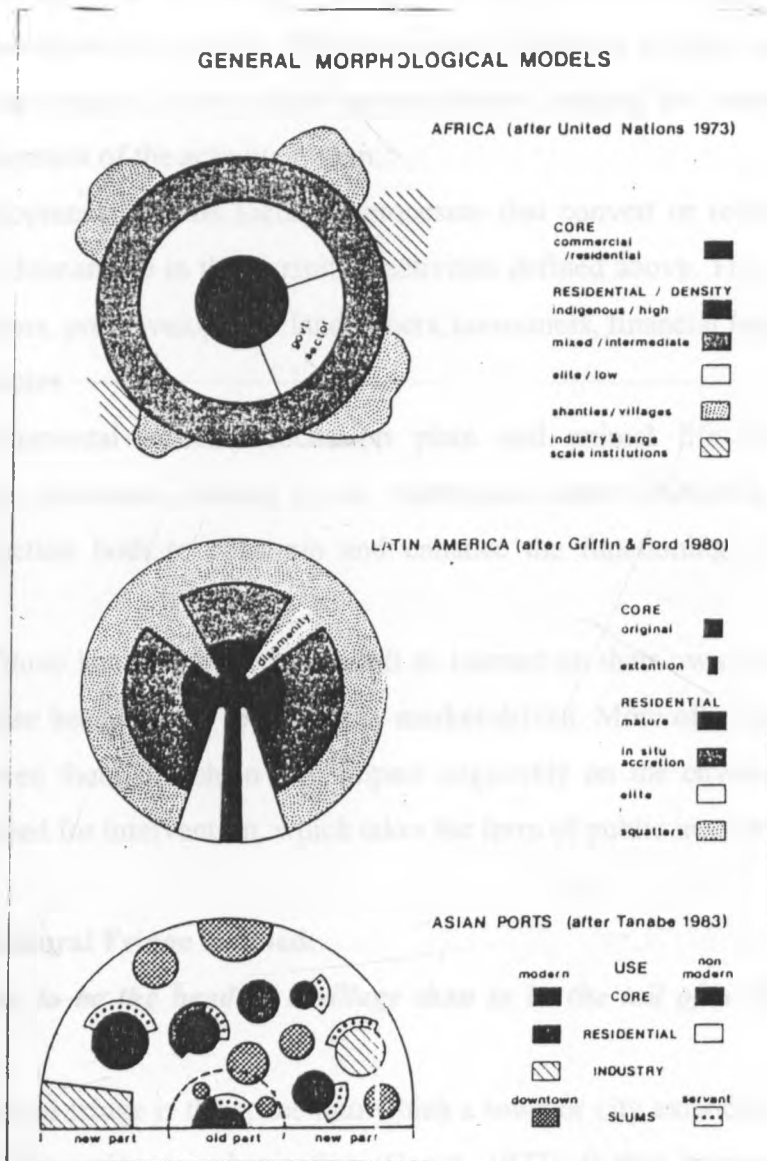
All of these models have severe limitations, and the evolution of urban land use in the past three decades highlights some of their deficiencies. Some attempts to deal with criticisms of earlier models can be seen in the development of later models. Most of the models above ignore the physical setting of the city together with its inherited stock of land uses and assumes the centre as the maximum point of accessibility. These models are also market oriented and their failure to cater adequately for a number of social needs in terms of the provision of land for socially desirable but unprofitable needs is apparent. For instance, both Burgess and Hoyt were concerned with the rapidly growing American city of the first third of the twentieth century, and to apply their models outside of this geographical and historical setting is misleading. At the time when Burgess was writing, the structure of the American city was almost wholly determined by market forces. Subsequently state intervention through planning regulations was not apparent then. Burgess and Hoyt, in particular, simply described the patterns, which they saw. They did not provide quantifiable models and were not explicit in their analysis of progress. As a result other theories have evolved over the years with a great deal of emphasis on urban planning, some of which are mentioned later in the study.

Figure 2.2. Land Use Models in Developed Countries



Source: Adopted from Kivell 1993 Pp 87

Figure 2.3. Models In Developing Countries



Source: Lowder 1988 Pp 211

2.4 Key Land Use Systems

Key systems affecting land uses have been identified as activity systems, environment systems and land development systems. Activity systems concern the way in which man and his institutions of households, firms and governments organize their affairs on a day-to-day basis in pursuit of human needs. How man interacts with one another is of key importance in the activity system hereby making the transport system on active sub-system of the activity system.

Land development systems focus on processes that convert or reconvert space and adapt it for human use in the pursuit of activities defined above. The principal agents are developers, pre-development landowners, consumers, financial intermediaries, and public agencies.

The environmental systems focus on plant and animal life (Biotic) and the fundamental processes relating to air, water and matter (Abiotic). Environmental system function both to constrain and enhance the functioning of the other two systems.

When the three land use systems are left to interact on their own, some elements of inequity arise because they are basically market-driven. More often than not conflicts arise between them, which in turn impact negatively on the environment. There is therefore need for intervention, which takes the form of public interest elements.

2.5 Urban-Rural Fringe Defined.

"It is better to be the head of a village than to be the tail of a city." A Corsican proverb.

An urban-rural fringe is the space into which a town or city extends as a result of the process of dispersion or urbanization (Carter, 1973). It thus becomes that piece of marginal land found on the periphery of an urban entity. It is transitional in nature and has been variously referred to as the peri-urban, the urban shadow area, the septic fringe area, the suburban area and many other descriptions. Pyror R.J (1968) argues that in practice, it is not easy to define the urban fringe; rather, it is better to give the term a more precise definition based on the proportion of the total land area under urban use and to sub-divide the fringe into *rural-urban* and *urban-rural* components.

This definitional dilemma is further extended to specific countries. In the developing countries for instance, fringe areas are associated with disorder and service deficiencies. This is not true in the western world where people in the fringe are high-income earners.

The phenomenon of the urban fringe is not a strange one nor is it a recent one. Righter (1975), notes that excavations at Ur, some 8000 years ago show that it had fringes, which were "befouled with shanties".

Fringes are normally areas of urban dispersal arising from either rapid or unprecedented urban growth. The tendency of cities to disperse or spread out is normally explained in terms of both **push** and **pull** factors. The pull is provided by the attractions of sub-urban or pseudo-rural environment together with the advantages of land price and availability whereas the crowded, expensive, unpleasant unsafe environment of many inner city areas provides the push. On several occasions the urban fringe has been lumped together with urban sprawl- a term, which planners in particular have associated with uneconomical, wasteful, and aesthetically displeasing surroundings. For instance, Mumford (1961) contemptuously called the urban fringe "suburban scatter" and complained that the city was "*rapidly sinking out of sight as an agent of human interaction*". In land-use terms Wissink (1962) has called the fringe an area of "*great differentiation*", while Colledge (1960) referred to it as "*a geographical no-man's land*".

Both these expressions are derived from the wide variety of land use patterns found in the fringe area, which has been partly absorbed in the neighbouring urban complex. It is recognized that cities grow not in well-defined cycles, but rather extend haphazardly, making rapid advances at some points and hardly extending at all at others. As a result, urban-rural boundaries are increasingly blurred and the relationship between city and countryside is shifting.

Pahl (1965) attempted to summarize the characteristics of the fringe areas and came up with four main considerations. He noted that the urban fringe is

- An area of segregation,
- An area of selective immigration,
- An area of commuting distance and
- An area where the geographical and social hierarchies have collapsed.

Recent literature by Mattingly (2000) describes the peri-urban fringe as the “coal face” of one of the most important social phenomena throughout the developing world: rural to urban migration. He states that it deals with urban expansion based upon the natural population growth within the urban and peri-urban population. Peri-urban areas are outside formal urban boundaries and urban jurisdictions which are in a process of urbanization and which therefore progressively assume many of the characteristics of urban areas.

Peri-urban areas can be defined as areas having all or some of the following interrelated characteristics:

- Fast and unplanned growth resulting in, amongst other things, negative environmental health issues and environmental degradation
- Jurisdiction is unclear or duplicated in matters of planning, land tenure and land transfer.
- Tenure of residents is not always based on clearly defined and enforceable title.
- Planning and building guidelines and regulations, the Rating Act, and provision of urban services are not applied.
- Service infrastructure is inadequate to meet even basic needs.
- Social infrastructure does not meet basic needs.
- A significant proportion of residents are in lower income categories.

- Unplanned settlements to cater to the growing rental market, the rental market alone catering to demand.

Thus the urban fringe is seen as a mix of land uses brought about by the incomplete extension of the city as well as the demands, which it makes on its marginal areas. It is this process, which occasions the incoherent land use patterns that is representative of the fringe. Hough (1989; 14) summarily states "*the countryside immediately surrounding the city, known as the urban shadow, is the object of land speculation and sporadic development, defying planning solutions perpetuating an unproductive landscape.*"

2.6 The Urbanization Process

The phenomena of urbanization poses challenges in definition and various descriptions of what is urban abound. Consequently, the conditions and levels of urbanization may be difficult to compare because of differences in definitions of urbanization. A few definitional examples are given below;

- In Japan, settlements with a population of more than 50,000 or more are counted as urban.
- Portugal and Switzerland include only settlements with at least 10,000 inhabitants. Australia, The UK, and Venezuela routinely count settlements with as few as 1000 inhabitants as urban.
- Argentina, Kenya and Ethiopia draw the line at 2000 inhabitants.
- In Indonesia and South Africa a settlement is classified as urban if it has urban characteristics.
- In Belgium, Brazil and China, Trinidad and Tobago, a settlement is considered urban when it has a certain kind of government structure.

The urban environment has been described as one in which natural surroundings have become dominated by man-made surroundings. Presently such sharp distinctions are not discerned and the interface between the urban and the rural settings is one in which both natural and man-made surroundings blend. This has largely been brought

about by conversion of rural land to urban uses therefore spurring on the process of urbanization.

Urban residents however can be distinguished from rural residents by the size and density of the settlements they live in and by their relative dependence on the formal provision of services. Urban residents tend to rely on established providers in the public or private sector to meet their daily needs-food, clothing, shelter and medical care-usually through a medium of cash economy.

Rural residents are more likely to meet their needs without recourse to institutional or corporate providers of goods and services often outside a cash economy.

Urbanization as a process of expansion and growth of urban area creates a formidable task for planners and managers of cities. It has shown a relentless march especially in the developing nations. The dramatic growth of third world cities has become something of a cliché (Rakodi and Devas, 1992). In 1950, some 27.5 million people were living in third world cities. By 1990 the world's urban population had reached 2.3 billion (UN2000), with 61%(1.4 billion) living in metropolitan areas of developing countries. Table 2.0 shows some of this global urbanization trends. In Africa, the growth rate of the urban population is believed to have exceeded 7% per annum especially in the early eighties. Though rates of urbanization in Africa are high, it still remains the least urbanized continent in the world. East Africa has also had its fair share of urbanization somersaults- In 1962, 6.9% of Kenya's population lived in urban areas while Tanzania had 3.8% followed by Uganda at 3% in 1969. Kenya has continued to feature prominently in this spectacular growth especially in the period 1980-1990 registering an urban growth rate of 8% (UN, 1989).Table 2.0 summarises some of these features.

Kenya's population shows remarkable trends in rates of urbanization. The proportion of Kenyans living in towns increased from 18.3% in 1989 to 30% in 1999. Presently, Kenya has 194 centres with a population of around 10 million representing 34.8% of the total population (CBS 1999). Of this, Nairobi the capital and primate city of Kenya has a share of 45%. It is in Nairobi that the highest rate of urbanization in Kenya is recorded at a staggering 7.5% per annum. Nairobi's population is expected to reach the 4 million figure by 2015 (CBS). A central question related to the

precedent size of these urban growth is how the city will cope –physically, economically, environmentally and politically with such acute concentration of people.

Urbanization on its own is neither good nor bad. It is not, in itself, a cause of economic growth; rather it is a response to it. Indeed Harris (1990:3), shows that there is a fairly clear relationship between a country's level of development (defined by GNP per capita) and the proportion of the national population that is urbanized.

In the developed world, the process of urbanization has long been accepted. The principle objection to the urbanization process in the developing world has arisen because of failure to cope with its effects. Thus it is not urban growth itself, which is the problem, but the rapid rate of growth, which outpaces the institutional, administrative and financial capacity to cope with it. What matters is how governments and local authorities cope with it. Renaud (1981), suggests that government policies, should for the most part, seek to be neutral as between urban and rural land areas, neither deliberately encouraging nor discouraging urbanization.

Whatever the merits of urbanization, most governments have taken the view that they need to control the process of urban growth. For instance, South Africa pursued a strict policy for controlling the movement of the black population in earlier years with the motive of pursuing the government's philosophy of racial superiority. Indonesia tried to control the growth of Jakarta by the use of residence permits but with little success. Perhaps the only real success story of urban growth control has been China and even there, a number of policies were involved; first the one-child national policy, second, an emphasis on rural development and thirdly, the effective control the state had over where people stay. The combined effect of these measures has been able to keep urban population growth between 1965 and 1985 to 2% per year, which is a remarkable achievement (Whyte 1988:256).

There is therefore the implicit assumption that governments should somehow intervene in the process of urbanization. Should governments therefore seek to intervene in the process of urbanization or should the self-regulating forces of the market prevail?

Table 2.0 The World's Total, Rural and Urban Population

Region	Total Population (millions of inhabitants)	Total population	Percent of the world's		Population in million cities	Number of the world's	
			Rural population	Urban population		'Milli cities'	'Mega cities'
World	5,285	100.0	100.0	100.0	100.0	286	12
Africa	633	12.0	14.4	8.8	7.4	25	0
Asia	3,186	60.3	72.2	44.4	45.2	119	7
Europe	722	13.7	6.7	22.8	18.4	63	0
Latin America	440	8.3	4.2	13.8	14.9	38	3
North America	278	5.3	2.3	9.2	12.9	36	2
Oceania	26	0.5	0.3	0.8	1.3	5	0

Source: An urbanizing world: The Second global Report on Human Settlements 1996

Table 2.1 Kenya's Total and Urban Population: It's Estimates and Projections

Year	1979	1989	1995	2001
Total	16.2	23.2	27.5	31.9
Growth rate	3.9	3.4	2.9	2.5
Urban Population	2.3	3.9	5.3	7.4
Urbanization rate	14.2	16.8	19.3	23.2

Source; Kenya National Development Plan 1997-2001

2.6.1 Why Government Intervention?

The essential justification for government intervention in the urbanization process is the failure of the market mechanism to provide an outcome that is satisfactory to society as a whole. The market may offer substantial benefits as an economic system, but it fails to offer a socially desirable outcome.

There are a number of reasons for this:

- Markets may not be competitive so that market power rests in the hands of a few – sometimes even a single supplier. A good example is the case of piped water services where it would be unacceptable to allow an “unaccountable” private supplier to control such a service unless there is an adequate regulatory framework to protect public interest.
- The existence of externalities: Externalities arise where the pattern of benefits and costs of a particular activity to the individual do not match the benefits and costs to the society as a whole. They may be positive or negative-positive ones being the example of roads, drainage, street lighting and fire prevention services, while negative ones include disposal of waste, pollution from industries, and traffic congestion. Thus because of externalities, government intervention is generally considered to be necessary, whether in the form of regulatory controls over the private sector or direct public provision of certain services.
- Uneven distribution of income and wealth: In all societies, wealth is unequally distributed, not only in terms of private ownership of land and capital, but also in terms of distribution of human skills and capacities. The market mechanism tends to perpetuate these inequalities of wealth. As a result the poor may become and do become poorer until they are unable to obtain enough even to survive.

It is thus clear that the market on its own will not produce a satisfactory outcome to a society as a whole. In one sense the justification for government intervention becomes a non-issue, since all governments intervene in the process of urban development; whether directly through systems of urban planning or indirectly through interventions in the wider economic system.

2.6.2 The Public Interest as a determinant of Land Use.

Whereas land use to the economist is explained in terms of economic motivations of individuals and firms functioning in the market, a planner views land use in the context of functioning in the health, safety and general welfare- which is often referred to as the public interest. The scope of the public interest is broad and encompasses many things about the conduct of people in urban society. Unlike the aforementioned key urban land uses which are combined market processes of firms, households, institutions, landowners, financial groups and the natural environment, the public interest involves the notion of control for public ends. These public ends are associated with public interest values and are often governmental processes, aimed at achieving livability, unity and efficiency in the overall land use pattern. The individual interest therefore does not determine land use pattern on its own but has to work through the machinery of the public interest.

As early as 1953 Abrams identified five public purposes for which land use controls are employed in the public interest. He states that land use controls,

- Guide the use of land to promote advantageous development of the community (e.g. protection of factory, residential, commercial and other sites).
- Curb the misuse of land so that it will not injuriously affect the interests of the community (e.g. prevention of unnecessary intense development.)
- Prevent the abuse of land (e.g. prevent abortive subdivisions.)
- Regulate the non-use or disuse of land (e.g. by taxation to avoid speculation.)
- Guide the reuse of land for more appropriate purposes (e.g. urban development.)

The first and fifth represent developmental forms of control and the other three involve regulatory forms of control.

2.6.2.1 Elements of the Public Interest Prompting the use of Controls.

In land use planning, the elements usually identified with the public interest are five; - health, safety, convenience, economy and amenity. Each of these five has a broader meaning ascribed to it and has resulted into further sub-elements which Chapin and Kaiser (1979) have identified as:

1.) **Health and Safety;** these are frequently used in combination and thus are customarily linked together. Health, sanitation, housing and building codes provide the basis for land use planning and are also the principle definitions of the public interest. More often the protection against criteria is used to safeguard the public from injurious or hazardous conditions. Land use controls in the interest of health and safety take the form of regulatory measures involved in zoning, subdivision regulation and the reservation of land for public use through official procedures. There are other controls exercised in the public interest. These are controls that relate to the broad patterns of land use as opposed to the individual structure. Controls such as these include, control of exposure to accidents, control over use and development of hazardous areas, control of daytime and night time population densities. The densities are based on what is considered desirable in the public interest from the standpoint of public health and safety.

2.) **Convenience;** This constitutes another basis for the exercise of control. Convenience upholds the construction of streets and roads as a public purpose and is a function of the circulatory system. It is a derivative of the locational arrangements of land use and is judged in terms of home-work, work-recreation, and shopping-work movements. Land use planning is concerned with the locations of these destinations which an important role in maximizing ease of movement.

Convenience is also affected by the intensity of land development i.e. the degree to which land is occupied and the density at which it is developed. Convenience is thus a public purpose that goes to the very heart of land use planning tasks. The land use plan may be viewed as a developmental control device aimed at achieving maximum convenience in the location and arrangement of land uses. To this end, regulatory controls such as zoning and sub-division regulations then become the means for building convenience into land development patterns.

3.) **Amenity;** This refers to the pleasantness of the environment as a place in which to live, work and spend one's leisure time. It refers to what appeals to the eye- the aesthetics and the enjoyment offered to other senses. Amenity has not been accorded the same recognition that health and safety, convenience or environmental quality

enjoy because it has an inherent deterrent in what constitutes public taste. What is attractive and pleasant tends to vary among individuals and it is thus difficult to subject tastes to a consensus. In view of this, control exercised to achieve attractive and pleasant growth and development is difficult to narrow into codes or laws. Amenity therefore has to be balanced against the other elements of public interest and the process of covering this balance constitutes one of the basic tasks of land use planning.

4.) Efficiency and Energy conservation; Efficiency is customarily associated with public cost implications. In this context it has to do with land development from the viewpoint of the community as a whole. It looks at what is economical to provide in the form of streets, schools, recreational areas and other community facilities. Energy conservation tends to interlink with efficiency in the sense that scarcity of energy supply becomes the basis of figuring public costs to distribute it equitably. The location of land uses and the intensity of development are key considerations in both cost and energy efficiency. What is economical to provide in relation to existing facilities also enters into the picture and in effect becomes a control factor in the planning of urban land use.

5.) Environmental Quality; Environmental issues have gained momentum in the global economy since 1970's. A few environmental processes have been recognized in land use planning in the area of water protection and air quality. The absorption capacities of rivers and streams relative to clean water standards set limits to waste disposal capacities and in turn establish a basis for determining the carrying capacity of land. The protection of aquifers and springs from urban development are examples in which the public interest is sufficiently recognized to warrant firm planning and guidance measures.

6.) Social Equity and Social Choice; Social equity concerns equal opportunities for access to the necessities of life- work, life, medical care and so on. It also involves the fair distribution of benefits and costs. Social choice has to do with the range of opportunities among which choices are made. Because land use planning and guidance systems fix densities and locations, and their community facilities, planners

have the responsibility to take into account the consequences of their proposals for instance free access to homes. With respect to equal opportunities in housing, land use studies must take note of the exclusionary powers of zoning practices and subdivision regulations. The public interest in social equity requires an affirmative approach in the entire land use planning process laid in the design of guidance systems.

2.7 Urban Planning and Development Control

Having considered the elements of public interest, which promote the use of controls, it is now possible to highlight the factors involved in bringing the public interest considerations into equilibrium, with the economic and social considerations as depicted in the key land use systems. In other words, how does the public interest converge with the individual land use interest? The task of land use planning thus becomes one of gauging the public temperament and balancing these against the local and individual preferences.

2.7.1 Urban Planning

Urban planning derived principally from architecture and public health engineering. Historically, town planning was concerned with the orderly, aesthetic, and healthy layout of building and land uses. Keeble (1964:1) defined town and country planning as "*the art and science of ordering the use of land and the character and siting of buildings and communications routes so as to secure and maximize the practicable degree of economy, convenience and beauty*". This primary concern with physical development still typifies the planning approach in many countries.

During the 1960's and 1970's many town planners sought to adopt a more 'rational', systematic and comprehensive approach to the planning tasks and to the evaluation of alternatives. Thus Davidoff and Reiner refer to planning as a process for determining appropriate future action through a sequence of choices (1962), while Faludi (1973) defines planning as "*the application of scientific method – however crude-to policy-making.*"

Over the years, 'town planning' has come to recognize much wider concerns with the economic, social, political factors, which affect urban development.

Franklin (1979:5) thus defines physical planning as that which is *“concerned with the design, growth and management of the physical environment, in accordance with predetermined and agreed policies, whereby balanced social and economic objectives may be achieved”*.

Taylor and Williams (1982) define Planning as *“a mechanism to provide an environment for living, which all may desire but which would not be attained through the fragmented decisions of individuals. It is a means to organize the public good of a society.”*

For purposes of this study, the terms planning shall be taken very broadly to cover the full range of governmental interventions in the development and day-to-day operations of an urban area. The purpose of such intervention is to bring about an improved situation.

2.7.1.1 Planning Ideology

Planning's historical origins lay in the need to do something about the horrible conditions of the working classes in the mid-nineteenth century. This involved taking powers to control and regulate the use of land and houses to property owners, which was a foreign and unwelcome idea because it tended to impinge on the constitutional rights of individuals. A lot of court cases hereby followed and it was felt that there was need to provide some protection for the urban landowners, against government action. This forms the basis of the first planning ideology, that law exists and should be used to protect private property and its institutions.

The second competing ideology is that of public interest. Here, planning is deemed to protect and advance the wider public interests and is against the selfish interest of the private landowner. This ideology is translated into laws, which confer wide powers on public administrators to do as they see fit. These were principles inspired by Chadwick, who was industrious of public health and housing reforms. In this ideology, it is assumed that the public official will act in good faith and is accountable to the government of the day for his/her actions and policies.

The third ideology claims a philosophical ancestry from the other two in the sense that it was realized that planning in the public interest and private interest alone tended to leave out a major group that is the participants. The participants were viewed as all who were likely to be affected by an interest or concern in proposed development of land or change in the environment. It was espoused that such person has a right of participation in the decision on the proposal because they might be affected or interested. Land use planning is often explained in terms of these three ideologies. Often conflicts arise between those ideologies, particularly between the ideology of public interest and private interest.

2.7.2 Development Control

Development Control (DC) is the key element in the planning system and is the point at which development plans interact directly with the physical environment. Various descriptions by several authors define development control differently. Keeble (1968) has defined it as *"the control of the use of land, the character, appearance and arrangement of buildings and facilities to ensure economy, convenience, sightly results and aesthetics"*.

Ratcliffe (1978) states that development control *"is the formal instrument of the planning authority regarding such matters as permitted density, height limitations, user restrictions, access and outstanding building preservation. It is therefore an instrument of overall environmental quality control"*. The rationale for this control is to ensure economic efficiency, in the use of space, and to ensure health, safety and general welfare, what Chapin (1976) has called the public interest. Planners have traditionally used the instrument of development control to restrain the location of land uses and land users which would impose heavy external diseconomies on adjoining activities and people, grouping together those activities which are not particularly vulnerable to the types of harm caused by one another and separating them from activities which would be significantly injured. Thus development control has been used to restrict the location of industrial land use in residential areas and it has been applied to resist the development of buildings, which appear out of character in areas of outstanding architectural quality. For this reason Poutney and Kingsbury (1983) referred to development control as a *"neighbour protection service"*.

The essential failure of a development control system of regulations is that prior approval has to be obtained from a public authority, acting in a semi-judicial manner, for any use of development rights by those persons wishing to undertake development and to benefit from it (Pearce, 1980). It is administered within the context of a development plan, which forms the most important factor that may be taken into account by a local planning authority in deciding whether or not to approve an application for development. According to McAuslan (1980) development control becomes "*the sharp end of the planning system*" in that it stops/restrains the private property owner from doing what he wants with his land thereby setting the stage for conflict in the two planning ideologies of private interest vis-a-vis public interest.

Consequently the action of development control is inherently complex, because powerful individual factors (such as social, economic, and locational) in the private interest, often act independently of what are formally prescribed as public interests. Any action of development control will be inadequate therefore if it has regard only to administrative procedures and to have meaning it must take into account the whole planning process (not only the development control aspects).

On the other hand, development control has been a most powerful and useful instrument to assist the implementation of planning policy. Development control acts as an early warning system in that while processing applications, a detailed local knowledge of the area is tapped. This in effect makes for an early awareness of incipient and actual development process, and the planning application procedure provides an antenna, sensitive for development options in a plan. Thus development control becomes a complicated function, which tries to relate the documentary form of plan to its physical form. A plan is a relatively 'static' document of reference defining an existing or potential physical form. To realize the potential, a dynamic stage of actual building and/or development is necessary.

Development control standards and criteria have been rationalized in some areas of Africa to adopt a more permissive stance on the basis that satisfaction can be found in being close to things and people, different from us (Mabogunje, Hardoy and Misra 1978). They successfully argued that most standards that guided development were

too generous bearing in mind the local economy in Nigeria. Mabogunje concluded that this lavishness was a result of standards based on western technology and social philosophy and were thus not truly applicable to Africa.

2.7.2.1 Development Control Practice in Kenya

In Kenya, the most active aspect of development control seems to glare in the recent demolition of illegal structures in Nairobi and Mombasa alike in the months of January and February 2002. The exercise was carried out with so much zeal and at such a scale, that the impression created was that there are inflexible standards regarding arrangement and design, which the structures have offended. In the fringe areas like area under study, applying unobtrusive control, which is necessary to keep heterogeneous users at peace with each other, becomes a delicate art. Control requires effort and demands a large degree of skillful political energy. Mixing uses or allowing them to succeed each other in time will require more intricate layers of control.

The Government of Kenya uses the following state powers to effect development control:

a) Taxation.

Government has powers to levy taxes and to 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.)
- Favour 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 and ground rent.

b) The Spending Power.

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

c) Proprietary power.

This involves the right of a government to acquire, develop, manage and dispose of property. 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.

d) Eminent Domain Power.

This 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. This power is guaranteed under section 75 of the constitution of Kenya 1969 and is exercised under the Land Acquisition Act Cap 295 that ensures that prompt and accurate compensation is paid to the dispossessed owner. It is also exercised under section 117 and 118 of the constitution for the purposes of setting apart of Trust Land.

e) Police Power.

This is the single most important power that the government has over land use. It involves the basic right of the government to make regulations for the advancement, preservation and protection of public health, safety, morals, convenience and welfare.

The police power may take different forms to influence and direct land use namely:

- Planning/zoning regulations under the Physical Planning Act Cap 286 and Local Government Act Cap 265. Zoning is one of the community's "police powers", probably the most powerful device because it permits the community to exclude many uses altogether. Zoning is the segregation of an urban area by ordinances and the establishment of regulations to govern the use of the zoned land (Courtney, 1983). It is a device employed in land use planning to ensure the separation of land uses and hence avoid mixed development. It may be defined as the physical division of an urban community into 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. Over a period of time, the concept of zoning has widened into a larger framework. It is now seen as a necessary instrument and system to ensue proper spatial relationship between uses within a city and to

channel the development effort for the present and foreseeable future. It is an attempt to organize and systematize the growth of urban areas by setting up categories, classes, or districts of land in the community. It also includes general rules about location, bulk, height, and thus plot ratios, shape, use, and coverage of structures within each zone.

- Subdivision regulations under the Government Land Act Cap 280 and Land Control Act Cap 303. Sub-division regulations govern the development of raw land for residential or other purposes and prescribe standards for lot sizes, layout, street improvements, and procedures for dedicating private land for public use. Their importance lies in the fact that they enable the community to force developers to pay for some of the community infrastructure occasioned by development. They have been powerful tools in Europe, but have not found an equally successful application in most developing countries. In Kenya, and more so in the study area, the subdivision regulations are all but on paper, while on the ground, the individual interest prevails.
- Building regulations under the Local Government Act cap 265 and Public Health Act Cap 242. These limit or define the way structures are to be built and the materials to be used. Building regulations are one of the oldest and most common methods for controlling and development. In Kenya the above control regulations are exercised through development applications. Submission of applications for use and consent to develop land depends on tenure of land and its locality. For instance in the case of freehold land applications are made to the approving authority as laid down in the relevant Acts and Local authority by-laws. For Leasehold land the development is determined by clauses stipulated in the lease, so that all applications must be submitted to the granting authority as well as the planning authority.
- Rent controls under Rent Restriction Act and Landlord and Tenant Act Rent Controls represent an important use of police power to regulate private practices affecting the leasing of real property, largely to protect tenants from

possible landlord exploitation. They assume that landlords possess an unwarranted bargaining power in their dealings with tenants and that public constraints are needed to ensure a measure of equity and distributive justice for tenants.

- **Urban Planning:** It is the process by which locational decisions are made regarding the global configuration of a city or urban area and its projections for expansion. The plan is the reference framework, which is used for the application, and the use of the regulatory instruments mentioned above.

2.8 Urban Planning Theory

Planning is fairly a young discipline but it has developed schools of thought and acquired theoretical traditions. The planning field has experienced great urbanization in the last century that in turn has had effects on priorities and resource allocation. The pervasive population shift to cities and within metropolitan areas has continued together with the fiscal crisis of local governments, environmental deterioration and land developments 'running out of control' – this has put pressure on planners for down-to-earth approaches to the solution of problems. Some of the theories espoused so far are discussed to shed light on the present study.

a) Pluralism approach

Pluralists see society as fractured into hundreds of small special interest groups with incompletely overlapping membership. These have differing power basis and a multitude of techniques for exercising influence on decisions salient to them (Pulsby 1963:118). In response, the government is forced to accommodate itself to a number of conflicting interests amongst which a rough balance is maintained. The political process is assumed to be open and democratic with easy access to decision makers, and that there exists numerous channels of communication for individuals and groups. The success of national and local level of organizations in land use planning depends on size, organizational ability and resources available to the group and also on the responsiveness of the planning authorities to the demands of the organizations. This is the approach widely used in the developed countries like U.S.A., Britain, Canada. It is yet to find footing in Kenya but is slowly taking root in form of neighbourhood

associations like Karengata in Nairobi. The handicap has been the undemocratic responsiveness of government bureaucrats and lately technocrats.

b) The Power of Public Bureaucracy

This is implicit in the study of local authority decision-making especially in the spheres of land use planning (Davies 1972). It is assumed that LA's are complex structures difficult to penetrate and largely impervious to influence from local residents. It is also assumed that local councillors are not accessible to vital information to help in policy-making. Land use planning decisions are taken by public officers and councillors according to their prejudices, convictions and technical expertise with little regard to the locals – the planned for. Pahl (1975) emphasizes understanding of the operations of the manager of the urban system, the local technocrats and local gatekeepers who mediate in the allocation processes and their capability to shape the spatial system. The approach however, fails to question the relationship between local and central government, and private sector interests yet it is widely appreciated that in planning, Africa has been constrained by this relationship to the extent that wrangles between central and local government have superceded the planning function. The private interest has prevailed with disastrous effects as in the fringe areas and slum settlements.

c) Reformism

This approach tries to relate political decision-making both in land use planning and more generally to the analysis of the economic structure and capitalist society. It is associated with poverty, homelessness and poor environment and is characterized by humanitarian aims involving positive discrimination in the distribution of resources. The reformist perspective is the recognition given to basic structural inequalities, income and wealth in a country in a way the pluralist approach does not. Harvey (1973) is concerned with the issue of inequality specifically in the context of urban users and the mechanisms that govern the distribution of resources within the urban space. This raises the question of the scope for redistributive measures within land use planning systems. The approach though recognizes the tendency for those groups advantaged by the working of the market gaining more from land use planning which reinforces and consolidates their position. For instance enhancing the environment of

middle and high-income residential areas by planning measures like low-density, conservation area statutes makes them more extensive and expensive. The focus is thus on the deficiencies of the land use planning within the economic system. It stresses the inevitability of poverty thereby necessitating radical changes. This perhaps is the dilemma of planners in Kenya where it is public knowledge that more than half the country's population lives below the absolute poverty line. Issues of amenity, social equity, efficiency and environmental quality are mirages for the majority.

2.9 Empirical Basis- Studies in Kenya.

Various studies have been made on the urban fringe in Kenya and related problems.

Yahya (1976) seems to have set the tempo with his detailed study of urban land and public policy in Kenya. He examines the problems of urban land administration, control and development against the background of rapid urbanization. Yahya in his study on urban land use policies notes that for any coordinated development of urban areas, there has to be in place a sound urban land-use policy. He observes with a certain element of cynicism that the urban areas lack in infrastructure, on information back-up systems, legal infrastructure.

Other past studies on the peri-urban fringe reveal different thought processes basically echoing Yahya's views over the years. Chege (1977), Shibira (1978), Mmella (1977) and Mugo (1972) come closer to problems of peri-urban areas in their respective studies of Nyeri, Kakamega, Kangemi-Satellite, and Kondele peri-urban areas. Chege (1977), notes in his study of land constraints in Nyeri town that there is shortage of land for urban development yet time and again boundaries are being expanded. This, he cites is mainly for political reasons and less for economic ones. He notes that mere extension does not serve any purpose but only makes DC difficult. Shibira (1978) in his study of Shirere, Kakamega seems to agree with Chege and reiterates that mere boundary changes do not automatically eliminate the problems of uncontrolled developments in the fringe. He points out that problems in Shibira were closely related to land tenure systems, speculation, inefficient control measures and acute deficiencies in community facilities. However, his study focuses largely on the housing problem weighed against the existing land tenure systems. Mmella(1977) in

Kangemi was to observe even as early as the 70's that containing urban growth on ancestral and agricultural land was bedeviled by several complexities amongst them the obvious lack of supportive infrastructure. Kingoriah (1980) in the assessment of the impact of government policies on the spatial structure of Nairobi acknowledges the significant contribution of government policy in shaping land use structure. Kingoriah (1978) noted that the future expansion of Nairobi would subsume the study area and that there was need to put policy measures in place to check this envisaged growth.

Recent studies reveal troubling evidence that previous studies have not had the desired impact. Thus Mureithi (1990), Muhia (1990), Wasikeh (1996), Mwatha (1993), Ngeti (1997), Omolo (1997), Njuguna (1997) and Koech (2001) also take up urban and peri-urban issues in various places.

Mureithi (1990), in a study of Ongata Rongai seems to be closer to area of study by focusing his attention on development control problems. He observes that the attendant LA, the Olkejuado County Council occupies a relatively lower position in the organizational hierarchy of urban authorities-it is accorded minimal political, administrative and therefore planning functions. It also has limited access to financial sources as compared to municipalities, which have access to technical, financial and legal resources necessary for planning and implementing plans. He points out that the existence of much formal legislation does not result in coordinated development and that there is therefore need for legislation governing urban land policy.

Mwatha (1993) agrees that Kenya's development control problems are intertwined with the broad problems of rapid urbanization and that any debate on the subject of urban development must of necessity be tied to the polemics of a growing society.

Ngeti (1997), focuses mainly on the problem of uncontrolled development in the municipality of Mombasa in relation to the existing land use control and policies. He concludes by observing that inadequate finance and manpower coupled with inefficient land management and administration are major constraints to development control. He recommends that there is need to revise the regulatory policies and planning legislation.

Njuguna (1998) looks at the problem of urban growth without attendant infrastructure with special emphasis on sanitation. He notes that urban population growth leads to conversion of previously low density areas into high density ones but sanitation methods suited for low density areas continue to be used. The sewerage system seems to be the most neglected of infrastructure needs. This is important to our area of study, as it seems to be a recurring feature.

Omolo (1997), in his study of the Nakuru urban fringe land as to its physical suitability of urban development expresses the fear that much of the urban expansion takes place on environmentally sensitive areas. He thus embarks on a detailed study of land suitability for general urbanization but with a bias towards environmental conservation.

Wasike (1996) focuses on shelter in peri-urban areas a case of Ngong'-Gichagi informal settlement. Though the study area is part of the one under study, her focus is on the parameter of housing in an informal settlement and tends to be exclusive to other parameters of planning control relevant to this study. However she tends to relate housing problems in Gichagi to rapid urban growth-a feature that Ngong is currently grappling with. She notes that inadequacy of space for housing is twined with the problem of lack of attendant services.

Koech (2001) on the other hand looks at development control problems within Kericho Municipality but also notes that these problems are more visible at the town's periphery. Once again the peri-urban zone is shown as a fluid one in which attempts at control are hampered by the land tenure system.

2.9.1 Identification of gaps

Peri-urban studies have been the intrigue of the social scientist and more so the planner. Studies in Kenya attest to this special interest with the fringe, all studies seemingly concluding that the fringe zone is an area of low control systems. As a result, the fringe area is often synonymous with mixed patterns of land uses, non-conforming users, and poor service delivery and is often home to slum dwellers and high-income earners alike.

This study seeks to go a step further, by gauging or censoring the idea of “planning awareness” amongst the locals. It would be interesting to gauge their views about land use planning with a view of funding out how local and popular participation the planning function can be or is.

Further to this, the political processes in the planning function are often major decision guides. In this study, an attempt is made to capture the political process as it affects the planning function. The policy of subsidiarity as developed from Agenda 21 alludes to decision-making at the lowest levels possible. The study tries to capture how politicians may or may not tolerate bottom-up participatory process requiring them to relinquish control over land matters. The study will also go further than concentrating on land development control issues by bringing out jurisdictional conflict that is common to fringe areas. How the Nairobi City Council plans for Ngong residents who work in the city vis-à-vis, Olkejuado county council that controls their use of land in Kajiado district.

Whereas there is an established system of official controls to guide land development, little attempt has been made to study the effects of such controls on the processes of urban growth and change peculiar to a fringe area. Thus the study goes a step further by trying to identify the extent to which urban planning tasks could be absorbed into the wider rural areas to achieve sustainable development. For instance how an institution like Land Control Board controls non-agricultural sub-divisions is part of the interest of this study.

The position of women in land use planning decisions has rarely been captured in previous studies of the fringe and is rarely accorded the status it deserves. This study seeks to acknowledge their contribution towards land use planning and development processes.

2.9.2 Conceptual Framework

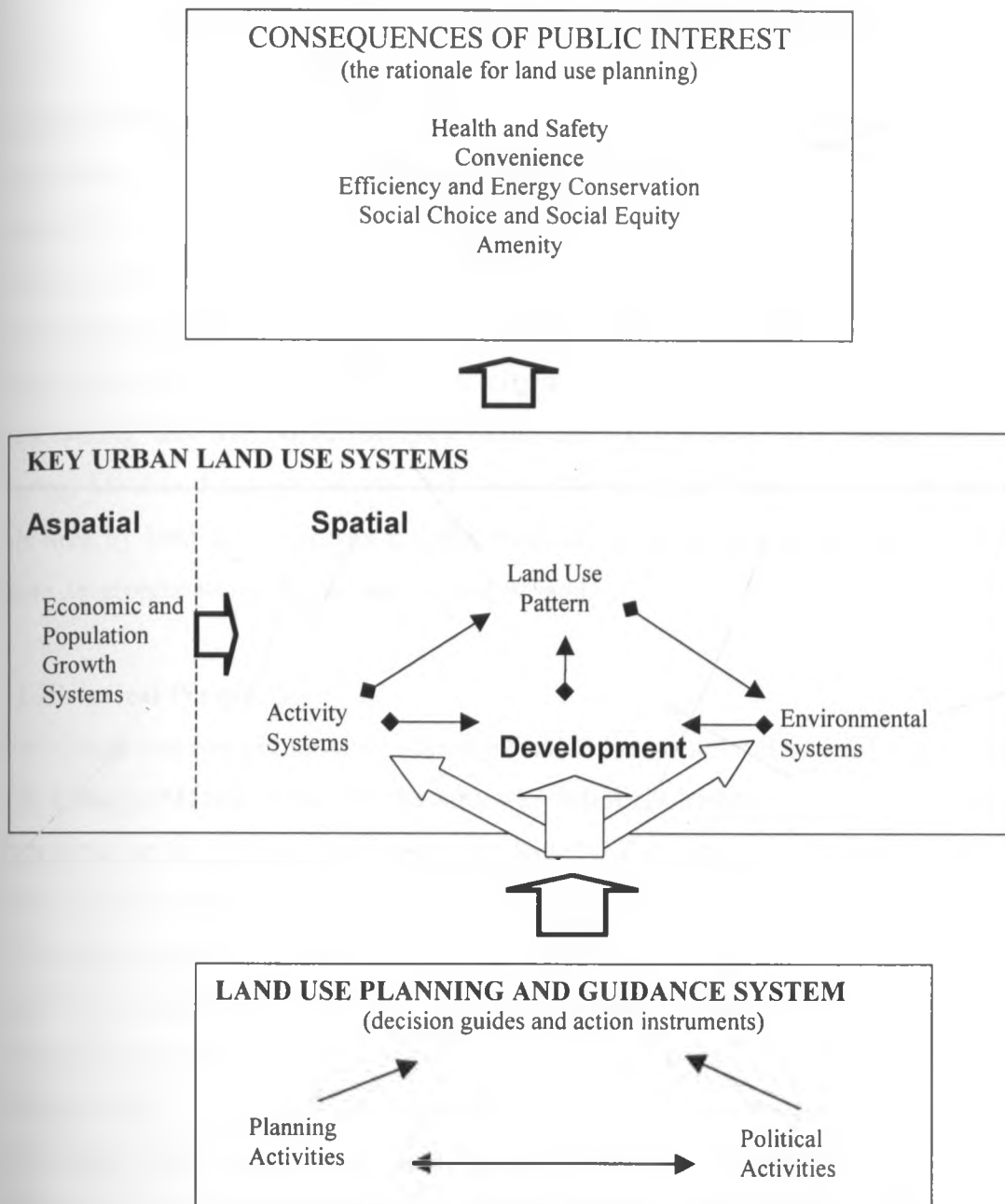
Land use planning and guidance is offered as a way to organize government’s role in the key land use systems. All this is done so as to reinforce the public interest and it incorporates the whole array of means by which government examines, interacts with,

participants in, services and ideally 'guides' land development (Chapin & Kaiser 1976:61). These means are summarized as land use development controls further compartmentalized into the building regulations, sub-division controls, land taxation, land banking and land acquisitions; public investments (power to spend); and incentive /disincentive tools. Within this broader concept, the purpose of land use planning is to make the built environment conform as closely as possible to land use and public objectives.

Such instruments however are influenced by the political processes, which will include elected and appointed officials, who are actively involved in decision-making. Thus the decisions made either in form of a land use plan or policy will have been influenced by a variety of forces including even the economic circumstances. The goals of land use planning therefore is to interact within the key land use systems of activity, development and environment so as to attain a conducive built environment all in the interest of the public. The system of planning control is based on the framework in which plans must not contradict the planning decisions at higher levels. In Kenya this system is supported by a number of sectoral planning laws and supporting institutional structures discussed in the next chapter. There is therefore need to understand this critical link in our commitment to planning for a fast growing city like Nairobi and to be aware of some of the more promising efforts to incorporate land use planning at the fringe. This need is recognized by diverse groups, among them the planner who carries the responsibility for planning both urban and rural environments; the civil society who feel limited in their technical understanding of the planning function and are seeking information about proven planning structures; and professionals who have traditionally approached problems with technical solutions.

Figure 2.4 attempts to summarize this situation. It is realized that the three main elements are land use planning & guidance system, the public interest and the key urban land use system. The land use planning and guidance systems represent government action/intervention in urban land uses, which also reflect further economic, population, and political processes. The interaction between the two serves to explain how well land use processes serve the public interest.

Figure 2.4 Conceptual Model



Source: Adopted from Chapin & Kaiser: Pp 65

CHAPTER THREE

THE URBANIZATION PROCESS IN THE STUDY AREA

3.0 Introduction

The study area is in Ngong Division, Kajiado District, and Rift Valley Province of Kenya. The area is predominantly an agricultural area currently portraying a strong urban residential pattern. Mixed land uses are thus prevalent. Forces of urban expansion from the city of Nairobi have followed the existing transport system, which forms a circuitous route to and from the city of Nairobi, thereby delimiting the study area. Along this transport/circulatory route, are various centres including Bulbul, Ngong, Matasia, Kiserian, Nkoroi and Ongata Rongai. There has been an infilling in this area by land developments and the study seeks to throw light on the effects of these developments on the use and control of land.

3.1 Historical Perspective.

The Ngong area has traditionally been the frontier between the Bantu Kikuyu and the Nilo-Hamitic Maasai. Although the area was definitely Maasai land, it was of great importance to the neighbouring Kikuyu in Kiambu District who believed that Ngong Hills was the fourth sacred mountain (after Mount Kenya, Donyo Sabuk and the Aberdares) used by God "Ngai" as one of his dwelling places on earth. The mountain was known to the Kikuyu as "the very black mountain" (Kiambu-Ruiru). The Maasai influence however was predominant and indeed Ngong derives its name from a Maasai word – 'Ngongo Bagas' meaning the eye or source of River Mbagas (Mbagathi). The presence of Maasai was an indication of suitability of land for grazing purposes, as the Maasai are basically pastoralists. Maasai cultural ideals look down upon cultivation as "degeneration" or "poverty" signs. Cultivation dates back to the 1920's when the Kikuyu were displaced and confined to the marginal areas of Ndeiya bordering Ngong. They infiltrated and influenced sedentary and agricultural practices in the district. This is what the white man found on the ground. As common in those days, tribal wars between the Kikuyu and Maasai led to intermarriages between the two as women and children were often taken captive by the victors. Intermarriages thus accelerated this intermingling process.

The advent of the colonial era brought in several changes. Two Maasai reserves were created in 1904 under a treaty established by Lenana, the Maasai Laibon, one in Laikipia, also called the Northern reserve and one in Narok also called the Southern reserve. With the creation of the two Maasai reserves in 1904, Ngong Station was opened in 1908 with an Assistant District Commissioner supervising the Southern reserve. Lenana and his successors were to occupy the land between Mbagathi River and Kiserian to the point where both streams met, which is a part of the study area. Two districts, Narok and Ngong were formed from the reserve in 1913 with Narok serving as the reserve's headquarters. The reserve became a province in 1924, and two years later the headquarters was moved to Kajiado. The Maasai Province was reduced to an extra territorial district in 1934 and was absorbed by the Southern Province in 1953.

During this time, the Kikuyu presence was further fortified by the displacement of the Kikuyu "Mbari ya Nyungu" clan by the whites for establishment of an experimental farm at Kabete. This clan went to Ngong "*at the invitation of the DC Mr. Deck, who found it necessary to take on Kikuyus as station hands as the Maasai could not be prevailed upon to do so*" (DC/KBU/4/3 dated 4th January 1928 Kenya National Archives). This was specifically in regard to a veterinary farm that had been established at Ngong, explained as "*the Maasai had given the veterinary department a free grant of land for veterinary training school*" (DC/NGO/1/17/3 Kenya National Archives). The Maasai and Kikuyu have therefore lived together in the Ngong area for a long time, the Kikuyu being largely agriculturalists while the Maasai remaining pastoralists.

The period of emergency – 1952 onwards brought in the close supervision of the Kikuyu tribe, as they were perceived to be the agitators in the politically motivated Mau Mau fights. They were later to be turned out of the Maasai District. "*The council considered their question and it was decided that all Kikuyus in Maasai country should be removed. In the first instance those at Ngong should be counted*" (Min 36/37-PC/MKU/3/3/20 – Folio 148, Archives Records).

In essence, the colonial government just used the existing tribal differences to alienate the Kikuyu out of Ngong. This was a tall order as Colonial Secretary H. Moore

reported to the Land Commission Report of 1933. *"Experience has shown that it is impossible to keep the Kikuyu out of the Maasai reserve, even if it is desirable to do so...."* (Ibid)

The colonial government thus turned to an exclusionist policy, that of land demarcation in 1957. Land was distributed strictly to the Maasai and many of the Kikuyus were forced out at that time. However, with title deeds, came the right to sell. The Maasai people have always sold their land to the Kikuyu. By the 1960's, the area was predominantly occupied by the Maasai with mixed Kikuyu origins.

The traditional way of the Maasai is over in Ngong with recent demands for land by Nairobi residents in Ngong area. The area is presently host to a variety of tribes, the dominant ones being Kikuyu, Maasai, Kisiis and Kambas. Like the Nairobi City – Ngong is very heterogeneous by nature.

3.2 Physical Attributes of the Area

3.2.1 Location

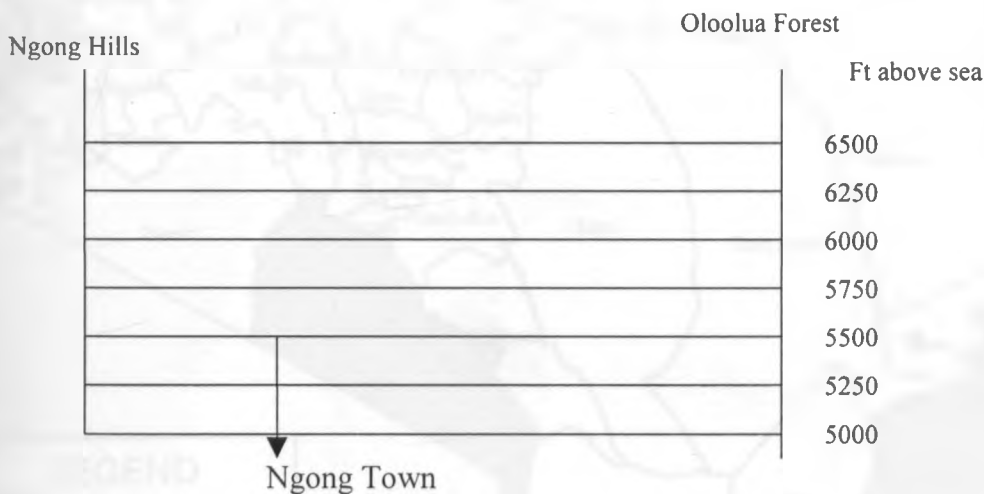
Ngong Division is situated in the North of Kajiado District. Longitude $36^{\circ} 5'$ and $37^{\circ}10'$ East and latitudes $1^{\circ}10'$ and $3^{\circ}10'$ mark the district boundary. Ngong Town is the divisional headquarters which due to its surrounding agricultural potential and nearness to the capital city has attracted a big population. The same factors have influenced the growth of other centres like Ongata Rongai and Kiserian. The Northern side borders the neighbouring districts of Nakuru, Kiambu, and Nairobi while Narok borders it to the west. Maps 1, 2, 3 and 4 show the study area in its national, district and local context.

3.2.3 Topography

Plains and occasional hills and valley characterize the general topography. The land varies from about 4000 ft – 6,400 ft above sea level. The Ngong Hills are one of the most dominant topographic features of the area. The hills form an impressive asymmetric ridge approximately 13 km long and 5 km wide (Cited in Oslo 1996). Perhaps the finest literary description of the landscape is offered by Karen Blixen (1937) from a vantage point of Ngong Hills.

“The mountain of Ngong stretches in a long ridge from north to south, and is crowned with four noble peaks like immovable dark blue clouds against the sky. To the south you see the vast plains of the great game country that stretches all the way to Kilimanjaro. To the east and north (area of study), the park-like country of the foot hills with the forest behind them.... But to the west, deep down lies the dry moon-like landscape of African low-lying country (Ndeiya area)”. A cross-section of the study area reveals the altitude pattern in the area as shown below.

Fig 3.0 Cross section of Altitude Patterns in Study Area



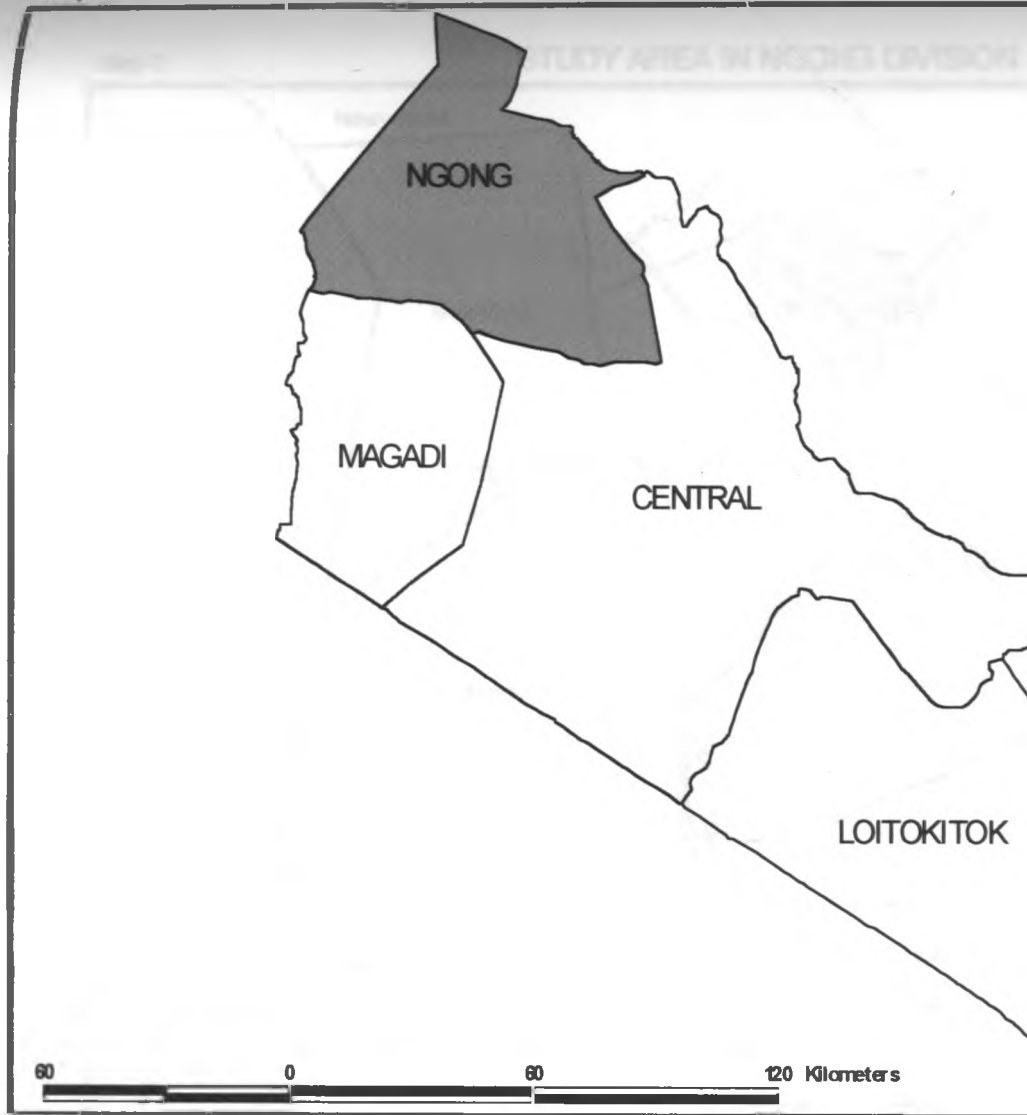
Source: Field Survey 2002

NATIONAL CONTEXT

MAP 1



Source: Almanac Characterisation Tool

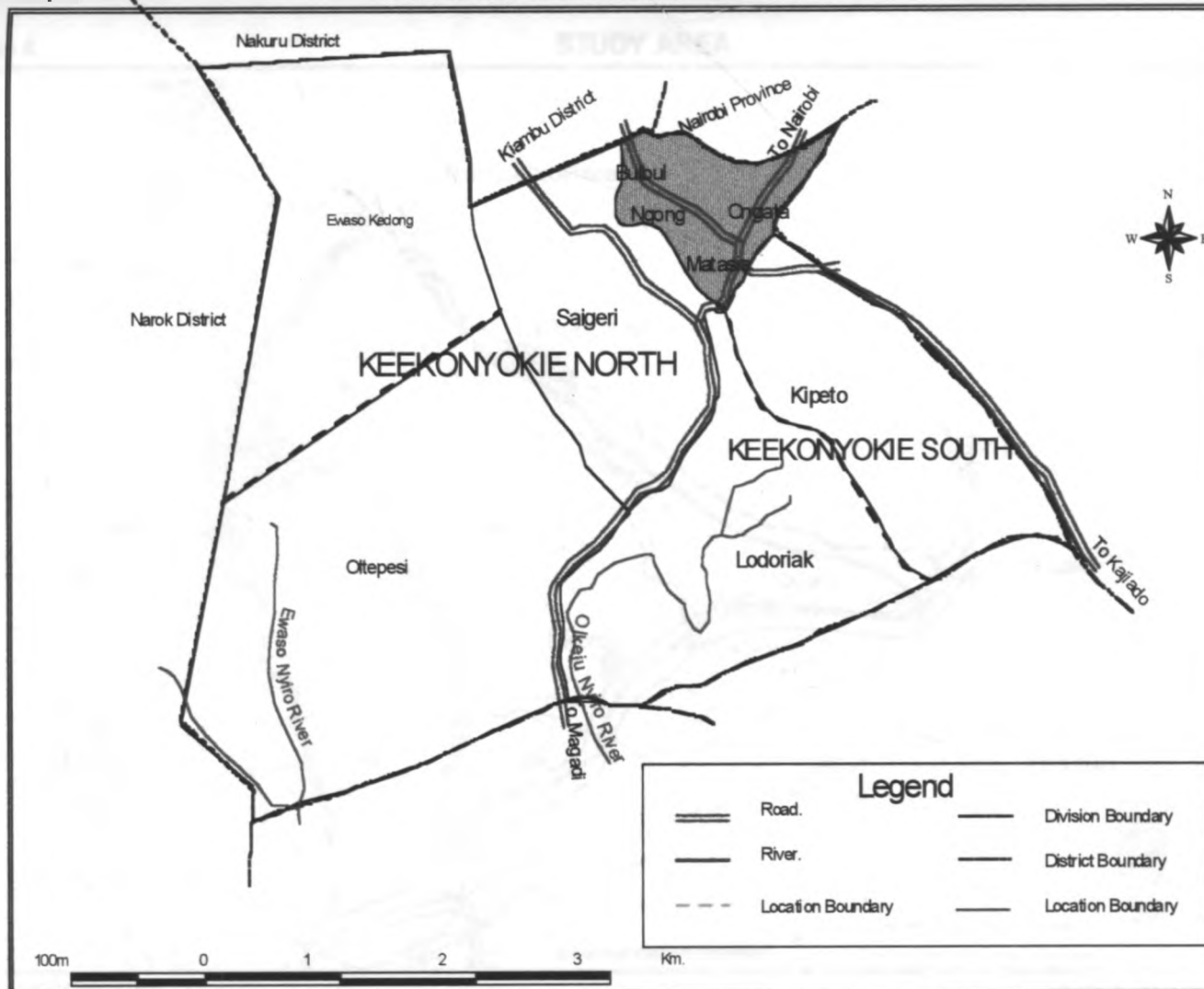




Source : Survey of Kenya

Map 3

STUDY AREA IN NGONG DIVISION

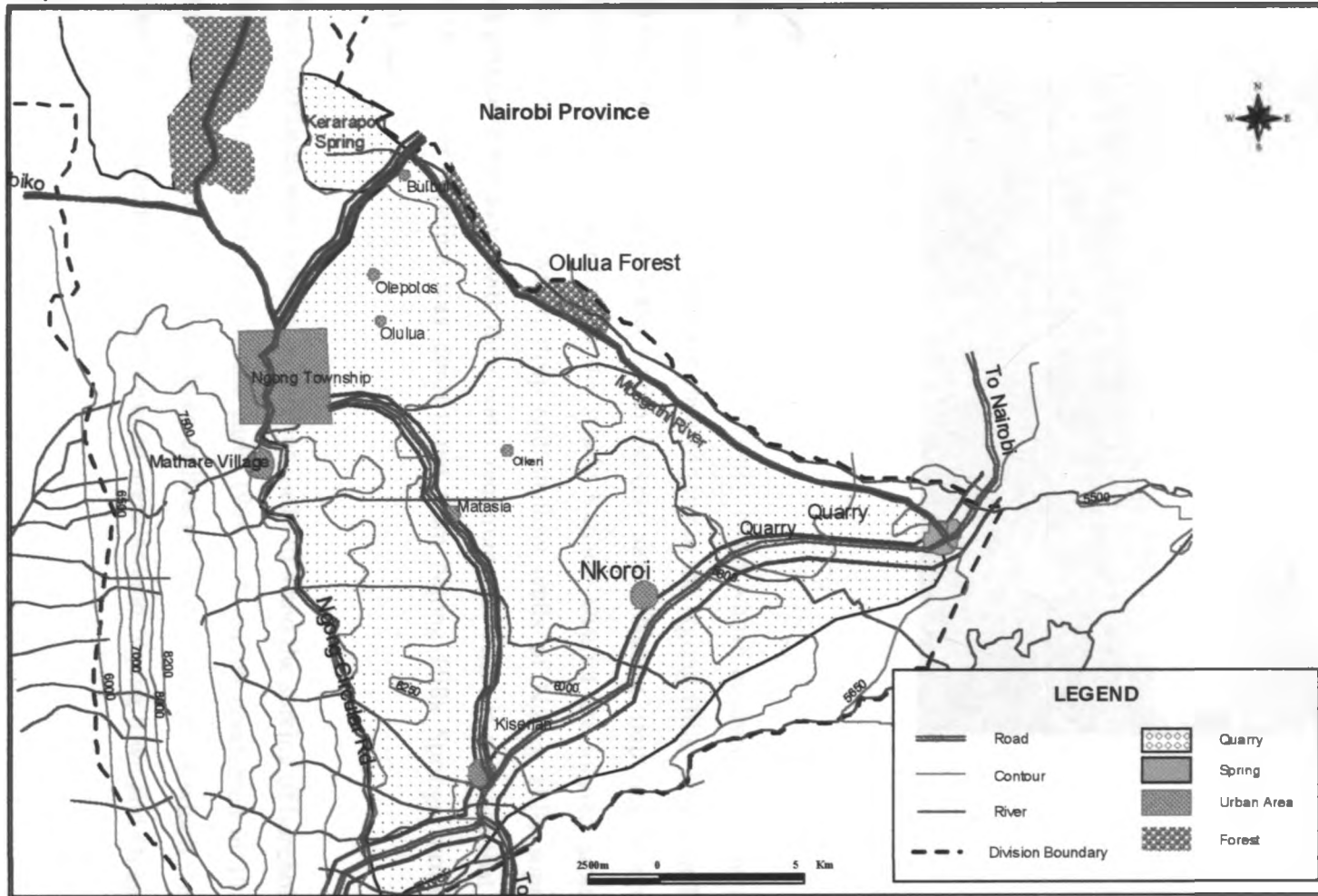


Prepared By Simiyu Lucy

Source : Survey of Kenya (Adapted)

Map 4

STUDY AREA



Prepared by Simiyu Lucy

Source: Survey of Kenya (Adapted)

Plate 1 shows the four peaks on Ngong Hills-note urban developments in the foreground



Source: Field Survey, 2002

3.2.4 Drainage

The area lies in the Upper Athi catchment drainage basin whose headwaters are in the Ngong hills. About 25 small streams have their origins in the Ngong Hills. Traditionally, Ngong Hills has been a source of water – with the very name “Ngong” implying “source, or eye” of water. The best aquifers in the whole Kajiado District are located around Ngong Hills. Springs, surface water, deep and shallow wells of Ngong Hills supply thousands of people in the town with their water requirements. There is evidence that as early as 1915, a water pipeline was constructed from Ngong Hills Springs through Kajiado to Magadi.

However, water shortages were evident as early as the 1970’s and the sinking of boreholes as a reliable water source dates back to the early 1920’s. A survey conducted in 1988 revealed that a total of 128 boreholes had been drilled in the division, 52 of which were operational and were concentrated in the pressure areas around Ngong town and Ongata Rongai.

3.2 5 Geology and Soils

The fertility, drainage and stability of the land has its fundamental basis in geological processes set in place millions of years ago. The Ngong area consists of tertiary rock formation with the rock type largely metamorphic. The geological history has been dominated by rifting and volcanism and the Ngong Hills represent the eroded remnants of the former volcano. The rocks of the Ngong area consist mainly of lava and pyroclastics laid over a system of crystalline basement rocks. These are the rocks presently at the centre of the controversy of quarrying activity in the Oloolua area, and which were dismissed in 1959 by Mr. Reed, the acting PC for southern Province as "*It must be remembered that the Nairobi quarry stone is easy to work and much in demand. The Ngong stone is extremely of poor colour and not much in demand*" (PC/NKU/2/22/3, Folio 33, National Archives). The 'Ngong stone' is now more in demand than ever before and quarrying activities in the area have accelerated the current building construction processes. The soils in the area are largely black cotton with low water permeability – a feature that makes the roads impassable in wet conditions like in the months of April and October. Areas bordering Kiambu District however, exhibit red alluvial soils, which are well drained and form a good agricultural base. Farming in Kerarapon relies heavily on this factor coupled with the presence of a spring in the area.

3.2.6 Climate

3.2.6.1 Rainfall

The area has a bimodal rainfall pattern with short rains between October and December while the long rains fall between March and May. Rainfall trends shows great variability and periods of prolonged drought are noted in 1890-1894, 1934, 1943, 1961, 1984, 1999. History also attests to this fact when Blixen(1937) states "*We were short of rain as well, in the Ngong country, and three times we had a period of real drought*" Periods of great flooding are also noted in 1951, 1963, and the El-nino rains of 1998. Reliability studies reveal that the area receives less than 750 mm six years out of twenty. The area has been prone to various drought periods and intermittent periods of flooding as recorded over several years. The Ngong station indicates that an average annual rainfall of 690 mm was received for the years 1999, 2000 and 2001 as shown in Table3.0

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Table 3.0 Rainfall patterns in Ngong in the last three years

Months	Years		
	1999	2000	2001
January	0	0	227.4
February	0	0	16.6
March	242.2	17.8	178.9
April	59.9	29.2	171.8
May	27	12.5	43.5
June	0	10	37.3
July	1.3	0	33
August	22.1	0	29
September	22.2	39.5	22.5
October	47.2	33	10.5
November	188.3	195.2	100.8
December	158.4	81.7	11.3
Total	769	418.9	882.6

Source: Field Survey, Ngong Weather Station 2002.

3.2.6.2 Temperature

Temperatures are fairly constant throughout the year with average monthly temperatures varying no more than a few degrees. Average temperature is highest in February and September at 24⁰c-28⁰c and lowest in June and July at 10⁰c-14⁰c.

3.2.6.3 Wind

Wind data is only available from the Nairobi-Dagoretti station. The wind speed is generally highest in December and January, while calmness is realized in the months of June, July and August.

3.2.6.4 Agro-Climatic Zone (ACZ)

Agro-climatic zones provide information about ecological potentials of the land. Ngong lies in the ACZ III where rainfall agricultural potential exists according to the Farm Management Handbook of Kenya. Perhaps this is what often attracted the Kikuyus in the marginalized areas of Ndeiya to continuously encroach on Maasai land - a case that brought about a lot of infighting amongst Maasais and Kikuyus in the Kibiko area.

3.3 The Urbanization Trends in Study Area

It is noted that urbanization as a process cannot be measured or exhibited by one variable, but rather manifests itself in various ways. A discussion of these variables as they relate to the study area follows with a view to draw out the general trends and patterns of urbanization in Ngong.

3.3.1 Population Size and Growth

Ngong Division in the 1999 population census had a total of 149, 771 persons with 39,475 households. The density was 41 persons per km sq, which is considerably low. This shows a considerable increase of 85.6% from the 1989 population census, which was at 80,696 persons with 19,619 households and 22 persons per km sq. What is worth noting is the trend in specific areas and not the broad figures, which can be misleading. The emerging scenario has been this spectacular growth currently registering a growth rate of 6.4%, a rate higher than even the national growth rate of 3.8%. At this rate, the projected population of the division will be 404, 104 by the year 2015. Table 3.1 shows this trend over the years.

Table 3.1 Population Growth Trends and Projections in Study Area

Year	Population Ngong Division	% Increase	District growth rate	Division growth rate
1969	15,931	-	2.92	-
1979	45,680	-	3.21	-
1989	80,698	76.65	4.51	5.85
1999	149,771	85.6	5.5	6.4
2002*	180,406	20	-	6.4
2005*	217,308	20	-	6.4
2010*	296,336	36	-	6.4
2015*	404,104	36	-	6.4

Source: CBS Population Census 1969, 1979, 1989, 1999

*Population Figures based on Projections

3.3.2 Population Densities

Over the intercensal years, Ngong Division has retained the position of being the most densely populated division in Kajiado district as shown in figure 3.1. This is attributed to its proximity to Nairobi. It is clearly shown that these high densities have concentrated in various enclaves namely Ngong Town, Bulbul, Oloolua, Kerarapon, Ongata Rongai, Kiserian and Nkai Moronyo as shown in Table 3.2

Table 3.2 Densities in selected areas of Ngong

Name of area	Area/km sq ²	Total population	Household	Density
1. Ngong Town	10.9	12,110	3,486	1,111
2. Oloolua	13.1	7,174	1,825	548
3. Bulbul	2.3	8,591	2,765	3,735
4. Kerarapon	3.7	2,222	584	601
5. Ongata Rongai	2.95	16,264	4,626	2,957
6. Kiserian	49.5	16,519	4,366	334

Source: Central Bureau of Statistics 1999

Bulbul, Ngong and Ongata Rongai are significant to the study as they form the eastern and western exit points from Nairobi city unlike Kiserian or Oloolua. In Kenya where an urban settlement is deemed to have a minimum of 2000 people, it becomes clear that the above centres are all urban in nature regardless of whether they are recognized as towns or not. Residential and commercial developments have tended to concentrate around such areas. A notable feature has also been visible in the development of slums in areas of Bulbul and Kandisi, which represent very high densities. It is recognized that Bulbul as a slum area is special to this study in that it is representative of a "regularized slum". Slums are accepted as urban features though negative in every aspect but nevertheless a pointer to the more intricate problem of land scarcity, land invasion, housing, and urban poverty. Other slums in the area are Gichagi and Mathare.

3.3.3 Population Composition and Structure

Kajiado District is second in importance to Narok District as the ethnic homeland of the maasai. As a result, the composition tends to skew favourably towards large maasai numbers. What is notable is the apparent decline of these maasai numbers with an equivalent rise in representation by other tribes as shown in Table 3.3

Table 3.3 Population Composition by Tribes

Tribe	1969	%	1979	%	1989	%
Maasai	58,961	68.6	93,560	62.8	146,268	56.6
Kikuyu	16,258	18.9	33,630	22.6	61,446	23.8
Kamba	4,321	5.0	8,798	5.9	20,775	8.0
Luo	1,612	1.9	3,174	2.0	8,084	-
Luhya	1,666	1.4	2,280	1.5	5,416	-
Others	3,585	4.2	7,563	5	-	

Source: Population Census 1969, 1979, 1989

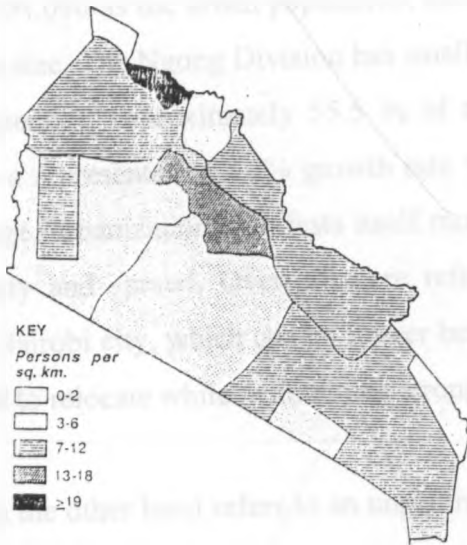
Results from the field survey tend to confirm this trend. Of the 79 households interviewed, composition patterns showed that maasais were represented by a larger 37.6%, followed by Kikuyus at 24.1%, Kisiis at 17.7%. The heterogeneity and broad representation of tribes in the area is a pointer to the in-migration experienced in the area.

The population structure on the other hand reflects the wider national scenario with a heavy bottom. The population of Ngong can be described demographically as a youthful one because the proportion of children (those aged below 15 years) is about 48% of the total population in 1999. A high proportion of children are always associated with dependency problems both at household and societal level. Children are mostly consumers of goods and services; though in rare circumstances do they contribute significantly to domestic incomes.

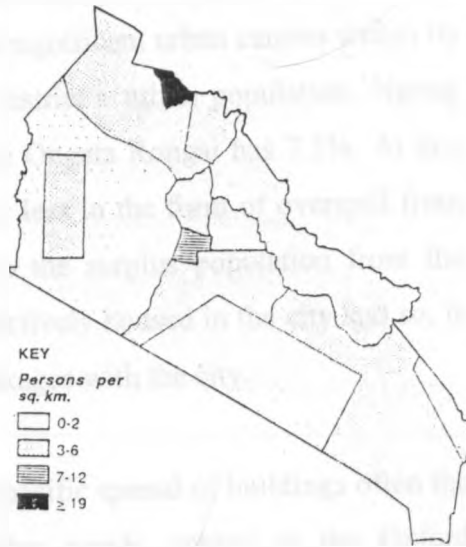
The female/male population ratios popularised as sex ratios reveal that whereas Kajiado district has a ratio of 105, the study area, which is Ngong, has a ratio of 102. This reduced ratio is often associated with urban areas where the presence of both male and female workers is heavily registered and does not therefore follow the natural birth trends but leans on immigration trends.

Figure 3.0 Population Densities in Ngong Division In Previous Census Years

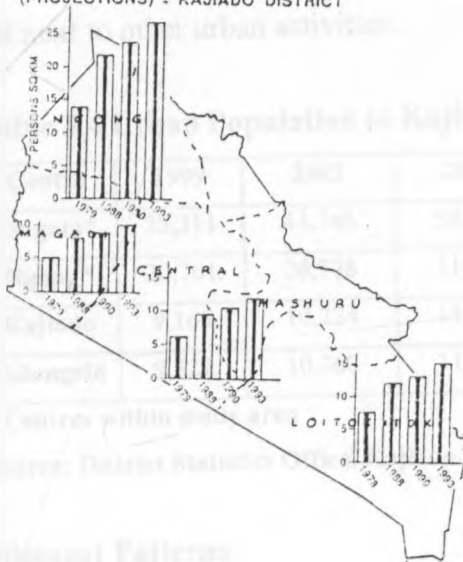
POPULATION DENSITY 1962 - KAJIADO DISTRICT



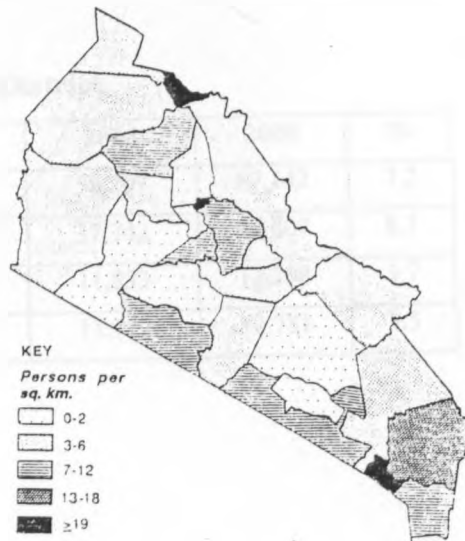
POPULATION DENSITY 1969 - KAJIADO DISTRICT



POPULATION DENSITY BY DIVISION 1979 - 1993 (PROJECTIONS) - KAJIADO DISTRICT



POPULATION DENSITY BY SUB-LOCATION 1979-KAJIADO DISTRICT



Source: Kajiado District Atlas 1997

3.3.4 Urban Population

Though the wider Kajiado District has a very low level of urbanization with only a figure of 104,090 as the urban population, the study area is leading in terms of urban population size. The Ngong Division has small but significant urban centres within its area representing approximately 55.5 % of the district's urban population. Ngong Town has a representative 8.7% growth rate while Ongata Rongai has 7.2%. At this urban fringe, urbanization manifests itself more or less in the form of overspill from Nairobi city and sprawl. Overspill here refers to the surplus population from the crowded Nairobi city, which can no longer be effectively housed in the city and so, is compelled to relocate while maintaining strong linkages with the city.

Sprawl on the other hand refers to an unplanned specific spread of buildings often the result of outward expansion of a town. In other words, sprawl as the Oxford dictionary – puts it is “*of things to spread out, extend, in a struggling manner*”. The result of this is the emergence of a distinct rural-urban interface where agriculture is practiced next to other urban activities.

Table 3.4 Urban Population in Kajiado District

Centre	1999	2002	2004	2006	2008	%
Ongata*	35,311	43,746	50,461	58,207	67,142	7.2
Ngong*	20,701	26,778	31,791	37,742	44,807	8.7
Kajiado	9,165	10,224	11,033	11,833	12,798	3.7
Kitengela	9,327	10,360	11,111	11,917	12,781	3.5

* Centres within study area

Source: District Statistics Office, Kajiado 2001

3.4 Settlement Patterns

The settlement patterns as seen from above have been influenced by the influx of Nairobi residents into the Ngong area. Those who want cheap rental accommodation but with ease of commuting to the city centre, settle in urban centres along the major transport route. Those who target spacious house and have cars/vehicles so that commuting is not a problem, settle in areas far from the major transport lines at vantage points such as hills, near rivers, to appreciate the amenity and environmental quality of a countryside.

Then in between are pockets of indigenous farmers and pastoralists, who are overtaken and baffled by the ‘standoff’ attitudes of the ‘Nairobians’ who come in the rural areas and enclose themselves with concrete walls, steel gates and electric fences. Kerarapon, Matasia, Nkoroi, Kiserian and Oloolua show patterns of owner-occupier – in that individuals have bought land and built their own homes. Therefore the larger part represents middle and high-income earners from the city of Nairobi. These areas exhibit leapfrog development; with certain parcels still grazing land while other have very dense settlements as shown in plate 2. In general the resulting settlement pattern is patch-like with no clear point of expansion but tends to spread out in some areas while concentrating in others.

Plate 2 Leapfrog settlement patterns



Source: Field Survey, 2002

3.5 Existing Land use Patterns

The present land use patterns in the area are predominantly residential oriented with practices of agricultural farming in between. In most cases, the two land uses are seen side by side. To serve this residential populace, several commercial enterprises have risen especially in the urban centres of Ongata Rongai, Kiserian and Ngong. A distinct institutional user is observed at the Ngong Veterinary Farm, which covers around 1,100 acres and even this has not been spared the axe of alienation. From an initial area of 2,000 acres only 1,000 acres are left. It is what is left of the veterinary farm that gives a

clue to what the natural environment looked like before and after human and urban developments came in. Small residential sub-divisions in planning language referred to as 'jackrabbit sub-divisions' are common. Immense quarrying activity has been realized in the Oloolua and Ongata Rongai area although a recent government ban has slackened the pace. Signs of isolated horticultural activity are also evident.

The Ngong Hills as shown plate 1, on the other hand have attracted tourism due to its commanding view of Nairobi city and environs and its collection of wildlife species.

Because of the rising demand for land the area, it is quite a common feature to find vacant land held in anticipation of future capital gains, a factor which seems to enhance an irregular land use pattern as shown in plate 3. On the one hand, there is high concentration of residential settlements in form of flats, which give way to low density residential homes, and on the extreme hand are Jua Kali industrial sheds in a residential area. The total end product is a jamboree of land uses placed haphazardly in space.

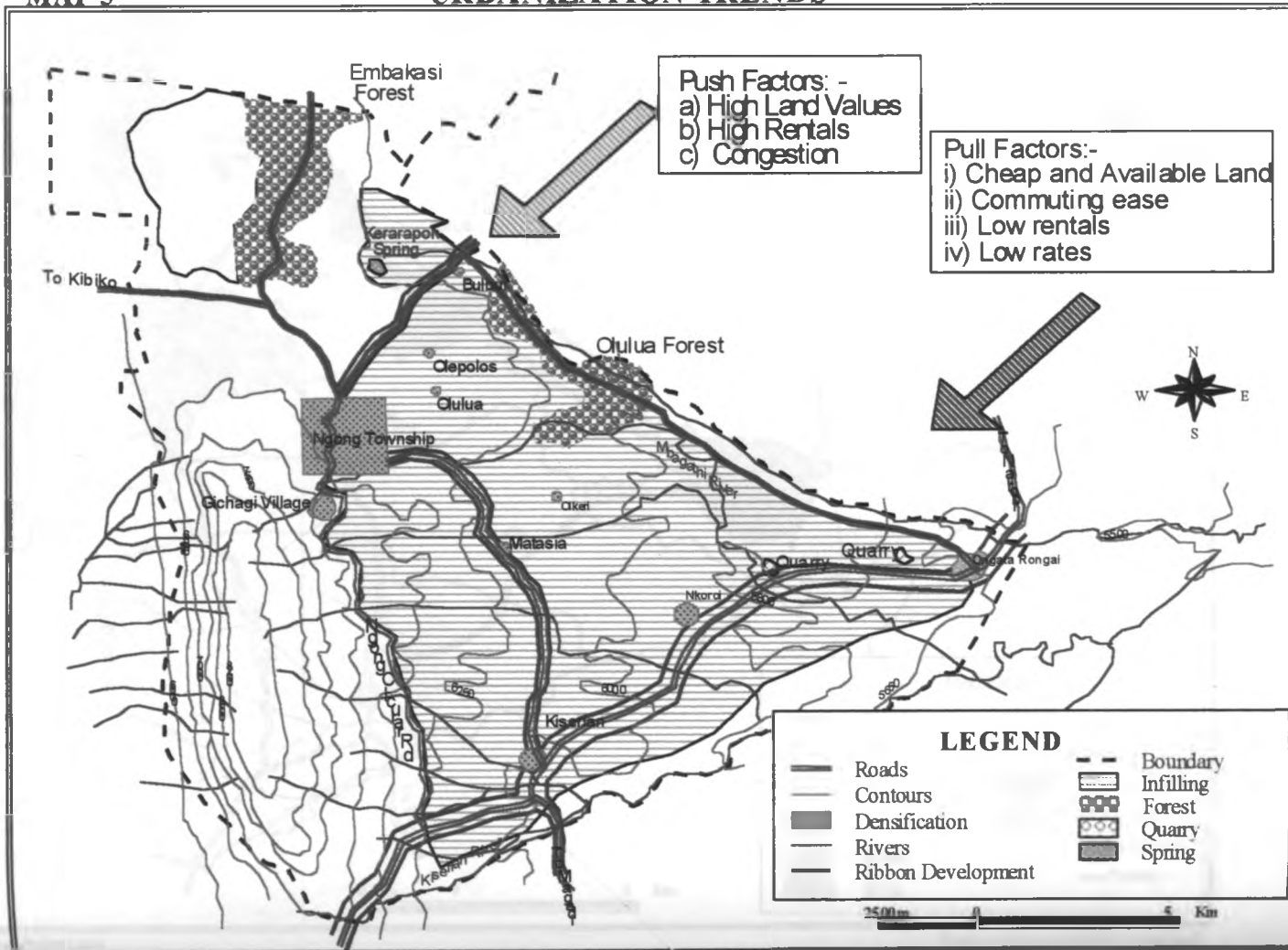
Plate3 Idle land awaiting future capital gains



Source: Field Survey, 2002

MAP 5

URBANIZATION TRENDS

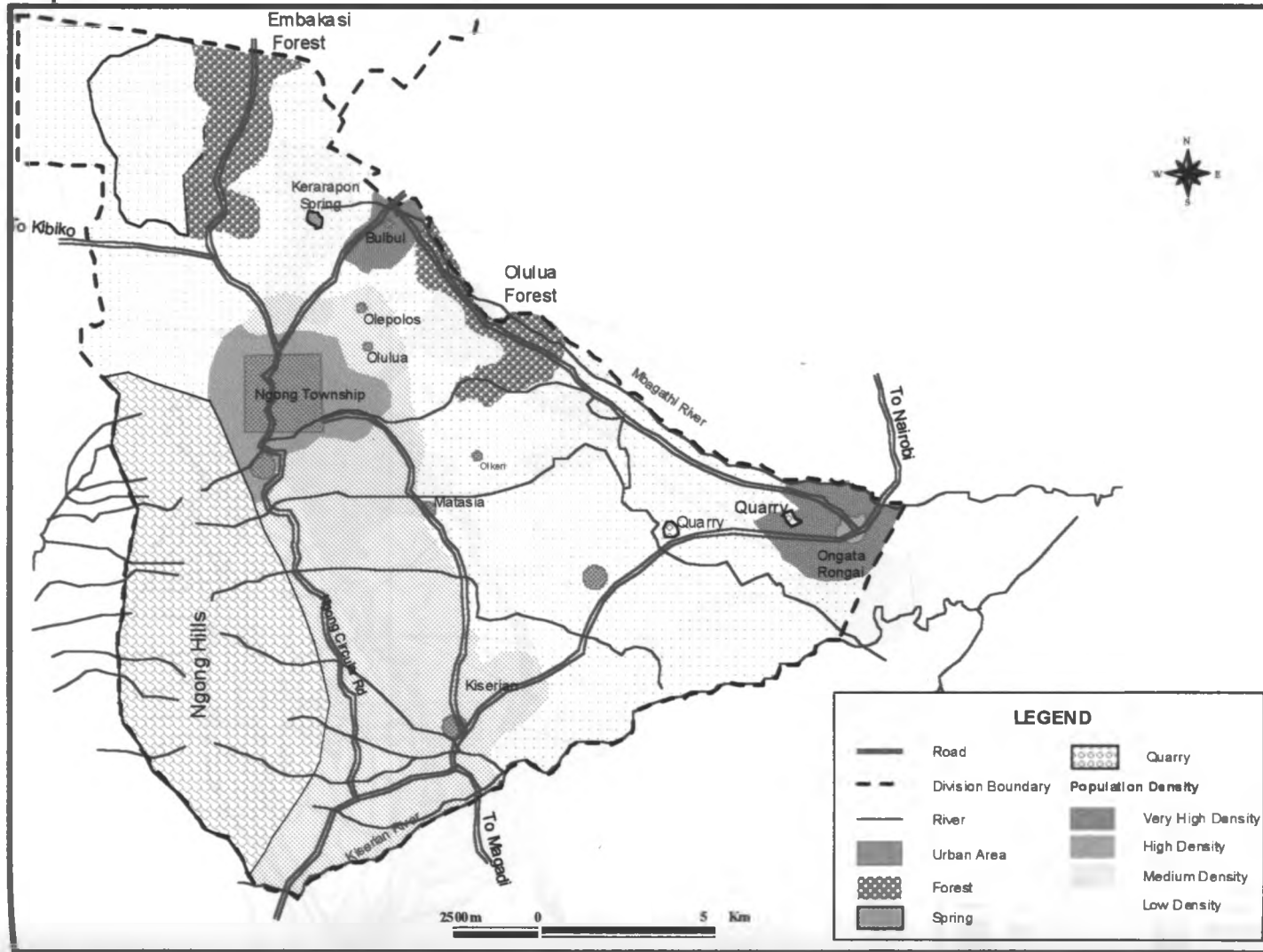


Source: Survey of Kenya (Adapted)

Prepared by Simiyu Lucy

Map 6

POPULATION DENSITIES OF THE STUDY AREA

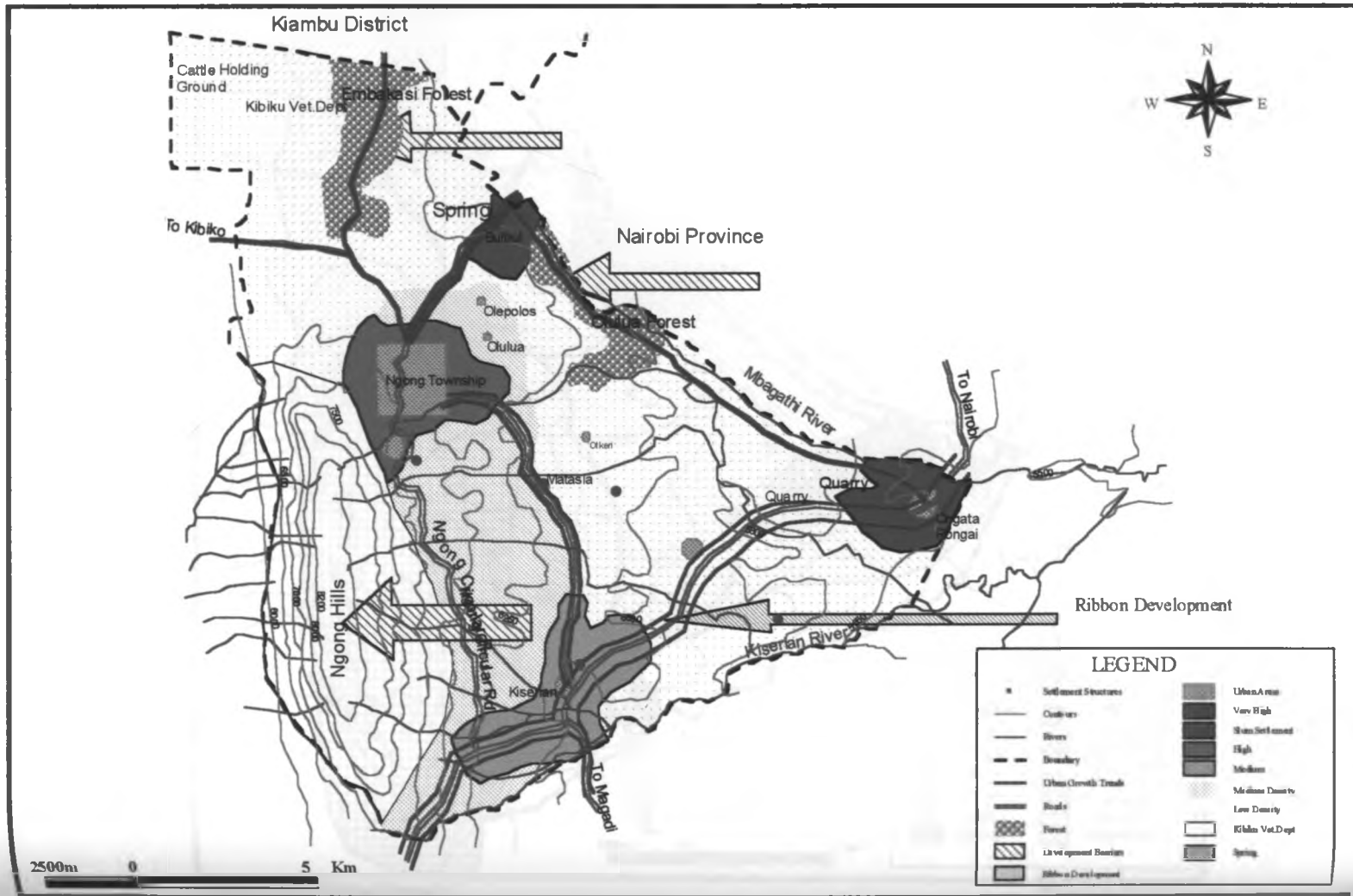


Prepared by Simiyu Lucy

Source: Survey of Kenya (adapted)

MAP 7

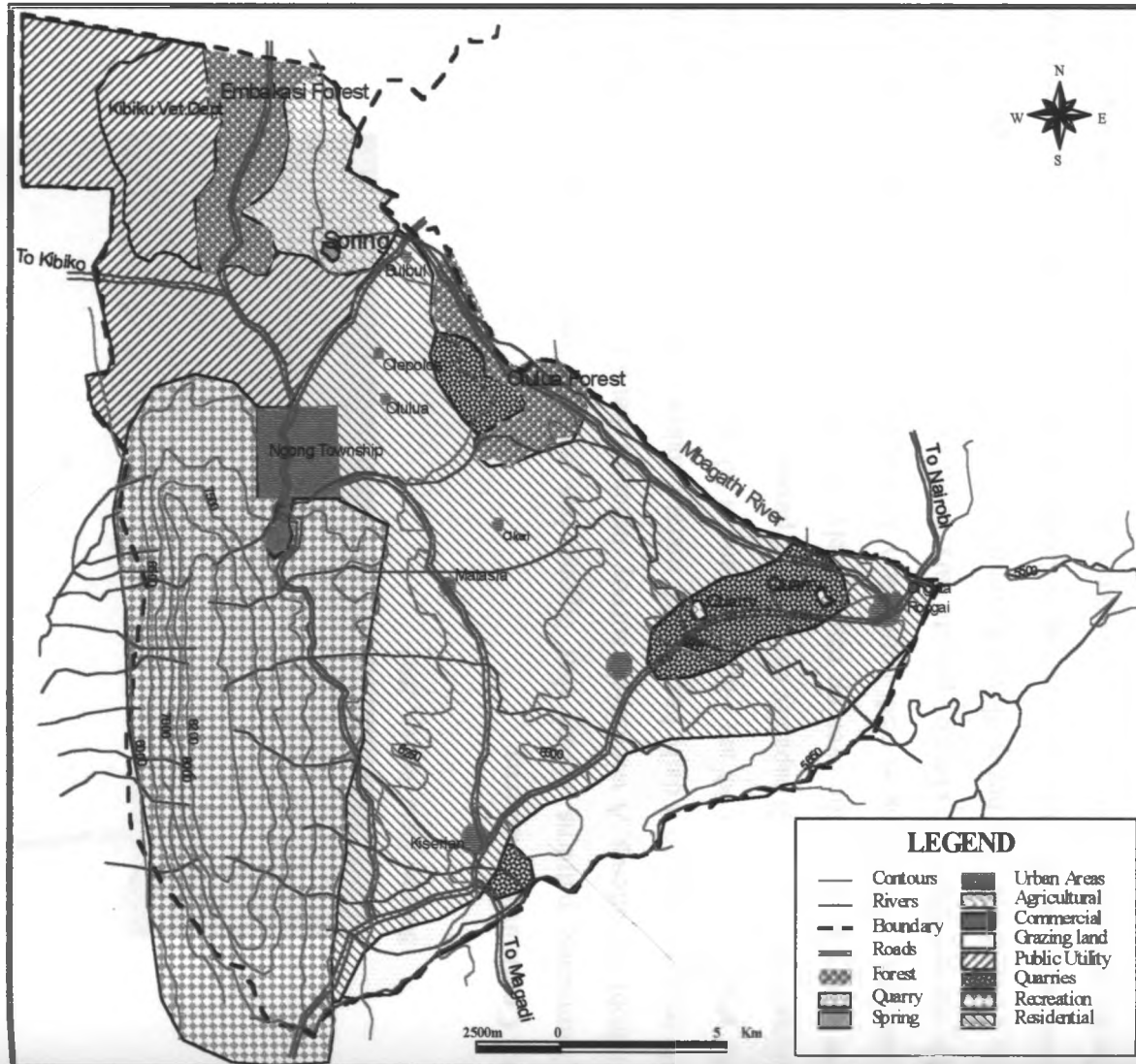
SETTLEMENT PATTERNS



Source: Survey of Kenya (Adapted)

MAP 8

EMERGING LAND USE PATTERNS



Source: Survey of Kenya (Adapted)

Prepared by Simiyu Lucy

Plate 4 Competing land uses of farming, residential and pastoralism all in a common area. Note the Maasai pastoralist herding the cattle

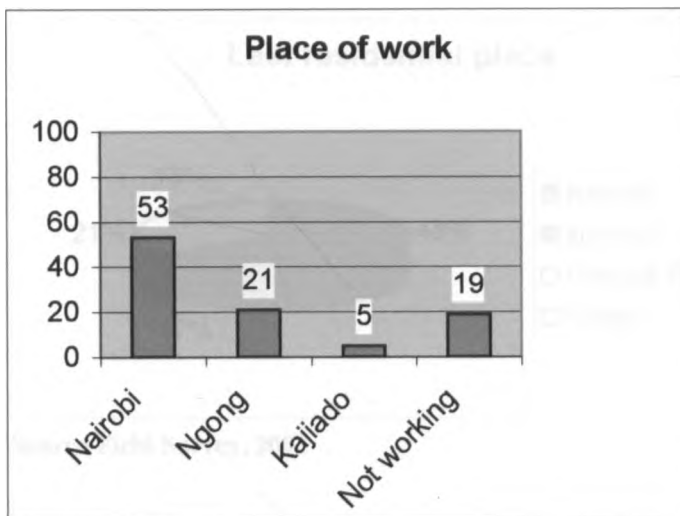


Source: Field Survey, 2002

3.5 Commuting Patterns

Commuting patterns reveal that Ngong has evolved into a dormitory area for Nairobi's residents. A windshield survey indicates that a total number of 240 matatus ply into the area on a daily basis. Each matatu makes an average of 3 (three trips) at the peak hours of 6.00 am –8.30 am and 4.30 pm –6.30 pm. At those times the matatus operate at full capacity carrying 18 passengers all bound to or from Nairobi in the morning and in the evening respectively. This works to a total of about 12, 960 passengers commuting at peak hours daily to and from Nairobi by matatu. Add onto this number those traveling by private cars, at off-peak hours and the public buses and the patterns show a heavy flow of commuters from Ngong to the Nairobi area. A commuting labour force is a strong indicator of the urbanization process and that Ngong is actually home to urban workers, who by extension transfer urban activities and behaviours to the area, transforming it into suburban enclave of the city of Nairobi.

Figure 3.2



Source Field Survey, 2002

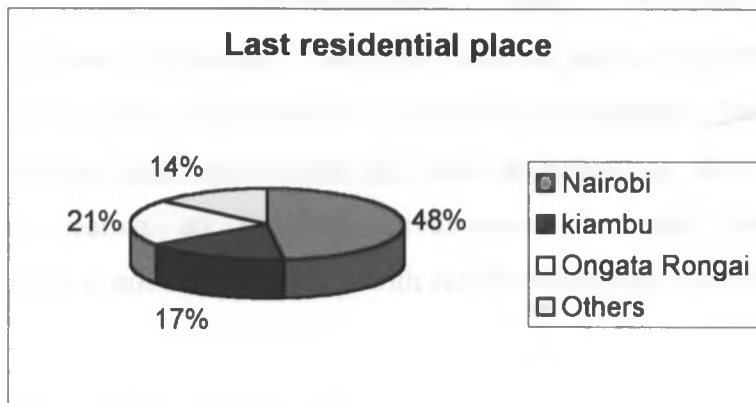
The field survey confirms this trend with 53% of the respondents stating that they work in Nairobi while only 21% work within the study area.

3.6.5 Migratory patterns.

A field survey done on both intra-urban and rural-urban populations to establish the functional relationship between study area and Nairobi, confirm what is generally held about fringe areas as areas of sub-urbanization processes. This is well brought out in Figure 3.3. Out of 79 households interviewed, 48% state that Nairobi was their last residential place. As regards inter-area patterns, 23% revealed that Ongata Rongai was their last residential place, noting that Ongata is but part of the study area only in a different locality.

Asked why they had preferred to move to study area from Nairobi, 58 % had done so because of the attraction of cheap land and cheap rents. A small percentage of 12% indicated other reasons for preferring to move. These ranged from marriage to being near place of work. There is also a strong migratory functional relationship between study area on one hand and other provinces of the country. A generalization of the field results show that the Ngong area has attracted more persons from Central Province than other provinces in the country.

Figure 3.3



Source Field Survey, 2002

Perhaps this is due to the current land pressure in Central Province with resettlement patterns taking on the trend of being close to Nairobi. The observation advanced is that the pattern decreases with increasing distance from the study area. Most of the far-off provinces didn't have a 'first degree' direct migratory relationship with the study area.

3.6.6 Income/ Employment Levels.

Incomes and employments vary with the two distinctive population types in the area. First, there is the indigenous population whose incomes range from extremely low to a few substantial landlords and businessmen.

This indigenous population can further be split into two.

- First group who own some land in the area. They are self-employed and own businesses like shops, bars and restaurants. They have some of the highest incomes in the area and live in decent homes.
- Second group consists of people who own a few acres of land and whose income is subsistence farming. Majority of this group have low incomes and no incomes.
- Third are those who own plots in informal settlements of Gichagi and Bulbul.

The second broad category and the largest one is engaged in the monetary sector in middle and high level jobs. Majorities comprise the homeowners. In the long run, it is expected that agricultural land will disappear. It is also expected that demand for

services and manufacturing in the informal sector will expand more rapidly. A strong reliance on the formal sector for employment is typical of an urban environment, together with attendant high wages. This urban economic pattern is perhaps the reason for the rising social needs and demands by the resident population. The high-income levels also form the basis upon which the local authority can derive the finance necessary for creating an enabling environment for rapid urban growth. Unfortunately, this is not true in Ngong, with residents deriving these functions from Nairobi city.

3.6.7 The Nairobi Influence (Linkages)

“Nairobi was our town, twelve miles away, down on a flat bit of land amongst the hills. It is impossible that a town will not play a part in your life- it does not make much difference whether you have good or bad things out of it, it draws your mind to it, by a mental law of gravitation” (Blixen, 1937).

Ngong's growth has been strongly influenced by its proximity to the capital city, Nairobi. In short it is an appendage to the city of Nairobi. This in essence means that Nairobi's problems are also Ngong's problems. The larger population in Ngong was once Nairobi's population and still continues to be Nairobi's daytime population. By commuting to the city center, a large proportion of Ngong residents make use of services to which they do not contribute and spend most of their incomes in the city center. This feature deprives the study area of a much-needed economic base with the result that it will always depend on Nairobi for high order goods.

At the same time, this immigrant population either settles on land that is still agricultural where rates are not paid or in rented units. They hence do not contribute much to the revenue base of the Olkejuado County Council. The study area is thus faced with a shifting population base heavily dependent on the city of Nairobi for employment. The challenge presented is how to cater for the needs of this interwoven and intricate population of the peri-urban fringe.

3.7 Summary

In the area of study, the urbanization process is reflected in the population densities, commuter patterns, land sizes and land use patterns. However this trend manifests itself more in the form of urban sprawl and overspill. These two phenomena are observed in the Ngong area in that it acts, as a catchment area for the overspill yet there exists no mechanism to direct this overspill leading to an extension of the urban fabric in 'a struggling manner' without attendant services and facilities in a rural area, which of necessity leads to urban sprawl. At the same time the heterogeneous nature of the population in the study area has been accelerated by in-migration from the city of Nairobi. This is a population that relies on a cash economy for daily needs unlike the rural areas, which rely on subsistence, a phenomena which heightens the process of urbanization. Rising land values from a modest 600/= per acre in the 60's to 13,500/= in the 70's and later quadrupling to 80,000/- per acre in the 1980's to over 1 million per acre in the late 90's and 21st century in the area are strong indicators of the demand for land in the study area spurring on the urbanization process. A strong dependence on the city of Nairobi brings in the element of urban -rural linkages with the city of Nairobi acting as the magnet to the study area in terms of employment and high level services.

CHAPTER FOUR

LEGAL, INSTITUTIONAL AND POLICY FRAMEWORK

4.0 Introduction

Because land constitutes the wealth of the nation, the government on behalf of the nation regulates law and other resources. For this reason land planning laws are almost entirely expressed in enabling Acts of parliament delegating responsibility to various institutions of government. In Kenya, and therefore the study area by extension, it is realized that the statutory body for land use planning, the Physical Planning Department, is not the only planning body formulating land use policies. Instead various private and public bodies are formulating plans relating only to their functions. The work of a statutory body (institution) is to coordinate in a comprehensive scheme, all the planning functions in its area of jurisdiction against the existing land policy. It is on the recognition that effective plan formulation and implementation requires enabling statutory regulations and supportive institutions that this chapter proceeds to analyse the policy, legal and institutional framework as it relates to the study.

4.1 Historical Perspective of Planning law in Kenya.

The purpose and principle of planning is to make suitable provision for the use and development of land and natural resources. The existing planning statutes borrowed heavily from British town planning ideas during the protectorate (1895 to 1920) period, colonial (1920 – 1963) period, and immediately after independence. Initially planning statutes adopted or applied were meant to influence the use of urban land in Nairobi, and other smaller centres such as Mombasa and Kisumu. The East Africa Protectorate 1903 Ordinance was the first land use statute in Kenya enacted barely two years after completion of the Uganda railway line. This was followed by the land use proclamation of 1911. This applied to the towns of Nyeri, Embu and Meru whose territorial jurisdictions were limited to 1 mile from the administrative flag post. It however, coincided with the Simpson Committee Report of 1911 – 12 which gave Local Authorities (LA's) powers to make by-laws that were to be approved by the governor in council. The committee recommended zoning of Nairobi albeit on the

basis of racial segregation. The government notice No. 911 of 1914 leaned towards development control in that it gave the definition of a plot in urban area and specified desired types of building materials, occupancy, accessibility and other provision related to sizes of structures.

In 1919, the Town Planning Ordinance was enacted and remained the only planning legislation for twelve years until 1931 when the Town Planning Act was enacted to amend the law relating to town planning in Kenya.

4.1.1 The Town Planning Act 1931.

This Act was developed to control the development of towns. For this reason, a Town Planning office with a Town Planning Advisor was established under the office of Commissioner of Local Government. The Act placed on the District Commissioner matters of development control thus bringing in the involvement of central government in planning issues. Although having the force of an Act, the 1931 Town planning ordinance was not at the time designated as an Act. This related to the limited powers of the legislative council under the governor as compared to the powers of a parliament after independence. The Town Planning Act was however full of contradictions. For instance Section 8 provided for public participation in plan making while Section 52 allowed 'secret planning', a feature which McAuslan(1980)) refers to as consensual planning. Private developers could enter into private or secret arrangement with local planning authorities with some conditions being attached to the approved plans. This provision was misunderstood and misinterpreted resulting into the proliferation of illegal settlements.

The central government involvement continued until 1961 when the Development and Land-use (Planning) Regulations were enacted. These regulations represented an expanded legislative base capable of providing procedure for planning and control of development. The regulations were enacted later in 1968 to become the Land Planning Act. The Land Planning Act was to supercede the Town Planning Act but the latter was never repealed until the Physical Planning Act of 1996. It meant that the two Acts operated parallel with each other and the planning system was essentially discretionary. Confusion and conflicts resulted to using both Acts when it was

suitable. The creation of planning units, approval of plans and the institution of planning were left discretionary to the policy-makers. It is against this background that the relationship between planning authorities, controlling institutions and executive authorities was and is still unclear and complex to date.

Some of the plans prepared during this period include the Master Plan for the City of Nairobi (1948). Since the Local Authorities (LA's) did not have adequate planning expertise, consultants prepared both plans.

4.1.2 The Land Planning Act of 1968

Regulations of planning the use and development of land that had been put in place in 1961 were later re-enacted into the Land Planning Act (Cap 303) of 1968. The Act set out to provide guidelines on the preparation and approval process of plans such as, area plans, town plans, sub-division schemes, etc. This Act extended planning to peri-urban areas – 8 km (5 miles) from the municipal boundaries and 400 ft or 122 m) from the highways, by establishing the Central Authority (CA). The Central Authority's role was that of controlling development in areas where the Interim Planning Authorities (IPA's) did not exist. The non-agricultural developments in the rural areas, which had to be approved by the CA, included the following.

- ◆ The subdivision of farms into portions less than 8 hectares. (Approximately 20 acres).
- ◆ Changes of user from agricultural to non-agricultural purposes (commercial, industrial, residential).
- ◆ Any development in the radius of 8 kilometres from boundaries of township and municipalities.
- ◆ Display of any advertisement.
- ◆ Deposits of refuse, scrap and waste materials on lands.

The major plans carried out under this framework include the Nairobi Metropolitan Growth Strategy (NMGS) of 1973, structure plans for most of the municipalities like Thika, Nakuru, Eldoret, Mombasa, and Kakamega, and the Human Settlement Strategy (HSS). A Central player in the Land Planning Act who cannot be ignored was the Minister responsible for Physical Planning. The Minister's role included

preparation of Town Plans, Area Plans, Sub-division Plans and use plans in respect of unalienated government through the Commissioner of Lands Office and the Physical Planning Department. It is however the Commissioner of Lands who carried out most of the Ministers functions and responsibilities in the approval of plans and ensuring enforcement and compliance with the same. The Central Authority, Interim Planning Authority and Local Authorities could issue an enforcement notice where a developer had developed without their consent, through the powers delegated to them by the Minister through the Commissioner of Lands.

4.1.3 The Physical Planning Act Cap 286

This is the main law that currently governs spatial planning in Kenya today. It repealed both the Town and Land planning Acts and provides the legal basis for the preparation and enforcement of direct physical development plans and requirements. The Act has established the office of the Director of Physical Planning, who is the Chief government advisor, on all matters pertaining to physical planning. Depending on the type of plan prepared, the responsibility for approval of plans rests with the Minister of Lands and Settlement and Local Authorities. For instance, the Minister approves development plans while the relevant LA approves sub-division of land; building plans and plans relating to the change of user and extension of lease. Local Authorities may grant or refuse to grant permission depending on various criteria, and also attach conditions to any approvals in order to ensure compliance with development plans.

The Act in Section 29 stipulates that development control measures can be taken in order to ensure compliance with the plan's proposals and requirements. Section 29 states that each LA shall have the power

- a) *"To prohibit or control the use and development of land and buildings in the interests of proper and orderly development of its area.*
- b) *To control or prohibit the sub-division of land or existing plots into smaller areas....."*(PPA Pp.79).

It empowers Local Authorities (LAs) to regulate and exercise control over physical development decisions and activities. In so doing, the LA sanctions all development applications and issues an enforcement notice where a developer has proceeded to

develop without grant of permission. Section 13 (I) states that *“any person aggrieved by the decision of the Director concerning any physical development or any matters connected therein may appeal to the respective liaison committee in writing against the decision...”* (PPA, Pp 173).

Under Section 30(2), the LA may charge fines, demolish illegal structure to ensure compliance with approved plans thus giving wide enforcement powers to LA's.

Through it's sister legislation the Physical Planners Resignation Act, the Physical Planning Act opens up room for the participation of the private sector in plan preparation activities through the establishment of physical planning profession and registration and licensing of qualified planners. On the other hand, the National, District and Municipal Physical Planning Liaison Committees created by the Act are avenues through which the public can voice their opinion and grievances. However, the power of physical planning is concentrated at the national level and local authorities are not seen as planning entities but development control agencies, yet the Local Government Act Sec166, empowers them to plan.

Some 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/her officers). Therefore approving plans is shared between the Minister and Local Authorities, whereas plan implementation and enforcement become an entirely local matter, being vested in Local Authorities. The office of the Commissioner Of Lands (COL) ceases to prepare and approve plans and takes on the role of documenting and administration of matters relating to land.

Subdivision of land involving change of user from agricultural to urban have to be made according to the provisions of the Act, with the guidance of Land Control Boards. Under the Act, uses that are no longer agricultural should be registered as leases for ease of planning and development control.

4.1.4 Other Laws Related to Planning

There are numerous laws that have a direct or indirect bearing on spatial planning activities. Some of them as they impact on the study area are discussed here below.

- **Local Government Act. Cap 265(LGA)**

Local Authorities in Kenya are the creation of the Local Government Act. Section 5(I) (a) gives the minister powers to “*establish any area to be ore cease to be a municipality, county or township*” and is further empowered to assign names, alter boundaries and names, among other duties.

The powers of Local Authorities under the Act are relatively wide, although few duties are mandatory. All Local Authorities are responsible for land use planning and development control, under section 166. “*Every municipal council, County council or town council may subject to any other written law relating thereto, prohibit and control the development and use of land and buildings in the interest of the proper and orderly development of it’s area*”(Pp 108.)

There are no less than 186 clauses in the LGA vesting the Minister with powers in relation to local government. Under 202, a Local Authority may from time to time make by-laws in respect of matters necessary or desirable for the maintenance of health, safety and well being of the inhabitants of its area. An example here are the Kisumu municipality (Building) (Planning) By-laws of 1961, which were enacted to cater for planning the buildings in Kisumu municipality and gave detailed specifications of use of land, density of buildings, erection of buildings etc. Together with the provision of the Physical Planning Act, development control then rests squarely on the Local Authority.

Section 162 (g) concentrates on sub-division regulations stating clearly the Local Authorities shall have power to control the sub-division of land or existing buildings lots into smaller areas by demanding that such sub-division be not transferred until an approval certificate has been given. The Local Authority also may lay out building plots, and guide sub-division for purposes of house constructions.

- **The Public Health Cap 242 (PHA)**

This is one of the most powerful and influential instruments available in planning circles. It defines the quality of structures and the facilities that go with it. It emphasizes on good sanitation thus ensuring a good and healthy environment. It is also concerned with the engineering standards as regards sewage reticulation; and also defines the need for access. The Act in section 126(a) requires the Local Authorities to make by-laws regarding buildings and sanitation and states,

“Every municipal council, and every urban area and area council, may, and shall if so required by the Minister of Health, make by-laws for controlling the space about building; the lighting and ventilation of buildings, and the dimensions of rooms suitable for human habitation”.

The Public Health Act does not have planning standards per se but instead emphasizes more on the quality and sanitary conditions of shelters. For this reason, it relies more on the building codes and Local Authority by-laws. What the Act has, are wide discretionary powers to approve or reject or plans or buildings on the grounds of health.

- **The Building Code**

The Kenya Building code is one of the legislation that has, along with others been instrumental in influencing planning standards. Although it is more concerned with housing quality and building materials, it also contributes to planning standards in that it deals with the siting and space about buildings (Part II of Grade I by-laws); and minimum areas of plots or buildings thereon (Grade II by-laws). They contribute to planning and design, regulation and control of a residential environment. The Grade II by-laws were revised in 1995 to facilitate the development of low-cost housings and Local Authorities have since adopted them by resolution. For instance, Nakuru Municipality has adopted them for application in seven areas of low income housing by a council resolution.

- **Land Control Act (LCA Cap 302)**

This is an Act of parliament that provides for controlling transactions in agricultural land. The Act applies to the subdivision of agricultural land without change of user with sizes of sub-division not being less than 20 acres. The Act under section 5

creates the Land Control Boards (LCB), institutions which are meant to control transactions in agricultural land and through which consent to transact in such land is granted. Any transaction affecting agricultural land is void for all purposes unless the Land Control Board for the area in which the land is situated has given its consent in respect of the transaction. In deciding whether to grant or refuse consent in respect of a controlled transaction, a land control board is governed by Section 9 of the Act which states that consent shall have regard to "*the effect it is likely to have on the economic development of the land concerned or on the maintenance of standards of good husbandry within the area*". Consent should further be refused if the terms and conditions of the transaction including the price are unfair, or where the subdivision of the land would further reduce the productivity of the same. Section a (i) (b) provides that consent shall be refused if:

- a) The person to whom the land is sold is unlikely to farm the land well or to develop it adequately
- b) Or is unlikely to be able to use the land profitably for the intended purpose owing to its nature
- c) Or has already sufficient agricultural land.

The Act was complementary to the Land Planning Act when the Central Authority had planning powers over areas 8 km outside the town boundaries. The powers of the Central Authority have since been subsumed by the Physical Planning Act, which in Sec 30 places more emphasis on the special planning areas. In the study area, it assumes a higher level of importance because it is actively applied to agricultural parcels. The provisions of this Act are still applicable in the area of study even though sub-divisions are far below 20 acres.

- **The Water Act Cap 37-2**

The Act provides for the conservation, control, apportionment and use of water resources of Kenya. Various institutions have been found to oversee matters of water utilization such as Water Retainment Boards section 23(2), Water Resource Authority section 19, Regional Water Committees Section 20, and Water Apportionment Board Section 25. All water bodies both on the surface and underground are vested in the Government through the control of the Minister. In the study area, this Act should come in handy, as it is a catchment region for the greater Athi river drainage basin. At

the same time individual borehole installation in Ngong seem to escape the provision of the Act with dire consequences for the hydrological balance.

- **Mining Act Cap 306**

The Act vests all unextracted minerals in the government and under section 4 mining without the required authority is prohibited. The Act has failed to address issues of reclamation and rehabilitation of areas that have undergone land dereliction and degradation as a result of mining activities. The Act makes such issues obligatory rather than mandatory. This has applied in Ooloolua in study area where there are many quarrying activities by individuals on their own farms.

- **Agriculture Act Cap 318**

This Act aims to promote and maintain a stable agricultural environment by providing for the conservation of soil and its fertility. It also calls for the stimulation of good land management and husbandry. Section 184(1) empowers the minister to protect agricultural land with reference to any developments that may curtail productivity efforts. Such developments include erection of buildings and other works on agricultural land. This can be applied to Ngong area to protect agricultural land from urban development.

- **Forest Act Cap 385**

The Act provides for the establishment, control and regulations of central forests, forest areas in the Nairobi area and or unalienated government land. The Act in section 4 provides for the declaration of forest areas and nature reserves. Protection of forests is necessary to promote sustainable development, for preservation of water catchment areas and ensuring biodiversity. Lately, depletion of forest reserves in Ooloolua and Kerarapon in the Ngong area has left a lot to be desired. Even the Ngong Hills have been deprived of all the natural forests and from afar look bare of any forest. The enforcement of this Act is further hampered by acute staff shortages within the department of forestry under the Ministry of Environment.

- Registered Land Act cap 300

The Act came into force on 16th September 1963. The preamble of the Act states *“An Act of Parliament to make further and better provision for the registration of title to land and for regulations of dealings in land so registered, and for purposes connected therewith”*.

This Act seems a “self contained” statute. The Registered Land Act (Cap 300) is one of the statutes that govern land administration of both government and Trust lands. This is more so in the area of land-use planning, control and development monitoring. Leaseholds are considered under the Registered Land Act. The most important planning tools are the restrictive covenants attached thereto. These restrict what the lessee can do with his land or any future dealings, which are binding such as: -

- Definition of period of term. In urban areas, this is usually 99 years, 25 years for special purpose facilities, and 99 years for agricultural land (Section 45)
- Section 48 of RLA describes implied covenants between the lessor and the lessee. This is where development control as a planning tool is highly used as the lease can not be transferred, sub-let unless consent from an administration office, more often the lands office, is given.
- Section 58 demands that rates and taxes due to the land are paid.

4.2 Institutional Framework

In Kenya, there exists a multi-level and multi-faceted institutional structure for the planning function. Some of the institutions involved in planning activities are summarized as follows;

4.2.1 National Level Planning Institutions

Ministry of Finance and Planning is the body charged with the overall planning of the Kenyan economy. It articulates national development objectives, policies and programmes through five-year development plans within which physical development policies are articulated by the department of physical planning. In the plan, detailed sectoral targets and ways to achieve these targets are given. Thus the contributions to national development to be made by the various sectors such as agriculture, industry, tourism and LA plans are given in the five-year plan period. Within the framework of

national planning, there has been increased urbanization over the years. Any settlement of over 2,000 people in Kenya is considered urban. The number of towns has therefore increased from 17 in 1948 to 177 in 1996. The urbanization trend is expected to reach 280 towns in 2010, with a population of 11,554,000 people (Sector Review, Habitat, June 1996). Other national bodies charged with planning responsibilities at national level include Department of Physical Planning, Urban development department, National Environmental Secretariat (NES), National Physical Planning Liaison Committees and Ministry of Local Government.

- **Physical Planning Department (PPD)**

The Physical Planning Department (PPD) is charged with the preparation of physical development plans for all towns in the country. It prepares regional physical development plans, structure plans and short-term physical development plans in the country. The department is represented at provincial and district level and works closely with Local Authorities in matters related to physical planning in their areas of jurisdiction. The department is linked to the Rural Planning Division of the Ministry of Planning and National Development. It co-operates with the Ministry of Planning in the preparation of five-year district development plans that set the social, physical and economic framework governing the implementation of various public and private sector programmes.

- **Physical Liaison Committees**

These are institutions established by the Physical Planning Act under Section 7-15. Section 7 states "*There shall be established the Physical Planning Liaison Committees in accordance with the provisions of the Act*" (PPA, Pp 69).

The establishment of the liaison committees is founded on two principal concerns. Firstly, they provide an avenue for a legally institutionalised system for conflict resolution in the process of physical development planning and implementation. Secondly by incorporating other authorities, the committees provide an avenue for a truly participatory determination of issues that transcend diverse disciplines and concerns.

Although composition and membership are provided for in Section 8 of the PPA, section 9 states that “*Notwithstanding the provisions of Section 8, a liaison committee, may co-opt such other persons as it deems fit to assist the committee in its deliberations*”(PPA Pp 72). The rationale behind this is to enable the liaison committees’ reach out to special interest groups that may not always in the opinion of the committee members, be adequately represented in any specific deliberations. Areas, which require further consideration by these committees before LAs can grant or reject applications for permission to develop are;

- Land adjacent to lakes, wetlands, forests and national parks
- Land adjacent to protected areas
- Land adjacent to international boundaries
- Land adjacent to major public utilities

- **Urban Development Department (UDD)**

The Urban Development Department based in the Ministry of Local Government is involved in assisting Local Authorities to prepare Local Authority Development Plans (LADPs). This process was initiated in 1982 after the Ndegwa Working Party on Government Expenditure. The LADP is a five-year capital expenditure plan containing a programme of infrastructures and investments in selected business enterprises meant to resuscitate the urban economy. However, the LADP has become a shopping list of investment projects, and fails to address spatial concerns, environmental issues and challenges of urban growth. The LADPs are divorced from planning and have inadequately addressed the planning problems and opportunities in Local Authorities. Lately, the LADPs have been supplemented by the LASDAPs which are programmes meant to improve local service delivery with the aim of enhancing economic governance and alleviating poverty as well. A LASDAP is a three-year rolling programme, which lists activities and projects affordable by the attendant LA.

- **Local Authorities**

The Local Government Act (LGA), (Cap 265) of the laws of Kenya provides for the establishment of authorities for local government. Under section 166 of the Act, Local Authorities are also mandated to carry out land use planning and development. Whilst Local Authorities in Kenya are statutory/corporate bodies, they are made to act as semi-autonomous institutions of the central government concerned with the planning, development and provision of services at the local level. The structure of the local

government system places Local Authorities in a three-tier set up in the following hierarchy order

- a) City/Municipal councils (including the city of Nairobi and presently Mombasa and Kisumu)
- b) Town councils
- c) County Councils

Municipal councils are supposed to be established in the large urban areas and their duties involve provision of a broad range of services including primary education, health services, road construction and maintenance, water supply (where the municipal council is a water undertaker), sewerage, housing, etc. Town councils are established in medium sized towns and they provide fewer services. County councils are rural based and operate within the geographic boundaries of administrative districts and provide even fewer services. The study area is under the jurisdiction of the OL-Kejuado County Council which body ranks the least in the hierarchy of LAs in Kenya. This perhaps explains its dismal performance in the study area.

The Local Authorities are empowered under section 166 to '*prohibit and control the development and use of land and buildings in the interest of the proper and orderly development of its area*'. (LGA Cap 265, Pp 108). Section 210 empowers the Local Authorities to make adoption by-laws in respect of all that makes it necessary for the maintenance of health, safety and well being of the inhabitants of its area while section 144 gives Local Authorities power to acquire land within its jurisdiction.

4.2.2 Regional Level Planning

Regional Development Authorities (RDA's) have been established for the management and utilization of resources to facilitate socio-economic development under respective Acts of Parliament. Some of these are, Tana and Athi River development Authority (TARDA- 1974). Kerio Valley Development Authority (KVDA – 1979), Lake Basin Development Authority (LBDA – 1989) among others, Initially provinces were planning regions in the early 1970's –they have been replaced by districts. Types of plans made include master plans of resource utilization. Regional Development Authority plans cut across various districts, which creates disharmony and duplication of roles.

4.2.3 District Level Planning

Institutions found here are the District Development Committees (DDC's), District Environment Committee, and Government Departments of different ministries, Physical Planning Development through the District Physical Planning Office.

The types of plans made at this level are the five-year district development plans, the long-term district physical development plan, and the sectoral plans of government departments.

4.2.4 City/Municipal Level Planning

Institutions of planning at this level are Municipal and City Local authorities, Department of Physical Planning, private sector and other organizations, as well as the individual developers and the community. Apart from the city of Nairobi, and lately Eldoret municipality, which have their own planning departments, other municipal authorities have no planning capacity and therefore rely on the department of physical planning at the district level for preparation of plans and discharge of planning service. Other institutions at this level are the municipal/city physical planning liaison committees.

4.3 The Role Of Other Central Government Agencies In Planning

As in most countries, the responsibility for planning and development falls on a number of agencies in addition to the above mentioned. At one time, it was claimed that there were about 36 separate GOK agencies and private sector institutions, which had a role in the formulation and implementation of urban planning. Of these, the most important ones comprise various central government ministries such as: -

- **Ministry of Finance (MOF)**, which though deals with general economic policy issues, is the final arbiter on division of the national cake and allocation of national funds. The share of the national cake for local authorities is decided by MOF. This planning machinery is dominated by sectoral planning which affects spatial planning in terms of resource allocation. It is also constrained by a mixture of regulatory and development functions and lacks a legal framework.

- **Ministry of Lands and Settlement (MLS)** which has wide ranging powers with respect to the planning, mapping, surveying, allocation and registration of land throughout Kenya.

The Department of Lands under this ministry has very wide-ranging functions dealing with administration of land in Kenya; allocation of government land; approval of department plans; preparation and registration of land titles; administration of 'Trust lands' on behalf of all Local Authorities. The department of Physical Planning comes under this ministry and has been moved between Ministry of Local Government and Ministry of Lands and Settlement several times since 1986. The planning function often revolves between this Ministry and the Local Authorities. The Ministry has significant resource constraints such as an up-to-date land information system which limits it's capacity to carry out the planning activity.

- **Ministry Of Education (MOE)**

Some large municipal councils like Nairobi, Mombasa, Kisumu, Nakuru, Eldoret and Thika are responsible for provision of education in their areas. Ministry of Education also has a significant responsibility for inspecting private school sites and approving them accordingly in corporation with the physical planning office.

- **Ministry Of Health (MOH)**

Like other sectoral ministries, Ministry of Health is responsible for planning, developing and maintaining health facilities in any given administrative area. Sometimes duplication has occurred between the roles of Local Authority medical officers, government medical officers and private consultant, though not of a serious nature.

- **Ministry Of Public Works & Housing (MOPWH)**

Two wings of MOPHW have some bearing on the planning function. The Road Branch is responsible for planning, designing, construction and maintenance of Kenya's national road network in rural and urban areas. The ministry defines standards for the planning and construction of roads.

The Housing Department lays down housing policy while it's executive arm, National Housing corporation (NHC) is responsible for execution of that

policy. It is apparent that the housing problem in Nairobi together with lack of a consistent housing policy has manifested itself in the fringe areas of Nairobi such as Ngong, with the result that the fringe is home to commuter residents.

- **Ministry of Environment and Natural Resources**

This is a crucial key player in conservation, planning and use of natural resources like water, forests, air, etc. It collaborates closely with the planning function of sustainable development. Lately it has come under attack for the wanton destruction of forests in the country and misuse/pollution of river drainage systems more so in urban areas and areas adjoining urban areas.

- **Land Control Boards**

They are established under Land Control Act in areas where land adjudication has been completed. They have been established with the aim of implementing the stipulations of the Land Control Act. They control the following dealings in land:

- Sale, Lease, Transfer, Mortgage, exchange, partition, or other disposal of or dealing with any agricultural land which is situated within a land control area.
- The division of such lands into two or more parcels, other than division of an area less than 8 hectares into plots.
- The issue, sale, transfer, mortgage or any other disposal of or dealing with any share in a private company or co-operative society which for the time being owns agricultural land situated within a land control area.

There are four main types of Land Control Board namely:

- Divisional Land Control Board. (DLCB) which covers a division or a district and is empowered to control transactions in agricultural land as listed above. The procedure for seeking consent are that one must submit an application in a prescribed form in triplicate to the Divisional Land Control Board within 6 months of an agreement in agricultural transactions, and in cases of subdivision submit 5 copies of the subdivision plan showing plot sizes, access roads, and any existing buildings.
- The Provincial Lands Control Board, which hears appeals against, consent refusals from the Divisional Land Control Board. This must be forwarded to

the Provincial Lands Control Appeals Board (PLCAB) within 30 days of the receipt of the decision..

- Central Land Control Appeals Board (CLCAB). The CLCAB receives appeals from the PLCAB and consists of the following members: The Minister for Lands as chairman, the Minister for Economic Planning, the Minister for Agriculture, The Minister for Home affairs, The Minister for Co-operatives, The Minister for Social Services, The Attorney General, with the Commissioner of Lands as Secretary.

The major objectives of the Land Control Boards are social, political and economic in nature. The boards in theory provide a public check with a view of controlling land accumulation for speculative purposes. This is supposed to mellow down landlessness and effect even distribution of land. In the area of study, the Ngong Division land Control Board also called the Land Control Board handles all transactions in agricultural land, while the Kajiado Land Control Board acts as both a divisional board and District Land Control Board. The Provincial Land Control Appeals Board is based in Nakuru town.

4.4 Planning and Development Control practice under the PPA Cap 286

The plan-making process under the new Physical Planning Act has changed greatly with the Director of Physical Planning exercising a more active role than before the Act. The procedure of plan making can be summarized in three broad categories as follows:

4.4.1 Authority to prepare Physical Development Plans

The initiative to prepare Physical Development Plans originates from various authorities depending on the type and purpose of the plans to be prepared. These authorities are:

(a) The Director of Physical Planning.

The Director of Physical Planning or the District Planning Officer is mandated to initiate the preparation of any plan in consultation with the Local Authorities concerned and other relevant stakeholders.

(b) Local Authorities.

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.

(c) The Commissioner of Lands.

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.

(d) 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 in areas where 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 endeavours.

(e) Local Communities.

Local communities through community based organizations, NGOs, land-owning companies, cooperative societies and individual land owners can initiate the process of land preparation either as advisory plans or land subdivision schemes. It should be noted that 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.

4.4.1.1 Plan Preparation

The process and the actual activities of plan preparation must be, all-inclusive. Hence, before embarking on the preparation of any physical development plan, it is imperative that all stakeholders are identified and brought on board irrespective of who is initiating the preparation of the plan. If the initiative has emanated from the Local Authority or any other stakeholder, it will be the responsibility of the initiator to notify the Director of Physical Planning/District Physical Planning Officer and other stakeholders. Similarly, if the Director of Physical Planning/District Physical Planning

Office has initiated the Plan preparation process the stakeholders should be notified and their participation invited by the Physical Planner who should:

- a) Notify the Local Authority and local residents in writing of the specific area to be planned, scope, purpose and objectives of the plan.
- b) Copy the written notice and send it to the Director of Physical Planning.
- c) Have another copy of the notice posted on the notice board of the Local Authorities and the Chief's Office indicating any intended meetings, public or otherwise.
- d) Have other copies of the notice published at least in two local dailies- one in English, another in Swahili languages.
- e) Record, discuss and file any representations, comments or objectives from any stakeholders whether the communication comes in writing, orally as say in public baraza or any other way.

4.4.1.2 Plan Publicity

On completion of the plan preparation, the Director of Physical Planning/ District Physical Planning Officer in consultation with the Local Authority are expected to:

- i) Submit the plan together with the technical report to the Director of Physical Planning.
- ii) Circulate the plan to all members of the District/ Municipal Physical Planning Liaison Committee and other relevant authorities who may not be members to the Liaison Committee. Comments from these authorities on the plan circulated to them should touch on the following pertinent issues:
 - Suitability of the plan and it's various provisions.
 - Compatibility of the various land use proposals.
 - Adequacy of services provided.
 - Safety and the aesthetics of the area.
 - The economy and efficiency considerations.
 - Compliance with special conditions set out in the title or grant of the land parcel or plot by the Commissioner of Lands.
- (iii) Arrange to publish notice of completion of the plan in two daily papers one in English and another in Kiswahili language using Form PPA 3.

(iv) Put up the same notice at public places, preferably at the notice board of the District Commissioner's office, Chief's office and Local Authorities office.

The cost of publication of part development plans relating to land alienation will be borne by intended beneficiaries while the cost of publication of Regional Development plans, Structure Plans, etc will be shared out between the Director of Physical Planning and the relevant Local Authority.

(v) Representations or objectives arising out of circulation and publication of the plan should be well considered for accommodation and if not accommodated, the District Physical Planning Officer should within thirty (30) days of receipt of the same notify the petitioner in writing of the reasons for the decline.

4.4.1.3 Submission of Plans for Approval.

If after the expiration of sixty (60) days no objections or advance representations will have been received by the Director of Physical Planning /District Physical Planning Officer, or such comments have been received but the planner does not consider them serious enough to halt the processing of the land further, or if the planner has been able to accommodate such representations adequately, the Planner should submit the plan together with the relevant write-ups in five copies to the Director for his certification before it is presented to the Minister for approval.

The plan submitted to the Director of Physical Planning for certification should be accompanied with:

- An indication of the authority or decision to plan e.g. minutes of District Plot Allocation Committee, requisition by the local authority, planner's own decision, etc.
- A copy of the notice to the Local Authority and other stakeholders inviting their participation in the plan preparation process.
- All comments received from other authorities to which the plan was circulated to, if any.
- Copies of the notices published in both the Kenya Gazette and the two daily papers.
- Copies of representations or objectives received from members of the public and other stakeholders.

Failure by the public and /or all the authorities to whom the plan is circulated to send their comments or objections even after proper circulation and publication cannot stop the District Physical Planning Officer from submitting the plan for approval.

Upon certification of the plan by the Director, three print copies of the plan will be forwarded to the Minister for approval.

4.4.2 Handling of development control matters

Development control as a process is the implementation and monitoring of compliance with physical Development Plan Provisions, regulations, policies and strategies. The step-by-step procedure of handling development control issues in as far as development applications are concerned under the provisions of the Physical Planning Act is as follows:

(a) All development applications should be made and submitted in triplicate on Form PPA 1 and submitted to the relevant local authority.

(b) Development applications on subdivision/change of user must be;

- Accompanied by a plan duly prepared as provided by the Land Control Regulations Section 2(2) and the Physical Planning Act Section 41(2).
- Development applications involving building plans should have the drawings and specifications prepared by a registered architect.

(c) The local authority on receipt of the development application, shall immediately or within 30 days send a copy of the development application on Form PPA 1 to the Director of Physical Planning /District Physical Planner and other relevant authorities in the District for comments, among them the District Land Officer, District Surveyor e.t.c.

(d) The physical Planner on receipt of the said copy (Form PPA1) shall collect Appropriation in Aid (AIA) and consider and process the application and enter the required information in the subdivision register. The Physical Planner then sends it back to the Local Authority with his comments. Other authorities do likewise.

(e) The Local Authority shall process the application by making the decision whether to approve or not approve the development through Form PPA 2. This decision should be communicated in writing to the applicant within 30 days of the decision being made after considering comments from the District Physical Planning Officer and Other relevant authorities.

(f) One of the conditions to be attached to approval of any application for permission to develop is the issuance of Form PPA 5 (Certificate of Compliance) by the District Physical Planning Officer. This certificate will only be issued when the applicant has fulfilled all the conditions attached to the approval as indicated on Form PPA 2 and/or when the applicant has carried out his development in accordance with the approved Physical Development Plan and the approved development proposal.

(g) On approval of any application for development permission, the Local Authority will issue notification to that effect on Form PPA 2 addressed to the applicant and copied to all relevant authorities and other stakeholders.

(h) In the case of subdivisions/amalgamations, the applicant will furnish the surveyor with Land Control Board Consent and Form PPA 2 together with the approved subdivision scheme, who will then prepare the mutations/ survey plans. The District Physical Planning Officer will issue Form PPA 5(Certificate of Compliance) if satisfied that the survey plan/mutations are in accordance with the approved scheme.

(i)The Land Registrar shall be furnished with (i), Land Control Board Consent (ii), Form PPA 2 (iii), Form PPA 5 and (iv), copy of approved subdivision/amalgamation scheme before he can register any document related to subdivision /amalgamation of freehold land (Section 37).

(j) All applications for development permission relating to leasehold land be it for subdivision/amalgamation, extension of lease, change of user or building plans shall be circulated to the Commissioner of Lands /District Lands Officer for consent or comments before approval by the Local Authority. Once approval for such application is granted, the Local Authority will communicate this decision to the Commissioner of Lands / District Lands Officer through Form PPA 2 to enable the Commissioner of Lands to effect the necessary documentation as required under relevant laws.

As part of the process of integrating environmental considerations in the development control practice, proper guidelines are necessary for effective application of the provisions of section 36 of the Physical Planning Act. It is the responsibility of the District Physical Planners and respective Local Authorities to demand for preparation and subdivision of an EIA report by the applicants for development permission on any applications for development on any applications relating to the following types of development.

- Proposed settlement in Forested areas.
- Medium to high-density industrial developments.
- Any residential, industrial, hotel and commercial developments falling within (30) thirty metres of high meter marks, riparian reserves and forest edges.
- Dumping sites, whether private or designated municipal sites.
- Sewerage treatment works and water dams.
- Quarries and stone crushing plants.

In the study area, the provisions of this relatively new Act are yet to be felt. This is explained by the fact that this community has for a long time been deciding what to do with their land with minimal interference. The market forces have produced a cluster of land types and development qualities which are contradictory to the Act.

4.5 Urbanization Policies.

Urbanization policies started in a rudimentary form between 1900's and the 1950's when decisions were made by the colonial government to locate periodic markets, trading centers and urban centers in various parts of the country (Obudho 1981 and 1993 :Owuor 1995). In the 1950's, four plans were introduced that altered the cultural and economic landscape of the nation.

First, the Troupe Report, which focused on the problems of farming in the white highlands. It recommended that to avert these problems there should be an increase in European immigration and settlement (Kenya, 1955). Second, the F.W. Carpenter report of 1954 that was primarily concerned with urban wages and proposed the policy of stabilization of urban wages through collective bargaining (Carpenter 1954). Third, the Swynnerton Plan that dealt with the problems of Agriculture in African areas (Swynnerton 1954), and lastly the Royal East African Commission whose aim was to identify the causes, conditions and trends of overpopulation in the urban areas.

The first National Development Plan (NDP) 1966-1970 did not represent any urban planning strategy different from the colonial strategies of the 1950's. Instead its major focus was on land reform in the "White Highlands". This was a period of centralist policies emphasizing agriculture and rural activities. The first explicitly national urban

policy was seen in the 2nd National Development Plan (1970-1974). The strategy 'selective concentration' as opposed to the 'concentrated' development was adopted by GOK. The plan advocated for the continued expansion of Kenya's largest urban centers and designated seven other urban centers as growth centers. The plan also elaborated a four-level hierarchy of service centers totalling 1600 (Government of Kenya).

In the third National Development Plan (1974-1978), the strategy was renamed 'urbanization policy' which emphasized on slowing down the rate of rural to urban migration by achieving maximum development of rural areas. This was to check the excessive concentration of population in Nairobi and Mombasa by encouraging the expansion of small and intermediate urban centers.

The fourth National Development Plan (1979-1983) took its themes as the alleviation of poverty renaming the urbanization policy as a strategy for rural-urban balance. This aimed at improving rural access to services such as health and education. An investment allowance was introduced to include new industries to locate outside the two large urban centers.

The 5th National Development Plan (1984-1988) was a replica of the previous plan as far as other centers were concerned. The urbanization policy was to later work side by side with the District Focus for Rural Development Strategy (DFRD), which was basically a decentralization policy.

The 6th National Development Plan (1989-1993) was guided by the need for rural-urban balance, having the twin aim of guiding urbanization in bigger urban centres while ensuring that such increases occurred in small urban centers. The plan in essence reiterated regional equity as expressed in the fourth and fifth plans. The 7th National Development Plan (1994-1996) also expressed the need for regional equity through the development of smaller urban centers while the current 8th National Development Plan (1997-2001) seems to have gone a step further with its emphasis on industrialization by the year 2020, associating industries with urban centers.

In the context of this policy, the study area emerges as an appendage to the city of Nairobi with no clear balance between the rural and the urbanizing environment. It is apparent that the policies that had been put in place to check the growth of the city of Nairobi have not had the desired effect. For instance, development has leapfrogged the Ngong Road Forest that was a green belt separating Nairobi from the Ngong countryside, and is continuing unchecked in the study area.

4.6 Land Policy

A land policy is defined as a set of socio-economic, legal, technical, and political measures that dictate the manner in which land and benefits accruing from land are allocated, distributed and utilized (Kivelli, 1993 Pp 124). The normal purpose of land policy is to control land development either in the sense of shaping land use patterns, or in the broader sense of ensuring a degree of fairness and redistribution of the gains to be made. Bureaucratic processes of land policy and legal development have a long history in Kenya. There is a long list of policy papers going back to the 1930s that attests to the use of this modality. Okoth Ogendo (1998) notes that *"the overriding concern in contemporary land policy appears to be the need to formulate a macro-level policy framework and complementary programmes about land its ownership, distribution, utilization, alienability, management and control"*.

Policy papers in Kenya during the colonial era include the following,

- Ormsby-Gore Commission 1925-25. This commission noted with concern the existence of insecurity and restlessness within the African reserves, which had been created by the East African (Lands) Order in council in 1901. This commission noted the sense of grievance among Africans over the land question, and took into account the social conditions of Africans, treatment of African labour and the incidence of African taxation. The commission stated *"There is probably no subject which agitates the native mind today more continuously than the question of their rights to land"* (Huxley 1935, Pp224-225).
- Hilton Young commission 1927-1929 which suggested some accommodation on the above mentioned question through some form of authoritative definition of reserve boundaries. The first legislative instrument relating to

reserves- The Native Land Trust Ordinance was later passed as a result of this commission report.

- Carter Commission (Kenya Land Commission) 1930 whose recommendations were to strengthen farther the settler community in the highlands. It recommended that Africans had little claim over much of the land in the highlands and that it was necessary to give a final and secure assurance to the Europeans that their “highlands” would remain inviolable. This meant that political security for the settlers was bound up with the political destiny of the African people.
- Swynnerton plan (1954). When the Mau-Mau revolution exploded in 1952, it became clear that the land issue could no longer be ignored. In a plan authorized by one R.J.M. Swynnerton and published in 1954, the colonial government argued that the issue of accessibility of land was essentially one of tenure and technology of production. The plan argued, inter alia, that if these two strategies were adopted, Africans would be able to make sufficient returns on their small plots to abandon their demand for redistribution of European held land.
- The East Africa Royal Commission of 1955, which endorsed the economic arguments for tenure reform and also argued that the future stability of the country depended upon the drastic definition of land policy in Kenya. It recommended a basically multi-racial approach was the most logical course of action. Upon these assurances, individualization of tenure became a national policy.

Since then, Commissions, Task forces and investigations have been used in land policy development on many occasions. Perhaps the admission by the Government of Kenya in the 1994-1996 NDP that *“there has not been a well coordinated land management policy with regards to various uses”* (Pp 101 paragraph 6.7), summarizes the state of affairs as they stand today. This admission came in the wake of the 1989-1993 National Development Plan, which noted that land issues *“exhibit a high degree of sensitivity and complexity in Kenya”*(Pp 130). The plan proposed, *“the*

government will set up an independent Land Use Commission to review questions related to land”(Ibid).

It is worth noting that this Commission only took off two years ago in November 1999, when a Presidential Commission was appointed to review the whole system of land policy and law, with the intention of recommending a new legislative and institutional framework, including the incorporation of customary tenure into statute law. The Commission popularised as the Njonjo Commission is still on going but should be commended at this stage for the methodology adopted – that of popular participation.

Kenya does not therefore of necessity have a clearly defined national policy that spells out the relationship between the people, the state and the land. Instead, aspects of land policy are currently found in various sections of the constitution of Kenya, Presidential decrees, administrative circulars, Sessional papers and various National Development Plans. However, there exists a number of tools, tactics, routines or techniques used in land policy some of which are summarized in **Table 4.1**.

Table 4.1 Various Techniques used as Land policies

Tactic /Routine	Objectives	Legislation	Current practice
1. Land banking	Create reserves of cheap land. Control land values. Control supply of land for housing.	Local Government Act Land Acquisition Act	Piecemeal accumulation for specific projects
2. Rating	Raise revenue	Rating Act	Rating based on market value of unimproved site
3. Development levy	Revenue raising Control rate of development	Physical Planning Act	Development application upon subdivision change of user, etc.
4. Land use zoning	Regulate use of land, control urban growth, control travel demand, and regulate supply of housing.	Physical Planning Act Local Government Act	Preparation of physical development plans delineating zones
5. Density zoning	Prevention of overcrowding.	Public Health Act Building by-laws Physical Planning Act, Registered Land Act, LGA, LCA	Plot ratio, site coverage, height restriction, minimum plot size, maximum, number of dwellings.
6. Building control	Ensure safety Reduce fire hazards Establish space standards Establish minimum sanitation standards	Building by-laws grade I & II	
7. Development control	Regulate type and density of development Aesthetic control Maintain health and safety standards Protect environment Control land values	Physical Planning Act Local Government Act Public Health Act Building by-laws	Planning permission and approval. Enforcement Planning inspection by various experts.
8. Sub-division control	Control densities Enforce space standards Enforce servicing standards	Physical Planning Act Registered Land Act Street adoption act	Subdivision applications. Survey Registration and planning
9. Physical planning	Provide orderly basis for urban development. Improve quality of life. Protect environment	Physical Planning Act Local Government Act Building by-laws	Preparation of various development plans

Source: As cited in Yahya 1987 Pp

A Kenyan scholar, Professor Yahya(1976) observed wryly that these formal measures were far removed from reality and in their place were unorthodox tactics/policies peculiar to Kenya as a country which influence the prevailing practice. He categorized the popular ones as:

- Big Fish syndrome- a big fish being an imaginary or real influential person who uses his power in a clandestine or ‘fishy’ manner. He is regarded as wealthy, powerful and unscrupulous who easily influences decisions on matters related to land.
- Grabbing-which in Kenya means, amassing land for speculative and sale purposes or in short the scramble for material wealth. A ceiling on the amount of land owned has been called for since independence but to no avail.
- Scapegoating- implying that others are used as scapegoats when things go wrong. This is especially true with our Local Authorities who always blame their incapacities on the lack of autonomy from the central government. Lately, in Kenya every single problem is blamed on the “economy”.
- Violence-intimidation and violence are morally wrong but have been used in policy-making on land issues in Kenya. The tribal clashes are a painful reminder of how violence can and has been policy instrument in the past years albeit, an ugly one.
- Sabotaging-frustrating somebody’ plans or projects to consolidate one’s own position so as to extend the sphere of influence. This one is a favourite with politicians and more often the battleground is land and related matters.
- Conspicuous nation building simply stated, it refers to a situation where development must not only take place but must be seen to be taking place. The more conspicuous the letters of allotments are issued to slum dwellers and squatters alike, the greater the political mileage.

A concept emerging is that land policy is influenced by non-conventional policies, which are really political or power-related. This informal processes and attitudes form an important input into policy-making. And this trend has not been spared from the study area. Indeed with the growing demand for urban land, both the political and prevailing land policies are simultaneously being used to allocate land as a resource,

sometimes with positive and on other occasions with negative results as will be shown later in the study.

4.8 Summary

From the above discussions, what emerges is that Kenya seems to have adequate legal and policy framework to guide urban development. What is evidently lacking is the ability to coordinate all agencies and institutions involved one way or another in planning issues. Lack of coordination and networking among the various stakeholders whose activities impact on the configuration of land use is apparently missing with the result that the coordinating institutions have not been able to grasp the dynamic nature of the urban fringe problems and the need for an integrated approach in solutions that they offer.

There is also the issue of multiplicity of scattered pieces of legislation dealing with planning, enforced by different government institutions, some of which have no planning capacity. At present, government land use policies are little more than an aggregate of unrelated and often conflicting decisions made by single purpose agencies, local and regional governments and private individuals. All this leads to conflict of interest. At the same time, some planning institutions are defined by legislation, which limit their powers, and authorities, in this case the Land Control Boards. There is also institutional inertia due to neglect by the government coupled with lack of innovative abilities to respond to political and dynamic socio-economic demands.

Lack of an explicit land use policy in Kenya as a whole means that there is no clear direction on how to control unrestricted growth at the fringe. All these factors combine in a show of the failure of the planning system to capture both the speed and directions of urban growth, more so in the study area.

CHAPTER FIVE.

PLANNING CHALLENGES IN THE STUDY AREA.

5.0 Introduction.

From the foregoing chapters, in which an attempt has been made to introduce the study area, this chapter goes further to evaluate the study objectives against research findings. It is based on the premise that, urbanization as a force has brought about various changes in the use and control of land in the study area. Emphasis is placed on the field findings and observations made. An analysis of these findings is drawn out in graphics, photography and general discussions. This it is hoped will steer the study towards recommendations.

5.1. General Growth Pattern.

The general growth pattern is characterized by urbanized areas of Ngong, Ongata Rongai, Matasia, Kiserian and Nkoroi lying as pearls on a string in a curved ribbon structure with the ribbon representing the road network while the pearls represent the development nodes as shown in the figure below. The overall structure is strengthened by the on-going densification of rural areas in between and adjacent to the urban centers in a pattern that is similar to in-filling. Such areas are Olepolos, Oloolua, Olkeri and Kerarapon. Slightly out of line in this overall structure are Olkeri and Kerarapon.

The urban and rural areas are interdependent on each other in many aspects socially, economically and ecologically. The Ngong hills act as a physical barrier to further development to the southwest, whereas Oloolua and Ngong Road Forest block further development to the north. To the west are expansive institutional lands belonging to the Ministry of Agriculture and Rural Development. This leaves the eastern side of Ongata Rongai and Kiserian where settlement patterns have been spurred on by spontaneous sub-divisions on either side of Magadi Road. Ongata Rongai, which in Maasai language refers to an open plain, has registered more human settlement due to its spatial characteristic.

The existing settlement structure forms a basis for a planning exercise but is beset by several challenges some of which are discussed below.

5.2. Rampant Land Sub-divisions.

Land sub-division in the Ngong area is a phenomenon that has been spurred on by rapid urbanization. It has a long history brought on by Group Ranch sub-divisions in the area. Ngong division had five group ranches and 78 individual ranches covering 129,314 ha of land. Due to high numbers of members, these ranches were subdivided to individuals leading to small parcels of 10.60ha. With Nairobi only 17km away, the stage was set for further sub-divisions.

The sub-division trends over the years show that the land parcels are getting smaller and smaller with 0.25acre plots currently featuring the most with some going to as little as 0.005 acres. The Land control Board on the other hand which is meant to control subdivisions in agricultural, among other transactions, allows for subdivisions upto ¼ an acre on individual land lots while a minimum of 5 acres has been accepted for those within ranches. Table 5 shows the subdivision trends over the last ten years.

Table 5.0 Trend of land sub-divisions in study area over the years

Year	Total number of sub-divisions registered.	Most recurrent land size in acres.	Change of user applications.
1987	989	1 acre	-
1990	1103	0.5	8
1992	3278	0.5	11
1995	2015	0.25	13
1997	1171	0.25	-
1999	1469	0.25	32
2000.	634	0.25	9
2002	960	0.25	15

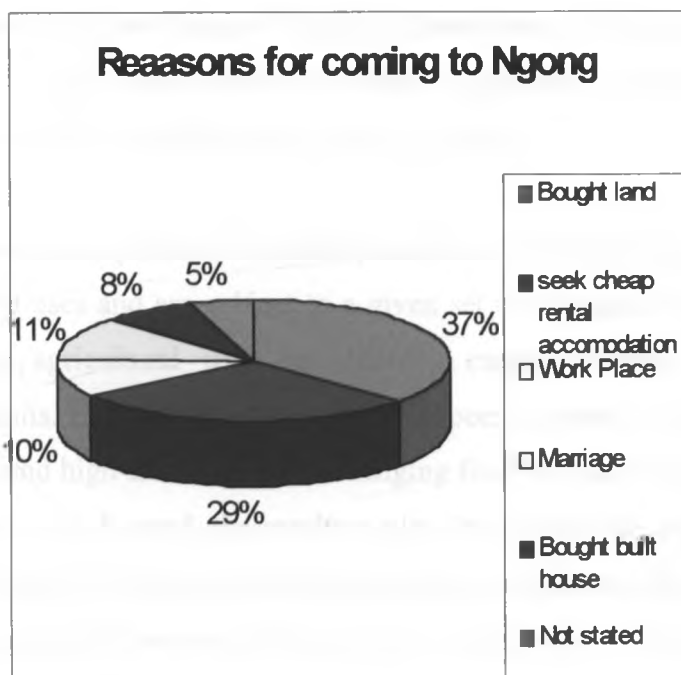
Source; Field Survey 2002 Kajiado Lands Registry-.

If this trend is to continue over the next, years then we envisage an area that will have as its maximum land area as 1/8 an acre or less. Yet the user remains agricultural when it is evident that such small parcels cannot adequately serve as agricultural parcels.

There is need to put a ceiling on further sub-divisions of land in the area for the sake of posterity. What happens to these sub-divisions when they have outlived their economic or useful life? One suspects that our grand children will have some extremely unkind thoughts towards us for having left them with a monstrous problem so difficult to solve.

It is also realized from the field survey that the reason for this sub-division is the demand for land in Ngong by Nairobi residents, who use the land for residential functions. Of the 79 respondents, 37% had come to stay in Ngong because they had bought land to build while only 10% had Ngong as their working place

Figure 5.1.



Source: Field Survey 2002

Sub-divisions are deemed a development process on land, which causes material change in its use. The resultant land sizes do not convey scales of harmony, order, townscape and visual order.

The planning challenges are evident in the plot shapes. Irregular plot shapes are a common feature as illustrated in areas marked red. The efficiency and convenience of providing services to such plots is compromised by their spatial characteristics. Sub-divisions in Ngong area have also been difficult to control because of their sheer numbers, which have overwhelmed both the Survey and Physical Planning Department in that they lack technical and professional capacities to record and capture their speed. As a result, even the registry Index Maps are not representative of what is actually on the ground.

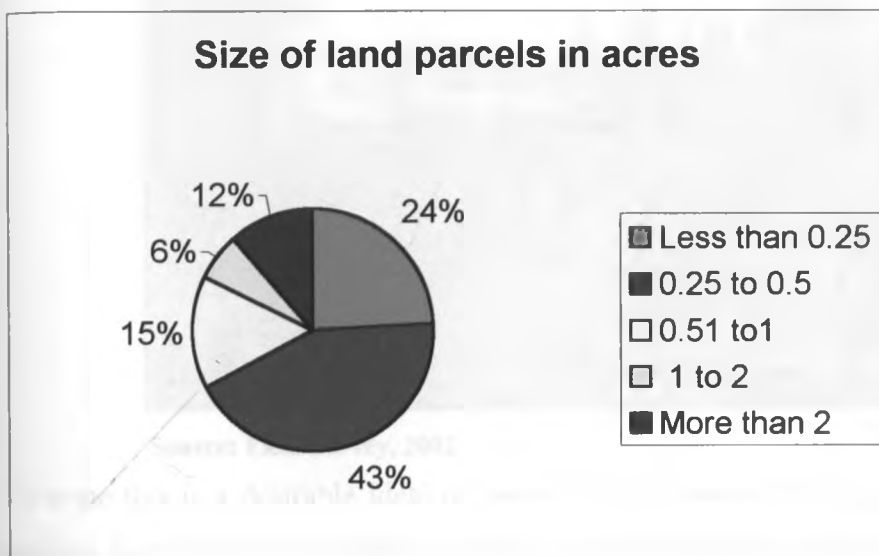
5.2.1 Resultant Land Sizes.

The demand for land in the study area has given rise to interesting plot sizes. The resultant sub-plots can no longer be treated as agricultural plots as they are in essence residential plots. The field survey showed that the most common plot size is in the range of 0.25 to half an acre registering a 42.9% occurrence while 24% represented those below 0.25 acres. It is interesting to note that these sub-divisions of agricultural land into residential users has not been accompanied by a corresponding change of user applications in the Physical Planning Department at Kajiado-as shown in Table 5.0. The 0.25 acres plots therefore remain agricultural parcels. This has several implications on the use and control of land in Ngong.

First residential uses plots are essentially urban land functions representing about 60% of urban land uses and are subject to a given set of standards. In Ngong, urban land uses remain agricultural uses and thereby escape controls expected of urban residential units. Break down of the control process is seen in the emergence of slum settlements, and high-income earners changing from one use to another irrespective of what the law says. Second, the resultant plot shapes beat the logic of having regular residential shapes. Some of the plots have been subdivided in thin strips up to the river with the aim of assuring that everyone enjoys the river frontage. It is therefore common to find a plot that is 8 metres by 300 metres. Shapes that are longitudinal in nature do not provide the required plot width/depth ratio, which postulates that there should be at least a ratio of 1 to 4.5 metres. Ratios in the study area are around 1 to 10. A conflict arises in the sense that whereas $\frac{1}{4}$ an acre is ideal for residential purposes, it is unsuitable for agricultural purposes.

There has been a tendency by Ngong residents to make financial gains out of these two functions, by having both activities side by side, a factor which brings in the question of optimality. What is the highest and best of land in the area? The emerging scenario and most likely trend is that the agricultural function will soon be overtaken by the residential function, as rental units are constructed to trap the Nairobi tenant. It is the planner's duty and responsibility to capture this scenario and put measures in readiness for this eventuality.

Figure 5.5



Source; Field Survey 2002

5.2.2. Individual Plot Development.

The individual plot development in Ngong is as varied as the individual owners. It is also influenced by a number of factors all interrelated in one way or another. That the majority of residents work in Nairobi has significant bearing on land use patterns. Those with higher incomes have invested heavily in ultra-modern complexes. This is a group who persuade themselves that they are "a miniature feudal lords" on their private lots. They have a natural and eager desire to express their individuality and pride of ownership of land.

Then we have the indigenous landowners with a simple rural house improved by sales of land over the years. The other group squat in illegal settlements in areas like Bulbul, Mathare and Gichagi. Not to be outdone are the pastrolists Maasais all going about their businesses in this rapidly changing scenario. Also notable are vacant land

parcels, which are held for speculative purposes thereby encouraging leapfrog development and in some very few areas, grazing grounds. The result is a seemingly vibrant competition of land uses in the study area.

Plate 5 showing individual plot developments. Contrast the opulent house with the humbler house in the foreground



Source: Field Survey, 2002

To some this is a desirable ideal of variety. To a planner this becomes a nightmare because such pride in ownership assumes an almost religious importance with neither party willing to relinquish a part of their 'small corner' for the sake of creating harmony. Aesthetic anarchy is a feature commonly diagnosed in Ngong. It is wrong to assume that this urban development will automatically arrange itself into surrounding areas in an efficient and orderly manner. There is need for intervention through the planning function, yet this is not happening in the Ngong area. The area has emerged into an haphazard arrangement of individual units over space.

5.2.3 Land Values.

It is not possible to cover the whole field of land values in the study area in an adequate way. The issue of land values is only discussed in the light of how they affect the planning function. Ngong has been referred to as the real estate broker's paradise. Values tend to vary from area to area but the average value of $\frac{1}{4}$ an acre is Kshs450, 000/= . This has progressed rapidly over the years with a similar acreage costing around 90,000 in 1991, to 150,000/= in 1996. In some places like Olepolos which has attracted the wealthier members of society, this figure ranges between

600,000/= to 750,000/= per ¼ acre. Fortunes await those of great persuasion, fortitude and stamina who can convince a prospective buyer.

While recognizing that land has a propensity to appreciate in value, the land values in Ngong show a peculiar sharp rise in the period between 1991-1996. This corresponds to the field survey observation that this was the period in which the highest number of immigrants to the area was recorded. A Land Valuation Officer in the Ministry of Lands made the observation that "*Ngong is still very active in property sales despite the depressed economy*"(Kajiado Valuation File, Folio 444, MOL 2002). When asked which year the respondents came to Ngong, it was revealed that 52% came to the study area between 1990 and 2000.

The planning challenge has been the speculative nature of land transactions, which have tended to multiply land values. A lot of land is often left idle awaiting capital accumulation in the future. Speculation is particularly disturbing because there are no taxes on idle land in the area as yet.

Lawyers specializing in land transactions seek out landowners in preferred zones and negotiate high profitable agreements allowing them to take charge of the sub-division process. Heavy representation by lawyers is also visible at the Ngong Land Control Board. When the land sub-division process is left to the Kenyan lawyer whose reputation is questionable then compromises in controls of land are incorporated at the very early stages of land development.

This perhaps explains why the lawyer is a popular professional sought in land transactions. The field survey indicates that 11.4% of respondents agreed that they consult a lawyer when it comes to land matters while 32.9% consult a surveyor. 10.1% respondents consult property agents. The interesting phenomenon is that 34.2% of the respondents stated that they consult no one. The researcher's conversations with real estate brokers suggest that they were pleased with the low levels of controls exercised by the Olkejuado County Council. It is obvious that the free market reigns supreme in the study area. The effects of a real free open market can be disastrous because it entails the elimination of restrictions on the size of ownership, elimination

of price restrictions, land use restriction, which all act in favour of the rich. The planner's attempts redistributing resources is hampered by this kind of development.

5.3 Land Tenure.

Land tenure refers to the collection of rights, which influence ownership, and management of land. Land tenure in Ngong falls within two categories-private and public. Within these two broad tenure systems, there exist a number of sub-tenure arrangements. Virtually all-private land in the peri-urban area of Ngong is held under freehold under the Registered Land Act (RLA Cap 300). The field survey attests to this with 48 % being freehold owners while 30.3 % were leaseholds and 19.3 % under customary law.

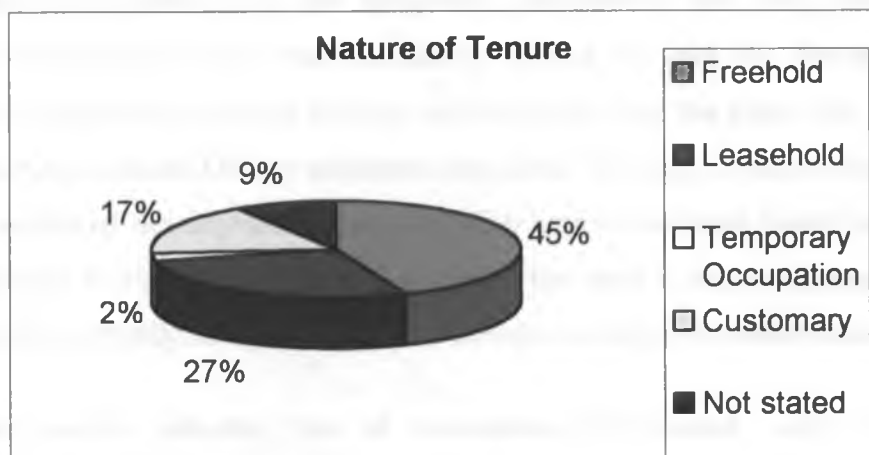
The freehold interest confers upon the landowner wide powers in the "quiet enjoyment" of his/her property. The title is held in perpetuity and has no attached conditions unlike leaseholds. It is this factor that has accelerated the urbanization process in Ngong and land has been easily released for urban development. Indeed the assumption that freehold land implies "free playfield" is echoed in the number of respondents who ever sought development permission for buildings on their land. The field survey shows that 64.6% of respondents did not have any development permission, while a paltry 7.6% represent those who had development permission.

The Physical Planning Act under section 2 states that the Act "*shall apply to all parts of the country*"-whether freehold or not. Consequently all areas are subject to the planning function unlike the popular belief that the freehold landowners are not subject to any restriction. The planning challenge here is how to fill this knowledge gap so that freehold landowners are sensitised on the need for planning control so that when intervention does actually occur, they are not in for surprises.

On the other hand, Olkejuado County Council has large tracts of land under the Trust Land Act. In chapter three, it was realized that Trust lands are held by county councils in trust for the community. This sort of tenure has been subject to abuse in the Ngong Area with County Council officials allocating themselves and interested parties such pieces of land. The administrative officer in the Olkejuado County Council revealed

that up to 2000 acres of land in the study area have been allocated using this instrument of setting apart. When it comes to assisting those who really own and need title to the land, severe administrative bottlenecks are cited.

Figure 5.6



Source: Field survey, 2002

The researcher came across a pathetic case of an elderly widow who had not obtained title to the piece of land she has been staying on for the last 30 years. She has variously been referred to Kajiado, the district headquarters, and on to Nakuru, the provincial headquarters with no satisfactory help. This serves to prove that the balance of planning decisions often swings to favour those who know the rules of the game and the stakes for which it is being played. The beneficiaries are of course those with political clout or economic power. This is a nation wide phenomena in all local authorities in Kenya but in Ngong, tends to be accelerated by the demand for land near the capital city of Nairobi. Consequently, social inequity has set in with rising landlessness living side by side with land accumulation. When most of the land is in the hands of a few wealthy and powerful, then the planning function is often hijacked by the private interest.

5.4 Loss of Agricultural Land.

As land is converted to new developments and farming land is lost, the role of agriculture in the study area economy and in the provision of livelihoods becomes increasingly marginalized, despite its potential for horticulture and food crops.

All the above developments have had great impact on agricultural land in Ngong Division. It is important to note that Ngong is one of the two areas in Kajiado District

together with Loitokitok with an agro-ecological zone with favourable climatic zone. Agricultural activities in the District are thus restricted to these two areas; with the rest of the District being arid and semi-arid. Increased population and migration has exerted pressure on valuable agricultural land. With the promise of higher returns from land sub-division sales, the indigenous landowners have sold their land to Nairobi residents who have not necessarily carried on with the former farming practices. Agricultural land has reduced tremendously over the years and the Ngong Divisional Agricultural Officer estimates that about 100 acres of agricultural land is lost to residential developments annually. With agricultural land based presently at 4067 hectares in Ngong location, and assuming the trend is set to continue, then by the year 2045 virtually all agricultural land will have been lost to urban developments.

The field survey indicates that of respondents interviewed, only 25.3% had agricultural activity on their farm but even this was alongside residential activity while 54.4 % had residential activities on their land.

Plate 6 showing that agriculture has been reduced to backyard gardening



Source: Field Survey, 2002

With 0.25 acre as the average land size, agricultural activities have been reduced to kitchen gardening and zero grazing. Farm sizes larger than one (1) acre have a high cropping index of around 250% (Divisional Agriculture Office, Ngong) indicating that double cropping is common. There is also a widespread use of agrochemicals as fertilisers and pesticides especially along riverbeds where intensive agriculture and

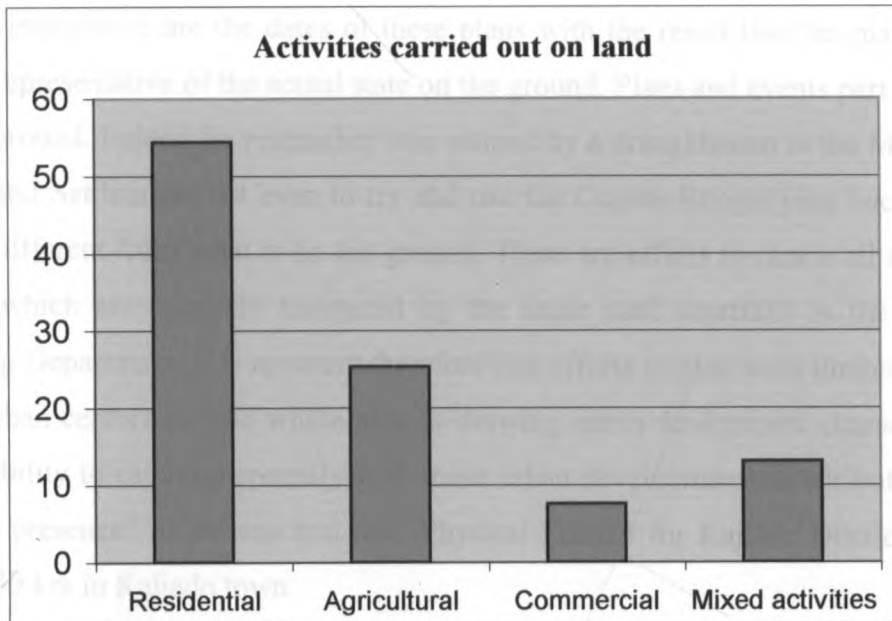
lately horticulture is practiced interfering with the underground water quality. This is more so the case in Kerarapon and Kiserian.

The immediate and longer term consequences of all the above are to reduce soil fertility, increase soil contamination, decrease the safety of food products, reduce productivity and hence erode the potential of a basic resource of livelihoods for the poor of the Ngong peri-urban fringe. The loss of fertile land and the fact that agriculture is perceived as unattractive and not profitable can also explain the tendency for more and more people - especially young people - to resort to the urban labour market. Changes in food self-sufficiency have also been recorded with increased dependence on the market for staple food crops. Only a small minority of farmers is actually able to take advantage of the opportunities created by the proximity of the urban market; the majority can have access to such opportunities only in the rare event of production surpluses. Farmers receive only the value of their standing crop. In addition to this, as the city approaches villages, land prices and rents rise. Indicators such as growing unemployment, homelessness, and landlessness are a sign that the changes to the environment in the study area have so far been a cause of increased vulnerability for the poor, rather than a potential created by the proximity of the city.

The farms are also overstocked given that the carrying capacity for grade dairy cows is 0.25 hectares per livestock unit. With an average of 2 livestock units per household, on-farm nappier grass seldom meets demand, and fodder is often bought from elsewhere. The strange phenomenon in this is that fodder is often sold to Ngong farmers from Nairobi along Langata road. Principles of sustainability suggest reliance on locally produced goods.

Although it is not the responsibility of councils to engage in direct support of the agricultural sector, some activities can be undertaken to encourage its development. The study area cannot claim to be particularly "sustainable" if most of its food comes from outside. There is need for the council to identify under which office the coordination and implementation of urban agriculture should be placed because it seems that the current practice. All this bring in the issue of dwindling food resources

thereby spurring on food security problems in study area and by extension to the entire district Overall, the increases in land development activity have led to a transfer of resources from the poor (farmers) to the rich. This is because funds from land sales are not always redistributed or reinvested in agricultural activity.



Source: Field Survey, 2002

On the other hand, there is no grazing plan for the area as no attempt has been made to establish carrying capacity and stocking rates over the years. Increasingly commercial criteria are being adopted in disposing of communal land, with little or no consultation with the locals. This not only undermines traditional values - on which social cohesion in the area has been historically based - but also entails consequences such as open defiance and antagonism between various groups of people. Conflict therefore arises between the agriculturalist, the Maasai pastoralist and the urban settlements.

5.5 Existing Spatial Framework

The study area has only three approved Physical Developments

- Ngong Town Development Plan
- Ongata Rongai Development Plan
- Kiserian Development Plan

Of key importance are the dates of these plans with the result that the plans are no longer representative of the actual state on the ground. Plans and events part company on the ground. Indeed the researcher was warned by a draughtsman in the Ministry of Lands and Settlement, not even to try and use the Ongata Rongai plan because it is totally different from what is on the ground. There are efforts to renew all the plans, efforts which are currently hampered by the acute staff shortfalls in the Physical Planning Department. It is apparent therefore that efforts to plan were limited to these three urban centers yet the whole area is showing urban development characteristics. The inability to catch up spatially with these urban developments is attributed to the “distant presence” of the one and only Physical Planner for Kajiado District located some 140 km in Kajiado town.

It may also be the reason for the current efforts by the Department of Physical Planning to prepare a zonal Plan for the Ngong area from the Nairobi office. It is hoped that this zone plan will bring some sense of spatial sanity in the Ngong area, albeit, a bit too late.

A scheduled interview with the Physical Planning Officer in charge of the Forward Planning Section and the one spearheading this exercise revealed that the need for a zonal plan arose from the rapid urbanization the area is experiencing manifesting itself in random sub-divisions. Their target is to zone Ngong into a residential area with the usual high density, low density and medium density delineations. A tentative zone schedule derived for the area is shown in Appendix D.

The planning function in Ngong is also beleaguered by an acute shortage of spatial information. The lack of a good cadastral, registration and tenure record is a serious constraint in monitoring urban growth in this area. The formal system that currently exists was formed at a period of slow urban growth, but now urbanization has brought

in an increasing volume of land transactions and changes in land use. There are no land records at Ngong lands Office which is basically the Land Control board office and one has to travel all the way to Kajiado town to do a search. While a land registry is found at Kajiado, the Registry index maps are available only in Ruaraka Nairobi, whereas some of the titles can only be processed at the Nairobi Lands office. The Survey department and other agencies involved in land registration and administration have fallen further and further behind their work. By the time a landowner is through with the rigours of land administration, he/she does not want another harrowing ordeal with public officials who control use of land such as planners. Ownership of a title is deemed the ultimate possession to one's land and more often than not the planner's idealism are dismissed. This inability to generate information is critical because the activity of planning is underpinned by the assumption that adequate information exists for a group of experts to make decisions regarding the best use of land. This information shortage is extended to other government agencies, which deal with land related matters. Almost all government offices seem to have developed apathy towards the tenets of proper record keeping with the result that it is extremely difficult to gauge for instance annual levels of forest depletion or of land conversion. It follows that a society that is not 'spatially enabled' is deprived of the ability to effectively plan. One wonders how urban growth without corresponding basic land data can be controlled. New knowledge and information create opportunities for innovation and should be seen in that context

5.6 Services and Infrastructure.

Adequate and timely provision of infrastructure facilities and services including electricity, water, sewerage and drainage is essential for the efficient running of any urban area. Apart from enhancing the general welfare of the residents, availability and spatial location of varied infrastructure and services also play a significant role in shaping the physical form of an area. For purposes of this study, infrastructure is categorized into three broad groups and analysis of field findings and related problems and challenges follows the same.

5.6.1 Environmental Infrastructure.

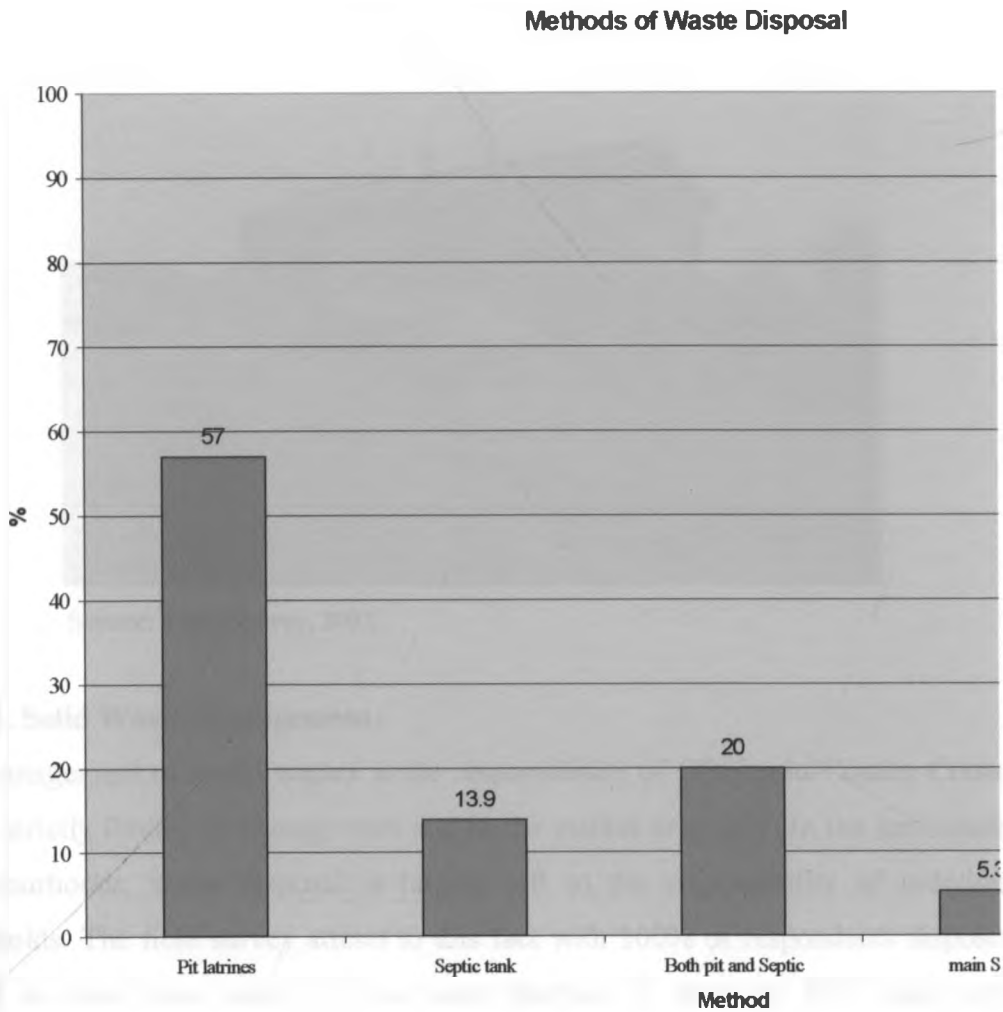
5.6.1.1 Sewage Disposal.

Sewage involves the mechanism for disposing domestic and industrial liquid wastes. In the study area, the disposal of domestic (human waste) is done through the conventional sewer, septic tanks and pit latrines.

The only sewered area is Ngong Town representing only 10.9km². The sewer reticulation therefore serves about 9.4% of the total built-up area of study area. Even these sewered parts do no better, with the basic system having been dug in 1976 for a population of around 1000 persons. Nothing of serious consequence has been added since, and in the meantime, thanks to sloppy maintenance, it is common to find sewer sillage in the streets of residential areas. In Ngong town, the capacity of the sewerage is overstretched because of an inadequate reticulation network with some residents totally unconnected. The situation is not improved by the frequent water shortages rendering flush toilets useless. At the same time, connection charges to the sewer main trunk line are also high at Ksh 7,500 thereby relegating its use to a few individuals.

There has been therefore a shift from the use of sewer lines to septic tanks or pit latrines. Though the septic tank is ideal as a sewage disposal method, frequent emptying restricts its use, which makes it expensive. Private exhausters cost 6,000/= while the council exhauster charges 2,500/= but is rarely operational. The field survey revealed that the most common method of waste disposal was the pit latrine at 57%, while the septic tanks was used by 13.9% of the sampled population. Another 20% used both pit latrine and septic tanks while 3.8% had no method of domestic waste disposal. They represented a few cases in the slum village. Only 5.3% were connected to the main sewer line.

Figure 5.8



Source: Field Survey 2002

The challenge here is the obvious need for a sewer system with the Physical Planning Handbook postulating that a sewer line will be considered for all settlements with a population of 30,000 or more having an urban layout. Ngong is long overdue for this essential service.

Pit latrines are a common sight even in the sewered parts of the town. On the other hand, the Olkejuado County Council is incapacitated to provide a sewerage system for the area. It is noted that a new sewage system will have to include Ongata Rongai and Kiserian centers totalling to a colossal Ksh 1.2 billion, resources which the council does not currently have.

Plate 7-a private exhaustor vehicle on stand-by for hire



Source: Field Survey, 2002

5.6.1.2. Solid Waste Management.

The management of social wastes is the responsibility of Olkejuado County Council and is strictly limited to Ngong town and in the market area only. In the surrounding neighbourhoods, waste disposal is largely left to the responsibility of individual households. The field survey attests to this fact with 100% of respondents disposing wastes in their own open pits and later burning or burying. Individual waste management is a procedure that will be sustainable but for a short while. The County Council has been slow in meeting the need for an efficient domestic solid waste management programme and this is completely lacking in the Ngong area. The top priority for the Olkejuado County Council in this sector is now that of finding new dumpsites. As urban developments increase, there will be need for a corresponding shift in waste management in the Ngong area. Already large mounds of waste are being dumped along the roads making the area very unattractive to both senses of sight and smell and presenting a serious health hazard. The risk of soil, air and water pollution is very real. Here, rapid demographic growth clearly gives more prominence to waste disposal and management as one of the top priorities.

Plate 8- indiscriminate dumping along the road in the study area.



Source: Field Survey, 2002

5.6.2. Physical Infrastructure.

5.6.2.1 Electricity and Energy.

The main provider is the Kenya Power and Lighting Company, which supplies according to demand. The demand for power is growing rapidly and at the moment exceeds supply. The emerging problem in this service provision is the glaring inequality it has brought out amongst the poor and the rich. It was observed that the poor rely on rural electrification whose success rate has been dismal. They paid initial down payments of Ksh 3,000 and have since only heard promises upon promises. The rich on the other hand do not rely and wait on rural electrification. They are the urbanites from Nairobi who can afford down payments of up to 250,000 shillings required for new connections. It is thus common in Ngong area, to find a well-lit luxury house next to a house that still uses kerosene as lighting source. The social disparity caused beats the distributive measure of planning for all people regardless of status and power. The field survey shows that 57% are connected to electricity while 40.5% are not connected at all. Notable also is the complete lack of streetlights even within all the urban centers, a situation that has increased the crime rate in the area.

5.6.2.2 Water.

Ngong gets its water from both surface and underground water sources. These include springs, surface waters, deep and shallow aquifers, which supply many thousands of people and animals with water requirements. All springs except the Kerarapon spring, which is the source of River Mbagathi, are seasonal. Water shortages in Ngong are a frequent occurrence and have a long history. By 1987, Olson in his study of Ngong hills realized that water rationing was already a recognized phenomenon. With increased population, the situation has been made worse. Indeed the field survey noted that the residents considered water shortages as a serious problem with 32.8% noting it as the priority problem in Ngong.

Plate 9 Self-help techniques in Water provision



Source: Field Survey, 2002

It should be noted that Olkejuado County Council as the Local Authority does not provide water to residents. Instead this has been left to the Government and private individuals. The Government has sunk two boreholes in the area in an effort to provide water but passes the burden of management of the same to communities. In Ngong area, water is gold and sold very dearly. Numerous water points have thus come up for sale of water. Water reticulation system is an independent venture by individual households, while most of the water distributed from private boreholes is untreated. Self-help techniques including ferrying water by donkeys, buying from water points and the current one gaining popularity is digging a shallow well.

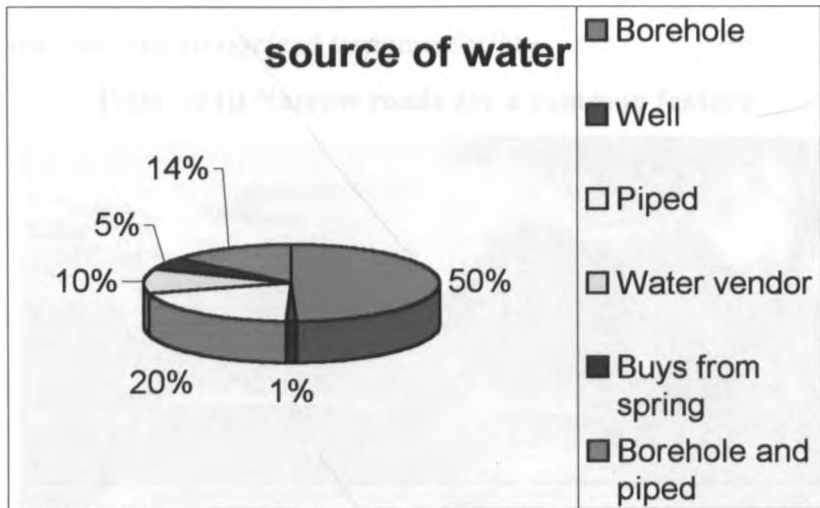
The salient element however is **water management** or rather the lack of it. Ngong lies on top of a watershed, the Ngong Hills and the pollution generated in the urban areas (petroleum, sawdust, wastes from the hotels, from the abattoir) flows downstream towards its rivers affecting agricultural production and contaminating streams, which in many cases constitute the only source of water in rural areas with no access to piped water. This is evident at Kiserian trading centre where liquid waste from the slaughterhouse freely flows to the Kiserian River.

Similarly, water pollution is generated within the study area by the extensive use of agrochemicals. Unauthorized activities such as building construction - especially on riverbanks - and the associated extractive activities (sand and stone quarrying) contribute to pollution and to flooding because of increased run-off. There is also a clear institutional vacuum as to what authority should have the responsibility to manage the water resources. The issue tends to be left to community-level initiatives. Moreover, local communities and families have no control over what happens upstream and have no responsibilities for water conditions downstream. Hence a situation of fragmentation of efforts and of institutional stalemate occurs.

Because water provision has been treated as a business, there is an added problem of haphazard sinking of boreholes and wells, which has the wider effects on supply of underground water. The Ministry of Water has licensed an additional 55 private boreholes, but in reality, the total stands at around 100 boreholes, implying that 45 of them are not licensed. Sinking a borehole needs technical and professional input and when left to individuals, brings in a state of hydrological imbalance. Suffice to note that Ngong is endowed with ample underground water, which should be protected for posterity. The water tanks that frequent Ngong in search of water for dry Nairobi city estates support this fact. Indeed the 2000 water rationing stint in the city relied heavily on the Ngong water. What is needed is a way to exploit this precious resource without the added agony of depleting it to extinction. The only area that has no water shortage is Kerarapon and Kiserian thanks to the springs. But even these need adequate protection from settlements at the trading centers. Attempts to fence off the area from the public drawing are underway. Areas like Ngong Town Oloolua, Olepolos and Ongata Rongai have chronic water shortages.

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Figure 5.9



Source; Field Survey, 2002

5.6.2.3. Roads.

At the local level, the study area has a network of roads laid out in an irregular pattern providing access to all areas. The Magadi Road passes through Ongata Rongai and Kiserian and is classified as C53. It is in fairly good condition. Ngong-Kiserian Road class D53 is in a bad state of repair and is almost impassable in wet conditions. For the kind of population they serve, the roads are narrow and not paved. Some are impassable even during the dry season. The field survey shows that 80% are loose surface and when it rains, access becomes a dream. Some roads also have very narrow widths, not allowing 2 vehicles to easily by-pass each other.

Where tarmarcked, drainage structures like culverts, channels and ditches are altogether lacking or blocked. There are many side roads and tracks providing pedestrian access to the farms while side hill cuts need stabilization and are impassable even in dry weather. Lack of public transport on all but hard surfaced roads means most people have to walk long distances to reach transport.

The field survey confirmed resident's feelings about roads and they listed it as the third major problem in the area with 20.6% of respondents agreeing to this notion.

Vantage settlements on hills have led to steep gradient access roads which though may contain high aesthetic quality as a pleasure drive, are really harrowing and subject to land slides. On the other hand, the tendency in urban centers is that

bus/matatu terminals have been invaded by physical developments and parking along roadsides is a common feature. Other than Ngong town, Kiserian and Ongata Rongai centres do not have any recognized terminus facility.

Plate 10 (i) Narrow roads are a common feature



Plates 10 (ii) Parking menaces blocking the side roads.



Source: Field Survey, 2002

Even then the Ngong town bus terminus is badly organized and its condition has deteriorated severely. It lacks sheltering cover and has been overtaken by an open-air market. In Kiserian and Ongata Rongai, vehicles simply park along the roads as they wait for passengers because of lack of a terminus.

5.6.3. Community Facilities

The provision of adequate community and public facilities is essential for improving the living conditions of residents in urban settlements. The level and adequacy of such communities should be such that the needs of the residents are met. Such include schools, hospitals, sports and recreational facilities and cemeteries.

In Ngong, like in most parts of the country the provision of community facilities has been hijacked by private interests with an impunity that defies all sense of order. As a result, private clinics and schools mushroom the whole area. This in itself serves a purpose but more often than not, planning standards are not adhered to. It is thus common to find Primary Schools on 1/4acre plots with no playgrounds and some altogether posing a health threat even in sanitation outlets. For this reason some 7 private schools were closed in the study area, early 2002. Another worrying trend is the tendency by well-to-do individuals to put up high cost private schools in Ngong such as Serare School, which target the elite of Nairobi city and therefore do not serve the needs of the indigenous residents but rely strongly on commuting pupils.

Other than Ngong Town, the up-coming urban centers have no cemeteries and stadium. Thus a planning challenge arises when people will start burying their dead on plots of less than an eighth of an acre and the only leisure outlets become video kiosks where uncensored films are shown.

An incident of fire in one of the slum settlements during the field survey conveyed the sense of unpreparedness in disaster management. The residents had to rely on self-help techniques like using buckets of water, sand and blankets. The area does not have any fire –fighting vehicle or equipment and relies heavily on Nairobi, a feature that is not appropriate as Nairobi can hardly manage its own disasters.

A strong reliance on Nairobi is also observed in seeking out higher order goods and employment outlets and even mortuary facilities

Plate 12 shows a school built on less than half an acre. The fence in the foreground marks the plot boundary.



Source: Field Survey, 2002

5.7 Institutional Capacity.

One of the most salient characteristics of the study area is the diversity of organizations that converge in the decision making process, and the lack of clearly established institutional arrangements to articulate their interventions. There are therefore, myriads of local groups-environment, women, church, political parties in the study area. Add to this various NGOs like ASAL, SARDEP, AMREF, and WORLD VISION together with quasi-government bodies like KWS, KEVEVAPI, and AFC. Central government bodies like Land Control Boards and Local Authorities are also a category of their own.

Unclear planning and operational responsibilities between sector agencies characterize this phenomenon. Separate sector agencies plan for and provide individual planning services, but coordination between agencies is inadequate. Public agencies lack the necessary autonomy and resources to make the provision of planning services more efficient with the reason that, public agencies expend little effort to involve the private sector. Reaching a consensus is thus the planning challenge. An analysis of key planning institutions in study area and related problems is highlighted here below.

5.7.1 Capacity of the Olkejuado County Council (OCC)

The Olkejuado County Council has not been able to afford the luxury of a large well-trained planning agency though it is responsible for enforcing development control measures in the study area. The Town Planning and Works Committee deal with planning issues within the Olkejuado County Council. This committee gives advice on planning matters related to subdivisions, change of user, and extension of user and part development plans. The District Physical Planner is a key resource member of this committee on matters of development control and planning. It should be mentioned that he has done a commendable job of initiating the formation of a special team for enforcement of development control.

The Olkejuado County Council has an administrative office in Ngong town for purposes of collection of rates, rents, market fees and license fees. Three persons assisted by two field inspectors man the Ngong office. It is realized that the Olkejuado County Council activities are biased towards collection of revenues rather than real planning issues. As things stand, even the Olkejuado County Council does not own a planning unit. Consequently weak enforcement capacities have led to problems of development control in the designated urban centres aspects of which will be discussed later on. On the other hand the Olkejuado County Council does not have powers to deal with land administration without going through the Department of Lands. Land administration has remained a central government responsibility even when managerial functions have been delegated to the local authority. The planning incapacity of the Olkejuado County Council is brought about by;

- Staff structure, which is heavy on junior level staff with, limited middle and senior level staff. Over 80% are low cadre staff and the overall impact is the high cost of effective management and delivery of services. Salaries and wages take more than 75% of the Olkejuado County Council budget in the midst of shrinking resources.
- Financial management; The Olkejuado County Council like other LA's in Kenya is facing serious financial constraints. Financial resources are constrained by overemployment. A wide resource base covering over 100 items brings in accountability and transparency issues. The council's own assessment shows that the expenditure structure is skewed towards salaries

and wages (LADP 2000-2005). The council has been unable to maintain a surplus budget over the years and in the just concluded financial year 2001, a budget deficit of 870,628/= was realized (LASDAP 2002). This was an improvement compared to 2000 when the deficit stood at 1,273,456/=. Such deficits occur when revenue collected is less than expenditure patterns.

- Service delivery: Expanding demand for urban services especially in the Ngong area is increasing as urban population increases. The nature, scale and scope of service provision by the council is far from being adequate to meet present and future needs of the urban population. Critical shortcomings in service provision have addressed in Section 5.6 of this study. The emerging scenario however is the Council's possessive stand towards the study area without an equally corresponding attitude in service provision. The study area is thus regarded as the "golden goose" that lays the golden egg of revenue and one, which should be jealously guarded.

5.7.2 The Land Control Board (LCB)

The LCB controls transactions in agricultural land. It is composed of a total of eight board members chaired by the District Officer. The office is manned by one secretary who records all transactions in any given month. The secretary estimated that an average of 60-100 transactions/applications in agricultural land are processed every month. Of these applications, 75% constitute sub-division schemes thus averaging 80 transactions in a month and 960 sub-divisions in a year in the Ngong area only. The secretary of the board noted a slump in transactions attributing it to prevailing economic conditions with past applications averaging 300-400 applications per month in the year 1994-1996.

Findings from the field indicate that the board has no register for transactions and instead relies on a hand typed list of applications. To capture past trends becomes tricky because one has to go through a pile of such applications all kept exposed to dust. It was indeed a horrendous task!

Other than poor record keeping, it could not be established how and when the Board started allowing sub-divisions of up to ¼ acre in agricultural land. This is done despite the Land Control Act, under which the board is formed, which states clearly in Sec

that the Act shall control transactions in agricultural land not less than 20 acres. This implies that policy changes occur without corresponding amendments to the respective legal provisions. The board members, as alleged by the secretary, are elders handpicked by the local politicians to protect their interests and nail their political opponents.

The field survey on the other hand drew out the resident's dissatisfaction with the LCB with one respondent summarily dismissing it as a "toothless bulldog" which gives consent to questionable transactions. He gave an example in which the same board had authorized the sale and transfer of a large and prime tract of land belonging to an absentee maasai pastoralist who was away with his herd of cattle in a period of prolonged drought. It is believed that the sitting board members were some of the beneficiaries of the same. This example seems to beat the logic of having elders well versed with the local conditions on the board to protect the interests of the community. Other respondents claimed that the Board issued fake receipts, which are later, rejected in the event of land disputes and charge extra fees for a consent to be given. The general view of the respondents was that the Land control Board is extortionist in nature and performs very few duties to enhance land development or even control transactions.

5.7.3 The District Physical Planning Department

The District Physical planning Office is based in Kajiado Town some 140 km. from the study area. This presents a problem to the Ngong residents who have to traverse this distance in search of the Physical Planner for services. Add onto this the expansive nature of the district then the stage is set for a planning challenge beyond imagination. On the other hand the District Physical Planning office has a total of four staff members namely; The District Physical Planner, one draughtsman, one secretary and one sub-staff. Surely such acute staff shortages do not augur well for the district at large and particularly to those areas bordering Nairobi city and are experiencing rapid urban growth. Small wonder that the correspondence between the District Physical Planner and the Nairobi head office revolves around the need for another Physical Planner in Kajiado District. It is also noted that the office does not have a vehicle to facilitate movement in this vast planning area. The Planner relies

occasionally on the Council vehicles for inspection purposes and on some different occasions has to use his own means or a client's vehicle, a factor that can swing decisions in favour of the client. Neither are there any sub-branch offices within the district. Even basic machinery to handle office work like a computer is missing in this very important office.

It can be correctly deduced that the department is technically unprepared for the rapid rate of urbanization experienced in the study area. This is echoed in the District Physical Planner's annual returns in which he persistently points that " *there is need for an additional Physical Planner in the District*" (PPD, Kajiado Quarterly Returns File). It must be noted that the District Physical Planner is going about all this with some Herculean bravery but is nevertheless overcome by the workload. Most developments have therefore escaped controls and the market forces tend to override the planning activity, a feature obvious in the urban centers of Ngong division. The preparation of the Zonal plan for the area had to rely heavily on the Nairobi office due to this technical incapacity.

5.8 Environmental Degradation.

When urban settlements disperse over a rural area, conflict arises when pressure is put on the natural and physical environment by the built environment and human activities.

In Ngong, this manifests itself in several ways;

- Depletion of forests especially in Ooloolua, Ngong Hills and Embakasi Forests. In the Ngong hills, there has been a complete destruction of all indigenous forests by squatter settlements at Gichagi.
- In Ooloolua, quarrying activities have spurred on forest destruction, leaving gaping sites in the forests. A ban on quarrying activities by the Government has not helped reduce this situation. Instead quarrying activities are now being carried out on individual land parcels causing very heavy externalities to neighbouring plots as shown in **Plate 13**. Neither do the owners try to rehabilitate the sites. Lorries are still seen ferrying building materials from the area. The Physical Planning Act in Section 39, demands for an

environmental impact assessment of such activities, but it looks like that the provisions of the act are all together ignored at the household level.

Plate 11 Encroachment on Ngong Hills by slum settlements



Plate 12 –a natural stream turned into a flowing sewer. Note the stone fence barely a metre away



Source: Field Survey, 2002

- Encroachment of Riparian reserves in Ngong Town and Kerarapon area. Intensive farming activities in Kerarapon violate planning ideals of keeping three metres from the water body while physical buildings have blocked natural stream flow within Ngong Town. In Kiserian, a slaughterhouse empties its waste into the neighbouring River Kiserian posing health hazards to those downstream.

Plate 13 Quarrying activities on private land-note the residential flats in the foreground



Source: Field Survey, 2002

- Obnoxious industries have found their way into this idyllic rural environment. One is at Oloolua-a fish factory, which emits strong smells over a long distance. The other one is a tar-manufacturing venture in Lower/Upper Matasia. All these within a residential set-up do not conform to principles of health and safety. It may look like such industries avoid areas of strict control and establish themselves in areas of less control by first buying freehold land with much ease, then later on putting up the factory. Planning therefore invariably follows development.

5.9 Other Non-spatial Challenges

The spatial components or challenges of the study area have fairly been easily identified. They are elements geared towards land uses and tend to have a direct linkage to planning standards, physical conditions and geographic locations within the study area. However there are also non-spatial challenges often dealing with quality aspects, rules and regulations, which require a spatial component in order to be functional. What should not be lost is the strong linkage between both spatial and non-spatial challenges. Some of them are discussed below as they affect the planning function in the study area.

5.9.1 Cultural Non-integration

All human societies have their own cultures, which overlap, to some extent with the physical environment. In Ngong, the cultural practices of a heterogeneous urban

population are threatened and inhibited by segregation and lack of tolerance between different ethnic groups. Segregation of different social and ethnic groups is a result of settlement sprawl and will ultimately represent different planning needs. Tribal settlements are common in Ngong with a designated area for the Kisiis, another one for the Luhyias and yet another for the Kalenjins. Cultural undercurrents are common between the two commonest tribes in the study area, the Kikuyu and Maasai, with the Maasai claiming that the Kikuyus duped them into selling their land. One chief informant a former paramount chief in the area recalled that the Kikuyu would invite the Maasai for a drink in Ngong town in the 1960's and after a drinking spree, would tell the Maasai to pay for the drinks in form of land.

It is also common practice to find the immigrants from Nairobi and other parts of the country treating the Maasai culture with contempt when this same culture can boost the area's pride and attract tourists. The problem manifests itself today in employment of the Maasai as watchmen allegedly because of their cultural attribute of being fearless. The pay, needless to say is poor. Yet they are a strong opportunity in solving the crime rate in the area. More often than not, the Maasai are howled at unnecessarily with a rejoinder of "*wewe Maasai!*" – Swahili for "You Maasai man". It is often forgotten that the Maasai are in their rightful place and have been pushed to more marginal areas by urban settlements. If there is a group that is poor in the study area, then it is the Maasai.

5.9.2 Gender

A gender perspective refers to equity between men and women focusing on equal rights, responsibilities, and opportunities. Equity does not mean that men and women will become the same, but that women's rights and men's rights, opportunities and responsibilities should not depend on whether one is born male or female.

In the study area, gender issues are often ignored especially with regards to women's roles in land use planning matters. The field study interviews among others showed that, the males dominate managerial and technical positions in affiliated planning institutions. The Land Control Boards in both Ngong and Kajiado have all their members as men. The Olkejuado County Council on the other hand, has all but one-woman representative councillor. The fact that women are under-represented in all

planning bodies is due to past social norms and practices. Yet women are the biggest managers of land – the physical base for planning functions. It also has a strong bearing on planning decisions with their interests not taken into account and more often, they are on the losing side of major decisions made in allocation of scarce resources. A good example is the obvious lack of a designated market place for Maasai women handicrafts, a feature that would go a long way in alleviating poverty amongst their lot. The poor of the study area are mainly women who are deprived of their land. Although they constitute the majority of peri-urban farmers and are central actors in the survival strategies of the poor, women represent the most vulnerable group. Not only is their capacity for any form of investment limited, but also they are consulted less than men on matters such as those dealing with land.

Both women and men may be disadvantaged by a gender bias in planning, as they may be by ethnicity, age or disability. Gender should not become a separate component with separate planning activities, but should be included as a normal part of all planning programmes and projects.

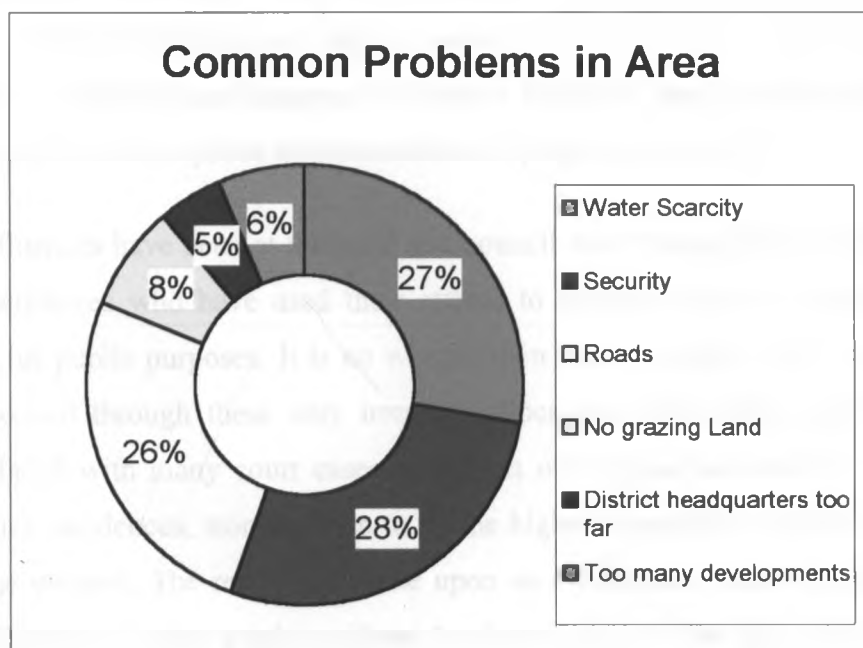
5.9.3 Social risk and Safety

There is a direct relationship between the physical structure and the social result. Leapfrog urban development, together with nature's assets of forests, unequal distribution of opportunities, along with the frustration of poverty, have resulted in high crime levels in the Ngong area. Conditions of crime may have been created by the spatial characteristic of the area in that it is not well planned and has become a hideout for criminals. Spatial fragmentation and spatial dislocation, together with low-density sprawl causes numerous opportunities for crime. Residents who are forced to cross vacant or undeveloped land are susceptible to rape, mugging and assault from potential offenders hiding in the bushes. On the other hand, large scale commuting, for example exposes travellers to increased opportunities for crime.

A cursory examination of recent crime records reveal that robbery in Ngong area takes the form of car hijacks and house break-ins. The Ngong Divisional Police Officer agrees that crime rates in the Ngong are pretty high with an average of 80 house break-ins in a month. He cited the case of a luxury residential house turned into

illicit brewery attributing this to low vigilance. A ranking of the problems in the study area, revealed that security was prioritised as problem number two, closely after water scarcity, with roads coming a close third.

Figure 5.91



Source: Field Survey, 2002

5.9.4 Political Influence and Trade-offs.

Meeting challenges of urbanization involves making difficult political trade-offs. The trade-offs occur at different levels. Most typical trade-offs are when economic objectives and planning objectives conflict. Budget constraints add onto this to make difficult choices i.e. where will a road be repaired, where will the water point be, where do you allocate land for community grazing. Public investments often benefit those with political voice. In the area of study, it is obvious that places where political heavy weights reside have the best roads, ample supply of water and security. They use their political power and wealth to influence public projects only in their favour.

Positive effects of politics have been the influence of the incumbent Member of Parliament, in protecting indigenous land rights especially after there were attempts by officials from the Lands office to alienate vast amounts of land for their individual allocation. This influence has saved the Ngong Veterinary Farm from excision efforts, together with KEVEVAPI farmland and the Kibiko Grazing area. His efforts also saw

the regulation of a slum settlement in Bulbul with all owners having some of security of tenure, an example that Nairobi city should follow.

Political leaders, it should be remembered often focus on immediate highly visible problems leading to short-term “band-aid” solutions. This was discussed in chapter four as one of the unorthodox land policies applied in Kenya. More often than not, there is always political unwillingness to confront issues of land concentration and speculation and this has impeded implementation of planning strategies.

Negative influences have been at the local and council level through the influence of local representatives who have used their offices to allocate themselves numerous plots, some for public purposes. It is no wonder then that even part of the cemetery has been excised through these very irregular allocations. The Olkejuado County Council is faced with many court cases in respect of irregular allocations of land. Again, in such incidences, women seem to be the highest casualties, more so if they happen to be widows. The researcher came upon an old Maasai widow whose land had been allocated to other parties without her knowledge on the basis that it was Trust Land and therefore belonged to the Olkejuado County Council. The piece of land is situated in the Kerarapon area, which is just next to Karen and therefore has high land values. Suffice to say that she has been resident on this land for the better part of her adult life. At the time of the field survey, efforts were underway by the community to have this land restored to her. This beats the logic of the Council holding the land in “trust” for the community when it cannot protect the rights of vulnerable members. At the same time, it brings out clearly the partisan role of the planner in preparing such subdivision schemes without adequate knowledge of the prevailing local circumstances.

The wider political scene has also had its influence with the Olkejuado County Council chairman, fighting his political battles against the incumbent Member of Parliament, from his Olkejuado County Council office. The trickle down effects of this are alienation of those deemed to be in opposing camps of each group or worse still, if one happens to share a neighbourhood with a warring faction, then the decisions made will affect the wider community.

5.9.5 Jurisdictional Complexity.

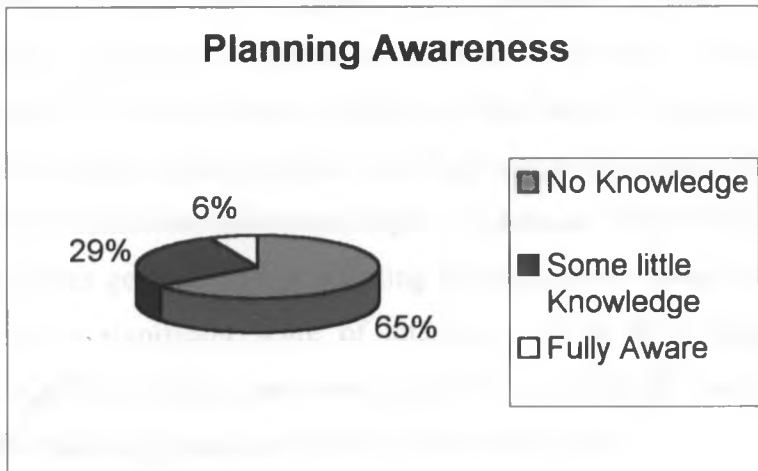
Land and land use are a major focus of local authority conflicts. The fundamental principle underlying this is the continuity of land extending across and beyond jurisdictional boundaries. Although diverse effects of land use controls planning require cross-sectional and cross-jurisdictional coordination, attempts to deal with planning issues in a peri-urban fringe are frequently compartmentalized. It stems in part from the multiplicity of actors and agencies, with overlapping, uncoordinated or poorly defined responsibilities in planning. Jurisdictional conflict arises between Olkejuado County Council and the Nairobi City Council and often impedes effective action or gives rise to gaps in prevention and control efforts. Mayors and Councillors disagree on what they interpret as a partial restriction of their jurisdictional powers. In our instance, the level of Olkejuado County Council does not match the spatial scale of the impact of urbanization. On one hand, the Olkejuado County Council is only a county council and is on a much lower scale of the hierarchy of the local authority structure compared to the NCC. On the other hand, the problems wrought in Ngong by urbanization forces are a result of the inability of the NCC to control and accommodate urban growth within its boundaries. The Olkejuado County Council only welcomes this spill to offset their financial constraints while lacking a complete planning unit. Efforts to accommodate each other are marred by each LA adopting a combative mood. This is spurred on by the fact that LAs have a knack for being 'unruly pets' characterized by fist fights, blows and kicks in council chambers. Governance requires the exercising and sharing of power and this should begin at this volatile level.

5.9.6 Lack of Planning Awareness.

Lack of public awareness of planning issues and low participation by members of the public in joint planning exercises mar efforts to control the use land in the Ngong area. In this instance, the researcher discovered that residents of the study area rarely have permission for developments on their land just because they are not aware that they need permission to carry out any developments on their private lots. Consequently, the field survey revealed that 65 % of respondents were not aware of what planning entails and those who made an attempt at envisaging what a planner does were of the opinion that planners are meant for cities only and not rural areas

like Ngong. The few who had knowledge about planning were represented by about 6% and were quick to point out its failures in Nairobi, a whole city! They unfortunately represented the elite group and it was worrying to note that even high caliber professionals like Doctors had no idea about what planning entails. One particular respondent was of the opinion that the Commissioner of Lands was the Chief planner of the country. It is perhaps this knowledge gap that contributes even more to the planning anomalies in area of study rather than the failure of the function.

Fig 5.92



Source: Field Survey, 2002

Vigorous participation in the planning process has rarely been part of the urban-rural fringe tradition. The institution of planning has not always been warmly embraced especially in areas with a history of rural life. Persuading indigenous residents to concentrate in designated areas or pay for their share of public improvements sounds like government interference. A major characteristic of the people in Ngong rural areas is a suspicion of government especially with regard to land issues, this suspicion rising in the recent spate of land grabbing. Outsiders are disliked from the onset as they are visualized as intruders. This characteristic is easily passed onto the immigrants from Nairobi who are too happy to mind their own business. In this place, private enterprise and property ownership is cherished with zeal. To plan for urbanization, residents must become aware that a desirable urban life cannot be maintained without more active involvement in the planning process.

5.97 Summary

From the foregoing discussion, it is realized that the Ngong area experiences various planning challenges most of which have been spurred on by rapid urbanization. It is apparent that all these problems are inter-related- the demand for land in the area has brought about rampant sub-divisions and high densities without attendant infrastructural support services. Unplanned new developments, many of which are in areas traditionally protected (river banks), loss of land by farmers, loss of grazing land, and an upsurge in violence and robbery are all indicators of the deteriorating environment in the fringe zone of Ngong. In most instances, transactions on land take place without the guidance of any form of planning for the areas. This together with a weak institutional framework have led to a deterioration of the environment both physically and socially giving rise to a 'loose and coarse urban grain' (Denmar, 1995). The institutional framework has proved highly inadequate in its operations in tackling the planning issues generated in or affecting the study area. Indeed planning matters do not receive a significant share of attention - if at all - from all levels of government, within the district and even more at the level of the location. Also, there are no specific planning strategies for the entire study region

A solution should be in the context of overall planning for urbanization. Moreover, as a result of the passive role taken by public institutions, not only are regulations not respected, but there is also a lack of coordination between areas within the same division as well as between residential neighbourhoods such as that which planning could bring to the situation. Rather, most of the initiatives are individual efforts, which, for lack of coordination information, and human and financial resources, seem not to have an impact.

The difficulties have themselves known in earlier years and are thus not new. They are only taking new dimensions and the old methods of treating these difficulties are becoming increasingly outdated. The urban fringe of Ngong is therefore in dire need of planning solutions based on the premise that unlike doctors who can bury their mistakes, or even lawyers who can hang theirs, a planner rarely conceals his mistakes with ease.

CHAPTER SIX

ASPECTS OF DEVELOPMENT CONTROL PROBLEMS IN STUDY AREA

6.0 Introduction

Development control as was discussed in section 2.7.2 of chapter two is a major operational component of the planning function and practice. It is in this light that the Physical Planning Handbook has set standards stating among other details, the minimum area that shall be allowed for each type of use, average number of structures of a particular use, percentage of area of plot that may be covered by development. This chapter seeks to analyze the function of development control in the study area with particular reference to areas that have a physical development plan, namely the urban centres. Given that only 3 urban centres have physical development plans in the Ngong study area, the study sought to prove conformity with planning standards and regulations in the three centres. A detailed study of planning applications received for one urban centre, Ngong town, was also done with a view to highlight the major development pressures in the study area. As a back up to prevalent development control issues, a case study is given which brings out a combination of salient development issues.

6.1 Conformity with Planning Standards and regulations

A total of 35 residential buildings were surveyed in the three urban centres – 15 in Ngong Town, 15 in Ongata Rongai and 5 in Kiserian centre. Only those buildings covered by the spatial plans were surveyed. Data was collected on three elements of development control namely:

- Density
- Site coverage
- Space around buildings

Density was recorded in terms of minimum plot size, site coverage in terms of one variable (plot coverage) and space round buildings in minimum building set backs.

The information was recorded in terms of whether or not a building conforms to approved standards. Where an observation did not conform precisely, a distinction was made between whether it violates or contravenes the approved standards, or

whether the variation is in the direction of conformity. Three possible categories of responses regarding each building were thus derived as:

- a) Less than minimum standards
- b) Exactly equal to minimum standards.
- c) More than minimum standards.

These were designated as columns a), b), and c) in Tables 6.1, 6.2, and 6.3. In all cases responses were recorded in terms of percentages of total observations for the given urban centre.

6.1.1 Development Density

Development control standards specify that plots intended for normal residential use in urban areas shall have the following minimum plot sizes of 465m², 309.7m² and 235m² for detached, semi-detached and row housing respectively. For purpose of this study, high-rise flats were categorized as row housing. Table 6.1 summarizes the characteristics of the sampled buildings vis-à-vis minimum plot sizes.

Table 6.1 (a) Development Density in the Ngong Area

Density Specification: Minimum Plot size									
Development control centre	Detached			Semi detached			Flats		
	(a) below 465m ² (8)	(b) 465 m ² (4)	(c) above 465 m ²	(a) below 309.7 m ²	(b) 309.7 m ²	(c) above 309.7 m ²	(a) below 235 m ²	(b) 235m ²	(c) above 235 m ²
Ngong	60%	20%	20%	40%	40%	20%	80%	-	20%
Ongata Rongai	80%	-	20%	60%	20%	20%	80%	20%	-
Kiserian	-	100%	-	100%	-	-	100%	-	-

Source: Field Survey, 2002

The results show that at the aggregate level, differences observed with respect to whether buildings complied with, or have contravened minimum plot sizes are statistically significant and could not have occurred by chance even at the 0.005 probability level.

Table 6.1 shows that an average 67% of developers have built on plots smaller than allowable minimum dimensions for all residential developments. The phenomenon is more pronounced for semi-detached building and flats within a plot-area. This is attributed to various functional uses of a plot, with rental units mixed with the landlord's home. Thus a compound that was meant for one dwelling house, gets multiple uses as it has within it rental units while on the surface it is deemed a semi-detached house. Densities are often increased by this phenomenon.

6.1.2 Plot Coverage for Developments

The standards applicable in Kenya regarding site coverage, are that with regard to normal residential development, the percentage for detached houses shall be 40%, while with respect to row housing, it shall not exceed 60%. The relevant data summarizing the characteristics of residential buildings in the three areas is summarized here below

Table 6.2 Plot Coverage by Developments

Type of Residential Development									
Development control centre	Detached houses			Semi detached houses			Block residential flats		
	(a) below 40%	(b) 40%	(c) above 40%	(a) below 50%	(b) 50%	(c) above 50%	(a) below 60%	(b) 60%	(c) above 60%
Ngong	20%	40%	40%	-	20%	80%	-	40%	60%
Ongata Rongai	-	20%	80%	-	-	100%	-	20%	80%
Kiserian	-	100%	-	-	-	100%	-	-	100%

Source: Field Survey 2002

As with development density, the study shows that the differences in characteristics of building studies are statistically significant even at 0.005 probability level. The chances of accidental occurrences are very insignificant and can be ignored.

In terms of disaggregates, Table 6.2 shows that almost 70% of all detached buildings in the three urban centres contravene development control standards stipulating that buildings should cover 40% of a plot area. This is explained by the construction of extended units for rental within the same compound as explained in the instance of densities in Section 6.1.1 above. Such units are very attractive because of the security offered within a single compound to the tenant, and to the landlord, the high rents payable per unit. More remarkably, the study revealed that an average 80% of sampled flats violate the 60% regulations. Flats in some cases cover the whole plot leaving little room for circulation and even parking for the residents, thereby increasing densities.

The degree of contravention varies from centre to centre, with Ongata Rongai registering the highest degree of contravention, in all building types. This is related to processes of rapid urbanization in the area undeterred by any physical barriers. As noted earlier in chapter 3, Ongata Rongai represents a plain ground with no physical barrier to development.

6.1.3 Minimum set-back of dwellings from plot line

The building 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, and access to lighting and air circulation. For the category of developments examined (normal housing development), minimum values of setbacks have been fixed at 4.5m at the front; 3m at the side; and 6m at the rear.

Table 6.3 summarizes the data pertaining to the arrangement of the surveyed buildings.

Table 6.3 Space around Developments

Minimum Set-backs									
Development control centre	Detached houses			Semi detached houses			Block residential flats		
	(a) below 4.5m (3)	(b) 4.5m (9)	(c) above 4.5m (3)	(a) below 6m	(b) 6m	(c) above 6m	(a) below 3m	(b) 3m	(c) above 3m
Ngong	20	60	20	66.6	20	113.3	13.3	66.6	20
Ongata Rongai	73.3	20	6.6	86.6	6.6	6.6	26.8	66.6	6.6
Kiserian	-	100	-	60	20	20	20	80	-

Source: Field Survey, 2002

At the macro level, the study shows that about 40% of developers contravene the front set back, while about 82% violate the rear set back and 29% contravene the side set backs. The following general observations can therefore be made. While the rates of contravention is least in the front set back, probably because, that is the one whose contravention is most visible to Local Authority officials, the rates are higher for the rear set back, because it is rarely visible and hence easier to escape control. Contravention is highest at all levels in Ongata Rongai as compared to Ngong and Kiserian. The side space standard of 3m set back appears realistic to the bulk of developers and there is a good compliance rate of 71%.

At the micro-level, the study shows an average of 67% developers contravene set-back regulations by building either too close to the road, or realizing full plot coverage. The study went further to establish why violation of the above elements of development control was as high as indicated.

The reasons for contravention were disaggregated into four:-

- Lack of awareness.
- Connived with the Local Authority officials
- Could not afford minimum fees charged.
- Deliberate actions of contravention

Plate 14 showing the mix of developments in Ongata Rongai center



Plate 15 Informal Kiosks in Ngong Town creating aesthetic anarchy

Plate 16 Residential flats towering over a bungalow depriving the latter of privacy



Field results show that 54% of developers deliberately contravened planning regulations because they did not want to be subjected to the agony of unnecessarily prolonged procedure for plan approvals for extra buildings. They stated that they could not comply with the set standards given because they found the standard

unrealistic given the cost of land, and felt that they had to get returns from the land by maximizing space. The developers also argued that planning and council officials created unreasonable bottlenecks in the processing of building permits. Of those interviewed, 21% cited the high fees charged for planning approval as the reason for not seeking, leave alone complying with the set standards. Another 20% contraventions resulted because developers connived with development control officials to undermine building plans. This percentage could be actually higher because few developers were frank enough to admit such a practice. This was a group that had approved building permits but had wide variations the ground. On the other hand, 9% claimed they were not aware that they were contravening any standards because no one had told them the contrary. They were of the opinion that the whoever drew the building plans for them did not explain to them the conditions necessary for development.

6.1.4 Analysis of the building survey

From the foregoing, the following observations can be made;

- The fact that almost half of this contraventions claim that they have violated development control standards because they could not afford to build to specifications implies that the planning standards are too generous with respect to use of land. At our level of development and given the limited resources at the disposal of the average threshold developer, one cannot afford to waste as much land as is presently provided for by control of planning standards. Indeed it is too much to hope that only 60% or about half of a residential plot can be developed for residential purposes given the exorbitant value of land. The study also shows that the procedures involved in obtaining development permission are complex for the layman and should therefore be simplified.
- Local Authority officials in charge of development control on their part seem even too ready and willing to capitalize on the desire of the developer to maximize the development of expensive peri-urban land, by conniving with and encouraging them. Indeed the study has shown that the absence of building inspectors constitutes the single most significant explanation for the

contravention of development control standards. The building site inspectors rather than educate the developers on the advantages of controlled development, either connive or encourage them to contravene with the sole motivate of personal gains and material gratification.

- The study shows that 20% of developers obtained building permits or had approved building plans. Beyond the approval of such plans, the developers built as they wished. The authorities are expected to supervise the actual construction of every structure at specified stages. Normally this is the missing stage. It is therefore considered extremely, unethical (professionally) for the same officials that 'approved' a building plan and 'supervised' the actual development to turn around and harass the developer for contravention. The bulk of developers who apply for permission to build do so as a camouflage – only because it is a requirement of the law to do (that every physical development must be backed by an approved plan). On the ground, they do as they deem fit.
- Developers rarely strive to comply with approved plans. Neither are development control officials serious about enforcing them. From this sequence of events, it would seem amazing that developers in Ngong do in fact comply with control standards when the situation seems conducive for avoiding to do so. The tendency has been to blame profit-mongering developers for lining their pockets and desecrating the land. Blaming development on developers is a little like blaming population explosion on babies. A developer are effects, not causes of people's desire to improve their lot, just as babies are effects, not causes of people's desire to reproduce.



Plate 17 Contravention of rear setbacks. The stone wall marks plot boundary



Plate 18 A residential compound with upcoming flats



Plate 19 Construction on Road Reserves

6.2 Survey of the Planning Applications

A survey of planning applications submitted from July 2001 to April 2002 for the town of Ngong was done in order to indicate the varying degrees of development pressures. A sample of 65 planning applications was obtained for Ngong town. Interviews with local authority officials in charge of development control together with the District physical Planner were also conducted so as to assess the decision taken on each selected application. The findings of this survey are as follows;

6.2.1 The sample of applications

The field survey revealed that a total number of 252 applications were received during the specified period. The nature of applications was broken as follows

Building plans-190

Subdivision schemes-83

Change of user-16

This reveals that the development pressure is largely building construction represented by 75% of all applications being building plans. This is a feature which seems to agree with the previous observation made that the agricultural activity is slowly being replaced by that of residential and commercial buildings. Change of user applications on the other hand still register a dismal percentage of 16% while subdivision schemes are at 33%.

6.2.2 The relation of decisions in respect to Plan

Considering the applications on a plan basis, the decision taken on each selected application was noted and related to the physical development plan. Each of the applications in the samples of applications was examined and five main points noted

- a) Type of development
- b) Existing user
- c) Proposed user
- d) Whether permitted or refused development
- e) Relationship of decision to the plan

Three categories of decisions were thus recognized;

- Applications, which conform to the plan
- Applications that contradict the plan
- Applications for which the plan has no specific provisions

The overall results of classifying applications by their conformity with the plan are shown in the table below.

Table 6.4 Applications versus Physical Development Plan

Decision	Agrees with plan		Contradicts plan		Unspecific		Total
	Building approval	Change of user	Building approval	Change of user	Building approval	Change of user	
Granted	31	2	21	1	5	2	62
Refusal	1	—	1	—	1	—	3
Total	34		23		8		65
Percentage	52		35.4		12.3		100

Source: Field Survey, 2002

Most striking is the number of decisions judged to conflict with the main physical plan at 35.4%. These contradictions to the plan were building permits for residential and commercial development. It is worth noting that all applications rated as having contradictions were decided in favour of the applicants, which is a paradox.

The proportion of applications not covered by specific reference to the existing plan was 12.3%. The nature of such applications when examined closely was found to be minor developments. The size of the category means that it must be taken into account in any overall assessment concerned with development control. Over half of these applications were for minor alterations and extensions.

The proportion of applications refused is very small representing a mere 3%. It may seem that the applications are in conformity with the plan but this is not the case. These low refusal levels do not necessarily measure the efficiency of development control procedures but are an indicator of the complexity of denying permission in an area of development pressure. Refusals in such cases prove to be an expensive waste of time and money considering the distance one has to travel from Ngong to Kajiado. It should also be noted that potential developers first discover from the planner whether or not their plans or intentions are likely to meet resistance. Such discussions provide the means of turning a non-conforming intention into an acceptable application. There is also the associated point that it is impossible to find out how many applications were not made for non-conforming development in cases where developers opted to leave out the approval process.

The differences identified during the analysis of applications reflect to some extent the range of circumstances being dealt with in approving the plans. Some of the emerging issues were probed in a series of guided interviews with the relevant planning officers. A number of salient points came up;

- That the Olkejuado County Council does not have a development control department within its hierarchy of office functions. This may be the reason why development control matters are taken lightly in the area of study having had a history of “benign neglect”. On the advice of the District Physical Planner, a special team was formed to check and control development in October 2001, albeit a bit too late. This, the Physical Planner stated was in conformity with the requirements of the new Physical Planning Act of 1996 implemented in 1998.
- That the existing departmental structure in which the function of development control is relegated is an opportunity to observing development control issues. The level of interaction between the Olkejuado County Council and the Physical Planning department in Kajiado is quite high and this in itself helps to strengthen matters of development control. On many occasions this interaction occurs even at the informal level with the distance between the two departments less than 3 kilometers walk. This interaction level has been further reinforced by the stipulations of the Physical Planning Act. However, the survey indicated that the planning department had a lot more experience with the development control work than the local authority officials had with plan preparation. As a result, the role of local authority staff in plan preparation is still predominantly reactive in that they are only asked to implement the plan policies long after they have been formulated by the physical planners.
- The interviews with the Physical Planners both in Nairobi in the forward planning Section and in Kajiado revealed that both were aware that the situation on the ground in the study area has shown considerable change over the years yet the statutory documents like the physical development plans for the area haven't changed. Both planners interviewed agreed that the details of previous plans were outdated and could easily become a hindrance to

development if carried over in the next years. Some applications were thus passed not on the basis of the development plans but on what might be termed as 'value judgments' by the planner. The planners were in favour of more detailed advisory plans to put in place strict control measures in building types.

- An observation made was that the daily processing of a stream of applications has reinforced the simplified interpretation of development control as merely an administrative procedure set in a planning context. This is a misleading notion in the sense that though the administrative procedures appear to dominate the process, it is only a part of the total function. The numerical data that arises from day to day control work shows that the formal use of this information is limited because it is handled manually. A computerized database would be very useful in monitoring plan applications. During the discussions, it also became clear that the way information circulates within the Olkejuado County Council and the Physical Planning Department indicates that there is lack of proper feedback situation. A large amount of development control information is fed into both the local authority and the physical planning department indirectly or informally. Most of these are applications by friends or those in positions of power who by virtue of their power or relationship to planning personnel get away with what is required by the law. Such a situation does not achieve what a formal system would achieve, suggesting that there is a gap between what is or ought to be or might be. The results of the planning application surveys do not resolve the issue at this stage, but merely draws attention to the fact that it seems likely that the best use of development control information is not being made of.

6.3 Case Study

The largest burden from planning decisions and activities falls on the individual citizen. This section will examine a case in which a summary of all the challenges described above is experienced. The case is intended as a random sample but also as an extreme hardship case, illustrating some of the problems that result from low controls on land uses in the Ngong area. It illustrates the intense problems of equity

and fairness that result from the efforts of a few to shift onto the shoulders of society, the burden of actions meant to benefit them.

In this instance, Mr Ngongo (real name withheld) has been owner to parcel LR/plot No. X in Ngong Township (See attached sketch plan) for the past 23 years, having bought the plot in 1976. He has substantial development on this parcel comprising shops, butcheries, bar and a supermarket. The plot is a corner plot enjoying two road frontages – Nairobi/Ngong Tarmac Road and Ngong Veterinary Farm road. Between his plot and the Ngong –Nairobi road is a road reserve as shown in the dotted areas and open space to the east as provided by the Physical Development Plan of 164/84/1 approved by Commissioner of Lands on 3-6-85. Other part development plans recognized this fact as late as 1988. Things were to take a different course when the fronting to Ngong-Nairobi, also a buffer zone was earmarked as LR.Y. The open spaces too were surveyed and delimited as LR No Z. These were alienated and given out using the instruments of setting apart of Trust land as discussed previously in chapter four. It is clear from the onset that several planning issues emerge simultaneously.

- First, by allowing a buffer zone to be alienated and be given out, means that developments will ultimately occur on road reserves.
- The allocation of open space to individuals reduces circulating space and greenery.
- That the complainant who is also a developer has been effectively sandwiched, a factor, which will impede and constrain his economic activities and therefore use of space.
- Allocating a road reserve also influences the distribution of sanitary lanes such as drainage facilities.

It is no wonder that the Mr Ngongo was quite livid. In a letter to the Olkejuado County Council dated 16th November 1999, noted-

“...This open space has been converted to a plot numbered LR Z. This plot has completely blocked my eight (8) shops that front Veterinary road. My shops have no frontage. When this plot is finally developed, my shops will cease to be shops ...how can a sane person establish a plot blocking existing shops?”

Incidentally, estate agents had already been given instruction to sell the plots. The owner of the plot, unlike popular belief is one who knows and is aware of the implications of misallocation of plots. He also notes that;

" I believe this matter involves senior people in lands office and most likely officers from your council. This matter will be very complicated when huge sums of money changes lands between grabbers and innocent buyers".

Issues that emerge are;

That the allocation of these plots is a function or is a result of both the Olkejuado County Council and the Commissioner of Lands Office. The input of the Physical Planner is obviously missing. Perhaps the Director of Physical Planning was only consulted when the situation was already at boiling point. This the owner qualifies by saying

"The new plot does not have a sanitary lane. This is an indication that no professional planner was involved. It is also clear no site visit was done by the clique that is behind the mischief".

This depicts a true situation and is a common occurrence. It is but an indication how complex planning decisions can be, sometimes defeated by the lack of co-ordination between various agencies, some in Kajiado, and others in Nairobi.

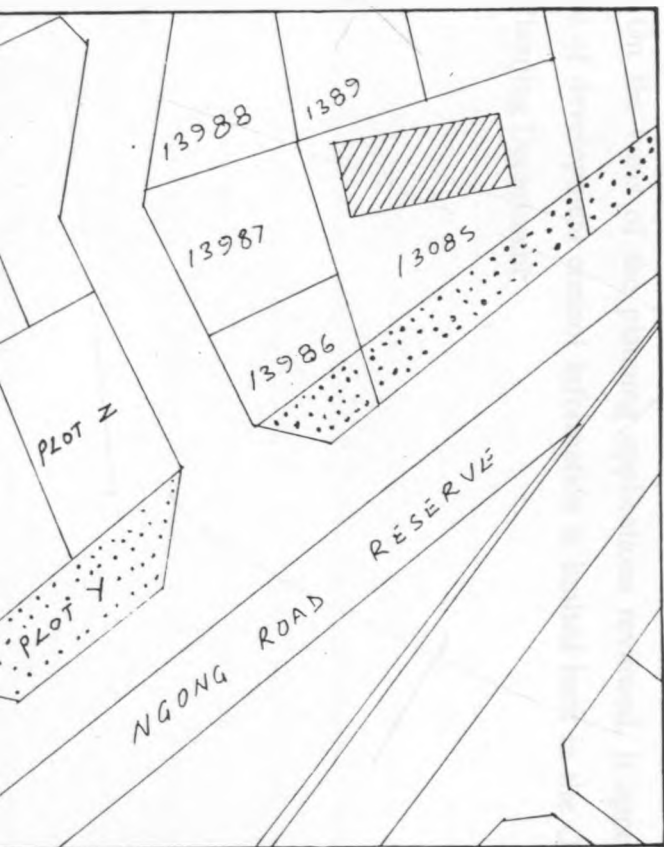
Also glaring is the non-consultation by the planner in such pertinent issues. The planner may have just received a copy of this letter from the council. It is therefore apparent the planners' role will only come in as advisory after a stalemate has been reached. Such are the realities of planning. It is also an indicator of the fact that indeed, Physical Development Plans have been prepared carefully taking into account all planning standards with provision of open spaces and roads. What is missing is the follow-up mechanism, which is often left to the Local Authority. The inability of the Council officials to respect planning standards is attributed to the Kenyan culture of being too greedy when it comes to land issues.

Source; Excerpts taken from Olkejuado County Council Correspondence File, Folio 184.

Fig 6.0 Illustration of Case Study



Source: Ngong Physical Development Plan



6.4 Summary

The main point to emerge from this chapter is that the integration between the physical development local plan and development control has some weakness. It is recognized that a plan is a relatively static document and to realize potential, an interim dynamic stage of building is necessary. The study area, besides having out dated physical development plans, also lacks a development control unit with development control officers. The developers are thus given wide maneuvering space with their development activities and the only semblance to development control is the approval of building plans. On the other hand, the element of conniving with the building inspectors has crept in with some developments unofficially sanctioned by the inspectors such that the building plan may be correct but what is on the ground is different. On the basis of the planning applications reviewed, it appears that the formal use of development control information is limited both in the OCC and the Physical Planning Department.

CHAPTER SEVEN: TOWARDS EFFECTIVE PLANNING AND MANAGEMENT OF THE NGONG FRINGE

7.0 Introduction

In the previous two chapters, analysis of the problems and challenges facing the study area has been made. This chapter goes further in synthesizing these problems with a view to finding better alternatives for the management of the fringe area of Ngong. Because the study is not oriented towards the preparation of a plan for the area, it has not been possible to come up with exact measures for meeting the anticipated future of the area. Instead, the study offers possible development options with the aim of revitalizing the area to a desirable spatial structure. The chapter goes a step further in evaluating the key planning issues and therefore suggests possible recommendations to change the situation for the better.

7.1 Synthesis of key Planning issues

7.1.1 Impact of urbanization in study area

The analysis of the urbanization process in Ngong reveals that it has a long history dating back to the colonial era. This has however reached a period of concentration and intensity between the years 1990 and 2000 with the study area evolving from a basically rural area to an urban one within a relatively short period of time. It is therefore currently grappling with an influx of urban population largely from the city of Nairobi with the result that urban centers within the Ngong area are registering higher growth rates than the city of Nairobi.

What is significant is the symbiotic relationship that Ngong has with the city of Nairobi, eventually leading it to the status of a dormitory area for the city. Ngong is a spillover ground for Nairobi residents and this, in the wider perspective means that constraining/restraining growth in Ngong is also dependent on restraining growth in Nairobi. According to the field survey, the most avid buyers of land in the area are in the age groups 30-45. This age group is set to increase as a component part of the total population in the decade of 1980-1990 when Kenya set a record for having the highest birth rate in the world. It is expected that a large part of this influx is yet to be felt.. Therefore the study area is in for a double whack; natural population increase and more specifically from the post 80's babies now reaching that age when they need the

land and services that only the study area can supply. Will the study area survive this onslaught?

Given the wide variety of reasons why people are moving to this area, it is apparent that infrastructural facilities do not facilitate this movement. Rather, it is the availability of cheap land, as well as cheap rental accommodation. The overall impact of this phenomena is registered in the following key areas:-

7.1.1.1. Rampant land subdivisions

As the demand for land in this Ngong area continues to grow, subdivisions of this scarce resource have continued at a scale and pace that cannot be matched. The study revealed that whereas in the late 1980's, the prevalent and average land parcel was 2 acres, it is currently reduced to less than $\frac{1}{4}$ acre. In essence, we are now talking of plot sizes rather than land sizes. The subdivision process has further been spurred on by the high land values in the area with $\frac{1}{4}$ an acre fetching as high as Ksh.750, 000 in some areas, as well as the attraction of a land tenure system that confers upon the owner wide discretionary powers in use and disposal- the freehold land tenure system. This subdivision process can be likened to a cancerous trend, that simple subdivision of the cell, which ultimately destroys both it and its host. A new 20-acre subdivision for instance will require a school, hospitals and in this day the cost of such structures is in category of millions. The planning challenge is that these resultant plot sizes have remained as agricultural parcels and are thus not subject to stringiest urban planning standards. They thus take any size, shape and form. Some are as narrow as a road width, others triangular while others are plain squares. There is need to intervene in this area in order to bring some spatial order and sanity.

7.1.1.2 Unplanned urban growth

The resultant plot sizes from the above mentioned subdivisions imply that the study area is actually urban in character and scale. The study found out that the residential activity is the most common land use registering an occurrence of 53% as compared to other land uses. This figure is not far from the idealized figure of 60% as residential land use in any given urban setup. Yet the study area lacks a comprehensive spatial framework to guide these urban developments. It is realized that the only physical

development plans are concentrated in the three urban centers of Kiserian, Ngong and Ongata Rongai. Areas around and between these centers have slowly emerged into urban residential developments without spatial plans to guide their growth. Densification and infilling has led to the mushrooming of uncontrolled developments. It is wrong to assume that urban development will automatically arrange itself into the surrounding areas in an efficient and orderly manner. This growth should be related to the social institutions of land ownership, the operation of the market and the interplay of forces other than those of the market. Unless there is some systematic and planned intervention, a large proportion of the study area will have no planned settlements.

7.1.1.3 Uncontrolled developments

A spiraling effect of these events is that built-up areas have been permitted to coalesce with no clear focus point of expansion. Development has been piecemeal and incremental such that it has thus been difficult to fit individual developments into a “coherent growth pattern”. The proliferation of slum settlements in this study area is a pointer to laxity in development control as well as the intricacies of urban poverty. What is interesting is that the upcoming slums in Ngong have similar names to those in Nairobi. Thus for instance, there is a ‘Mathare’, and a ‘Soweto’ just as we have in Nairobi. Could this be a pointer to the fact that we are simply transferring Nairobi’s problems to the fringe?

Substantial tracts of land owned by the Olkejuado County Council retard development by withholding land from the market for investment speculation. As a result, substantial areas of unplanned vacant land and low-density development are also common features. To this, add deficiencies in planning law enforcement by the same County Council and the result is haphazard development patterns.

7.1.1.4 Land use conflicts

The uncontrolled nature of such developments has affected all spheres of economic life bringing about conflicts in land uses. The conflicts take many forms, some obvious and others less so. This occurs especially between residential and quarrying activities. The study revealed that the activity of quarrying is currently being done as a homestead business with neighbours bearing the inconvenience of such a practice. A strong conflict is also registered in the area of expanding urban developments versus

dwindling grazing land. Infighting between the pastrolists and agriculturalists over grazing and watering points are common. The Kibiko cattle holding ground is one example. With the recent emphasis on horticulture, flower farms have also found their place in this area with devastating results from the chemicals they use on natural watercourses. Even in the recognized urban centres non-conforming mixed users are common with bars put up in residential areas or light industries in residential areas. The Planner is often caught in the middle trying to reconcile diverse interests and values. Conflicts on land cannot be eliminated since land by its very nature is immobile and limited in both quantity and specific qualities, but they can be harmonized and this essentially is what planning is all about. There is therefore need to direct this urban tide to avoid conflicts that arise when the individual interests prevail.

7.1.1.4 Loss of agricultural and grazing land

As a dormitory area to Nairobi, Ngong is slowly losing its rural character and thereby experiencing a shrink in agricultural land. A greater portion of the agricultural land has been sterilized by urban developments and this jeopardizes food security in the wider Kajiado district and neighboring Nairobi city. As agricultural land decreases, it costs more and more to live there. Consequences of this shrink in agricultural land means that even areas of environmental sensitivity have been threatened by human settlements. Examples include forest depletion, pollution of water sources, and in the Ngong Hills, a human wildlife conflict. Small-scale farmers face a variety of constraints such as:

- Shortage of arable land
- Shortage of grazing land
- Decline in carrying capacities
- Poor roads
- Overstocking and land degradation

On the other hand, lack of a clear grazing plan for the indigenous Maasai pastrolist has variously led to conflicts between agricultural, pastoral and urban activities. Principles of sustainability suggest that reliance on locally produce agricultural goods is the ultimate good.

7.1.1.5 Poor service provision

In order to maintain and improve the living conditions for everyone, it is critical that services are provided at least at a basic level. The study recognizes that this is an area in which deficiencies are highest. The field survey confirms this with the residents' prioritizing water and roads as the two major problems faced. It is for this reason that individuals use self-help techniques to provide services for themselves. This in turn has brought in the haphazard sinking of wells and boreholes as families strive to provide themselves with basic services like water. The community facilities in Ngong are not enough to cope with the high urbanization rate and schools on residential compounds have mushroomed in the area leading to a closure of some. The same goes with health institutions. Cultural and social meeting places are almost non-existent. Consequently, the study area lacks adequate and comprehensive infrastructure upon which the private developer can be encouraged to initiate development. This is an issue that has to be addressed as a major priority in this area.

7.1.2 Institutional Capacities

It has been realized that the Olkejuado County Council, which is the attendant local authority, has not been able to deal with land use problems arising from the urbanization process in the area. It has not been able to afford the luxury of a large well-trained planning unit and is both financially, and technically unprepared for the rapid changes occurring. Therefore, the attendant local authority, the Olkejuado County Council has not been able to capture speed of growth by providing adequate services.

Even a development control unit is lacking in this local authority and it is only in 2001 that a special team was formed to monitor developments in the entire district. Its contribution is yet to be felt. Understaffed and unprepared to anticipate the increasing variety of problems that urban growth has spurred, the Olkejuado County Council needs help. The net effect of all these is that the Olkejuado County Council has been unable to regulate and control many of the upcoming urban developments.

The Land Control Board, on the other hand, which is meant to regulate transactions in agricultural land, has been reduced to one that approves subdivision schemes and transfers of 'plot sizes'. Indeed it has accelerated the subdivision process leading to urban users by sanctioning the subdivision of up to $\frac{1}{4}$ an acre plot.

The Physical planning Department in the district is also technically incapacitated in trying to check and control development in the study area due to the expansive nature of the planning area (district) it has to cover versus the provision of one Physical Planner. Anticipating development problems, identifying possible strategies and implementing solutions are monumental tasks for a single planner.

At the same time, the lack of concerted efforts and miscommunication among various agencies involved in land developments process in the study area have caused wasteful duplications in the efforts of controlling land uses. On the other hand, the procedures required to meet urban development and planning have been found too lengthy and cumbersome. This has tended to encourage deliberate avoidance of such procedures.

All the available evidence seems to confirm the fact that the process of urbanization is way ahead of land control functions. The problem is not unique to the study area but does embrace the whole of Nairobi peripheries. Ngong is only a representative case study that has much deeper and smaller but concentrated scale. The preoccupation of the study is to find out how best and fast it can evolve realistic and workable solutions that would help the problems of not only Ngong fringe but also other peri-urban areas like Kiambu and Kitengela.

To come up with what it considers to be workable recommendations, the study will look at what it considers to be the major strengths of the study area to and how this can be used to address the weaknesses.

7.2 Building on strengths to address weaknesses

The key strengths of the study area can be categorized into three groups.

1. Agricultural potential most specifically irrigation agriculture and horticulture.
2. Proximity of study area to Nairobi which makes the study area unique within Kajiado District. Such proximity allows migrant workers to access places of work without having to be away from their families. The proximity also reduces the financial impact of commuting.
3. Residential development potential exists in the availability of residential land. In this view, denser settlements should be located along the main roads and the emerging numerous urban centers. This would facilitate the provision of agricultural land and grazing land. Essentially this means that the area is held to be an urban area with the potential for future urban development.

7.3 Policy Recommendations.

A review of previous studies within the same field shows that a number of solutions and recommendations have been suggested to the problem of the fringe. These solutions however are to a great extent specific to the areas where the studies were conducted or directed. The ideas raised by the work of other researchers provide part of the general solution to fringe areas especially experiences that have worked in other parts of the world. The study therefore recommends changes in the following key areas:

7.3.1 Land development objectives

It is recognized that all human activities take place on land and that in the study area, land assumes an almost magical attraction. It is this scenario that has led to uncontrolled rapid urban development. The study recommends the following strategies to be adopted to help ease the situation

- **Need for an urban land use policy.**

This need arises from the social costs of unrestricted growth especially in the area of study. This becomes tied to Nairobi, and it is cognitive that the future of the nation is related to the future of Nairobi. The need also arises from the multiplicity of land use

- The inefficient pattern of land development.
- The severe limitation of financial resources for further urban development.
- The difficulty of acquiring land for development within Nairobi city coupled with the ease of acquiring land on the fringe thereby pushing demand to the periphery.

All these factors have influenced and in turn been affected by patterns of land use and land ownership. It is hoped that the findings of the current Njonjo Commission on land will not be an exercise in futility as other commissions have been, but will stimulate and guide debate on this missing gap. An urban land policy should provide clear direction on

- a) Optimum size of urban centers to ensure adequate provision of cultural, social and physical requirements.
- b) Establish national minima for services
- c) Research on urban matters.
- d) Co-ordination of planning.

A Land policy will also have to deal with new concerns such as

- a) The position of women as property holders
- b) The untenured urban poor also called squatters to the existing land laws
- d) The need for provision of common community facilities
- c) Pastoralists who pursue land regimes parallel to established land systems

- **Land Banking**

It is recommended that the instrument of eminent domain be used to expropriate vacant land for public facilities, a factor that will also check the mushrooming of private initiatives in service provision. Such a move will also curb speculative dealings in land because then land is release only when it is needed. This kind of activity has a long history. The Ottoman Empire had a concept called "*Machlus*", which provided that uncultivated agricultural land becomes state property after three years. Instead of the Olkejuado County Council setting apart large tracts of trust land, it should reverse this trend and start acquiring land for future urban development. This is a move that will most likely be met with a lot of resistance, but can be done by first targeting former trust lands that have been irregularly allocated. If the same piece of

land has not been in use for say three years, then it should be repossessed to avoid speculative actions.

- **Taxation of vacant land and extra developments.**

The main purpose of tax on vacant land is to bring it into productive use to meet the needs of a growing urban population. Land taxation has been recognized as a potentially effective means of achieving desired patterns of land development in urban areas. As the urbanization problem continues and urban problems mount, it should be expected that the Olkejuado County Council should increasingly resort to land taxation as a policy tool to influence the location and type of urban development and also as a way of raising much-needed revenue. In principle, these taxes should be highest in areas, which attract investments and lower in second choice areas. Hopefully, this would contribute to a more balanced distribution of land uses providing the population with employment centers, cultural and commercial facilities in the areas where they live. At the same time when taxes increase, land is forced into development and becomes a practical luxury even for the rich.

On the issue of extra developments, which are a common feature in the study area, the study recommends that a developer should pay a 50% tax of the added value accruing to his property following additions and renovations not in conformity with the development plan. Such a recommendation will take effect only if the development control function is properly working. Such a system provides considerable incentives to reduce discrepancies between actual and desired land use.

- **Built environment**

During the year 2002 to 2010, there is a projected population growth of 150,000 persons in the study area. It is assumed that this growth will occur in urbanized areas. The common way to create to create more residential areas is as extensions to existing areas. In areas like Kerarapon and Oloolua, this population growth can be accommodated but not in areas like Ongata Rongai urban center. The study recommends that densification be directed to already dense settlements, while infilling be directed to the less dense areas such as Oloolua.

The study also recommends that a community-based land use control system be established in the area to mitigate against contravention of planning standards. The

enforcement of such a system depends on a partnership between the community and the formal sector. To forge such linkage, the community-based land use control system and the Ol-Kejuado County Council must know relevant sections of the Physical Planning Act and the Local Government Act, which empower the Ol-Kejuado County Council to deal with development control issues. Such a body can organize rallies to educate community members on development control or even use pressure groups against residents and developers who infringe on stipulated standards.

7.3.2 Infrastructural Requirements.

The enormous costs of making any investments in infrastructure, does not pre-empt the planner from making recommendations for them. All infrastructure should be seen as a means to achieving societal goals and that excellent infrastructure is not an end in itself. There is therefore the need to consider the entire system. For instance providing a main road should go hand-in-hand with provision of feeder and distribution roads. The key to managing the urbanization process has been identified as institutionalizing a participatory, evolutionary approach towards urban services. The study recommends that a strategic investment policy approach be used to provide services in the area. This is based on the premise that investment in infrastructure cannot occur on an ad hoc basis if it is to be sustainable. It is proposed that such investment occurs in three levels.

Level 1- Provision of basic needs, which is a constitutional right.

Level 2- Build capacity by directing public sector investment in areas of growth and opportunity.

Level 3-Target focus areas by specific investment from private sector on a project-based approach.

Action oriented recommendations in the provision of services will include among others;

Water

- Expanding the water reticulation system especially in densely populated areas
- Rehabilitating the existing water sources
- Encourage and support participation and partnership between the county council, private sector and the community.

Sewage

- Expand the sewer reticulation system to all urban areas in the long run
- Encourage the development of public sanitary facilities in the urban centres
- Increase the fleet of exhauster vehicles in the council.

Roads

- Construct additional terminus in the town to cater for local public transport needs
- Regulate the matatu industry to instill discipline and create harmony between commuters and operators

7.3.3 Development of an Information Base.

Information is essential to the planning process. In Kenya as a whole this is very inadequate. This in a large part explains the inability to plan in the study area. The greater the information gap, the greater the need for a flexible plan to permit adjustment upon receipt of further information. Future integrated spatial planning will to an increasing degree be dependent on a reliable and extensive database to be able to handle the integrated that is required of this peri-urban area. The creation of structural digital database using the concept of GIS (Geographical Information System) to combine mapped information with text information is considered to be vital. GIS can be used at the local level to locate essential facilities such as hospitals, schools police stations and health centers. It is also an important tool in the management of environmental services like sewer pipe networks.

A land information system on the other hand will facilitate planning; land management, infrastructure provision and property taxation. Because planning is intricately tied to land administration, it is necessary that a lands department be established concurrently with the physical planning department.

7.3.4 Closing the Knowledge Gap

The study revealed that the general public has very little understanding of what planning is all about. There is therefore the need for planners to communicate with the general public. Each planner needs to know what the people need and the people need to know what the planner's proposals are. As a matter of fact, in formulation of goals and plans the better the quality of communication, the better the planning. An

opportunity exists in the myriad of community-based organizations in the study area and the introduction of LASDAPs, which maintain that the community has to come with their priority projects. This is the point at which planning information can be disseminated with positive results. Public information campaigns should be directed at schools, communities and specific user groups.

An opportunity also exists in the public universities offering the planning course. They have a role and responsibility for planning education. It is recommended that the universities step down from their ivory tower and partner with local authorities and other public agencies to close the professional knowledge gap that is often lacking.

7.3.5 Research and Training in Land use planning

The planning process is complex and as Kenya attains new levels of urbanization, much research is needed to improve decision-making and implementation process of planning. The study recommends that a national planning research centre be established. The primary purpose of this centre would be to guide national policy formulation, setting of development targets and identification of national goals in harmony with regional, district and local planning goals. Such a centre would enjoy the advantage of not being under great pressure of the day- to-day operations of urban planning and would thus be in a position to further the science and art of planning. One would want to know and understand the tested and proven functions of physical planning as a teachable and learnable discipline. What harm would it do to the growth of such a discipline, if it was taught early in the learning process say even primary level?

The study revealed that there is little communication between those who plan and those who are planned for. A major aim of research and training should therefore be that of “building bridges” and reaching common understanding of the role and purpose of planning. Another aim would be to train sufficient cadres of technical and administrative personnel who comprehend the need and the methods of planning and more particularly in areas of development control where the cadre of officers is below par. Other centres of scientific research are needed in the universities and other institutions of learning to concern themselves with analysis of planning for local,

regional, and national development; advancement of a planning and development theory for Kenya; and evaluation of planning and development practices.

7.3.6 Need for an autonomous planning institutional body at the fringe

In the fringe area of Ngong, there are many planning bodies that lack a co-ordinating authority. These bodies are for the most part not answerable to the ordinary "mwananchi" thus discouraging public participation. In the study area, it has been established that both the Olkejuado County Council and the Nairobi City Council have been unable to deal with the special problems arising in this area effectively. It is therefore recommended that a special planning body be established to deal with mainly the peri-urban area. This body, it is hoped, will prioritize development and planning needs in this very fluid zone of peri-urban influence. There should be recognition of the fringe as a socio-economic unit to be given some form of political expression as an authority on its own standing and the introduction of a Peri-urban Authority in addition to existing Local Authorities could lend direction to planning in the region. This is not really something new as the Paris Plan of 1965 was based on such a concept. Tokyo and Naples have also tried this with measures of success.

The delimitation of this peri-urban area would be best arrived at by taking the commuter zone as an indication of extent of possible jurisdiction of the Peri-urban Authority. As this is likely to produce a large jurisdiction, it may well be accommodated as one regional body in a national system of regional bodies. Boundaries should therefore be quite general. To combat effects of centralization of responsibility for services, the peri-urban Authority should assume very few services for which it alone is responsible and should instead lean heavily on the existing local government structure for provision of essential services. It is recommended that the process be managed through a two level hierarchy – the Peri-Urban Authority (PUA) at the government level, and Local Community Development Associations (LCDAs) at the community level. The former is to provide integrated management of the process, including the master plans for settlements, arrangement of financing options and technical support for the formation and continuing development of the Community Development Associations. The Community Development Associations

Community Development Associations. The Community Development Associations themselves are to manage the process of growth of the settlements, and provide incremental means of infrastructure delivery.

To assist this specialized body, it is recommended that a docket or department for peri-urban planners articulate in understanding the problems of the fringe be formed at the regional level to guide decisions in coordinating all the activities of planning bodies under this wider umbrella body. One has to observe the trends in other professions to see the effects of specialization. Specialization increases the capacity of, for instance, of the medical system, while decreasing the ability of the general practitioner to handle specialized areas effectively. Why should the land use planner be any different? The area wide nature of the fringe often calls for acceptance of responsibility by a specialized team of planners. Clearly the question for the formulation and justification of a peri-urban planning authority is one whose importance has been undervalued. This is a body which will close the gap between a decision maker and the public in this area and in so doing improve the effectiveness of local democracy and therefore planning participation

7.3.7 Preparation of an integrated land use plan

The case of Ngong has established that fringe areas tend to experience growth without the guidance of a physical land use plan. The study area for example has evolved into an urban area within a relatively short span with the planning function limited to the urban centers only. Meanwhile urban developments have continued to arrange themselves on agricultural lots with adverse effects to the environment. An integrated land use plan in this area will therefore define prevalent land uses with a view to outline deficiencies in service provision. Pressure areas will thus be determined through a detailed demographic analysis leading to urgent attention to such areas. This will help maintain a high quality of environment and resolve conflicts among incompatible activities.

A properly carried out planning process is characterized by sequences of stages for identification, review and assessment of alternative development scenarios to be evaluated against agreed goals and objectives. Within this framework, two alternative

development scenarios, A and B, basically related to the development of the urban areas in Ngong are outlined for consideration.

Scenario A

The most salient features of this scenario are related to transportation and land reforms and settlement plans. Transportation cuts across most planning aspects. Reliable, affordable and safe means of transportation are pre-requisites for development in terms of proper delivery of goods and services, as well as access to services and facilities. The challenge will be to develop the infrastructure and a transportation system where all modes are recognized as important means and coordinated in an efficient operation. To this end the Ol-kejuado County Council will be challenged with regard to its responsibility in building up such a system in collaboration with other stakeholders within the transportation sector. It is expected that the road traffic in the study area will double over the years and there is need to widen the roads leading into this area especially the Ngong road and the Magadi road to avoid traffic snarls already exhibited on Ngong road. This calls for collaboration between the OCC and the NCC as service providers to issues that cut across jurisdictional boundaries.

Another possibility that can be explored is the use of non-motorised transport, which will then call for the provision of pedestrian and bicycle route network, a feature less expensive than the conventional road network. Time has not allowed studies of pedestrian and bicycle route networks in the study area.

The study also recommends that communication between Bulbul and Ongata Rongai be improved by provision of an all-weather road between the two centres. This will enhance circulation trends within the study area thus opening up more areas for development. In summary the following measures are proposed for consideration and implementation:

Elaborate on the multi-modal transport concept

- Make use of public transport, pedestrian and bicycle more attractive than the use of private cars to ease congestion on major roads
- Increase attention in physical development layouts and plans with regard to road accesses.
- Increase the standard of rural, urban and rural-urban public transportation systems in terms of travel time, safety and reliability

With regards to land reforms and settlement, the study recognized that the area is growing into an urban settlement without suitable plans to guide these changes into an organized growth pattern. The study recommends identification of areas suitable for settlement purposes and relates these to

- Densifying existing settlements
- Upgrading existing settlements by formulating spatial arrangements
- Planning new settlements to meet the needs of the landless people
- Ensuring productive use of prime farming areas
- Addressing the issue of land tenure
- Preserving and protecting forests from encroachment while also providing good quality to beneficiaries
- Facilitating sustainable land use practices and service provision

In the case of fast emerging urban slums in the area, it is recommended that a community land trust be established and whose main thrust is to make land tenure sustainable thus minimizing the negative effects of the land market on the poor people. The basic concept is that land belongs to the community with individual members owning the development and improvements they have undertaken. This concept has been applied with a great deal of success in the Voi-Tanzania Bondeni village of Kenya.

Scenario B-Strategic Investment Policy Approach

The most salient feature of Scenario B is related to service provision. In this instance, it is recommended that a strategic investment policy approach be applied. This approach suggests that investment in infrastructure in the study area should be carefully planned. Due to the immense need evident within the Ngong study area, it is realized that investment in infrastructure cannot occur on an ad hoc basis if it is to be sustainable. Investment should occur at three levels as mentioned earlier under the recommendations for infrastructural requirements. In addition, the following is noted with respect to the study area:

- All the rural communities fall within Level 1-that of provision of basic needs. The OCCs key responsibility is to facilitate the implementation of projects designed to meet these needs.

- The Ngong –Kiserian road within the study area is identified as a potential development node and capacity-building projects should be focused in this area. The intention is to facilitate the development of this road in such a manner as to improve the socio-economic conditions of the entire area surrounding it.
- Nairobi City, although not identified as part of the study area, is a significant role player in the area. This infers that private sector investment in the area will be encouraged in the area due to Nairobi's proximity. The creation of a corridor of development between and Nairobi and the study area will thus allow for greater opportunity for those residing in the study area.

Evaluation of Scenarios A and B

From the evaluation of the two scenarios, it can be concluded that the study area is ripe for a comprehensive urban planning project with the following areas as the key planning strategy:

- Improvement of infrastructure within the study area by consolidating and upgrading
- Focusing development efforts on existing communities and urban centres
- Provision of basic services to all settlements
- Conservation of resources-natural, cultural and social
- Adopting pro-active measures at the local level in the fight against social problems
- Improving linkages between study area and Nairobi city and other parts of the district as well

CHAPTER EIGHT

SUMMARY AND CONCLUSION

8.0 Introduction

This is the final chapter of the text. The study sought to examine the effects of urbanization on the use and control of land in the Ngong fringe area. A summary of the main findings from each chapter has been given at the end of each of the preceding chapters. This section provides a summary of the research findings inferred from the stated objectives in chapter one and from these objectives, observations made in the core chapters are placed in perspective with a view to steering the discussion towards recommendations and conclusions arising from the study.

8.1 Summary of emerging issues

From all the evidence brought to the surface by the study, there definitely exists a planning problem in Ngong. This problem can be summarized as uncontrolled development brought about by rapid urbanization. The problem manifests itself in rampant subdivisions of agricultural land into residential holdings, lack of attendant services in the area to cater for this growing urban population, lack of adequate physical development plans to guide development, development of urban slums and encroachment on environmentally sensitive areas.

The study also recognizes the failure by the Ol-kejuado County Council to evolve a realistic planning strategy that would guide and stimulate urban developments in this evolving scenario. By commuting to the city center, a large proportion of Ngong residents make use of services to which they do not contribute. On the other hand, the Ol-kejuado County Council does not tax or rate land in areas outside designated urban centers, which leaves a big majority of the fringe population enjoying tax-free services.

The future situation in terms of land parcels and population is likely to be unmanageable. The study revealed that the average land size parcel is 0.25 of an acre, which is slowly reducing to the 0.125-acre level. Unless there is some systematic and planned intervention, a large proportion of the expected population increase will have

no alternative planned settlements and instead conditions of extreme squalor and differentiation are set to continue.

The study also noted the fragmentation between planning and all other aspects of central government. The administrative convenience of separating planning say from housing, transport or education is obvious and is exemplified into entrenched departmental positions. All these departments tend to be hidden behind veils of confidentiality so that that it is not often possible to tell how rational or decision-making is. The inability to coordinate fully the different branches of local government and central government make for a less effectively implemented land use policy.

Though the system of local government has managed to separate one planning authority from another, sometimes the countryside is broken up into units, which compound the planners' problems. To plan for Ngong separately cuts across the functional unity of the city of Nairobi and its surroundings. This will separate employment from labour force. The justification for separate planning bodies thus becomes questionable and poses a threat to planning for a peri-urban area.

The basic argument of this section is that the pace and scale of urbanization in Ngong will soon be such that urban planning programmes and policies will lag behind and thus will thus not make any effective contribution to the solution of the current situation.

Summary of some of the key planning issues and challenges are listed as;

- Lack of a planning unit in the county council.
- An overworked district Physical planner who covers over 22,000km²
- Outdated physicals development plans and in some areas lack of the same.
- Lack of capacity in the council to respond to planning problems and challenges.
- Planning inertia on freehold land.
- Rapid urban population growth
- Fragmented and at times non-existence information database.
- Poor service provision.

- Irregular and rampant sub-divisions sometimes done by non-professionals.
- Poor road network with underdeveloped public transport networks.
- Poor women representation in land use planning issues.
- A fragmented urban land use policy to guide development at the fringe.
- Uneven and inadequate distribution of community facilities.

Opportunities.

- Available natural resource base in land, water and forests.
- Genuine interest by the general public to participate in the planning processes.
- Cultural diversity, which is an asset to attract tourism in the area.
- Established system for local participation at grass root level through the local authority structure
- Neighboring Nairobi city represents a potential economic growth in the long run.
- Idyll countryside.

Threats

- High crime rates.
- Corruption practices at all levels of society impede planning decisions.
- Increasing car traffic.
- Political interference in the planning function.
- Indiscriminate dumping of waste and general littering.
- Noxious industries.
- Quarrying activities
- Water resources reaching capacity.

8.2 Conclusion

This work set out with the hypotheses that the presence of cheap and unserviced land together with low levels of land use controls has led to the current haphazard development pattern experienced in the study area. The conclusion of the study is that this indeed is true in Ngong. The grain of urban developments in this rural area is loose and coarse and built-up areas have coalesced to form "*a weak solution of unorganized growth.*"

This is not and should not be the case. The control and the use of land is first important to the environmental quality in any given set-up, then any other variable. And this is basically a planning truism- control and use of land is for purposes of order, scale and harmony. This control is particularly critical in a changing environment like the study area, which is basically an urban fringe, where complex processes of urban development take place. If we are to understand the role of land use controls, and the changing demands upon it, we need to understand something of the urban transition at the fringe. All sorts of **pulls, pressures and pushes** have often accompanied the land development process in Ngong. In these shifting sands, planning has grown into a series of different policy areas, which defy description let alone coordination.

It is for this reason that planning agencies and institutions have been void of purposeful and explicit concern for such fringe environments. Difficulty has therefore been experienced in fitting these urban developments into a "*coherent growth pattern*." The area of study, Ngong as Bryant (1982) would put it possesses '*no commodity, firmness or delight*'.

This is inevitable given the youthful state of land use planning in Kenya. True legal powers exist in almost all spheres but in our minds, land use controls are often associated with status, power and dominions. Economic pressures continue to dominate a situation, which calls for intervention measures in the public interest.

The study confirmed that previous planning processes in the country in general and in the Ngong area in particular, have up to now been shaped to deal with either rural or urban communities, where urban planning has received the most attention. The fringe areas surrounding Nairobi City for example if at all noticed in the urban planning process have been mostly perceived as an additional burden to the city of Nairobi, rather than as asset and a potential for economic growth and balance.

The conclusion drawn from this study is that the incremental planning assumptions being used to control land development in Ngong are based mainly on the experience of Nairobi as a city. Yet the city of Nairobi has been unable to control and direct growth within its boundaries and cannot thus serve as a best example.

Given the increasing need to plan for such areas, then planners should come up with alternatives to the current brand of planning practiced in such places where planning tends to follow developments. The government admittedly has a major role in peri-urban development and more so in preservation of spatial order and aesthetics for the well being of its people. To avoid past mistakes, planning must be viewed as necessary in an increasingly urbanized society.

8.3 Recommendations

If the above findings can be accepted for Ngong and other peri-urban areas, it would probably call for a complete overhaul and complete change of urban land use policy and laws for future urban development in other Kenyan towns. More importantly, there is need to demystify legal jargon and write the land laws and related documents in a style and format that can be readily understood and absorbed by the majority, so that the message can spread further

A key challenge in Ngong is the uncontrolled expansion of the urban settlements which has led to undesirable consequences on both the living and natural environments. There is need to restrict and control urban expansion by evolving a peri-urban strategy geared towards selective urbanization. A programme of zoning for multiple uses will reduce competition between land uses and minimize impacts on the environment. To allow order or patterns to be recognized, a system of classification is needed in the study area. It is noted the OCC has a wealth of data, which can be used in the study of land uses and their subsequent planning. This is based on the premise that routine planning statistics relating to allocated users, development control and planning applications yield much more information at the local level. Also to be included is an integrated land use plan for the entire area with joint cooperation between the local authority and the local communities. More importantly, the OCC should be encouraged to introduce community roles and sanctions for land use controls so as to create awareness, educate and deter residents from infringing on key provisions of planning.

Owing to scarcity of resources and prevailing economic circumstances, the Local Authority and the Central Government should begin to appreciate the role of the private developer. The negative and non cooperative type of attitudes both the Local Authority and central government have had towards the private developer should be discouraged. There is also need to consider alternative options to service delivery such as cost sharing and minimal rates on urban land uses.

8.4 Areas for further research

On the whole, the study has not exhausted the full scope of the fluid urbanizing fringe. The study recommends further studies on how best to manage the fringe with specific inquiry directed to such studies as;

- The role of Local authorities in managing border areas
- A more detailed study on land tenure system in the area with a view of finding which tenure system is ideal in a rapidly changing environment
- The positive role women play in planning functions
- Urban land conversion at the fringe with a view to estimating how much land is needed for future urban growth.

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Mining Act Cap306

Physical Planning Act Cap 286

Physical Planners Registration Act

Revised Building By-laws

The constitution of Kenya

Trust Land Act cap 288

Water Act Cap 372

APPENDIX A

HOUSEHOLD QUESTIONNAIRE

University of Nairobi

Department of Urban and Regional Planning

Master of Arts Planning 2000/2001 Thesis Field Research

“The Effects Of Urbanization on the control and use of Land in the Ngong Fringe Area”

Declaration. The information obtained will be purely used for academic purposes and will be treated with confidentiality.

Questionnaire Number :

Date of Interview :

Sub-location :

Location :

Division :

A. HOUSEHOLD DETAILS

1. Name and address of respondent (optional)
2. Details

Household	Age	Sex	Level of education	Occupational status	Marital Status

3. Are you an indigenous residents of Ngong? Yes/No.
4. If not, where do you come from?
5. When did you come to Ngong?
6. What were your reasons for coming to Ngong?
7. What is the length of period as resident of Ngong?

B. LAND ISSUES

8. Do you own this land you currently stay on? Yes/No.
9. If yes what is nature of ownership
 - a) Freehold
 - b) Leasehold
 - c) Temporary occupation license
 - d) Customary.
10. How did you acquire the land?
 - a) Bought
 - b) Gift
 - c) Allocated
 - d) Inherited
 - e) Other (specify)
11. What is the size of the land?
 - a) Less than ¼ an acre
 - b) ¼ acre – ½ acre
 - c) 1 – 2 acres

- d) More than 2 acres.
12. If bought or allocated, how much did the land cost you? State year bought also.
 13. Do you own a title of your land?
 14. Where did you obtain title to land?
 15. On acquisition of this land and processing of title, which procedure did you follow?
 16. What are your comments about this procedure?
 17. How long did it take to process the title to your land?
 18. Have you ever done the following on your land?
 - a) Sub-divided
 - b) Effected change of user
 - c) Extended lease
 - d) Converted tenure say from leasehold to freehold
 19. If yes what procedures did you undertake before doing any of the above?
 20. In dealing with you land, whose professional services have you frequently sought?
 21. What in your opinion, is the major setback to developing your piece of land?
 22. What activities do you carry on your farm/land?

C. SERVICES

23. Do you have access to water on the land?
24. If so, which type?
 - a) Piped
 - b) Borehole
 - c) Well
 - d) Roof catchment
25. What procedure did you follow before you were supplied with water?
26. Is supply sufficient for present use?
27. What type of waste disposal do you use on the plot?
 - a) Pit latrine
 - b) Septic tank
 - c) Flush toilet
 - d) Others (specify)
28. Where do you dispose household garbage?
 - Open pit
 - Dust bin
 - Collected by local authority
29. What problems do you face regarding waste management?
30. Are you supplied with electricity? Yes/No.
31. Where do you pay your electricity bills?
32. Do you have any problems with accessing your property?
33. Is the land accessible to both vehicular and pedestrian traffic?

D COMMUNITY FACILITIES

34. Where do you go for the following? State distance & place

	<u>Place</u>	<u>Distance</u>
a) Shopping		
b) Nursery school facilities		
c) Primary school		
d) Secondary school facilities		
e) Health centre		
f) Library		
g) Entertainment		
h) Playground		

E. GENERAL

35. What do you consider as a serious problem in this area?
36. Any other comments.

Thank You

APPENDIX B

SCHEDULED QUESTIONNAIRE FOR THE PHYSICAL PLANNING OFFICERS (NAIROBI AND OLKEJUADO COUNTY COUNCIL)

University of Nairobi

Department of Urban and Regional Planning

Master of Arts Planning 2001/2002 Thesis Field Research

"The Effects Of Urbanization on the control and use of land in the Ngong Fringe Area "

Note The answers you give to the questions will be treated with due confidentiality and will be strictly used for academic purposes. Your cooperation in this regard will be appreciated.

Date of interview:

1. What is the extent of your services as regards planning the district and its environments?
2. What has been the council's role in land use development in the Ngong area?
3. Your area of jurisdiction i.e. Olkejuado County Council has the significant element of being very closely related to Nairobi, the capital city, what are the emerging planning issues.
4. What are the various tools you use to plan for an agricultural area that is rapidly urbanizing like the Ngong area?
5. What has the council done or intends to do to avoid effects of high-density unplanned settlements in the Ngong area?
6. What are some of the problems you face in enforcing building regulations?
7. What are the land management agencies, standards, policies, legislation or other systems in operation in the Ngong area?
8. How are these related or coordinated in operation?
9. What are the common problems or conflicts experienced in the course of their practical operation and use?
10. How could this be harmonized or made to operate efficiently for effective land development and management in this area?
11. What do you think are the major limitations of land use regulations and control with the present planning legislation?
12. Who else apart from the physical planning department and county council provides physical planning services in the Ngong area?
13. The fringe area of Ngong seemingly portrays urban trends, which dictate a planning approach that is urban in nature. Have there been any similar changes in the planning jurisdiction?
14. In your opinion therefore, what is the way forward for effective planning of urban fringe areas?
15. Any other comments.

Thank you very much for your cooperation.

APPENDIX C

University of Nairobi

Department of Urban and Regional Planning

Master of Arts Planning 2000/2001 Thesis Field Research

“The Effects Of Urbanization on the control and use of Land in the Ngong Fringe Area”

Declaration. The information obtained will be purely used for academic purposes and will be treated with confidentiality.

BUILDING SURVEY

Questionnaire Number :

Date of Interview :

Sub-location :

Location :

Division :

A. HOUSEHOLD DETAILS

1.Name and address of respondent (optional)

2.Details

Household member	Age	Sex	Level of education	Occupational status	Marital Status

2. Are you an indigenous resident of Ngong? Yes/No.

3. If not, where do you come from?

4. When did you come to Ngong?

5. What were your reasons for coming to Ngong?

6. State place of work

B BUILDING ISSUES

7. Type of house

- Bungalow
- Flat
- Maisonnette
- Single room/s.

8. Number of rooms
9. Number of buildings per plot
10. Do you have an approved building plan?
11. If yes, who drew it for you? If no state why.
12. State distance of building from
 - a) the front plot boundary
 - b) the back plot boundary
 - c) the side plot boundary
12. Have you any other buildings on the plot without a building plan
13. Annual rent of land if known
14. Built up ground floor area in sq.m
15. Cost of buildings if known
16. Age of building in years
17. At the construction stage, were you visited by the county council officials
18. If Yes, do they still make occasional visits to your plot
19. Type of buildings by
 - a) Roofing material
 - GCI
 - Tiles
 - Concrete flat roof
 - Grass thatch
 - b) Walling material
 - Mud and wattle
 - Timber
 - GCI
 - Concrete blocks
 - Natural stone
 - c) Floor type
 - Rammed earth floor
 - Cement screed
 - Wood blocks(parquetry)
 - PVC
 - d) Internal Wall finish
 - Painted and plastered
 - Plastered only
 - Unplastered
 - Other
 - e) Ventilation
 - Adequate
 - Small windows
 - No windows