FACTORS CONTRIBUTING TO ILLEGAL OCCUPATION AND DEVELOPMENTS ON ALIENATED PUBLIC LAND FOR ROAD CORRIDORS IN KENYA:

The Case of Nairobi Northern Bypass

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A Thesis submitted in partial fulfillment of the requirements for the degree of the Master of Arts in Planning



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August 2009

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Declaration

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DEDICATION

This thesis report is dedicated to my husband, Gitari and our sons, Victor and Ian who didn't forget to ask me whether I had assignments to do.

ACKNOWLEDGEMENT

This research report would not have been possible without the contribution from the various individuals and organizations. I wish to thank the University of Nairobi for sponsoring my study and the Ministry of Roads for allowing me to take a study leave. I also appreciate very much the help and guidance accorded to me by my supervisors Prof. Ngau and DR. Obiero of the Department of Urban and Regional planning of the University of Nairobi. I cannot also forget the Principal Superintendent Surveyor of the Ministry of Roads for availing the materials I was able to use for the research; the various government officers who availed themselves for the interviews and my classmates for the moral support they gave when I felt like giving up.

ABSTRACT

Illegal land occupation and developments on road corridors in Kenya is quite common. The consequences include destruction of property and delays when the time comes to construct the roads. The fact that it is possible to occupy land, which had previously been acquired for road construction, could be caused by various factors ranging from a weak land administration system to poverty and corruption in the country.

The study utilizes the Nairobi Northern bypass to examine the factors, which contribute to the illegal occupation and development on the road corridors. The objectives were to determine the nature and the extent of the illegal occupation and development on the bypass, to determine the process followed during the planning, design and acquisition of the road corridor, to examine the factors which led to the illegal occupations and development, and to find out the reaction of the Government and other stakeholders to the illegal occupations. The study aims to contribute towards policy guidelines to ensure that there is proper management of the road corridors in the future.

The study was carried out by use of questionnaires and interview schedule with the relevant government officers in the various ministries involved with the land administration. A total of 113 household questionnaires were administered and these were selected using systematic sampling technique. The data collected was both qualitative and quantitative and hence various methods of analysis were adopted such as using frequency analysis and inferential statistics.

A weak land administration system, poor enforcement of regulations, a weak legal framework, poverty, population increase, greed and corruption emerged as some of the factors which have contributed to the illegal occupations and development of the road corridors. There was also abuse of public offices and the failure of the land professionals to uphold moral and ethical principles in the execution of their duties and failure to implement plans. There is therefore a need to look closely into the land administration systems of the country, which in reality is about the use, the ownership, and the value of the land. All the factors identified as contributing to the

illegal land occupation point to a weakness in the land administration processes in the country.

The study recommends that since the 1973 plan that proposed the bypasses was never degazetted, the road should be constructed as it had been planned. To ensure that land acquired in the future for road construction is not encroached on; the weak instrument used during the land acquisition process should be amended to make it compulsory for the agency acquiring the land to register, survey it and use appropriate survey markers and to ensure that there is security of tenure. There is need to prepare physical development plans which depicts all planned utilities and adequate provision of cheap housing for the urban poor.

The study calls for exploring the possibilities of setting up a land information system which combines the different data sets from the different agencies and hence eliminating the exclusive nature in which the data is held. This will ensure that the land information will be complete and therefore giving the true picture of the ground in comparison with the current system where one has to visit at least five offices to ensure that there is agreement on the data.

Abbreviation and Acronyms

COL Commissioner of Land

GLA Government Land Act

GOK Government of Kenya

MOR Ministry of Roads

CCN City Council of Nairobi

NUSG Nairobi Urban Study Group

RIM Registry Index map

PDP Part Development Plan

TABLE OF CONTENTS

	Page
Declaration	ii
Dedication	iii
Acknowledgement	iv
Abstract	v
Abbreviation and Acronyms	vii
Table of Contents	viii
List of Tables	xi
List of Figures	xii
List of Plates	xiii
CHAPTER ONE: INTRODUCTION	1
1.1 Background to the Problem]
1.2 Statement of the Problem	3
1.3 The Objectives of the Study	4
1.4 Significance of the Study	5
1.5 Limitations of the Study	5
1.6 The Methodology	5
1.7 Definition of Terms	11
1.8 The Outline of the Study	11
CHAPTER TWO: LITERATURE REVIEW AND THE CONCEPTUAL	_
FRAMEWORK	13
2.1 Introduction	13
2.2 Land Policy, Land Management and Land Administration	13
2.2.1 Land Policy	14
2.2.2 Land Management	15
2.2.3 Land Administration	18
2 3 Land Use Planning	27

2.3.1 Development Control	29
2.3.2 Land Use Policy and Development Control	30
2.4 Summary on the Land Management and Land Administration	31
2.5 Land Management and Administration in Kenya	32
2.5.1 Land Allocation in Kenya	
2.5.2 Security of Tenure	35
2.5.3 Land Use Planning in Kenya	35
2.6 Illegal Occupation and Development	
2.7 The Conceptual Framework	44
CHAPTER THREE: THE STUDY AREA	51
3.1 Introduction	51
3.2 Geographical Location	51
3.3 The Natural Environment	54
3.4 Growth and Development of Nairobi	54
3.5 Population Growth and Distribution	56
3.6 Infrastructure	56
3.7 The Administration of Nairobi	58
CHAPTER FOUR: PLANNING, ACQUISITION AND DESIGN OF T	ГНЕ
NORTHERN BYPASS	60
4.1 Introduction	60
4.2 The Procedures Followed	60
4.2.1 The Planning of the Nairobi Northern Bypass	60
4.2.2 The Design of the Road	60
4.2.3 The procedure for Land Acquisition	61
4.3 Weaknesses in the Land Acquisition Process	63
4.4 Problems arising from the Acquisition Method used	66
4.5 Summary	69
CHAPTER FIVE: FACTORS CONTRIBUTING TO ILLEGAL	
OCCUPATION AND DEVELOPMENT	71
5.1 The Extent of the Illegal Occupation and Development	71
5.2 The Nature of the Illegal Occupation and Development	71

5.3 Occupation and Development of the Road Corridor	75
5.5 Summary	84
CHAPTER SIX: POLICY RESPONSES ON DEVELOPMENT OF THE I	ROAD
CORRIDOR	87
6.1 Introduction	87
6.2 Response to the illegal occupation and development along the Road corrido	r87
6.3 Communication to the illegal occupants	87
6.4 Delegation of Authority to manage the road corridor by the statutes	88
6.5 Summary	90
CHAPTER SEVEN: CONCLUSIONS AND RECOMMENDATIONS 7.1 Conclusions	
7.2 Recommendations	
7.2 Recommendations	
REFERENCES	99
Appendix I: Household Questionnaires	104
Appendix II: Interview Schedules	109
Appendix III: Registration of Acquired Land	115
Appendix IV: Sample Letter of Allotment	116
Appendix V: Notification of Illegal Occupation by the Ministry of Roads	117

List of Tables

Table 1.1: Data collected from the study	7
Table 1.2: Methods of data collection	8
Table 3.1: Population size for Nairobi 1985-2015	56
Table 5.1: Types of legal documents	75
Table 5.2: Results for those who have ever heard of Nairobi Northern bypass	76
Table 5.3: Results on whether the respondents know where the bypass passes	76
Table 5.4: Approval status before development	81
Table 6.1: Reaction from the illegal occupants	88

List of Figures

Figure 2.1: The land management paradigm	-16
Figure 2.2: The basic components of land administration	-18
Figure 2.3: The basic elements of land registration	
Figure 2.4: Government land allocation procedures	-34
Figure 2.5: Causes of illegal occupation and development on road corridors	48
Figure 3.1: Map of Kenya showing the place of Nairobi in the National Context	52
Figure 3.2: Map of Nairobi showing the Northern bypass	53
Figure 3.3: The growth map of Nairobi from 1900 to 1963	55
Figure 4.1: The procedure for land Acquisition	-62
Figure 4.2: Failure of designing road in the right time	-63
Figure 4.3: Uncertified title after the 1970 land acquisition	65
Figure 4.4: The part of the bypass that was compulsorily acquired	-66
Figure 4.5: Part of the bypass acquired using the bylaw and the areas that have not	
been acquired	67
Figure 4.6: Road encroachment at Runda	-68
Figure 4.7: Mismatch between the acquired road corridor and the designed road	69
Figure 5.1: Hot spots along the Northern bypass	72
Figure 5.2: Pie Chart representing the reasons for occupation	73
Figure 5.3: Land ownership	75
Figure 5.4: Representation of how they learnt about the bypass	76



List of Plates

Plate 5.1: Houses at Kongo and an Inset of Houses at Kamae	7 3
Plate 5.2: Un-constructed Piece of Land at Kongo	73
Plate 5.3: Slum Development at Githiogoro	77
Plate 5.4: Cultivation along the Bypass	83

CHAPTER ONE INTRODUCTION

1.1 Background to the problem

Virtually all third world countries are becoming increasingly urbanized so much so that the United Nations suggests that 80% of the growth in population in the next few decades will be urban not rural (Hardoy et al, 1995).

Due to rapid and uncontrolled growth, millions of these city inhabitants live in slums (Dixon-Gough 2006). It is now common for 30 to 60 percent of an entire city's population to live in houses and neighborhoods that have been developed illegally (Hardoy et al, 1995). Squatter settlements are other informal settlements. Many of these settlements are illegal in the sense that first, land is occupied illegally and the site is developed without regard for zoning and subdivision regulations (i.e., concerning the permitted use of the land, permitted density, water supply, drainage, and access roads) and secondly, many individuals and businesses profit from the development of illegal communities or the needs of their inhabitants. Landowners, land developers, and businesses make money from buying and selling land illegally and, in some cases, extensive and highly profitable landlordism has developed.

UNCHS (1996) is of the opinion that there is usually a great range in the nature of the illegality- in the occupation of the land, in the registration of ownership, in the way the land is subdivided, in the way to which the land is put and in the nature of building on it which can all be grouped to be illegal occupations. These illegal occupations have been referred to in literature as informal settlements and include spontaneous, irregular, unplanned, marginal and squatter settlements.

Squatters are people who occupy land or buildings without the explicit permission of the owner. They often differ from other informal settlements only in this particular aspect. Thus, squatter settlements are settlements established by people who have illegally occupied an area of land and built their own houses upon it, usually through self-help processes. They are primarily though not exclusively built on public land. They can be the result of organized 'invasions' of land, which may have occurred

overnight (especially in Latin America), or they can be the result of a gradual process of occupation and incremental growth.

Illegal occupation apart from squatting can also take place due to illegal land subdivisions. Illegal subdivisions refer to settlements where the land has been subdivided, resold, rented or leased by its legal owner to people who build their houses upon the plots that they buy. The settlements are illegal owing to any combination of the following: low standard of services or infrastructure; breaches of land zoning; lack of planning and building permits; or the irregular nature of the land sub-division'. Illegal sub-divisions are very common in developing countries but are not restricted to or to occupation by people living in poverty (UNSHP, 2003).

Illegal occupation is a logical sequence of the explosive population growth within a city. In developed countries like Japan, England and U.S.A, it takes the form of taking over abandoned buildings but it is in the developing world where illegal occupation takes the form of actual construction of homes on land which does not belong to the developers (Popko, 1978). Authorities tend to consider these settlements unsightly, and one way of eradicating the "problem" is to bulldoze them (Herbert, 1996). They are often built on land earmarked for development so most developing world cities have a history of forced evictions.

Cases of illegal occupation especially in developing countries are not constrained to urban land but also affect land set aside for forests, game reserves and other public purposes. Illegal occupation of transportation corridors is quite rampant due to the vast lands usually allocated for this purpose and the fact that the construction of this infrastructure is quite expensive resulting to the land remaining vacant for a long period of time. These are lands mostly set aside for airport expansion and pathways, railway reserves and land for road construction.

In India, in the 1960s, road, drain and railway track margin squatter settlements proliferated (Baken 2003), whereas in the 1970s and 1980s considerable settlements increased along the national highway. Apparently some of these settlements were cleared in the 1980s in the context of road widening scheme. Airports land has not been spared either and encroachers have with the active help from local legislators grabbed nearly 150 acres of land belonging to the Airports Authority of India and this

has affected the expansion of Mumbai Airport. The situation has jeopardized the direct flights into the city and the Airport Authority has been battling to evict the illegal occupants.

Illegal occupation and development shows lack of enforcement on the ground by agencies concerned which can be as a result of lack of capacity both financial and technical, lack of awareness or total disregard of the laws governing the management of the land. With the absence of any effective land use plan or other means to control new developments, then generally cities expand haphazardly (Satterthwaite 1999). Lack of coordination between different government agencies often leads to severe land disputes and none of the departments is usually willing to settle them (Colchester et al, 1995).

In Kenya, Illegal land occupation and development is a national concern and this led to the formation of the Ndungu Commission into illegal and irregular allocation of public land in the year 2003. The commission identified that there was extensive allocation of alienated public land, land, which even the president, does not have powers to allocate. The commission found out that land acquired compulsorily like that for proposed Nairobi bypass was illegally allocated to individuals and companies whereas land meant for public purposes such as schools, playgrounds and hospitals was sold off by the Commissioner of lands and numerous local authorities.

The reaction to illegal occupation and developments has been evictions and demolitions of developments as experienced in the late 2003 when houses built on the proposed road corridors were demolished. The demolition of developments results in heavy loses on the part of the developer and wastage of resources for the economy, which would have been used positively to enhance the standards of living on one hand. Lengthy legal case occurs between the developers and Government leading to delays in the construction of the road projects.

1.2 Statement of the problem

The road bypasses in Nairobi were provided for more than 30 years ago in anticipation of future traffic demands. These roads that were to be the main corridors to be used by vehicles to bypass the Nairobi commercial area were provided for in the

1973 Metropolitan Growth Strategy for Nairobi after a thorough analysis of growth potentials and options for Nairobi. The plan, which was prepared by the Nairobi Urban Study Group (NUSG) through the period 1970-1973 and financed, by the Government of Kenya and United Nations was approved by the government and published in the Kenya gazette.

After the planning process the road corridors were actually mapped and the roads designed to facilitate the acquisition process. The acquisition was done either through the compulsory land acquisition or in some cases through the application of the city bylaws that were being enforced to any developer who wished to subdivide his land to surrender the road corridor. This meant that the road corridors were to be provided for and respected through subsequent land subdivisions and property development.

Having followed the right procedures in the plan preparation of the road corridors and the subsequent land acquisition process, the bypasses were not built as expected where else many illegal occupations and developments have taken place. Since 2003, the government has sought to deal with numerous cases of illegal occupation and development on the road corridors for the proposed bypasses in Nairobi. A number of legal cases have been instituted. The study therefore seeks to examine the extent of, and the factors, which have contributed to illegal occupation and developments on the proposed corridor for Nairobi Northern Bypass.

1.3 The objectives of the study

- 1. To examine the process followed in the planning, mapping, design and compensation along the Nairobi Northern bypass.
- 2. To determine the extent and nature of illegal occupations and development on the road corridor for the proposed Nairobi Northern bypass.
- 3. To examine the factors which have contributed to illegal occupation and developments on the proposed road corridor
- 4. To examine the response by government of Kenya to the illegal occupation and development along the Nairobi Northern bypass.
- 5. To suggest policy and planning guidelines for effective management of proposed road corridors.

1.4 Significance of the study

The study is significant because there is no literature in this area and therefore the research aims at filling a gap. It is expected that new road corridors will continue to be proposed and acquired as the need arises to meet the traffic demand and unless there are guidelines on how the acquired land should be maintained and preserved, in the cases where the road corridor remains undeveloped due to either limitations of funds, and with the increase in population and urbanization, the possibility of the land set aside being illegally occupied is high. To avoid the use of the bulldozer as the means of reclaiming back the land, it is important to have guidelines on how the road corridors can be maintained free from illegal occupations and developments.

1.5 Limitations of the study

The issue of land in Kenya is quite sensitive and is marred by politics and hence there was suspicion when the study was being conducted and at times outright hostility from the government officers. The cooperation from some departments was minimal especially the Lands department of the Ministry of Lands the department responsible for the management of land in Kenya. This resulted to withholding of some of the information as to who could have triggered these illegal allocations.

1.6 The methodology

The research is both qualitative and quantitative. The Northern Bypass corridor is used as a case study for an in-depth investigation of illegal land occupation and developments on road corridors. By studying the Northern bypass as a case study it is possible to draw conclusions on the factors which contribute to illegal occupation and development on alienated public land in Kenya.

The subjects

The main subjects were households occupying the proposed road corridor at Runda, Githiogoro, Githurai, Maziwa, Kahawa West and Kamae areas. The households gave data as to the time when they occupied the road corridor, the type of ownership, how they acquired the plots, whether they have infrastructure services provided, how they

were provided for with the infrastructure and whether they seek development approvals.

The other subjects were drawn from agencies and officials responsible for land planning, allocation, development control and enforcement. The agencies included the City Council of Nairobi who prepared the master plan which proposed the road corridors and provided the process on how road corridors are planned for and the role they play in the implementation of the plans. The ministry of lands provided another set of subjects who were drawn from its three departments; the physical planning department, the survey department and the lands department. The lands department has the responsibility of alienating government land and documentation of land ownership among others. The department of lands shed some light on the process of land acquisition and how they protect the land acquired for road corridors. The survey department has the responsibility of providing and maintaining plans for property boundaries in support of land registration throughout the country. The survey department provided information as to how road corridors can be identified on the cadastral plans. The physical planning department has the mandate to prepare part development plans and to process development applications such as change of user and subdivisions. And lastly the ministry of roads survey section who have the responsibility of ensuring that there is no encroachments on road corridors. The survey section also has the responsibility of mapping the road corridors for the provision of data for design purposes and to prepare maps for the subsequent land acquisition and compensation. Heads of department of these departments were interviewed to give an insight on their perception of the illegal occupations and why they need to be demolished.

Methods of data gathering

The study used a mixture of structured and unstructured questionnaires to gather information from the households (appendix I) and use of interview schedules (appendix II) on key informants from the various departments and discussions. There was also use of observation and photography in the field to appreciate the extent of illegal occupations and development on the road corridors.

Types of Data

The data for the study is primary and secondary data which helped to answer the objectives set. The data collected was as follows:

Table 1.1: Data collected for the study

Objective	Data collected
1. To determine the extent and nature of illegal occupations and developments on the Nairobi Northern bypass	 Extent The Northern bypass boundary The cadastral plans abutting and within the road corridor aerial photography List of the properties on the road reserves Nature
	 How the land was acquired Security of tenure The nature of occupancy: Owner or tenant Duration of occupancy
2. To examine the process followed in the planning, mapping, design and compensation along the Nairobi Northern bypass.	 The procedure followed in the planning, mapping, design and acquisition of the bypass. When the road was planned, mapped, designed and acquired.
3.To examine the factors which have contributed to illegal occupation and developments along the proposed road corridor	 When the road was acquired How the rights of the road corridor are recorded after the acquisition When and how the road was allocated to private developers When and how the change of user was effected How do the physical planning department of the local authority implement the plans When and how the ministry of roads opened the road for the first time How the road extent is identifiable on the ground

	Why the occupants acquired the land
4.To examine the government of Kenya response to the illegal occupation and development along the Nairobi Northern bypass	 How the government informs the illegal occupants How the illegal occupants respond

Collection of primary data

This was done by use of structured questions which were in the form of

- 1. Key informant interviews
- 2. Household questionnaires
- 3. Field observation

The secondary data collection

Secondary data collection was used for searching and reviewing existing documents and publications with information on the research topic. This was important for substantiation and collaboration of primary data. The main sources of secondary data were:

- 1. Official policy documents
- 2. Government of Kenya reports
- 3. Legislations
- 4. Prior research work (e.g. journal articles)

Table 1. 2: Methods of data collection

Types of Data (Variables)	Form of data	Source of Data	Method of data collection
When the road was acquired.	Secondary	Ministry of roads/ lands and the City Council of Nairobi	Data retrieval
Opening of the road for the first time	Primary	Ministry of Roads	Interview

Recording of rights after acquisition	Primary and secondary	Ministry of lands and Ministry of roads	Interview and retrieval	data
Implementation of the master plan	Primary and secondary	Ministry of lands and City planning department of City Council of Nairobi	Interview literature review	and
When the road was allocated to private developers	Primary and secondary	Ministry of lands	Questionnaire, interview literature review	and
When the change of user was effected	Primary and secondary	Ministry of lands and department of city planning, City Council of Nairobi	Interview literature review	and
Duration of road occupation by the developers	Primary and secondary	Developers	Questionnaire	
Type of activities carried out	Primary	Developers	Questionnaire observation	and
Security of tenure	Primary and secondary	Developers and Ministry of lands	Questionnaire, interview literature review	and
How they acquired the land	Primary	Developers	Questionnaire interview	and
List of the properties on the road reserves	Primary and secondary	Ministry of lands and developers	Questionnaire, interview literature review	and
Ownership details	Primary and secondary	Ministry of lands and developers	Questionnaire data retrieval	and
Informing illegal occupants	Primary and secondary	Ministry of Roads and developers	Questionnaire, interview observation	and
Illegal occupants response	Primary and secondary	Ministry of Roads and developers	Questionnaire, interview and retrieval	data

Sampling frame

The sample was drawn from households and relevant officers and agencies. These are the ministry of roads, the ministry of lands; physical planning department, lands department, Survey department and the department of City planning in the City Council of Nairobi. Key informants were identified from each department and these were; the Principal Superintendent Surveyor (Roads), the Director of Surveys, the Director of Physical planning, the land administration officer (Lands) and the Assistant director of city planning (City Council of Nairobi).

The households who are the main developers constituted all those purported illegal occupations and developments. The illegal occupants were stratified according to the locality and came up with six localities. These are Kamae, Jua Kali, Kongo, Maziwa, Githurai 44 and Githiogoro slum in Runda. For each locality a sample size of 30 was to be selected but for some this was not possible. Hence even with an expected sample size of 180, only 113 cases were interviewed.

Along the Nairobi Northern bypass there are both squatter settlements and the irregular allocations. For the households within the irregular allocations, all the illegal parcels along the proposed Nairobi Northern bypass were captured from the cadastral plans and listed where one parcel was assumed to house one household. The parcels in this category to be included in the study were selected using systematic random sampling techniques where the first case was selected from the tables of random numbers and the others picked after an interval.

For households within the squatter settlements at Githiogoro and Kamae, the households were identified using data generated from aerial photography of 2003 and ground truthing done to populate the map with other structures which have come up since the photography. The structures were then numbered on the map and systematic random sampling applied to select the cases to participate in the study.

Analysis of the data

Quantitative data was analyzed using SPSS software to generate frequency distribution, measures of central tendency and percentages. The qualitative data was organized into categories, themes and patterns and then evaluated to determine the usefulness of the data in answering the research questions. The qualitative data was analyzed by synthesizing data from interviews with the key informants and observations. Pie charts, bar charts and maps were used to present the results.

1.7 Definition of terms

- "Bypass" A road on the fringe of a town or village to enable through traffic to avoid congested areas or other obstructions to movement.
- "Road" A way for vehicles and for other types of traffic which may or may not be lawfully usable by all traffic.
- "Informal settlement" means one shack or more constructed on land, with or without the consent of the owner of the land or the person in charge of the land;
- "land invasion" means the illegal occupation of land or any settlement or occupation of people on land without the express or tacit consent of the owner of the land or the person in charge of the land, or without any other right in law to settle on or occupy such land:

"Owner" means the registered owner of land, irrespective of whether such owner is the National Government, the Provincial Government, the Municipality or a private individual, company or other legal entity.

1.8 Outline of the study

The thesis is presented in seven chapters as follows.

- Chapter one gives the problem statement, the objectives to be achieved and the
 methodology which was followed in order to achieve the objectives in terms of the
 subjects who formed the sample of the study and the way the data was analyzed.
- Chapter two outlines the theoretical framework for the research. The key concepts underlying the research are elaborated. The chapter deals largely with the formal land administration practice and the reasons which make it to fail. The chapter finally gives the conceptual framework describing the factors which are always intertwined to cause the illegal occupation and development of road corridors.
- Chapter three describes the background to the study area and issues of urban land management in Nairobi are given attention.
- Chapter four presents the findings regarding the procedure which was followed during the planning, design and compensation of the Northern bypass.

- Chapter five presents the findings on the extent of the illegal occupation and development, the nature and the factors which usually lead to these malpractices.
- Chapter six utilizes the findings to identify the policy options available to the
 Government for the management of road corridors
- Chapter seven draws conclusions regarding the study topic and gives recommendations on what should be done to ensure that road corridors are well managed to deter illegal occupation and development.

CHAPTER TWO

LITERATURE REVIEW AND THE CONCEPTUAL

FRAMEWORK

2.1 Introduction

The question of land in the urban context is not only very broad and complex but also economically and politically sensitive. Land is not only a basic-component of human activity but is also, in most cases, the most important means of livelihood. It is the foundation for shelter, food, work and a sense of nationhood.

Rapid urban population expansion in the developing world has created the need for effective land management in urban areas. Uncoordinated urban land development is one of the major problems associated with urban land management and environmental degradation. The uncoordinated and haphazard developments manifest themselves in the form of unregistered slum settlements and illegal unapproved commercial structures.

The main causes of urban land problems have been identified as ranging from lack of proper land information systems, political interference, increase in population, rapid urbanization, indiscipline in the property market to the lack of a clear land policy, a weak institutional framework and linkage, and a widening gap between the rich and the poor. Inability of both local and central governments to enforce law has also been sited as a cause to urban land problems. Lack of adherence to laid down regulations, rules and procedures by responsible agencies has encouraged the problems.

2.2 Land Policy, Land Management and Land Administration

Different approaches have been used to describe the relationship between land policy, land management and land administration while some experts have viewed land management as encompassing land policy and administration (Dale and McLaughlin, 1988), some have seen it as distinct from land policy and land administration (Steudler and Williamson, 2002). Yet others see land administration as a key component of land policy (DFID, 2002 and Molen, 2001). The three concepts of land policy, land management and land administration have been placed in a hierarchical

scheme by Dale and McLaughlin(1999), but Barry ad Fourier (2001) suggest that they are complementary and the hierarchy is not always distinguishable.

Steudler and Williamson (2002) describe a hierarchical structure with three land management levels. These are the land policy level which is concerned with the definition of the rule of law and ownership of land; the land management level which is about controlling the processes that put land resources to good effect and the land administration level which includes the functions involved in implementing land policy.

2.2.1 Land Policy

Land and the way governments deal with land, is in all countries (whatever stage of development they are in) an important topic of government policy (Molen, 2001). Land policy consists of socio-economic and legal prescriptions that dictate how the land and the benefits from the land are to be allocated. It relates to economic development, equity and social justice, environmental preservation and sustainable land use (UN-ECE, 1996). The implementation of land policy has a lot to do with institutional arrangement such as the organizational framework of land administration, enforcement of land laws and the allocation and monitoring of land administration mandates in the public sector.

Land Policy Instruments

There are various instruments that can be used to implement land policy. Molen (2002) has identified four main instruments for implementing land policy: improving land tenure security; regulating land markets; land use planning and land taxation. For implementation; these instruments depend on land administration tools. These land policy instruments can interact and influence each other and may be used by governments to determine the distribution of land, to regulate landed property values, to control the development and use of land and to create revenue from the use of land.

Land Policy Reform

The relationship between humankind and land is of fundamental importance to every society and is evident in the land policy that the society adopts. The drivers and/or objectives of land policy reform include economic, socio-political and ideological trends (Burns et al, 2003).



Land policy reform programmes implemented by governments over the years have followed regional trends. Dale and McLaughlin (1999) provide examples from post-colonial Africa (tenure shift from customary system to individual freehold title) and the transition economies of central and Eastern Europe (re-privatization of land through restitution and first-time private ownership of family owned land).

McAuslan (2000) has identified five overlapping phases in the evolution of land policy in Africa in terms of the interaction between formal western land law and the indigenous land law. The acquisition of territory by colonial powers in the late 19th century and the assumption of full rights of jurisdiction over all land in the territory; the destruction or displacement of customary land law to suit the ends of colonial powers; the adoption of policy reforms in the mid 1950s towards security of tenure based on individual freehold tenure for indigenous populations and the integration phase which is an attempt by particular countries to develop new common land law from the disparate parts of existing law to remove the notion of a hierarchy of land laws.

Land policy reforms may be categorized according to the instruments that are used for their implementation; for example legal and/or administrative tools. Examples of legal land policy reforms include nationalization of land and administrative forms are delegation, de-concentration and devolution of land administration. The implementation of land policy reforms is very critical for the processes in land in any country.

2.2.2 Land management

According to Dale and McLaughlin (1988), land management is about decision making and the implementation of decisions about the use of land resources. It entails the processes which allocate land resources "over space and time according to the needs, aspirations and desires of man and within the framework of his technological inventiveness, his political and social institutions and his legal and administrative arrangements". Land management encompasses all activities associated with the management of land and natural resources that are required to achieve sustainable

development. The concept of land includes properties and natural resources and thereby encompasses the total natural and build environment.

The organizational structures for land management differ widely between countries and regions throughout the world, and reflect local cultural and judicial settings. The institutional arrangements may change over time to better support the implementation of land policies and good governance. Within any country context, the land management activities may be described by the three components: Land Policies, Land Information Infrastructures, and Land Administration Functions in support of Sustainable Development. This Land Management Paradigm is presented in Figure 2.1 below (Enemark et al, 2005):

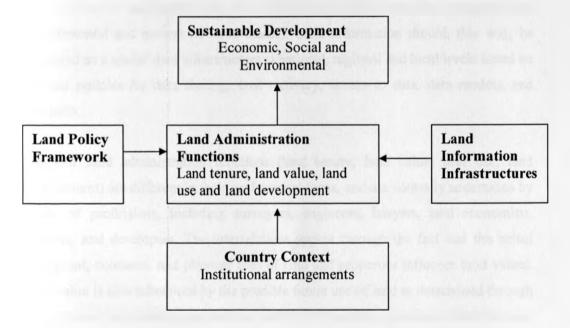


Figure 2.1: The land management paradigm, Source Enemark et al., 2005

Land policy is part of the national policy on promoting objectives including economic development, social justice and equity, and political stability. Land policies may be associated with: security of tenure; land markets (particularly land transactions and access to credit); real property taxation; sustainable management and control of land use, natural resources and the environment; the provision of land for the poor, ethnic minorities and women; and measures to prevent land speculation and to manage land disputes.

The operational component of the land management paradigm is the range of land administration functions that ensure proper management of rights, restrictions, responsibilities and risks in relation to property, land and natural resources. These functions include the areas of land tenure (securing and transferring rights in land and natural resources); land value (valuation and taxation of land and properties); land use (planning and control of the use of land and natural resources); and land development (implementing utilities, infrastructure and construction planning).

The land administration functions are based on and are facilitated by appropriate land information infrastructures. The land information area should be organized to combine cadastral and topographic data, and link the built environment (including legal and social land rights) with the natural environment (including topographical, environmental and natural resource issues). Land information should, this way, be organized as a spatial data infrastructure at national, regional and local levels based on relevant policies for data sharing, cost recovery, access to data, data models, and standards.

The four land administration functions (land tenure, land value, land use, land development) are different in their professional focus, and are normally undertaken by a mix of professions, including surveyors, engineers, lawyers, land economists, planners, and developers. The interrelations appear through the fact that the actual conceptual, economic and physical uses of land and properties influence land values. Land value is also influenced by the possible future use of land as determined through zoning, land use planning regulations, and permit granting processes. And the land use planning and policies will, of course, determine and regulate future land development.

Sound land management is the operational processes of implementing land policies in comprehensive and sustainable ways. In many countries, however, there is a tendency to separate land tenure rights from land use rights. There is then no effective institutional mechanism for linking planning and land use controls with land values and the operation of the land market. These problems are often compounded by poor administrative and management procedures that fail to deliver required services.

Investment in new technology will only go a small way towards solving a much deeper problem; the failure to treat land and its resources as a coherent whole.

2.2.3 Land Administration

The UN Economic Commission for Europe (1996) defines land administration as the "processes of determining, recording and disseminating information about the ownership, value and use of land when implementing land management policies". Dale and McLaughlin (1999) view land administration as a combination of routine processes that include "regulating land and property development and the use of the land, the gathering of revenues from the land through sales, leasing, and taxation, and the resolving of conflicts concerning the ownership and use of the land". From these definitions, land administration makes the land tenure system within a country socially relevant and operational. One fundamental objective of good land administration is to ensure sustainable developments. All landscapes change over time, whether through human interference or by natural processes and therefore there is need for an effective land administration system.

Steudler, Rajabifard et al (2004) describe land administration in terms of its functions. They divide the functions of land administration into four components: Juridical, regulatory, fiscal and information management (see figure 2.2 below).

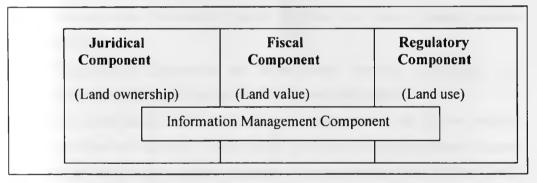


Figure 2.2: The basic components of land administration .Source: Steudler, Rajabifard et al (2004)

The Juridical component ensures that the boundaries of property rights created under tenure law are clearly defined and maintained. To achieve this, a good land administration must have mechanisms for efficient land rights delivery, adjudication of rights, demarcation and survey, registration and record keeping.

The regulatory component ensures that performance standards in land resource management are properly designed, prescribed and enforced, and their integrity assured. It should have mechanisms of land use planning, land market regulation and land quality assurance through environmental assessment.

The fiscal component ensures the existence of mechanisms for the proper assessment of land resources for revenue generation through a variety of land taxation measures. This function depends on how the cadastral component of the land administration is organized. This is because the cadastral aspect ensures the existence of appropriate mechanisms for retrieval of accurate information on who owns what interest in particular lands and the proper identity of land parcels in maps.

The essence of a land administration is its land information system. The completeness, accuracy and currency of the information in the system determine how well the land administration system will serve the society, McLaughlin (1999).

Land Administration system

A land administration system comprises of:

- Legal framework- land policy and land laws
- Administrative framework- financial, technical and human capacity; service delivery
- Organizational framework and infrastructure- enabling technology; land information production processes; flow of land information.

Every jurisdiction adapts land administration arrangements to suit its own history, culture, political and economic environment. Land administration systems in many countries are not performing their mandates at an appropriate level. Molen (2002) cites some of the reasons why many countries are encountering serious difficulties with the development of appropriate land administration systems as due to flimsy institutional frameworks, ineffective enforcement of the legislation, legal concepts of land ownership which are incompatible with the local tenure, excessively complex

legal and technical procedures and the lack of sufficient funds for investment in capacity, structure and tools.

In most countries, there exist two parallel systems of land administration, that is the formal land administration and the informal land administration.

On the failures of formal land administration systems, Rakodi (2002) states that, in some respects, informal land supply systems work better than formal ones and they could even contribute to improvements in overall land administration. She discusses the failures of various African cities to apply formal rules to land supply. She analyses how such failures lead to formal rules being ignored and formal procedures being bypassed. "Real" rules that are understood and mutually accepted by actors in the informal land sub-market emerge. These rules subscribe different procedures and are enforced by different actors but are linked to and bear resemblance to the formal rules. These rules constitute the informal land management institution. She discusses some approaches to dealing with informal tenure systems that have been used in various parts of Africa (e.g. dismantling informal recognition and integration of informal systems into the formal system). She concludes that formal land administration systems in African cities are neither effective nor appropriate in their present form. She also notes that informal tenure systems are ineffective, wasteful, discourages infrastructure development and complicate land administration systems. She recommends that government policy should emphasize working with actors in the formal land sector and recognize and modify informal rules which govern property relations in that sector.

The process of land administration needs complete, accurate and reliable information about the ownership, use and value of existing land and its resources. Cadastres play the book keeping role for this information within the wider land administration and land management. The cadastre is considered to be the core of a land administration system (Williamson, 2001).

Cadastre

The international Federation of Surveyors, FIG (1995) defines a cadastre as a parcelbased and up-to-date land information system containing a record of interests in land (e.g. rights, restrictions and responsibilities); it usually includes a geometric description of land parcels linked to other records describing the nature of the interests, and ownership or control of those interests, and often the value of the parcel and its improvements.

The UN Ad-Hoc Group of Experts on Cadastral Surveying and Land Information Systems defines the cadastre as: "A methodically arranged public inventory of data on the properties within a certain country or district based on a survey of their boundaries; such properties are systematically identified by means of some separate designation; the outlines of the property and the parcel identifier are normally shown on large scale maps". Dale and McLaughlin (1999) on the other hand define a cadastre as a technical record of the parcellation of land in a territory, usually represented on plans of suitable scale.

While the FIG definition includes a record of interests in land i.e. land registration records (presumably from a unified cadastre perspective), the other two definitions do not. All three definitions describe a cadastre as a land information system. They also identify two essential components of a cadastre: parcels boundaries in the real world i.e. on the ground and geometric description of land parcels of the real world i.e. objects and identifiers on a map.

Cadastral processes

Cadastral processes constitute the activities necessary for access to land and land delivery. The processes involved in cadastre may vary in nature and/or procedure between land administration systems. However, four common cadastral procedures are recognizable in many parts of the world:

Adjudication

This is the authoritative ascertainment of existing rights on land. Adjudication is usually the first component of the land delivery process before first registration. Adjudication does not alter existing rights nor create new rights.

Demarcation

This is the marking of boundary limits of each unit on the ground. Physical objects (monuments) may be placed on the ground to clearly indicate the boundaries. Boundary definitions should meet the requirement of providing

evidence of the location of recognized land units. The nature of boundaries adopted determines method of demarcation. Boundaries are categorized into two: fixed/precise boundaries (accurately surveyed boundaries that can be reliably reestablished from previous survey records in cases of dispute) and general/approximate boundaries (boundaries that are determined by relaxed survey methods or no survey at all and that depend on ground evidence in cases of dispute)

Surveying

This is the actual ground measurement of cadastral land units. Cadastral surveying is normally conducted under statutory regulations. The regulations stipulate the methods and standards of accuracy for different kinds of survey. The requirements for demarcation determine the conduct and accuracy of survey.

Mapping

This is the geometric description of cadastral land units. The basic requirement of cadastral mapping is to provide a sufficient specification of the location on a land unit (or object).

Land registration

Land registration is the process of recording recognized interests in defined land units. In addition to documenting the nature and spatial extent of interests in land, registries also enable the transfer of such interests; provide evidence for the resolution of land disputes and information for a variety of other public functions (Dale and McLaughlin, 1999). The basic elements of land registration are the registrable land unit i.e. the land object, the legal person to whom rights re assigned i.e. the legal subject and the relationship between the land and the legal person i.e. the property rights (Henssen, 1995). Figure 2.3 illustrates these three basic elements.

The land object in land registration is the basic unit of cadastral record. In parcel based cadastral systems, the basic spatial unit is the parcel. A parcel can be defined as the spatial extent over which homogeneous property rights are recognized.

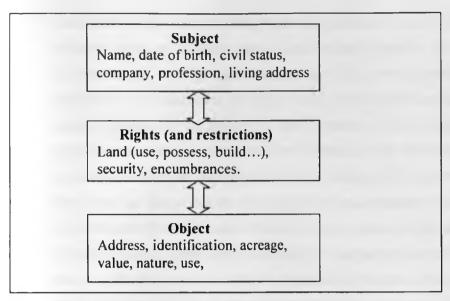


Figure 2.3: The basic elements of land registration. Source: adapted from Henssen (1995)

Property rights describe the use to which land may be put, the length of time during which the rights are valid and the manner in which some or all of these rights can be transferred to other parties. Property rights range from the most robust that allows (almost) unrestricted use of land (e.g. freehold tenure) to the most insecure which may not be registered (e.g. squatting). The various property rights that lie within this range vary in extent to which they allow the rights to use, occupy, enjoy, benefit from, develop, dispose of and restrict others from land. These rights are accompanied by responsibilities and/or counter rights which may allow other parties to make certain use or to restrict the owner's use of the land.

Some of the basic functions of land registration include:

• Security, protection and enforcement of property rights. A registration system gives security of property rights when it provides complete, current and accurate information. A key premise of registered property rights is that rights holders can depend on the state (or other registry authority) to enforce their rights when they are violated or threatened. Registry information can be reliable only if people use the registration system. If new land owners do not register land transfers, registry information will not reflect the reality on the ground and property rights will no longer be secure.

- Land transfer-land transfer refers to the disposition of some or all of one's property rights to another party. Land transfer may be through sale, inheritance, gift or other modes supported by the norms, practice or legal provisions in a community at a given time. Land registration supports land markets through the facilitation of land transfers. The challenges of land registry with respect to land transfer are illustrated by the questions: how does one know that they are buying land from the real owner or the only owner?; how does one know that the land is free of encumbrances?; how can the possibility that the land is sold twice to different persons at the same time be avoided? Palmer (1998) views land transfers as agreements involving security and risk. Security has to do with the protection of interest in land during and after transaction while risk arises where there exists asymmetry of information between parties in a transaction. Risks associated with imperfect information and protection is heightened in informal land markets.
- Land registration records help in the resolution of land disputes by providing evidence of boundary location and/or land ownership. The resolution may take a legal or an administrative approach.

Systems of land registration

There are three basic types of land registration:

- Private conveyancing
 Land transactions are handled by private arrangement and the state has little or
 - no role. Professional intermediaries may be used to oversee the transaction. Such intermediaries may even maintain registries for their area of operation. The only security of transaction comes from the integrity of intermediaries and may be supplemented by title insurance. The government may have access to information on the changes in land rights.
- Registration of deeds- the basic unit of registration is the deed. A copy of the
 deed of transfer is deposited in a public registry. The time of entry in the
 registry is logged and the deed instrument indexed and archived. Registration
 of deeds is a passive system i.e. the contents of the deed documents are

verified by the registry staff. Professionals (e.g. lawyers, notaries) are normally used to prepare and lodge the deed documents and are responsible for the correctness of the deed information. This registration system offers substantial security of title and reduces opportunity for fraud especially where deed registration is compulsory. Registration of deeds does not prove title. It only provides evidence of an isolated transaction.

- Registration of title Interest in land is registered as proof of title and a title certificate is issued. Registration of title is an active system i.e. the state plays an active role in examining land transactions including transfer documents. Many jurisdictions use the Torren's system. The Torren's title registration model is based on three main principles (Dale and McLaughlin, 1999):
- Mirror Principle- the register reflects accurately and completely the interests in land; there is no need to look elsewhere for proof of title
- Curtain principle- the register is the sole source of title information; there is no need to examine the history of title
- Insurance principle- the state is responsible for guaranteeing the reliability of the register; the state provides compensation to those injured by errors or omissions in the register.

Where formal land registration is practiced, certain principles have been formulated to improve the performance of the land registration function and its impact on the land market and economic development. Dale and McLaughlin (1999) discuss five criteria for assessing the performance of land registration systems:

- Coverage- the more parcels that are registered, the more effective the registration system (may imply the need for compulsory registration)
- Quality control- the more reliable the information that is held in the registry, the more useful the system (requirement for certification of documents and modern information management techniques)
- Currency- keeping the information in the registry up to date so that the register reflects the actual situation on the ground

- State guarantee- e.g. the Torren's system features a positive warranty of the information in the register as well as a negative warranty against the effects of anything that is not in the register)
- Indemnification- compensation of anyone suffering loss because of an error in the register.

Henssen (1995) has prescribed four basic legal principles of land registration (either deeds or titles) to include:

- Booking- the creation or change of a real right is not legally effected until the creation or change is booked (entered) in the land register.
- Consent- the real entitled person who is booked as such in the register must give his consent for a change of the entry in the land register (unless the change is legally sanctioned by a court of law)
- Publicity- the legal registers are open for public inspection, and protected by law
- Specialty-the concerned legal subject and land object must be unambiguously identified.

Land Information

Increased information about the land and property right allows public agencies and private corporations to plan the management of resources more efficiently and enables government to enforce environmental and other regulations. It acts as a 'metainstitution', that is as an enabling mechanism that allows other functions (such as the building of power, communication and water systems) to be undertaken effectively (McLaughlin and Nicholas 1989).

Uncertain and unobtainable access to land is a cause of disputes in many countries (Dale and McLaughlin, 1999). Uncertainty over the boundaries between neighbours can cause a breakdown in social cohesion while uncertainties over land ownership may result in both lengthy and expensive court cases or else in land remaining underutilized. Not only is this a waste of resources but it also reduces land values which in turn reduce the revenues that governments can potentially collect through

land related taxes. Such revenue can be used to defray other government expenditure or to fund social reform.

All governments recognize the importance of use rights as well as ownership rights but normally choose to manage them differently, often retaining the control of ownership as a central government responsibility while delegating much responsibility for land use control to local government. This is in spite of the fact that ownership affects the use of the land while conversely the use will influence the form and substance of the tenure.

On the importance of reliable information for urban management, Nzioki (2002) recognizes the general lack of land information and inappropriate land information management systems as major constraints to the achievement of effective urban land management in both formal and informal areas in Kenya. He cites the gaps in land related data and information collected by a wide range of government and non-government agencies and the difficulty in maintaining and distributing it to stakeholders. He also sees the need for creation of a new corporate culture of sharing information between agencies. He argues the case for an urban land information system and outlines the institutional, technical and resource requirements for successful implementation of such a system for urban land management.

2.3 Land Use Planning

Land use planning refers to the process by which land is allocated between competing and sometimes conflicting uses in order to secure the rational and orderly development of land in an environmentally sound manner to ensure the creation of sustainable human settlements.

The process of land use planning consists in the main of the two twin functions of Development/Land use Planning and Development Control. Of necessity, these two functions must be supported by relevant research and mapping which are also major components of the land use planning process.

Land-use planning does not exist in isolation. It is necessary to view land-use planning as an integral part of the process of national growth and development.

Among other things, this process seeks to identify, articulate and satisfy the basic social/human needs of a country's population within the context of available economic/financial resources and technical knowledge.

People have needs that must be satisfied. For instance, they need housing; jobs; education; opportunities for recreation; transport; and basic services like water, electricity, clean air and health care. Social planning and policies attempt to take care of the basic social needs of the country's population. Economic planning and policies seek to ensure that the country has a sound economic base which provides revenue to finance government operations and pay for provision of services to the public while also ensuring that jobs are available to the country's labour force.

Land-use planning seeks to accommodate these needs within a technical and spatial framework. While houses must be built for the population for example, they cannot be provided in a swamp; or an area that is unsuitable for housing development because of its terrain, vulnerability to natural or other disasters, or inability to physically support the building; or in an area that endangers the health and safety of the occupants or other members of the public.

Similarly, economic decisions to focus on tourism, manufacturing industry or agricultural development as the basis of the country's economic development must be translated into land-use terms. First, each of these activities uses land. Furthermore, some areas of land are more suitable for some types of activities than others and some activities have negative impacts on the terrestrial (land) and/or marine (sea) environments. Also, use of land for one activity often prevents its use for another activity at the same time.

National social and economic needs are identified and articulated by people themselves, by politicians; community groups and sometimes by the technical experts, like Land-Use Planners. These needs are translated into a spatial form or a land-use activity and reflected in land-use plans, policies and development actions. Land-use planning therefore derives from the need to satisfy these needs on the ground, in a rational manner and within a technical framework. It is a crucial part of the process of Integrated Development Planning which includes social and economic planning and reflects their land-use/spatial components.

Land use planning also takes place within a legal context. At this stage, suffice it to say that the legal context provides the justification for undertaking land use planning and sets out the powers and duties of the agency responsible for the planning function - the Development Control Authority. The legislation also sets out the procedures to be followed, the conditions under which they may be carried out and the matters to be covered in executing both the development planning and development control functions. The law also makes provision for revising and changing land-use plans and policies to ensure that they are always current and relevant to the country's development needs.

The law also provides for remedies for those persons affected by planning and development decisions/activities and penalties for those who fail to comply with the provisions of the legislation.

2.3.1 Development Control

The development control function seeks to manage and regulate property development to ensure that all development takes place at an appropriate time and place and in such a manner that it conforms to a pre determined set of policies or standards.

The purpose of development control is not to stop development or to make life difficult for developers or home builders. Instead, the main purpose is to ensure the orderly and rational development of land to create sustainable human settlements that accommodate a variety of land uses to meet the needs of the people who live in these settlements.

The development control function is an important one and those who work to evaluate applications for development permission; grant or refuse permission; and inspect development have a tremendous responsibility to ensure that the problems just identified do not arise. They have a responsibility to ensure that development occurs in the right place, at the right time; that buildings are structurally sound and will not endanger the safety or lives of those who live in or use them; that they are provided with the basic services and facilities necessary to support the purpose for which they

are erected; and to ensure that the environment and natural resources of a country are managed carefully and prudently for the enjoyment of present and future generations.

2.3.2 Land Use Policy and Development Control

Development control is the most visible part of the land use planning process and the function with which members of the public - particularly those engaged in the construction and property development industries - interact on a daily basis. However, the development control function cannot and should not operate in a vacuum.

The formulation of land use policy and development standards - often contained within development plans - provides the contextual framework within which the development control function operates.

The preparation of Land Use Plans and formulation of land use policies and development standards are some of the main outputs of the development/land use planning process. Plans are prepared to:

- anticipate the development needs of an area;
- identify relevant development issues;
- identify opportunities for and constraints to development;
- identify areas which are suitable/unsuitable for different types of development;
- make proposals for the way in which the area should develop over time; and
- Establish policies and standards to guide development.

Plans are also prepared for areas which are already experiencing significant development pressures or some of the negative effects of growth and development in an effort to find solutions to these problems and to manage future growth.

The Plan is a statement of intent or vision. It sets out how we would like to see the country develop over a specified time period. It is also a road map: since we have a vision and a goal, how do we get there? Policies and standards help us to achieve the vision we have set ourselves for the future development of the country. As the old adage goes: if you don't know where you are going, any road can take you there!

Preparation of Plans is a lengthy and time-consuming process. However, land-use planning agencies are often called upon to make decisions on applications for development permission before a Plan is prepared or completed. If no Plan or policy statement exists, evaluation of development proposals may raise critical development issues for which no policy guidance is available. At such times or in order to pre-empt such situations, the land-use planning agency may formulate land-use policies/policy statements to address specific development issues when a quick response is needed and time does not permit preparation of land-use Plan. These may include, but are not limited to, subdivision policies, industrial location policies, settlement upgrading policies, development standards etc. Policy statements may also be prepared as an alternative or supplement to a land-use Plan.

2.4 Summary on the land management and land administration

Because the literature on Africa's land reforms focuses on land tenure problems, it tends to identify weak land administration systems and the need for their reform as the main issue of concern, rather than the land redistribution issue (Moyo, 2004). Land administration reforms tend to be proposed within a neoliberal conception of good governance, focusing on the decentralisation and democratisation of land institutions, to enhance land administrative efficiencies, broad based representativity of local structures of land control, and civil society participation in land administration, within a framework of introducing formal and statutory law in land management systems (Quan, 2000; Adams, 2000).

There is no doubt however that African land management institution poses vexing problems, and that these constitute an important aspect of the land question. The institutional frameworks for land administration are exceedingly complex and fractured (Shivji, 1998; Palmer, 2002).

In many countries land administration remains highly centralized, there is poor representation and the institutions which adjudicate land issues at the local level are widely dispersed (Shivji et al, 1998). At best, weak land administration systems tend to be created at the local level, a situation which tends to perpetuate centralized land administration powers

2.5 Land Management and Administration in Kenya

2.5.1 Land Allocation in Kenya

The Ndungu Commission of inquiry into illegal allocation of public land on its review of the land system as it developed under colonialism (based upon the Crown Lands Ordinance of 1915), stresses how the authority to allocate Crown lands (as distinct from lands reserved for African Customary Tenure) was vested in the Governor, and under him, the Commissioner of Lands. Under their prerogative, grants of agricultural leases (initially for 99, later for 999 years) were made to settlers, whilst commercial plots in townships and urban centres were initially allocated through a system of public auction while residential plots within municipalities were allocated through public tender. They noted that, by the 1940s, the system of public auction – which had become dominated by wealthy cartels – had fallen out of favour, resulting in a change whereby commercial plots would be allocated by means of direct grant by the Commissioner with the assistance of a local committee, a system which had already informally replaced the public tender system with regard to residential land.

The principles which decided such allocations included notions of the public interest, as well as the ability of selected allottees to pay for land (sold at 20% of its estimated value to encourage development) within 30 days and to carry out intended developments within a prescribed time limit. As the Committee notes, for all that such procedures may have worked to restrict African opportunities to purchase land in 'white' areas, they served to control the 'mischief of land speculation'. However, what appears to have succeeded in the colonial period (i.e. allocation by direct grant) was later used to facilitate the massive illegal and irregular abandonment of public land by the Government after independence. The very officials and institutions charged with being the custodians of public land became the facilitators of illegal allocations (pp.6-7). The colonial Doctrine of Public Trust, whereby Kenya's rulers administer land in trust for the people of Kenya, dissolved under independence, and land was to become granted for political reasons, or simply subject to 'outright plunder' by 'a few people at the great expense ... of the public' (pp.9-10).

The process of the land Allocation in Kenya

The government holds public land in trust for residents of urban area. Regulations indicate that public land should not be allocated without following statutory procedures, which include sale of land by public auctions (Section 12 of GLA). This regulation requires that the time and place of sale be announced in advance in the Kenya gazette; and that the land be sold to the highest bidder. Before the Government or Trust Land can be considered for allocation it must have been planned by the Director of Physical Planning and the development plan showing various users such as industrial, residential, commercial, education, public purposes and utilities, transportation, recreational etc. have been duly approved by the Minister for the time being in charge of Lands. Depending on the type of development proposed, there are three modes of alienation:

- Through Plot Allocation Committees (PAC) at various levels after advertisement,
- 2. Direct application, and
- 3. Reservation.

According to Kenyan legal provisions, it is only the president (who can also delegate responsibility to the C.O.L) who can allocate land. Such allocation should be aimed at addressing social imbalances. However, in most urban areas, procedures are not followed and government officials often abuse the system of public land allocation, and assist others to whom they are well connected to do the same (Mitullah 2001). The occupation of public land leads to evictions and this has often created conflict since regulations indicate that residents should not be evicted unless the commissioner of lands first gets a court order for vacant possession. Mitullah (2001) has looked at the provisions of allocating un-alienated public land which the president has powers to allocate but the study will be concentrating with alienated public land for road construction which has been subject to misuse.

Government Land

Government land is the land that was vested in the Government of Kenya by sections 204 and 205 of the constitution that was contained in schedule 2 to the Kenya independence order in council 1963 and sections 21, 22, 25 and 26 of the Constitution

Advertisement of already planned government land for In the absence of advertised plots people allocation in the Kenya Gazette and two daily can apply to the chairman of the provincial newspapers; those interested or district plot allocation Sorting out of applications for land already received at the Ministry headquarters to be returned to the district for The PAC verifies with the District Land& Physical planning officers whether the land applied for is available &. PAC sends the District Land Officer with the details of the successful application to Ministry headquarters to crosscheck the status of Upon receipt of the confirmed status, a PAC meeting considers and recommends the application and authorizes the The planner plans the identified area as per the physical planning Act, which requires circulation of the PDP to various government departments for comments and publicity so that objections can be registered with the Comments forwarded to the Director of physical planning to scrutinize and advise the minister in charge of lands accordingly The director of physical planning forwards the PDP to the minister for lands for approval The approved plan is then gazetted by the Director of physical planning on behalf of the minister to notify the public for 14 days Comments and the minutes for allocation of government land are sent directly to the COL whereas those for allocation of trust land are sent to the COL through the permanent secretary, Ministry of Local Government for clearance The COL submits the minutes of the PAC to the ministerial plots committee for ratification before a letter of allotment is issued, Plot survey by the Director of Surveys or a private surveyor. The process has at least 8 stages from Amendment of Registration Index Maps (RIMs) and insertion of survey number by the Director of surveys COL prepares a lease with conditions, which is forwarded to the Land Registrar for registration The Registrar of Lands registers the parcel number and issues a certificates of lease to the alottee

Figure 2.4: Government land allocation procedures. Source: Musyoka 2004

of Kenya (Amendment) Act 1964, GOK (2004). Government land usually consists of un-alienated government land and alienated government land. Un-alienated land is land which for the time being has not been leased to any other person or in respect of which the commissioner has not issued any letter of allotment. No private title has been issued. It is the state land in the private domain which is the land the government is willing to put on the market through the award of leases and it is the land which the government allocates. Alienated government land on the other hand is land which the Government has leased out to a private individual or a corporate body or has been reserved for Government ministries. It's the state land in the public domain which is not on the market and which is used by public utilities. The latter includes not only forests, game parks, mining lands, military camps, roads, sea shore, water and other natural resources. It is this type of land which the study was concerned with since even the president who is the custodian of all land in Kenya does not have the powers to allocate unless the institution concerned confirms in writing that they no longer require such land. The process of land allocation is outlined in the figure 2.4.

2.5.2 Security of tenure

Land tenure describes the manner in which rights in land are held and it is defined by a broad set of rules, some of which are formally defined through laws concerning property while others are determined by custom. Kenya provides a free market on land by providing an enabling environment through laws and rules of the game but this is negated by the fact that a lot of land transacted on is often of unclear tenure and often not properly documented, indicating a clear lack of security of tenure. Uncertainty of land ownership can be attributed to inefficient allocation processes. Professional attribute these problems to poor public attitude towards land, poorly developed administrative and legal framework for handling public land and political interference. There has been ignorance of legal procedures where individual interests have taken precedence over law.

2.5.3 Land Use Planning in Kenya

Land use planning in Kenya can be traced to the early colonial period, particularly the establishment of the new urban centres. The first land use plan was prepared for the city of Nairobi in 1910 and it proposed zoning and sub-division of land from various

uses. In 1926, a town planning scheme was prepared for Mombasa. It was only in 1931 that the first town planning ordinance was enacted and most principles were borrowed from British legislation. Since 1931, there have been amendments to the Act, particularly the extension of the provisions outside townships and municipalities. Fundamentally, town planning legislation controls land sub-division, use and density of land, character and setting of buildings and establishment of new developments.

Other legislation which impinges on the town planning legislation includes the physical planning Act, the local government Act and the Public health Act. The most important is the local government Act which empowers local authorities to control development within their areas of jurisdictions. For its success, therefore, planning legislation depends on the existence of effective and viable local government.

Kenya is the only African country where land titles have been granted in both rural and urban areas. The power of land is, therefore, vested in private individuals, households and developers, whilst the local government remains in existence and operational, it has been subjected to strong central government interference, particularly that of the main urban centre, Nairobi. The will to implement and uphold the provisions of the law has been subject to severe strains due to extreme competition for access to land.

Planning legislation and its implementation is centrally located with the Director of physical planning, Commissioner of Lands and to a limited extent with the local authorities. It is clear that without a strengthening and revamping of the local government Act, existing planning laws will continue to be marginalized at local levels.

Physical Planning

Physical plans are prepared by the Physical Planning department to guide development at the local level in the interests of the public. Plans are classified as development plans, local physical development Plans and short term development plans. Within short term development plans there are action plans, advisory plans and Part Development Plans (PDP). Previously the decision to make plans emanated from the planner, DDC, Local Authority and Commissioner of Lands. Currently the

decision to make a structure plan is vested in the Department of Physical Planning (Planning Act 1996: 68).

The purpose of making a structure plan is indicated in the third schedule of the new planning legislation. Long term and short term plans were prepared by Physical Planners who took them for circulation to Departmental Heads and display at public places for comments. The plan was then submitted to the Commissioner of Lands for approval. The process can be summarised as (Decision -Plan Preparation - Plan Circulation-Director-Commissioner of Lands - Approval - Gazettement). In the new Act the process is: Decision - Plan Preparation - Director for circulation - Minister for approval - gazettement. Circulation of the plan is aimed at incorporating the views of the community hence making the process participatory.

Purpose of planning laws

A major provision exists for preparation of a whole range of statutory plans- regional plans, urban plan master and structure plans, local plans, action plans and specific subject plans. The statutory plans are considered fundamental because they provide the basis for the state and institutions to perform the development role.

Planning laws define and reinforce the institutional framework through which planning is conducted. The laws usually elaborate technically what should be done, who should be consulted and when.

Planning laws specify the nature of the different plans, their intentions and uses. The focus has been on land use and infrastructure planning. These are plans which are used by the designated authorities to control and manage development.

Planning laws have placed an important focus on control of physical development. Once plans have been adopted there is need for a whole range of management mechanisms which reflect the powers of the authorities and the rights of ordinary citizens, developers and other commercial interests. It gives powers to planning authorities to create local bye-laws and to enforce them.

They are related to a whole range of laws governing the operation of sectoral activities, -water, electricity, roads etc and although planning laws have centrally focused on land use planning, they can only function effectively in conjunction with other sets of laws.

Planning Laws and Regulations

There are various statutes that deal with planning and land use regulations.

Those that deal with planning are: Physical planning Act 1996, and the Local Government Act Cap. 265. Statutes and regulations on land use include: Government Lands Act Cap. 280, Land Control Act Cap. 302; Land Acquisition Act Cap 295 and Registered Titles Act Cap. 300.

The Town Planning Act Cap 134 and Land Planning Act Cap 303 have been repealed by the physical Planning Act Cap 286 which has been operational since October 1998.

The Physical Planning Act of 1996 deals with all matters relating to preparation of all kinds of physical development plans and subdivisions. It stipulates development control measures and the role of the District and liaison committees. The physical planning act bestows local authorities with legal authority in the implementation of physical planning proposals and decisions are based on this. This means that the local authorities are key development agencies in the country. However, the power of physical planning is concentrated in the office of the director and Local Authorities are not seen as planning entities.

Local Government Act Cap 265: The Local Government Act provides for the establishment of Local Authorities, Planning subdivision plans, land acquisition, powers to make by-laws, development control and functions of Local Authorities. The act gives powers to local authorities wide ranging powers to control and guide development in their areas of jurisdictions in addition to using the various by-laws.

Government Lands Act Cap 280: This Act deals with land issues that are both urban and rural relating to land allocation, development control, registration, appointment of a town planning advisor, and preparation of part development plans (PDP's) and development plans. It requires government land to be alienated, surveyed, planned,

and serviced before allocation. The Act is cumbersome to apply due to the numerous procedures. The Local Government Act cap 265 gives the local authorities powers to make by-laws subject to any superseding legislation for "controlling and regulating" the development and use of land and buildings in the interest of proper and orderly development of their area.

Sections 162, 159, 166 and 177 of the LGA are relevant for planning and development control. Section 162(g) concentrates on subdivision regulations and it prohibits subdivision or cutting of land for transfer without the approval of the clerk or any other person appointed by him. Any plan, which has been approved by the local authority must not be changed (cancelled, altered, withdrawn) without the consent of the same local authority.

Land Control Act Cap. 302: This Act applies to the subdivision of agricultural land without change of user with sizes of subdivisions not being less than 20 acres. It complements the land Planning Act. The inability to circulate the subdivisions weakens the applications of this Act.

Land Acquisition Act Cap. 295: This Act is used by Local Authorities and the government to acquire land in accordance with Sections 117 and 118 of the constitution of Kenya. Land acquired is meant for Town Planning purposes and owners are compensated at market value plus 15% disturbance allowance.

Development control in Kenya

Control of development is a key function of the department of physical planning in consultation with local authorities, Commissioner of Lands and the Developers. This normally involves the implementation and monitoring whether provisions in the approved Development Plan are complied with.

The issues addressed to in Development Control include land subdivisions, extension of leases, change of users and building plans, etc. No development should be undertaken without grant of development permission by the Local Authority. Development applications are submitted to the Local Authority by using Form PPA 1.

2.6 Illegal occupation and development

Settlements are illegal either because they are squatter settlements, without the right to be or use the land, or the land on which they are settled has not been designated for housing and related activity in the statutory land uses of the city or they have not obtained the necessary permits for development. Illegal occupation of land occurs when there is a chance to obtain land for free; no matter if this land is state, common or someone's private property. But, ilegality exposes the dwellers to harassment, eviction and health hazards. It also becomes a conduit whereby resources that would otherwise be employed in housing improvements are diverted away in the form of payments to ward off enforcement.

Previous studies have identified the causes leading to illegal occupation and development among others to include landlessness, a weak land policy, weak institutions and lack of enforcement.

Landlessness

Lamba et al (1991) attributed illegal land occupation to landlessness which has been caused by an increase in urban population making urban land scarce and therefore expensive. Land is however necessary for economic activity and the informal sector has made land accessible through the illegal invasion of government land or private land and also by illegal subdivision. Andreasen (1987) found that urban land in Kenya is increasingly being purchased as opposed to being illegally occupied. However he found that informal sub-division of urban land was quite common. All these studies attributed illegal allocation to landlessness but the study will disapprove this as some of the land which has been acquired has not been built on rather has been for speculation purposes.

Weakness in the Kenya land policy

In Kenya colonial land injustices and current land policies have led to increased differentiation in the control of, and access to land. According to Kanyinga and Lumumba (2003), land ownership patterns are derived from endowments arising from class differentiation strategies, which emerged in the colonial era and have lead to growing landlessness.

The more critical route to land concentration has thus arisen from 'above', through land policies and land allocation systems, which favour elites in both rural and urban areas. For example, since Kenya's land law grants enormous powers of control of land to the President who holds land in trust for the state, the President tends to grant land to a few individuals and corporate interests.

Weak institutions and lack of enforcement

Kanji et al (2002) in their study of promoting land rights in Africa observed that though many institutions are mandated by law, decree or otherwise to allocate land, they do so without following the established procedures and without consultation between institutions. It has also been established that over-concentration of land related functions can cause confusion, delay and inefficiency (Favcque and Auslan 1992). For example over-concentration of some land administration functions restricts land use change in Russia and the KYRGYZ republic (Prosterman and Hanstad, 1999).

Though the government of Kenya policy is to preserve land for public purposes and has realized the need for all public land to be planned, surveyed, reserved and titles issued to relevant institutions in order to secure them for the intended uses this has not been the practice. The coordination of the existing implementing agencies has been inadequate.

The rational allocation and distribution of responsibilities and functions amongst and across levels of land related administrative institutions are essential to accomplish institutional missions.

Political patronage and corruption

The civil service has been viewed as corrupt, opportunistic and that it labours under a self-deception of its own superior status in society. Though civil servants should be viewed as agents of change, as managers of the nation's development plan and from this role are therefore expected to be men and women of high status and integrity, a quality presumably inherited from their colonial predecessors this has not been the case (Throup and Hornsby, 1998). The civil service is expected to have symbols of justice, merit and devotion to duty but frequently does not because while the civil servants would like to be seen as the embodiment of these values, their actions may

not be in accord with them (Klopp, 2000). According to Otiso (2003) civil servants are by no means neutral instruments for progress but are bestowed with a political role in the widest sense and this role attaches not only to rule-implementation but cuts across a whole series of decision-making processes at many levels of society from top to bottom. This juxtaposition of rules exposes the civil servant to some uncertainty and makes him vulnerable to the dangers of patronage and can hinder the growth of a professional ethic in the civil service is hindered.

Olima et al (2002) arrived at the conclusion that issues concerning land ownership are becoming increasingly sensitive. This is as a result of an increasing uncertainty concerning ownership and demand for land coupled with inappropriate use and questionable mechanisms of gaining access to land. There has been serious abuse and manipulation of land acquisition procedures by the economic elites and their supporters. Indeed land has been allocated to individuals to buy loyalty (Olima, 1998).

The land related institutional framework should rationally develop and clearly define the rights and obligations of both the land rights holders and the administrative actors and provide mechanisms for changing the rights and obligations (Dixon-Gough, 2006). If institutions fail, productive and efficient land use and land transactions are hampered or simply fail to happen and the anticipated benefits either fail to materialize or are stunted and not worth the cost. Opiyo (2004) in his work "land grabbing and evictions in Kenya" looked at the issue of illegal land occupation but was concerned with how to protect the occupants from violent evictions. He didn't consider the fact that these illegal occupations affect the construction of infrastructure and making the planning process futile.

Legal and Institutional Framework

The role of the state and the individual, particularly in aspects relating to the land are inexorably intertwined. The state provides the legislation relating to the land use and even ownership of the land and controls that legislation. Urban planning in Kenya has two broad objectives that of attainment of economic development of the county as whole and the control of land use with environment, health, social and social consideration among others. McAuslan (2002) observed that planning laws were

derived from Britain and therefore are not effective in the local situations given the fact that planning problems in a developed country are not similar to the problems in developing countries. There is rigidity in such laws to integrate land use to economic development. Hansen et al (2004) has observed that most of the legal framework adopted was designed to contain settlement rather than to deal with the rapid growth.

Also, there exists a multiplicity of agencies dealing with land use development and management. Various institutions are involved in urban land development control. At the national level "Commissioner of lands" and "Director of physical planning" who advises the government and statutory bodies while local authorities are the main development control agencies at the local level. There are no clear cut definitions of roles and responsibilities of each of the agencies; hence there is very little coordination amongst the numerous agencies resulting into conflicts and duplication of responsibilities.

The study examined whether there are any weaknesses in the planning laws which could have been used as a loop hole in the approval process of the land on the road corridors.

Urbanization

Magalhaes et al in their study of facing the challenges of informal settlements in the city of Manaus, Brazil observed that illegal occupation of urban land is a widespread phenomenon in Brazil and has become a tradition of sorts. This is through the occupation of land in the periphery as illegal subdivisions by private agents, the direct invasion of public lands by settlers, or the invasion of infill vacant public lands in central areas. They concluded that this resulted from the use of a master plan dating 1975 to manage the urban expansion and land development before a new one was produced in the year 2002. Also there was confusing and disarticulated legislation and regulations. They also concluded that lack of clarity in the land use regulations was compounded by inadequate institutional capacity to enforce them in a rapidly growing city.

Magalhaes has looked at informal settlements as occurring due to the rapid expansion of the city population and the resulting need for more housing but the study seeks to

look at illegal occupation of road corridors not only by the slum occupants but also by the well to do in Kenya.

Opiyo (2004), his idea on lack of clear or comprehensive policies is that the colonial laws which were inherited do not guarantee security of tenure especially to vulnerable groups; but not how to protect land meant for public purposes.

Problems of master planning

Mainly before 1970s, the Master Plan was the primary planning tool for guiding development in most parts of the world. However, master plans have proved to be quite ineffective in reality, as city growth typically outruns official capacities to control development, to finance infrastructure and to influence events on the ground. Master plans have a narrow physical and spatial focus and fail to deal adequately with economic and social, much less environmental aspects of city life. They are also more concerned with a desired end-state rather than with the process of achieving it, so that even the few plans which are technically good, have little hope of being implemented. They require, as inputs, a vast amount of data, much of which is difficult or impossible to obtain. Master Plans have been prepared without involvement of those responsible with implementing plans, stake holders, residents and other interested parties.

2.7 The Conceptual Framework

Illegality is a characteristic of activities that are prohibited by law. While Fernandes (1998) distinguishes between degrees of illegality based on what is tolerable and intolerable, Werhmann (2001) 's distinctions focus on three elements:

- Illegality- violating both land tenure and planning laws
- Semi-legality-violating only planning laws while land rights are legally valid,
 and
- Criminality -violating laws which safeguard moral principles, through fraud, theft or exploitation of others. This category corresponds to Fernandes' (1998) reference to intolerable illegality.

This results to different types of illegal settlements spectrums (Auslan and Farvecque 1992). At one end of the spectrum there is the classic squatter settlement where there is illegal occupation of land either public or private followed by the building of

structures that ignore all planning, zoning, building and public health regulations. Usually no official acceptance is granted to such an occupation and development and so any tenure relations and transactions must develop without reference to official institutions or procedures.

The other end of the spectrum is the development that is below the required standards. The land has been sold legally by a land owner to a developer who subdivides it into plots below the required standards and sells the plots to individuals who construct houses based on land not fully complying with the relevant statutory codes. Because the regulations have already been by-passed and in order to save costs, plot owners may not register their titles which are thereby rendered technically illegal. It can be concluded that there are infinite degrees of illegality which arise from different factors at play.

Evidence suggests that public land management policies fail due to inherent inefficiencies of bureaucratic allocation as seen in rent seeking activities of self-aggrandizing bureaucrats, wasteful budget extension and lack of accountability. Apart from corruption and ineptitude, the bureaucracy is hampered by lack of information. The political process-especially in democracies –also poses its own problems as governments engage in vote seeking and vote trading activities which benefit certain interest groups at the expense of society at large (Bardhan, 1989 and Wagner, 1996). As result, equity objectives are easily compromised and colossal wastage engendered.

Kenya's economy is largely agrarian, and as such, land has high social, cultural and economic value; it is an important sign of wealth as well as a source of livelihood and political power (Apiyo 1998; Kanyinga 1998). Considering the amount of land required; the importance of providing mechanisms for efficient land development processes cannot be overemphasized. However, the supply of land in most developing countries is genuinely and artificially limited (Brennan, 1993). The problem of land supply is generally independent of the type of ownership. It is a problem in Delhi and Karachi, where most land is publicly owned, and in Bangkok and Seoul where most land is privately owned.

Land allocation is regulated by the Government Land Act in Kenya. The government land act stipulates that any land set aside for public purpose should not be allocated. However, in practice, land compulsorily acquired for public purpose has been allocated without regard to the law. There is inconsistency between rhetoric and reality and this has resulted to illegality in land occupation with legal titles. This has been attributed to various factors.

Political patronage has evolved as the single most medium of regulating access to land in Kenya (Otiso, 2003). Since the early 1990s, the dishonest acquisition of public lands, or 'land grabbing" as the practice is known locally has increased significantly with the denial of international aid to Kenya as a result of the failure to stem corruption and successfully implement world bank-IMF sponsored proposals of structural adjustment. This curtailment by the IMF; reduced the amount of public funds available for pilferage by political functionaries and hence were required to seek other means of accumulating private wealth or maintaining political power (Jennifer Klopp, 2002) which is a political cause. Institutional change can act as a catalyst for illegal sale of government land which are common in situations of either abrupt transition; for example to a democracy .Public lands because of their high value and the ease with which they can be disposed of especially the urban lands have come to be a handy means for this purpose (Otiso 2000). The dishonest system of land allocation, together with the poorly regulated urban land market, has disadvantaged poor people, invariably forcing most of them to obtain land informally, often through illegal occupancy (UNCHS 2001: 36). The political process especially in democracies also poses its own problems as governments engage in vote seeking and vote trading activities which benefit certain groups at the expense of society at large (Antwi, 2002).

Lamba et al (1991) attributed illegal land occupation to landlessness which has been caused by an increase in urban population making urban land scarce and therefore expensive. This can be considered as a change in society, demography and poverty.

Land laws dictate types and limitations of land rights, restrictions on alienation, government rights to take land, and regulations binding the occupation and use of state lands. Planning laws on their part prescribe types of uses permitted in specific zones while also enunciating building and development standards. Lack of following

the laid down legal framework has resulted to corruption and ineptitude in the allocation of land in Kenya. These factors have led to occupation of public land and excluding other interested parties from enjoying their rights.

According to North (1990), institutions are the rules of the game in a society or, more, formally, the humanly devised constraints that shape human interaction. Where institutions are supposed to implement and enforce the rules of the game and where they are weak either due to legal, technical or administrative causes, the society in its desire to satisfy its needs usually take advantage of these institutional weaknesses and hence leading to illegal land occupation and development.

It is important to note, however, that where the problem of unauthorized developments occurs, the particular characteristics of the planning system may only play a minor part in explaining it. Factors outside the formal planning system will often play a determining role in its operation and effectiveness. Factors such as the historical relationship between citizens and government, attitudes towards land and property ownership, and implications of social and economic institutions in society will all play a part amongst other historical and cultural conditions (European Commission, 1997).

The rapid population growth in Kenya has led to increasing pressure on land and with the increasing scarcity of formal employment, the urban migrants usually settle in the slum areas as they provide cheap housing. The taking advantage of functional deficits takes root and this is driven by the desire to make a profit which is based on emotional and material needs. The increase in population therefore makes access to land critical to the well-being and this makes illegal appropriation of public land a peculiarly visible crime that has come to excite huge passion, not least because, as the Ndungu Commission Report asserts, the practice of illegal allocations of land increased dramatically during the late 1980s and throughout the 1990s:

Land was no longer allocated for development purposes but as political reward and for speculation purposes ... 'land grabbing' became part and parcel of official grand corruption through which land meant for public purposes ... has been acquired by individuals and corporations (p.8).

The interdependency of causes

From the figure 2.4, it can be observed that the causes of the illegal occupation and developments on public land do not occur in isolation but usually are intertwined with each other.

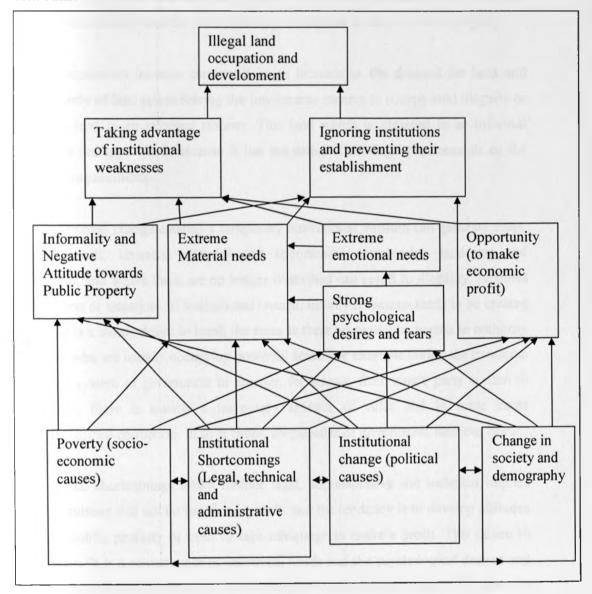


Figure 2.5: Causes of illegal occupation and development on road corridors. Source, author 2009.

Changing circumstances can provide the basis of illegal land occupation and development. In times of natural disasters which can increase the level of poverty in the rural areas, people will tend to migrate to the urban centre and they will need to be provided with shelter. Where the Urban government has not been able to provide

cheap housing for the low income earners, the demand for housing will go up raising the rent rates and consequently those who cannot afford are pushed out. These people tend to occupy the empty urban spaces which most of the times belongs to the government either as alienated public land for different purposes. They construct houses which do not meet the local authority's standards as they are done illegally.

Natural population increase can result in an increase in the demand for land and consequently of land prices forcing the low income earners to occupy land illegally or to obtain land in an informal manner. This land which is obtained in an informal manner is not legal either because it has not satisfied the legal requirements or the technical requirements.

An institutional change causing a temporary institutional vacuum can generate fears, desires, needs, interests, attitudes and opportunities concerning land use and ownership, and where these are no longer controlled can result to illegality. In times of moments or situations of institutional change, usually a vacuum tends to be created and there is a strong desire to break the rules as there no particular person in authority for those who are usually occupying powerful seats. For example during the transition from one system of government to another, for Kenya, from single party system to multiparty, there is usually a temporary absence of rules and in some cases institutionalized corruption. In such times, illegal sales of government land can occur.

Institutional shortcomings which include legal, administrative and technical implies that institutions will not be functioning well and the tendency is to develop attitudes towards public property or even to take advantage to make a profit. This desire to make a profit is a consequence of emotional needs and the psychological desires and fears to have material properties. An example of a psychological fear is the fear for one's future which can result to material needs and emotional such as the need for shelter or the need to be powerful and this makes people to break the rules (institutions) or profit from institutional shortcomings.

Usually deficits in institutions are not the main reasons for illegal occupations but they act as catalyst and hence facilitation. In most cases, the desire to make a profit is the driving force for most of the actors and in present day situations whereby the society looks at irregularities as the 'normal behaviour' and therefore evils like corruption and disregard for regulations are considered the norm. Social and religious values no longer play a major role in people's everyday life but of importance is self-interest more than the public. When this takes root, the ethical principles and the rule of law is undermined in running land administration issues.

It can therefore be noted that poverty, institutional change, institutional shortcomings and other changes in the society influence each other and usually strong psychological desires and fears are provoked. The result is strong emotional and material needs such as the need for shelter or a strong need for independence and in the long run leading to accumulation of wealth. Given the informality and the negative attitude which arises from the institutional change and/or poverty, these emotional and material needs, which most of them are supported by opportunities to make a profit result in individuals either taking advantage of the institutional weaknesses, ignoring formal and/or informal institutions or at times preventing their establishment. The causes can therefore be distinguished as political, economic, socio-economic, demographic, legal, administrative, land management (technical) and psychological causes.

The study of the Northern bypass aims at unraveling and bringing into light how these different factors contributed into the illegal occupation and developments of the road corridor. In the end, it aims at proposing measures which should be carried out to ensure that in the future, road corridors are left intact. The importance of public awareness that population is made to appreciate the need to observe regulations which result to sustainable urban development will also be examined.

CHAPTER THREE

BACKGROUND TO THE STUDY AREA

3.1 Introduction

This chapter provides background information on the study area. It gives the physiographic, drainage and population and their relationship with the development of the road infrastructure. The chapter also includes the infrastructure services of the city an also the institutional framework which is responsible for guiding and controlling development.

3.2 Geographical Location

The Nairobi Northern bypass is in the city of Nairobi that is the principle urban area of Kenya. Figure 3.1 shows the location of Nairobi within the regional and national context. The neighbouring Kiambu, Thika, Machakos and Kajiado districts harbour persons who work in the city thereby contributing to the day population of Nairobi. This together with the fact that many people from all over the country visit the city give Nairobi a high resident and non-resident population which makes utilization of infrastructure such as roads very difficulty leading to endless traffic jams. In fact, Nairobi has the largest urban population in Kenya with about 2.1 million people and has been classified as a "classical primate city". Nairobi has grown as a major service centre of both up-country highland agricultural areas and as a national headquarters of the country.

Four major land routes meet at Nairobi. One originates from the coastal region approaching the city from the South Eastern direction and funnels the traffic from most of the populated areas of the country (and from neighbouring countries). The second route is a continuation of the former into the Lake Victoria region and Uganda. The third in order of importance continues in a northerly direction from Nairobi along Eastern franks of Nyeri, Embu and Meru and then onwards to AddisAbaba via Marsabit and Wajir. The fourth route branches southwards at Athi River Township into Moshi and Arusha (Tanzania) via Namanga and it then continues southwards to Zambia and Southern Africa. These routes generates traffic which in essence do not necessarily need to pass through the city centre and hence the need of

the bypasses. Figure 3.2 shows the Nairobi city and all the proposed bypasses and in particular the Northern bypass which is the actual study area.

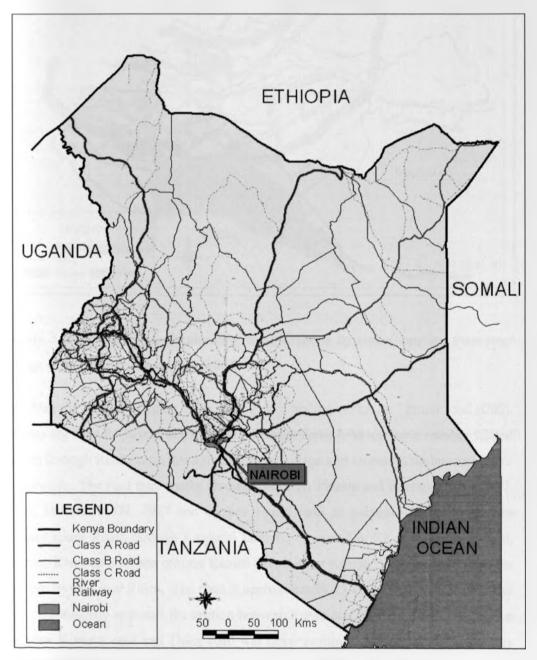


Figure 3.1: Map of Kenya showing the place of Nairobi in the national context. Source MOR

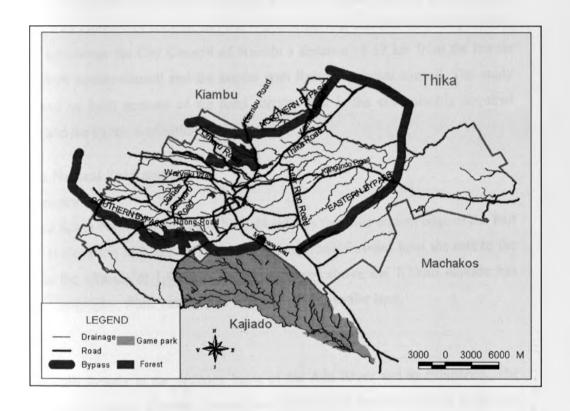


Figure 3.2: Map of Nairobi showing the Northern bypass. Compiled from road design maps and aerial mapping (2003).

The Nairobi Northern bypass starts after Ruaka trading center on Limuru road (C62), crosses the road to Banana (C63) on to Koinange Farm land reference number 22 and passes through Runda area, through Githogoro village and crosses Kiambu road above Ridgeways. The road then passes through Marurui, Thome and through Lr No. 30/2, 5987, 1012/6, 11478, 4927 and crosses kamiti road at githurai 44. The road then crosses Riara River, through Kamuthi farmers, crosses Kiu River to Kahawa west, Kamae, Kiwanja and then crosses Kamiti River. After Kamiti River the road joins the Eastern Bypass near Ruiru. The road is approximately 25 kms. Only 7km of this road was compulsorily acquired; the section between Ruaka and Kiambu road. The section between Kiambu road and Thika road was never compulsorily acquired but the city council of Nairobi was to invoke the already repealed Town Planning act cap 134 for owners of property to surrender 60m road corridor as a condition whenever they sought approval for subdivision of their farms free of any cost. Though some of the illegal occupations have been demolished especially at Kamuthi farm area and Kiwanja there are still encroachments at Kahawa west, Githurai 44, Githiogoro village and Kamae slums.

The Nairobi Northern bypass passes through three local authorities; the Karuri county council, City Council of Nairobi and the Ruiru Municipal council. The study will be carried out within the City Council of Nairobi a distance of 17 km from the border with Karuri county council and the border with Ruiru municipal council. The study will focus on both sections of the road corridor that is the compulsorily acquired section and the bylaw acquisition section.

3.3 The Natural Environment

Topography

The area lies in Nairobi District and Nairobi extends from the eastern edge of the Rift Valley at elevation of 2,300 m, gradually sloping down forward from the east to the south to the altitude of 1,400 m. The western part above the 1,700m altitude has rugged topography, while eastern part is gently sloping to flat land.

Drainage

Nairobi falls largely in the drainage basin of the Athi River and its tributaries. The Nairobi river, a major tributary, flows generally from the southwest to the north east through Nairobi city, and is joined by the Kamiti, Thiririka and Nalaruru rivers in the eastern part before it drain in the Athi River.

Geology

The land in Nairobi is composed by volcanic rocks in the west and Metamorphic rocks (eg. Mica, Marble, quartzite, gneisses and schist) in the east. The rocks mainly comprise a succession of lavas and pyroclastics of cenozoic age, overlying the foundation of folded precambrian schists and gneisses of the Mozambique belt. The crystalline rocks are rarely exposed, but occasionally fragments are found as agglomerates derived from former Ngong Volcano. The Northern bypass passes through the estate areas developed on the mountain slope of Ruiru to Kiambu generally following the Nairobi city's north boundary.

3.4 Growth and development of Nairobi

Nairobi city has experienced growth in terms of population and physical expansion ever since it started. The site on which the city of Nairobi has grown was chosen for its suitability as railway depot situated roughly between Mombasa and the final

destination of the railway at port Florence (Now Kisumu), 220 miles further inland (Etherton 1969). The railway company moved its headquarters from Mombasa in 1899 and was joined in the same year by the Government Administration of Ukambani province, which until then had its office in Machakos. By 1906, the original railway depot and camp had mushroomed to a town of 11,000 people living and working in five distinct areas within one and a half mile radius of the government quarters.

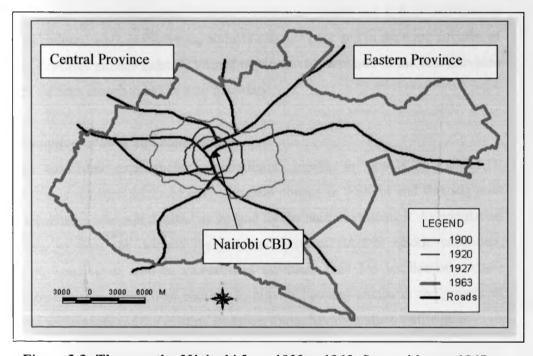


Figure 3.3: The growth of Nairobi from 1900 to 1963. Source Morgan 1967

The town consisted of the railway centre, the European residential suburbs and the military barracks outside the town. In 1919, Nairobi became a municipality with a corporation and the initial circular boundary was changed to include some of the residential estates like parklands. The first low-housing schemes were started in Eastlands during this period. The area of Nairobi expanded from 2.5 km squared in 1910 to 3.8 km squared in 1919.

The 1948 Master Plan prepared for the first time for a colonial capital in Africa by a team of South African planners brought in the segregation of residential areas into European, Asians and Africans. The "garden city" appearance of the city was initiated during this period. From 1948 to 1963, the city developed more or less on the same

lines prescribed by the master plan and the roads declared as public roads would be gazetted. This master plan advice resulted into a nearly static plan of a population of 250,000 people and an area of 2148.9 acres.

In 1963, the new independent administration changed the city boundaries with the intention of including adequate land for residential and commercial development and to absorb the peri-urban and dormitory areas occupied by the people depending on the city for their employment. The city boundary was extended to 698 km squared, which is still the current official size of the city.

The constraints to the extension of the city were in the North due to encroachment of good agricultural land, in the South, Nairobi national park and in the west, suburbs of varying densities already existed. Vacant underutilized farmland in the east provided most of the area absorbed by the new boundary.

3.5 Population growth and distribution

Nairobi has been experiencing a continued growth in population (table3.1). Population is a major driver of environmental change in Nairobi and this suggests more inhabitants who will demand more land for the built environment. As population increases, so does the demand for jobs and services such as health, education, transport, housing as well as recreational facilities. This has implications where failure by the City Council of Nairobi to provide housing results to the growth of informal settlements and the existing transport routes having endless traffic jams.

Table 3.1: Population size for Nairobi 1985-2015. Source: UNCHS 2001

City	Estimates and projections (thousands)						
	1985	1990	1995	2000	2005	2010	2015
Nairobi	1100	1403	1810	2310	2841	3346	3773

3.6 Infrastructure

The components of infrastructure described in this section are transport and urban mobility; water supply and sanitation; and health and education. Provision and maintenance of infrastructure has been a major problem, especially within the low-income urban settlement.

Transport and Urban Mobility

Nairobi's transport infrastructure is ill-equipped to handle the additional travel generated by the increasing population, and other service and industrial activities. Indeed traffic congestion is a common problem exacerbated by lack of space (especially in the CBD), weak enforcement of traffic regulations, parking restrictions, land-use control and failure to develop an adequate policy and planning framework. The existence of the traffic congestion within the Nairobi CBD calls for the construction of the bypasses to filter out traffic that do not necessarily has to pass through the city centre.

Water supply and sanitation

Nairobi is supplied with water from both ground and surface water. However, the current practice by the City Council of Nairobi is to solely rely on surface water though different institutions have sank their own boreholes to shield themselves in times of drought.

The main problems facing the water and sanitation sector include access to water, water quality, access to sanitation and poor solid waste management. Only about 42 percent of households in Nairobi have proper water connections (MWI/WSP 2005). The urban poor and slum dwellers are the ones who suffer most from the lack of piped water supply with many forced to spend large proportion of their income on water leading to household poverty. In 2004, the CCN privatized water services under the National Water Sewerage Company in order to improve on water supply and demand management. The Nairobi water and sewerage company is also expected to manage the sewerage infrastructure provision. Only 48% of Nairobi's population is served by the existing waterborne sewerage system. The poor state of sanitation and the inadequacy of sewerage management pose a health hazard to the residents.

Health and education

Information on distribution of health facilities is critical in ensuring efficient access and implementation of cost-effective health-care strategies including preventive measures through improvement of environmental quality. Access of health facilities in Nairobi is an issue.

Providing educational opportunities to both men and women is a means for cultural, social and economic development. It therefore follows that strategies for improved literacy and access to educational opportunities will do much to improve the wellbeing of the people and the areas they live in. Illiteracy levels are lowest in Nairobi compared to the rest of the country- 21% for women, and 12% for males (CBS 2003). With the introduction of free primary education, access to primary schooling especially among the poor households has been broadened.

3.7 The administration of Nairobi

Urban Management

The administration of urban areas is largely the responsibility of the local authorities and the Ministry of Local Government. Other ministries such as the Ministry of Health, the ministry of lands and housing are also involved in urban issues. Local authorities in Kenya have two arms: - the legislative arm (or council) concerned with policy formulation; and the executive arm concerned with implementation of the policies and composed of the administrative and professional staff.

Local authorities perform their legislative function through the councils. Because of the wide range of responsibilities and to facilitate efficiency, the councils are divided into committees. The number of the committees and the sub-committees in a council will depend on the size of a council and its status.

Problems of the urban administrative system

There is usually a general consensus that local authorities in Kenya are not doing their job and that there are various problems that have adversely affected their performance. One is increasing central control which has resulted in a shift of the decision making power from local to central government.

Local authorities suffer from a poor and inflexible resource base with a major problem being that the local authorities do not have full control over the source and volume of their revenue. Because of lack of funds, local authorities provide poor services to their residents.

Local authorities' activities can be grouped into two categories:

- Provision of services and facilities-water, housing, education, ambulance, roads, markets, sewerage, health, garbage disposal etc.
- ii) Control functions building by-laws, premises and occupational licenses, land use control, public control, public health, traffic control etc.

Land allocation and planning

The management of urban land is the responsibility of the CCN city-planning department. Land use in Nairobi is determined by zoning regulations prepared by the city planning department. Nairobi is divided into 20 zones, each with a specific land use- residential, commercial or industrial; or a combination of two uses, and a minimum plot and plot ratio. Any new developments in the city must abide with the regulations and the plans must be approved by the CCN. The CCN has often been accused of mismanaging and misallocating land. This accusation is mostly directed to councilors who exert their influence to acquire land for themselves and their friends.

Nairobi Roads Management

The responsibility for Roads Infrastructure is fragmented among different government ministries, departments and levels of Government. These include the Ministry of Roads, Ministry of Local Government, Local authorities and Ministry of Environment.

The Ministry of Roads is responsible for the classified roads while the Ministry of local Government through the City Council of Nairobi has responsibilities of the other road network mainly for access. The Northern bypass is a classified road and hence is a responsibility of the Ministry of Roads.

CHAPTER FOUR

PLANNING, DESIGN AND ACQUISITION OF THE NORTHERN BYPASS CORRIDOR

4.1 Introduction

This chapter uses the secondary data collected mainly from the government documents and the primary data collected during the fieldwork and analyzed using the SPSS software to make some deductions regarding the study objective of examining the process of planning, acquisition and design of the Northern bypass. The section describes how the road was planned for, how it was designed before the actual land acquisition was carried out.

4.2 The procedures Followed

The road was planned for through consultation with various stakeholders and consultants hired to map and design the road. This is described below.

4.2.1 The Planning of the Nairobi Northern bypass

The Northern bypass was planned by city council of Nairobi through the technical expertise of planners under the Nairobi Metropolitan Strategy Group through the period 1969 to 1973. Colin Buchanan and Partners acted as the planning and transportation consultants. The local members were drawn from the CCN and the department of physical planning. The United Nations and the government of Kenya funded the programme. The route was therefore planned after consultations with the relevant departments of the Government, as the implementation was to rely on other agencies of the Government. The planning of the road was done by considering the traffic demand which is derived by growth in population, the economy and personal incomes. Forecasts of these factors were therefore determined to make accurate traffic forecasts. The road corridor though planned at the same time, the plan was not implemented wholly at that particular planning period.

4.2.2 The Design of the Road

Road corridors are provided for in order to accommodate future road connections or changes in alignment, road width or junction layout for existing roads and to enhance the safety, operation and appearance of the roads. According to the road design manual, the road corridor should always be determined and shown on the final design for road projects.

Topography, land use and physical features

Since road design is an exercise in three-dimensional planning its success is measured not only by the efficiency of the road but by its appearance and impact upon the adjoining area. It is important to fit the road symmetrically into the landscape and with a broad awareness of the character and features of the area through which it passes and this calls for topographical mapping. The stretch from Ruaka to Kiambu road referred to as Ruaka-Rosslyn road was planned for by the City Council of Nairobi, Mangat Engineers were consulted to carry out the design of the road and this also involved mapping of the general area where the road corridor was to pass through. After the road design it was possible to identify the properties that were being affected by the road corridor and hence to be acquired.

4.2.3 The Procedure for land Acquisition

The land acquisition drawings were prepared by the Mangat Engineers and submitted to the commissioner of lands for compensation through the Ministry of roads. Once the road corridor was acquired it was the responsibility of the Ministry of roads to ensure that the road corridor was maintained for road construction. For this section of the road, the procedure as outlined by the Land acquisition act of 1968 was followed and the corridor marked using angle-iron beacons at an interval of 100 metres and was never constructed. The procedure is as shown in figure 4.1.

For the road section between Kiambu road and the boundary with Ruiru, the road was only designed in the year 2005 by the Chinese consultants when in actual fact some of the road corridor had already been acquired. This means there were no geometric considerations on how the road corridor was being excised from the original titles and this role was being left to the whims of the land professionals who felt they could also carry out physical planning. The surveyor only ensured that the 60m road corridor was left out and a close scrutiny of the left out corridor reveals lack of design elements such as presence of kinks on the road corridor which are not allowed. From the figure 4.2 below, the corridor left out by the subdivisions of the adjacent pieces of

land has left out a kink and overlaying the actual design means more land has to be acquired to fit the road design. This point to lack of implementation of plan proposals as contributing to this malpractice and also lack of integration of relevant professionals to ensure adequate land was acquired for the bypass.

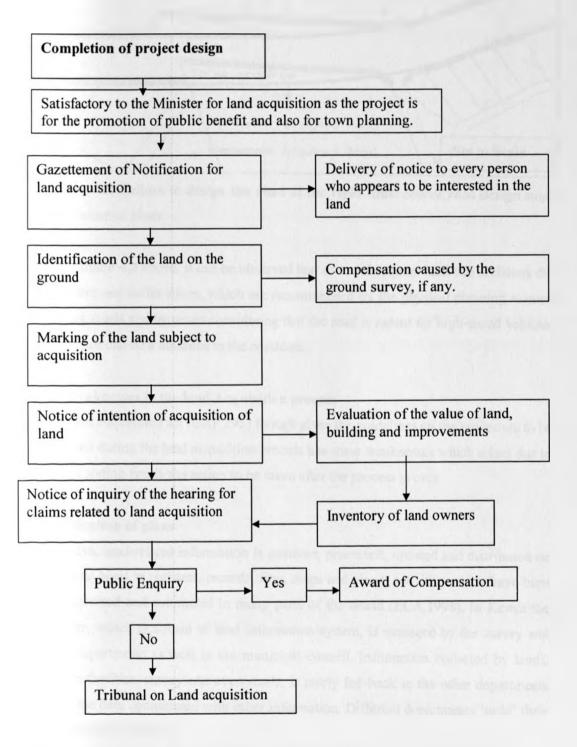


Figure 4.1: The Procedure for Land Acquisition. Source, Land Acquisition Act

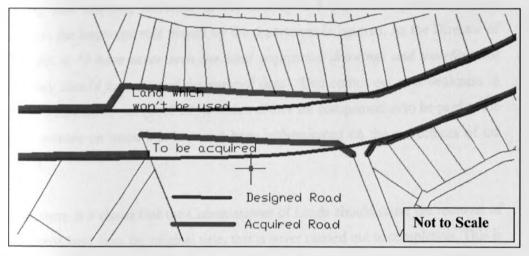


Figure 4.2: Failure to design the road at the right time. Source road design maps and cadastral plans

From figure 4.2 above, it can be observed that even subsequent land sub divisions did not leave out buffer zones, which are recommended by the physical planning manual for link roads and bypasses considering that the road is meant for high-speed vehicles and hence can be a nuisance to the residents.

4.3 Weaknesses in the land Acquisition process

The land acquisition act (CAP 295) though gives the guidelines on the procedure to be followed during the land acquisition process has some weaknesses which arises due to lack of stating firmly the action to be taken after the process is over.

Rectification of plans

In Kenya, land-related information is gathered, processed, updated and distributed on a manual basis in registers, records, files, maps and plans; activities which have been computerized and automated in many parts of the world (ECA,1998). In Kenya the cadastre, which is a form of land information system, is managed by the survey and lands department, as well as the municipal council. Information collected by lands, local authorities, survey and even roads, is rarely fed back to the other departments nor is the data coordinated with other information. Different departments 'hold' their information exclusively.

The survey of Kenya is the official agency of the government responsible for surveying and mapping activities in the country and yet in the process of land acquisition the important role played by the department is ignored. As the Director of Survey put it, 'I have never seen the land acquisition drawings and therefore not aware they should form part of the mapped data'. This comes out as a weakness in the Land Acquisition Act (CAP 295), which allows for compensation to be paid to the original owners on maps that have not been authenticated on the correctness of the area data.

Though there is a clause that the Commissioner of Lands should cause the removal of the acquired land from the original title, this is never carried out to completion. This is because the Ministry of roads prepares the land acquisition drawings for roads corridors. The ministry of roads that acquires the road corridors does not have the required personnel capacity to carry out the cadastral survey. According to the Survey Act, only a licensed surveyor or a government surveyor, where a government surveyor means any officer of the survey department of the Government who is authorized by the Director of survey, is allowed to carry out surveying for registration purposes. The act does not recognize the surveyors working in roads department as government surveyors entitled to carry out cadastral surveys unless they seek for authority from the Director of Survey to carry out survey for registration purposes, which they do not apply for. This has contributed to the lack of completion of the land acquisition process, as the plans prepared cannot be used to rectify the plans and consequently to illegal occupation and developments on the road corridor. The Commissioner of Lands does not have the technical knowledge to amend the cadastral maps but rather this is the work of the Director of Surveys. The Director of Surveys however suggests that to make the cadastral information more useful, the roads department through his office can rectify the plans for advisory purposes to people concerned by indicating on the particular plans the extent of the road corridor even though as an approximate alignment.

Registration of rights after the land was acquired

Farvacque and Auslan (1992) have noted that in Africa not all urban land is demarcated and titled, especially the road reserves, and there are no properly maintained cadastral maps, and this makes it impossible to have a clear picture of the

land tenure situations. This is also true for Kenya especially with regard to land that has been acquired and fully paid for.

According to the land Acquisition Act, section 20, subsection 2b, 'where only part of the land comprised in the documents has been acquired, record upon the documents that so much land has been acquired under this act and thereafter return the documents to the person by whom they were delivered, and upon such receipts, or if the documents are not forthcoming, cause an entry to be made in the register recording the acquisition of the land under this act". This explains the process to be followed to register the land acquired and this has proved to be inadequate in that for the subsequent land subdivision, for example in Runda, some part of land which was acquired has not been left out in the subsequent subdivisions leading to some properties encroaching on the road reserve. Also it does not act as a good source of information since it was not able to inform the people involved in the development approval process of the actual land that should be left out of the title. Lack of amendment of the plans implies that if the approving authority relies on the cadastral plans solely, this could be misleading. There is also an assumption that the widest road corridor is 60 m wide.

Surveying of remaining land

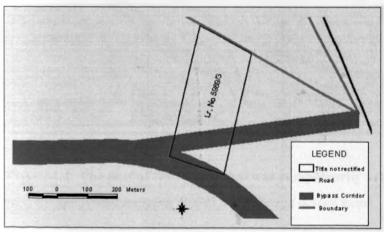


Figure 4.3: Un-rectified title after the 1970 land acquisition.

Compiled from road design maps and cadastral plans

The remaining land is never surveyed but instead is left as the initiative of the original owner to rectify the plan.

Section 17 of the land acquisition act says that "where part

only of the land comprised in documents of title has been acquired, the commissioner shall, as soon as practicable, cause a final survey to be made of all the land acquired". This often does not take place, and an example can be given for the piece of land at Runda, which was compensated for in 1970 and yet to date the title has never been rectified. This is as shown in the figure 4.3. Because the owner has never seen the cause to subdivide his land and therefore the plan being rectified, the acquired road corridor still appears as part of the title. This shows lack of completeness of the land acquisition process and also of the land information.

4.4 Problems associated with the acquisition method adopted

From the government records and maps, not the entire road corridor was acquired. This is because of the two methods that were applied for the corridor acquisition. The stretch of the road from the border with the Karuri county council and Nairobi to Kiambu road was acquired in 1970. This stretch named the Ruaka –Roslyn road was planned, mapped and designed and acquired in the period 1969-1970 and has a road width of 80 metres. This is as shown in the figure 4.4 below.

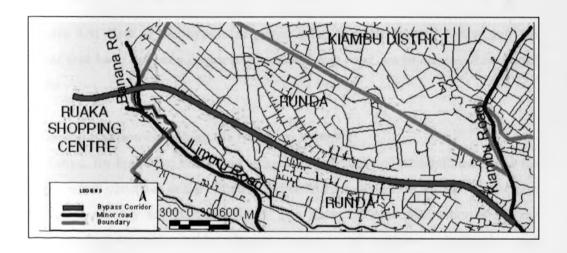


Figure 4.4: The part of the bypass that was compulsorily acquired. Compiled from topographical mapping (2004) and the road design maps.

The remaining part of the road corridor has been acquired through the application of the city council bylaw where if the property owner wants to carry out any development is given the condition to leave out a 60 metre wide road corridor free of any cost to the city council. Since the owners have not been carrying out development

at the same time, at some places the road corridor does not actually exist. Figure 4.5 shows the areas which have been acquired using the city council bylaw and the areas where the road corridor is yet to be acquired.

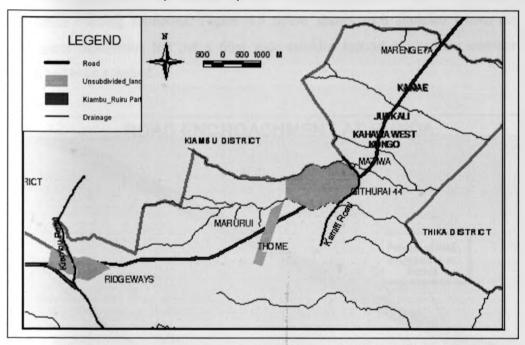


Figure 4.5: Part of the bypass acquired using the city council bylaw and the areas that have not been acquired. Compiled from road design maps and cadastral plans

Land information describing the Northern bypass

In Kenya, for both rural and urban areas, the inadequacy of land information is the single major constraint in the effective and efficient management of land, conferment of tenure security and property rights. The status of land information along the northern bypass road corridor depicts a picture of confusion, duplication and incomplete information. This has been caused by the different methods used for the acquisition of the road corridor.

Whereas the acquired road corridor was 80m and registered as a caveat against the original title, appendix III shows such a registration, subsequent cadastral surveys carried out on the abutting properties (which had a caveat) left a 60 m wide road corridor and this has led to road encroachment on some parts of Runda. This means

that, whereas the owners of the properties used the cadastral plans to ascertain that the properties they are interested in are not on the bypass and actually bought; the ministry of roads on the other hand will mark the development as road encroachments and hence creating confusion. Figure 4.6 below shows such situation where the subsequent subdivision left out a 60m wide corridor instead of the 80m corridor which had been acquired.

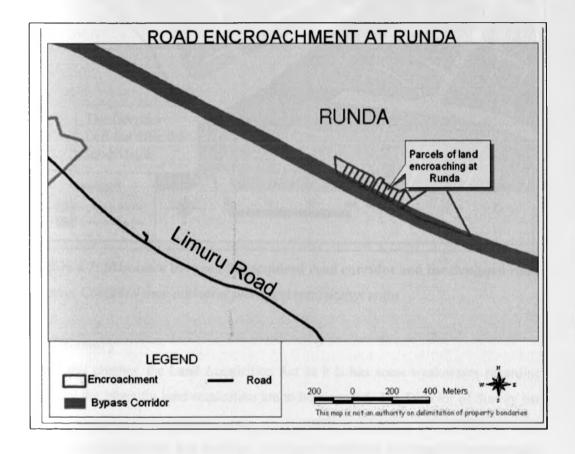


Figure 4.6: Road encroachment at Runda. Compiled from cadastral plans and road design maps

Another example of inadequacy in land information is at Githurai 44 where the directors of Tinganga Company had their plans approved and left out the 60m-road corridor not where the designed road corridor passes through but in a different location. This has led to creation of legal titles on the actual road corridor. The left out road corridor does not provide a continuous alignment with the other left out spaces for the road corridor at Maziwa and can therefore not be used. The owners of

Tinganga Company have also allocated the left out space to citizens though they don't have titles. This is as illustrated by figure 4.7 below.

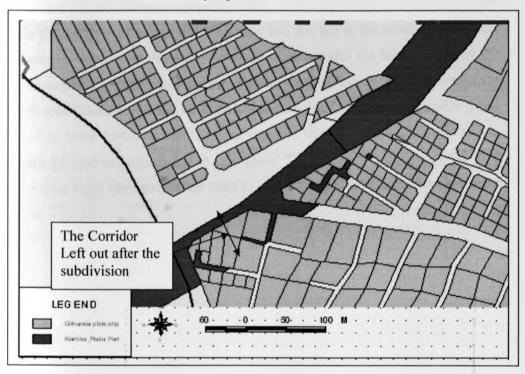


Figure 4.7: Mismatch between the acquired road corridor and the designed road.

Source: Compiled from cadastral plans and road design maps

4.5 Summary

From this chapter, the Land Acquisition Act as it is has some weaknesses regarding the way the plans for land acquisition are to be prepared. The Director of Survey has the responsibility of preparing plans for registration purposes but the act does not recognize the important role he plays. The land acquisition drawings are not prepared to the standards stipulated by the survey act and hence cannot be used for registration purposes. Failure to register the acquired land is also emerging as an issue. The acquired land is neither marked properly on the ground with markers which one can see clearly but even in areas where the markers exist, they are the survey beacons usually erected as property boundaries. These at times are buried underground and where they exist on the surface and due to long time of neglect has made them not to be visible. The ministry should endeavor to put clear and visible marks at an interval to inform the members of public where the road passes through. Also the land acquisition act does not make it mandatory for the acquiring authority to register the

land it has compensated for but leaves it to the COL and this emerges as weakness in the act.

The ministry of road relented on its duty since it did not design the remaining road corridor from Kiambu Road to Ruiru on time and this led to the subdivisions which were being approved with the surrender for the road corridor not being guided by the actual alignment but an approximate one. This has implications in that the some of the acquired road corridor will not be used and the ministry will have to acquire some land and in some instances like Githurai area, for the road construction to go on, compulsorily land acquisition has to take place. The Githurai occupants of the road corridor have legal titles and for the road to pass through this area the land has to be acquired.

CHAPTER FIVE

FACTORS CONTRIBUTING TO ILLEGAL OCCUPATION AND DEVELOPMENT ON THE NAIROBI NORTHERN BYPASS

5.1 The Extent of the illegal occupation and development

From chapter four, the Northern bypass was planned for by the Nairobi Urban Study Group between the periods 1969 to 1973. The plan has never been degazetted, rerouted or replanned as required by the Local Authority Act, the physical planning Act or the Roads Act for the same land to be used for another use. The Northern bypass covers a stretch of 25 Kilometres from the intersection with the Eastern bypass at Ruiru to the intersection with Limuru road at Ruaka. The road that was acquired at different times has different road width, with the stretch from Ruaka having a road width of 80 metres and the remaining section has a road width of 60 metres. The section from Nairobi border with Karuri county council to Kiambu road, which forms the Ruaka-Rosslyn road, was acquired through compulsory acquisition in 1970 and the owners duly paid. The other parts of the bypass were acquired through a process of surrender during subdivisions. The 17 Kilometres of the Northern bypass within Nairobi which was part of the study has different hot spots along its corridor. These are the informal settlements at Kamae and Githiogoro, the land invasion and latter regularization at Kahawa west Kongo, road alignment at Githurai, non-existent corridor at Marurui, Ridgeways and Runda and Corridor encroachment at Runda. The occupation of the road corridor is at 40% of the 17-kilometer length within Nairobi. This is as shown by figure 5.1. The study sought to identify the factors, which have contributed to these anomalies.

5.2 Nature of the illegal occupation and developments

The road corridor has a mixed kind of development though a large portion of it has been developed as a residential land use. Though the residential land use is generally common, different classes of development can be identified based on different factors as found out in the study and are discussed in the following sections.

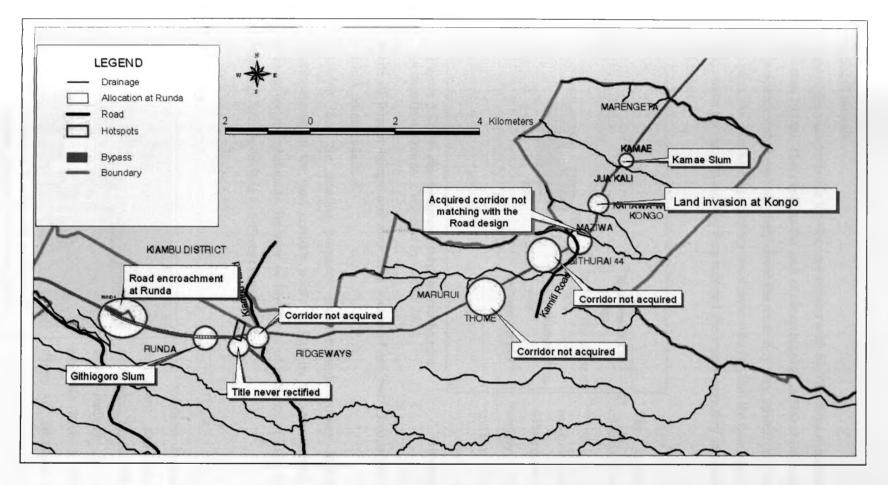


Figure 5.1: Hot spots along the Northern bypass. Source: Compiled from Cadastral plans and Road design maps

Level of income

Most of the occupants are low-income earners with 61.7% of the respondents earning less than 10,000. This explains the lack of cheap housing in Nairobi and also when the respondents were asked why they chose the areas they stay, apart from those who own the plots, the next highest category were those who felt that the house rent was cheap. The results for the reasons why they selected the areas where they stay are as in figure 5.2 below.

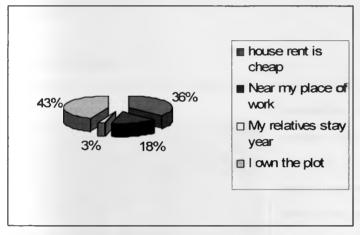


Figure 5.2: Pie chart representing the reasons for occupation. Source: Compiled by author 2009.

The desire for the citizens to own a house, which is a material need, is quite high as 43% reported that they occupy the corridor because they own the land. Housing forms part of the material

needs of human beings and also as a source of income. Occupation of the road corridor points to lack of

available land for housing purposes and the high tenancy rate among the developments on the road corridor points to lack by the city council to provide housing for its inhabitants. Because of low levels of incomes of most residents, the buildings have been done to different standards.

Buildings

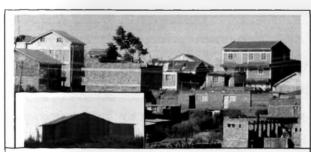


Plate 5.1: Houses at Kongo and an inset of houses at Kamae. Source: field survey 2009

The Northern bypass has both permanent and non-permanent structures. Those who feels they have security of tenure, for example have a title deed or letters of allotment have done

more permanent houses than those who have no security of tenure. Most of the buildings at Kahawa west Kongo who have letters of allotment are permanent in nature being constructed with stones and iron sheets. At the time of construction, Kongo residents were enjoying political patronage and hence had protection when they were constructing with just the informal rights. The same case applies to Githurai44 where the owners have individual titles to the land. At Kamae and Githiogoro where the owners have no security of tenure, the housing is of semi-permanent nature and the photographs above shows the houses at Kongo and Kamae respectively.

Usage of the Land

In areas like Kahawa west (Kongo) where the land had been allocated to single



Plate 5.2: Un-constructed piece of land at Kongo. Source: field survey 2009

residential buildings, the original owners sold the land to others who have put up commercial structures for rental purposes. Also some plots that were to be part of the sample size were not constructed which further explains the holding of land for speculation purposes or for economic gains. Speculation is also rife at Githurai

where land has been acquired but is still idle. Plate 5.2 shows an example of land left for speculation purposes.

Legal documents

Of the 50 respondents who said they owned the land, 40 had legal documents with 11 respondents (22%) having legal titles and hence can seek development approval from the city council of Nairobi, 18 respondents (36%) with letters of allotment and 11 respondents (22%) having share certificates. The remaining 20% though they ansewered that they owned the land they occupy did not have any document as proof. Despite having these legal documents, majority did not have confidence with the documents and the main reason was that with letters of allotments one cannot use them for collateral purposes and those who had genuine titles which are Government documents, the general feeling was that no one can compete with the Government and

there was even the famous quotation of then Minister of Information, Mr Raphael Tuju who said that a title is only a piece of paper, hence putting the sanctity of the title into jeopardy.

Table 5.1: Types of legal documents. Source: field survey 2009

		Which legal documents				
		Title	Letter of allotment	Share certificate	9	Total
Ownership	Tenant	0	0	0	60	60
status	Owner	11	18	11	12	52
-110	Squatting	0	0	0	1	1
Total		11	18	11	73	113

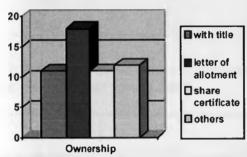


Figure 5.3: Land ownership. Source: Field survey 2009

From the chart, letter of allotment has the highest percentage of proof of ownership. This shows a weakness in the land administration system in Kenya. Usually a letter of allotment is given with some conditions and is usually valid for only three months.

Citizens have been using it for land transaction purposes that can be seen as the institutional failures on land administration. There are two centers of power regarding the land allocation. The commissioner of lands allocates land as well as the city council of Nairobi (appendix IV). If the conditions are to be followed to the letter, the land in question is not supposed to change hands until the given conditions by the Commissioner of Lands have been met. The legalizing of using the letter of allotment for land transactions in 1994 interfered with the land administration.

5.3 Occupation and Development of the road Corridor

The occupation and development of the road corridor could have arisen due to different factors. The residents could have knowingly or unknowingly settled on this road corridor due to various reasons.

Knowledge of where the bypass passes through

From the study, 92 respondents (table 5.2) knew there is a road referred to as the Northern bypass but out of these 92 only 57 respondents (table 5.3) had an idea where the road corridor passes through. Despite the need for the roads to be clearly marked on the ground, from the analysis it can be observed that the road has not been opened and neither are there survey markers on the ground to delineate the road corridor. This points to lack of management of the road corridor by the Ministry of roads who have the mandate to do so.

Table 5.2: Results for those who have ever heard of Nairobi Northern bypass. Source: field survey 2009

		Frequency	Percent	Cumulative Percent
Valid	yes	92	81.4	81.4
	no	21	18.6	100.0
	Total	113	100.0	

Table 5.3: Results on whether the respondents know where the bypass passes. Source: field survey 2009

		Frequency	Percent	Cumulative Percent
Valid	yes	57	50.4	50.4
	no	56	49.6	100
	Total	113	100.0	

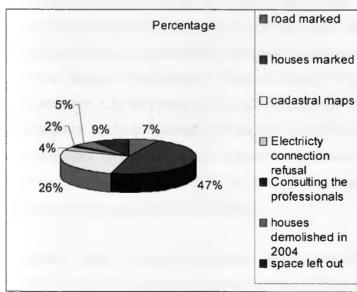


Figure 5.4: Representation of how they learnt about the bypass. Source: field survey 2009

Of the 57 respondents (table 5.3) who know where the bypass passes through, they learnt after different processes. 7% was because the road was marked, 47% was because the houses

were marked and this was quite recent as the houses were marked in January 2009, 26% was from the cadastral plans, 4% after the Kenya Power and Lighting Company refused to connect them with electricity, 2% after consulting the professionals, 5% was after the houses were demolished in 2003 and 9% from the space left out without construction of houses. This means that some of the developers were not aware that they are occupying the road corridor implying that there is usually no further consultation before land transactions take place due to the informal nature.

Settlements on the Road corridor



Plate 5.3: Slum development at Githiogoro. Source: field survey 2009

Runda estate that came up in the late 1980s also led to the growth of the Githiogoro slum.

According to the respondents of this area,

they have occupied this area as early as 1990 that further explains its

relationship to Runda. Apart from Kamae, the next in the longest period of occupation was at Runda. Most of the residents of Githiogoro occupy the road corridor because it provides a cheap source of housing as they seek employment in the rich neighbourhood of Runda. Though the residents are not able to access public facilities such as health centres and instead rely on a mobile clinic through the courtesy of the Baptist church, they have persistently continued to occupy this area. The Githiogoro slums were marked by the ministry of roads as illegal occupants, but even with such marks (see plate 5.3), they have continued to occupy the area. This further explains the inadequacy in cheap housing provision by the city council of Nairobi. This has also encouraged landlordism at the expense of the poor. Most of the people in Githiogoro who own the structures are the same engaging in self-employment participating in such activities as retail trades.

At Kamae, another informal settlement on land formally owned by Kenyatta University, the initial occupants of the road corridor had actually moved out following

the 2002/2003, demolitions of buildings on the road corridors and were given land to occupy by Kenyatta University, but later reconstructed the houses on the road corridor.

Period of occupancy

The longest period of occupation was 42 years at Kamae and therefore giving Kamae the longest period of occupancy followed by Githiogoro. Basically these are informal settlements. The areas where the land was either bought or allocated were settled in the late 1990s, which can be associated with both population increase and the political processes that were taking place. The 1990s show the introduction of multiparty politics in Kenya and the politicians being engaged in the process of vote buying and hence land became a commodity for luring the voters. This led to the settlement of people at the current Kongo scheme by the then city commissioner, Mr. Kongo and the illegal subdivisions of the road corridor at Runda.

When the road was allocated to private developers

Not the entire road corridor was allocated and where it was allocated, especially in Runda this was done in the 1990s. According to Klopp (2000), this was mainly as a result of the curtailment by the International Monetary Fund (IMF) for Kenya, which left the government with no money to misuse, and the only other resource that could be misused was the government land. Road corridors once acquired usually become government land and the commissioner can allocate such land through misuse of powers conferred by the Government land Act. According to the Ndungu report (2004), on irregular public land allocation, the Northern bypass was allocated through a letter that the permanent secretary of the ministry of roads wrote to declare that the road corridor was no longer needed. This letter though was meant for the link road which passes through Kitsuru linking Northern bypass with southern bypass triggered the other allocations on the Northern bypass. The land allocated in Runda area and titles actually processed are not constructed and this means that land was not being allocated for development purposes but for speculation with the intention of making a substantial profit. Some of the owners who were allocated the land at Runda have since surrendered the titles to their properties.

From the household interview, where the land was allocated and people actually constructed, this was in the mid 1990s and this can be attributed to the multiparty politics and hence land was being used for vote buying as this was after the introduction of the multiparty politics in Kenya. The then City Commissioner, Kongo, allocated the land in the area now referred to as Kongo in Kahawa west in 1997 before the year's elections. The land was allocated to people who were occupying the Soweto slum who later sold or actually constructed. The process was that a scheme plan was prepared, plots surveyed on the ground and balloting carried out. This was not an official allocation but rather an invasion and then subdivision of the city council land that's some parts forms the Northern bypass. After the invasion, there was regularization where the city council formally gave the residents letters of allotment from the commissioner of lands, just before the 2002 elections. Observing this process of land allocation in Kongo in Kahawa west, land was therefore being used to lure the voters as most of the activities were occurring just before the elections.

Opening of the road for the first time

From the interview carried out with the principal superintendent surveyor in the ministry of roads and field observations, the ministry has never opened the road. Though parts of the road are being used in Marurui/Thome area, this was not an initiative of the ministry of roads but the residents of Marurui who maintain that stretch for accessing their properties. The part that was compulsorily paid for in 1970 has never been opened though a small stretch in Runda has been tarmacked for accessing the properties and some parts planted with flowers by the Runda residents to deter those who had illegally acquired the land from constructing. The road corridor has a range of activities ranging from cultivations, dumping grounds, human settlements and with some areas being used for accessibility purposes.

Implementation of the master plan

Even after the planning exercise of the 1970-1973 by the Nairobi Urban study Group, the plan was never fully implemented and where it was implemented it was in hap hazard manner. The different stakeholders who should have implemented the plan were not well represented during the study and funds were not availed. Lack of implementation can also be observed from the fact that the city council of Nairobi

which was supposed to ensure that the plan was implemented also played a role in allocating a part of the road corridor by Kongo the then city commissioner. Another lack of implementation of the plan is from the fact that the remaining part of the corridor was only designed in 2005 and hence the city council even in its application of the bylaw was not being guided by an accurate plan and this can be confirmed from the generated road corridor which does not offer the appropriate road design geometrics for example the vertical curves at the river crossings. The acquired road corridor is not continuous with the appropriate circular curves where they are needed especially with a change in gradient.

The Northern bypass though it was planned for did not take care of the implementation process. There was no link between planning and implementation. Funds were not identified for the construction of the road and even with the first phase of the road corridor acquisition, the rest of the road corridor was to be acquired through the use of the city council bylaws. This method of implementation was bound to be slow and making the planning process irrelevant.

Role of Professionals

According to Kaiser (2005), Planners are expected to be managers of the land use plan, drafting and enforcing the rules of the game and advocating cooperation among the players in order to achieve community goals. They have the responsibility for recommending and administering plans and regulations. They have inside information and privileged access to any other player in the land use planning. Land use planners are therefore expected to keep careful track of all the stakeholders' interests, actions and alliances. To lose track is to risk losing planners' credibility as experts, their authority and land use change managers, and their opportunities to facilitate cooperation among competing interests in building a better community.

The planners and other professionals involved in the land profession were not playing their role. According to the deputy Director of physical planning, City Council of Nairobi, "before the physical planning act of 1996, the commissioner of lands really ignored the advice of the physical planner"; this was also echoed by the deputy director of physical planning, ministry of lands. The deputy director of the physical planning (CCN) was also of the opinion that the professionals were not being guided

by their morals; "though we claim to be Christians, our morals and ethics do not reflect our faith. Pure greed dictates our actions instead of our principles"; a fact which was supported by the deputy director of physical panning, ministry of lands.

Development Control

There are two basic approaches to regulating how land is developed and used: by way of legislation applying to all properties uniformly; or by way of a permit system in which property owner must make application at the time of a proposed development (Dale and Mclaughlin 1999). In Nairobi City, before one commences on any development it is a requirement to obtain a development approval. However, from the study, of the 53 respondents who claims ownership to land, only 4 sought development approvals (table 5.4). Lack of seeking development approvals has led to development which does not meet the laid standards. Lack of infrastructure provision in this place such as sewer has necessitated the residents to use septic tanks and pit latrines on plot sizes which do not allow such methods of sewerage disposal to be used. This is a health hazard to the residents and also a source of environmental degradation and in some places there is open sewer flowing on the ground. The houses also do not meet the planning standards with the majority being done with the iron sheets for the wall. The illegality of these settlements marginalizes them and prevents them from benefiting from the advantages of services of urban management such as access road and streetlights.

Table 5.4: Approval status before development . Source: field survey 2009

		Frequency	Percent	Cumulative Percent
Valid	Yes	4	7.5	7.5
	No	49	92.5	100
	Total	53	100.0	

A major cause for the unapproved constructions is attributable to ineffective development control. The functions of development control include implementation of development plans, regulation of land use, efficient and equitable location and distribution of resources, amelioration of the negative externalities arising from haphazard or uncontrolled developments and arbitration of conflicts between

competing interests. The consent for development depends on land tenure, locality, and the fact that the application must be submitted in the prescribed manner by the relevant approving authority. Thus for most of the land parcels on the Northern bypass which do not have security of tenure, development approval is not possible. This contributed to the owners of such land going ahead and implementing their unapproved plans and in the process leading to unrecognized human settlements and densities. Some plots have been developed to accommodate high density with the housing units being single rooms in areas where there is no sewer for example in Kongo area.

Implementation of regulations by the CCN

The law requires that all developers submit their development proposals to local authorities for approval. In Nairobi, the plan implementation section of the city council receives these. To ensure that the submitted plans meet various requirements, they are circulated to all relevant sections. Despite the existence of legislation to govern development, some developers have built without reference to the local planning laws and policies for example structure plans and zoning maps. The developers who do not comply with the planning regulations are supposed to be served with notices. According to Mwaniki (2001), for the period 1993-1997, only 1110 notices were served on illegal developers by the CCN and considering the number of developments undertaken in Nairobi per year, these are very few.

According to the deputy director of physical planning (CCN), the factors which fuel ineffectiveness of the CCN include; minimal funds to enforce development control by the CCN and those who enjoy political protection and or those who can compromise the system, develop in direct contravention of the existing laws and regulations. Greed and corruption also makes enforcement difficult. From the study, most developers on the Northern bypass did not comply with the planning regulations and there is also a weakness from the enforcement unit of the CCN as the respondents claimed that the only time the council was involved in the construction of the houses was when they would come for bribes from the developers to allow them to continue with the construction.

Legal framework enforcement

According to section 154 of the local Government Act, every municipal council, county council or town council shall have power to prohibit the cultivation by unauthorized persons of any enclosed and unoccupied land in private ownership and of any Government land and land reserved for any public road. Some parts of the



Plate 5.4: Cultivation on the bypass. Source: field survey 2009

bypass are under cultivation as can be seen in plate 5.4 and this point to lack of enforcement of regulations by the concerned authorities. This is an institutional failure where the existing legislations are ignored all together.

The traffic act cap 403, stipulates that it is an offence to encroach on road

reserves and despite this, the northern bypass road corridor has been encroached on with some parts reporting occupation of more than 15 years. The institutions concerned with the management of the road corridors are not effective. The principal Surveyor of the ministry of roads during the interview confirmed that the road was not being maintained until the year 2003 when the interest was revived. Considering that some parts of the road was acquired compulsorily in 1970 points to a poor management of government land and also lack of implementation of government policies. The ministry of roads was not managing its road corridors until there was a change in government regime and issues to do with the illegal allocation of public land were brought into the limelight.

Institutional weaknesses, which were caused by the political systems of the day, meant that the technical departments within the Government ministries were not competent enough. For example, according to the deputy director of physical planning in the ministry of lands, where the director of physical planning would advice the commissioner of land on why a part development plan should not be prepared, this would often be ignored and instead would be required to do as the COL deemed fit. The role of the physical planning department was therefore undermined and consequently that of the professional. The COL totally ignored the advice of the

technical staff under him. Other professionals in different departments were also failing.

The survey section of the roads department has the responsibility of putting up survey marks on the road corridors to inform the members of the public on where the road corridor reaches. This has not been carried out and the problem is compounded further by the lack of opening up of the road corridor. There is no constant policing of the road corridor to detect early enough the encroachments and illegal occupations and thus help in ensuring that there is no loss of property and consequently useful income which could have been used elsewhere for the country's development.

5.3 Summary

From the analysis, a number of factors have emerged as contributing to the illegal land occupation and developments along the Northern bypass road corridor. These factors have not worked in isolation but together hence a breakdown in land administration systems, which include land use planning, the cadastral processes and the land registration issues. The emerging factors are the population increase, greed and corruption, lack of up dated physical development plans, poor implementation mechanisms of plans, weak and poor enforcement of the legal framework and the abuse of powers conferred to the Government officers.

The deterioration in moral and ethical principles has a significant effect. This can be observed both from the Government officials and also the developers. The developers are ready to part with their money to ensure that the rules of the institutions do not take place and the enforcers on the other hand who are supposed to use their technical expertise are ready to receive the money and hence compromising the development control system.

The need to satisfy material needs are quite high and with the lack of the city council of Nairobi to have a land bank and also provision of cheap housing, the citizens are using any existing loophole in the system to satisfy their needs both for shelter and material needs. This is triggered by population increase and the high rate of urbanization for Nairobi. Many of the citizens have used different methods to acquire

the land which they have occupied ranging from land invasion or using informal processes of buying land where the transactions are not documented formally such as buying land which has a share certificate instead of a title from the land buying companies. Such a document cannot be used for approval purposes and with the need to own houses the residents constructs the illegal developments with a tendency to ignore the existing regulations. Obtaining land from informal processes has led to the area being occupied lacking important facilities such as sewer infrastructure, water, electricity and poor state of access roads.

Institutional failures have been demonstrated by failing to implement the laid down regulations and enforcement of legislations and hence contributing to the illegal occupations. The agencies concerned with the enforcement do not carry out their mandates to the letter. The surveyors in the ministry of roads are not recognized as government surveyors to provide the technical expertise required by the department to carry out its work and the ministry would have to enlist services of the ministry of lands to finish the process of land acquisition.

Nairobi lacks an up-to-date physical development plans and most urbanization is therefore taking place in a vacuum. Nairobi urban planning and management has not effectively offered solutions to the increasing urban decay and environmental crisis as has been seen with the development of slums on land meant for transportation purposes. Most of the planning of the Northern bypass which was acquired through surrender was on a single land parcel and hence the existence of the kinks. Land operates as a system, which requires keen management, calling for collective responsibility through a systems approach. Planning on a single land parcel has to be done in relations to others, not in isolation and hence the need for a land use plans showing the position of the bypass.

Demolitions of structures without a close follow up or a monitoring process as has been illustrated by the rebuilding of structures at Kamae and the continued occupation at Maziwa despite the previous demolitions in the year 2003 means that, the Ministry of Roads needs to be constantly monitoring its corridors to free it of any illegal structures. It is not enough to remove the structures, but the road corridor should be clearly marked on the ground and frequent clearing of the road corridor so as to deter

the growth of illegal occupations and also to inform the members of public of the existence of the road corridor. The road corridor is not well demarcated on the ground and there is need to have permanent markers on the ground.

Lack of implementation of plans is also emerging as a factor. For example when the residents of Runda were buying their land from the owner they were assured that only an insane government would build a bypass in the area after people have occupied it. The estates along the road corridor even those that have been developed after an approval process lacks a buffer zone to separate them from the nuisances caused by vehicles expected to use the road. This implies that the development approval process has been weak. Planning without implementation has greatly affected the effectiveness of land—use planning.

There was intensive abuse of office in the allocation of the road corridor that is an alienated public land. Alienated public land should not be allocated and even the president who is the custodian of all land in Kenya does not have the powers to do so. For example the use of a single letter that was meant for the road corridor at Kitsuru to allocate all the other prime land along the bypass and yet there was no change of user is an abuse of office.

CHAPTER SIX

POLICY RESPONSES ON DEVELOPMENT OF THE ROAD CORRIDOR

6.1 Introduction

This chapter will examine the government responses to the illegal occupation and development of the road corridor. The section utilizes both the primary and secondary data collected.

6.2 Response to the illegal occupation and development along the Road corridor

For a long time the Government was not following what was happening on the road corridor and it only came to the notice of the ministry of roads that the road corridor was occupied when the department of physical planning started preparing the development plans for the Runda area in 2002 and the interest became increasingly more with the Government in regime declaration to obtain back the illegally allocated land. Prior to that, development was taking place on the road corridors and road reserves without any intervention.

6.3 Communication to the illegal occupants

Specific individuals are not served with notices that they are on the road reserve but once the boundary survey is carried out, the houses are marked with an X mark and initials MOR. This is to warn the occupants that they are occupying the Ministry's of Roads land. This is later followed by notices in the local dairies as shown in appendix V. This informs the occupants the grace period they have to spare their properties from the Government use of the bulldozer. However, even with such notices, the occupants do not move and the Ministry does also not enforce the regulations in time and this creates laxity in the whole process.

Reaction of occupants on notifications

Of the respondents who said they own the land, 43% would seek legal redress if informed that they are on the road reserve. This is despite that majority of those who have legal titles do not feel secure with the titles. 19% would demolish the houses on their own so as to avoid the bulldozer flattening their houses together with their belongings. 38% would not demolish their houses but would wait until the Ministry

comes on the ground to demolish. Actually at Githiogoro, where the houses have already been marked, the owners and even tenants have not done anything towards removing the structures despite that the X mark on the buildings gives the owners a notice of one month to demolish the buildings.

Table 6.1: Reaction from the illegal occupants. Source: field survey 2009

	Frequency	Percentage	Cumulative
Seek legal redress			
	23	43.4	43.4
Demolish the house			
	10	18.9	62.3
Adopt wait and see			
attitude	20	37.7	100.0
	53	100.0	

6.4 Delegation of authority to manage the road corridor by the statutes

The existing legal framework for the management of the road corridor is split between different agencies each acting to the mandates accorded to it by the legislation governing it.

The physical planning act

According to the Physical Planning Act, the Director of physical planning should advise the Commissioner of Lands on matters concerning alienation of land under the Government Lands Act. Road corridors when they are acquired are categorized as government land. The Director also plays advisory functions to the COL and the local authorities in regard to the most appropriate use of land including land management such as change of user, subdivision of land, e.t.c. This implies that the Director of physical planning has an important role in ensuring that road corridors are not allocated to another land use.

The Physical Planning Act gives local authorities powers to prohibit or control the use and development of land in the interests of proper and orderly development of its area, to control or prohibit the subdivision of land, to consider and approve all development applications and grant all development permissions, to ensure the proper

execution and implementation of approved physical development plans, to formulate by-laws to regulate zoning and to reserve and maintain all land planned for open spaces. This means that the local authority has all the powers in regards to management of local corridors as it approves the plans and also has powers to formulate bylaws.

The Traffics Act

Section 91 of the traffic act deals with encroachment and damage to roads and provides that any person who without the written permission of the highway authority encroaches on the road or any land reserved for a road by erecting any building, fence, or even depositing in any manner whatever on a road reserve is guilty of an



Plate 6.1: Soil dumping on the road Corridor . Source, field survey 2009.

offence. Consequently it is lawful for the highway authority to remove anything in contravention of this section.

The mandate for the management of road corridors according to this act lies with the ministry of roads and hence has failed in implementing the regulations.

The Local Government Act

According to section 154 of the local Government Act, every municipal council, county council or town council shall have power to prohibit the cultivation by unauthorized persons of any enclosed and unoccupied land in private ownership and of any Government land and land reserved for any public road. This section gives the local authorities powers to ensure that the road corridors are free from any illegal development.

The building codes

The building code which can be described as the Local Government (adoptive Bylaws) (building) order 1968 and grade II building order 1968 gives the various bylaws which are supposed to be followed in the erection of buildings. According to bylaw 252, a person who carries out construction of buildings without obtaining the

approval of the council is guilty of an offence. The council in efforts to secure conformity with the by-laws is supposed to serve notices to any person who contravenes the by-laws and even powers to demolish structures that do not meet the standards.

This implies that the existence of structures within the CCN area of jurisdiction that have not been approved is a failure to carry out its mandate because it is during the enforcement that structures built on the road corridor would have been detected. The CCN though it has a great role in the management of urban land has therefore failed.

The Public Roads and Roads of Access Act CAP 399

The act which commenced in 1920 and revised in 1972 is silent on who manages the road corridors but gives the Minister responsible for roads powers to dedicate a public line of travel through a gazettement. Though the gazettement used to take place before the revision of the act and from the fact that the Nairobi Northern bypass was planned for in 1970 and the Ruaka-Rosyln became a committed section, it was never gazetted as a public line of travel as required by the act. The act concentrates more on the roads of access that have restrictions on who can use them.

The Kenya Roads Act, 2007

The Kenya Roads Act 2007 gives cognizance on the management of the roads corridors through the responsible authorities which have been created by the act. The act gives powers to the authorities to approve or disapprove the construction of any structures on the road reserves and where construction takes place without the concerned authority permission, such a person is to be issued with a notice to remove the structure. Where the person fails to comply, the authorities have powers to remove such structures and recover the cost from that person. The act therefore places the management of the roads corridors to the Ministry of Roads.

6.5 Summary

From the foregoing, it can be established that even though the GOK has various options at its disposal for the management of the road corridors, this has not been possible. The responsibility for the management cuts across various government departments and with this kind of fragmentation it's not possible to blame any agency

for the illegal activities that have been taking place. The existence of these options without a coordinating mechanism between the concerned agencies has contributed to the illegal occupations and development on the road corridors.

There is existence of multiple legislations all having a part in the management of the road corridor and this is an institutional shortcoming that should be addressed. Also from the household questionnaires it is evident that the developers do not take institutions seriously which can arise either due to fiscal causes or technical causes as they have been able for some individuals to occupy areas which had earlier been cleared in the year 2003.

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

The study has been able to examine the factors which contributed to the illegal occupation of the road corridor. The following conclusions touching on land information, land use plan, land registration, weakness in the land acquisition act, housing, implementation of plans and development control mechanism among others can be made.

Land information

The current land information system does not reflect the road reserve status and has led to the adjacent landowners having a claim to the land. Land information systems (when it comes to road reserves) in Kenya are provided by different ministries. There is no coordinating mechanism between the different agencies to ensure that the same land information data set is being used by all the agencies although this is possible by ensuring that the cadastre is well updated to reflect the actual ground situation. The road reserves once they have been acquired are not registered and this has an implication on the planner, who by virtue of using the land information available can approve a development which otherwise falls on the road reserve. There is need to develop policy guidelines on how the acquired road corridor should be depicted on the plans to make the land information complete.

The National Data infrastructure is long overdue and this should be implemented with utmost urgency to enable the sharing of information and importantly in notifying people on where they can get what information. With the slow pace at which plans are rectified, where a stakeholder wants to know where a certain corridor passes through the data warehouse will make it possible to know from which agency what type of data is available.

Land use plan

There is no existing land use plan for the sections where the bypass passes through. This is a problem since a land use plan is supposed to guide the development control exercise. A land use plan is a key tool in coordinating community development

activities and the plan fulfills many needs. There should be preparation of integrated land use plans for the urban areas to facilitate the regulation of development at all levels so that development approval is subject to conformity with integrated land use and transport plans.

Land Registration

Kenya is among the few countries that have been credited with the registration of land especially in the urban areas. This spirit has not been extended towards land meant for other public utilities to differentiate it with un-alienated public land. Though the commissioner of lands is the custodian of all Government land in Kenya, and road corridors are part of the Government land, the acquired corridors should be registered as properties of the Ministry of Roads and any subsequent change to the status should be subjected to public gazettement and obtain views from members of the public.

Weakness in the Land Acquisition Act

The Land Acquisition Act has some weaknesses and needs to be repealed. The plans that are used for the land compensation are not authenticated by the director of survey for correctness of the areas like the other cadastral plans and therefore cannot be used for registration purpose. If the director of survey had authenticated the plans, the same survey data can be used to rectify the cadastral plans and subsequent registration of the acquired land. The Act should therefore include the director of survey in the land acquisition process.

Housing

The need for the unauthorized development has been necessitated by a response to a need. The residential developments were responding to a need for shelter (housing). To correct this need, it must be attended concurrently with the enforcement of the development control system.

Implementation

The slow process of implementing the 1973 growth strategy plan has implications on why the road corridor was acquired ranging from the belief that the plan had been overtaken by events. There should be reaffirmation to the members of the public that the 1973 plan is still in operation as no other has been developed to supersede it and

there has been no degazettement as is required by the physical planning act, the local government act or the roads act.

Development control system

The existing development control system is weak as it spreads across many agencies. Without proper enforcement of regulations that is constrained by lack of funds, existence of several overlapping acts, by-laws and institutional responsibilities; the development control will only exist in theory but not in reality. There is need to provide the right mechanisms and facilities to ensure that there is orderly development of an area.

Surveying

The ministry of roads does not put survey markers on the grounds that are clearly visible to ensure that developers are well aware of the extent of the road corridor. This has led to some developers constructing who otherwise if they had known the extent would not have done so. The survey markers would help reduce the wastage of the countries resources by reducing the number of the illegal structures that would have to be brought down.

Use of restrictions against the title

The land acquired is registered by lodging a caveat against the original title. The encroachments at Runda where the road corridor has been left at a road width of 60m instead of 80m should be taken care of by the registrar of titles lodging a restriction on them. The owners should be made to surrender the 20m encroachment corridor which is part of the bypass.

Powers held by the Commissioner of Lands

The commissioner of land has too much power in regard to allocation of land for development purposes. The allocation of alienated public land should be subjected to participatory decision making if the land has to be allocated at all. If members of the public are made aware of the changes likely to take place and hence improving awareness; they are likely to acknowledge or reject and therefore playing a role in reducing land conflicts. The decision as to whether the land is still needed should not be left to one public official who might be representing his own personal interests.

Ethical principles by the professionals

Lack of moral and ethical principles played a role in the illegal occupation and development of the road corridor. The staff of the institutions responsible for the implementation of plans should be encouraged to uphold the highest moral standards. This will help to ensure that there are no institutional weaknesses to be taken advantage of.

Self-centeredness has taken roots among the citizens and there should be change of culture for the people to instead embrace the culture of community togetherness. This will help in ensuring that apart from the government policing the road corridors; there is also the community policing and since this is more close to the people; the road corridors will remain free from illegal occupations and developments.

Need for road design and acquisition to be followed by the road development

The design and acquisition of the Northern bypass was not followed by any positive development of the road corridor. The expropriation of the land was carried out without the actual implementation of plans and resulted to idle land that became an attraction to land speculators. The ministry of roads which has the mandate to maintain the road corridors did not take proper management of the land and this became an attraction to developers. The Ministry should therefore open the roads and carry out monitoring of the road corridors to deter the illegal occupants and developers.

7.2 Recommendations

Urban development, in the modern sense, requires painstaking urban planning. One American judge described the planning process as bringing to bear "the insights and the learning of the philosopher, the city planner, the economist, the sociologist, the public health expert and other professions concerned with urban problems." Urban planning is not something unique to Nairobi, but a burgeoning, worldwide trend. Likewise, the use of demolition as a tool to enforce the planning code is a routine enforcement measure widely used in the United States and elsewhere around the globe. The ministry of roads put an advert on January 2009 (see appendix V) giving a notice of removal of the illegal structures. After a period of three months nothing has

been done by the owners concerning the illegal structures and this leaves the bulldozer as the last resort. Where the occupants have refused to voluntarily demolish the structures, the use of the bulldozer should be used otherwise infrastructure development would be curtailed.

If urban planning is to have any chance of successful implementation, it must be accompanied by efforts to educate the public as to its importance. If people understand the reasons for urban planning, they will be far less likely to violate legal construction standards and will likewise make their objections known when their neighbors build illegally. Even where efforts are undertaken to publicly explain the desirability of planning, some individuals will inevitably disregard the law for pecuniary or other benefits. In order to protect the interests of the public at large, and indeed the very future of the city, authorities must respond to such challenges, by fining offenders, demanding the removal of illegal structures, and, if nothing else can preserve the integrity of the planning scheme, demolishing illegal construction.

It is important to coordinate entire development plans, programs, and activities in the CCN through provision of an overall land use strategy and a broad development framework by formulation of the strategic development plan of the area.

Monitoring is important. Without efficient monitoring of the conditions of the resources in question, no actions can be taken either on central or on local levels. According to this context, access to information of this kind must be readily available and affordable and the people at the local level should be involved in the monitoring process.

Land earmarked for future road development should be well secured by issuing title deeds of road reserves to the ministry responsible for roads. The same should be demarcated on the ground and reference marks that are easily identifiable on the ground to be erected. Use of billboards to warn members of the public on the existence of the road corridor should be used this would aid in the policing of the road corridors.

There is need to solve the problem of the illegal occupation and development through the use of the technical tools available. This is through boundary (re-) determination, agreeing on the future land use needs and documenting the usage rights. The available tools range from securing property rights, land registration, land use planning and state land recovery.

- 1. Land administration— There is need for clarifying, legalizing and securing property rights. There is need to do an analysis of who holds what type of property rights over the piece of lands within the road corridor. There is need to focus on the formal rights as well as the informal rights so as to determine who should be compensated by the government and who should not.
- 2. Surveying and land registration should be carried out to solve boundary conflicts and to protect against illegal expropriation. The road corridor should be surveyed to cadastral standards and this data used for registration purposes.
- Land use planning should be strengthened to mediate between conflicting land
 uses. Land use planning which is participatory will help to address the needs
 of the different stakeholders and to help curtail the interests of the selfish
 individuals.
- 4. There should be increased public and private investment in the housing market so as to reduce the demand for informal land acquisition and to avoid forced evictions. Informal land acquisitions are often the result of insufficient housing supply.
- 5. Proper state land management the Ministry of Roads who has the mandate to manage the roads corridors should use preventive measures such as policing the road corridors constantly to ensure that illegal developments do not take place.
- 6. The land acquisition act should be revised to ensure that the acquired land is surveyed and registered and this should be mandatory.

Area for further research

The land information existing for aiding the various agencies involved in the management of the road corridors is exclusive to that particular organization. Even with the introduction of the National Spatial Data Infrastructure for Kenya which will enable different stakeholders to know which type of data exists where and the conditions of its access, there exists a need to develop a common land information system. This would help to ensure that the data being used to control development by both the city council and the physical planning is the same as the data being used in the roads department and the survey section of the Ministry of lands. There is therefore a research gap in exploring the possibilities of developing such a system for ease in decision making of land related problems.

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Questionnaire	No
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UNIVERSITY OF NAIROBI

DEPARTMENT OF URBAN AND REGIONAL PLANNING

M.A. PLANNING YEAR II- 2008

A study on: Factors contributing to illegal occupation and development on alienated public land for road corridors - A case study of Nairobi Northern Bypass.

of respondent (optional)	Date of interview
of interview	Name of interview
OUSEHOLD OUESTIONNAIRE	
Part 1: Household information (Bi	io-data/ social economic)
1. Relationship to household	
Head	1
Spouse	2
Child	3
Other (specify)	5
2. Sex	
Male	
Female	2
3. Age (Years)	
4. Marital status	
Married	1
Single	2
Other(specify)	3
5. What is your type of employment?	
Public employment	1
Private employment	2
Self employed	3

Other (specify)	
6. What is your monthly gross income?	
0-10000	1
10,001-20,000	2
20,001-40,000	3
over 40,000	4
7. What is the size of your family?	
Males	1
Females	2
8. What is the number of school going child	iren?
Part 2. Ownership and security of tenure	
9. How many years have you lived in this a	rea?
10. Why did you choose this area?	
House rent is cheap	1
It's near my place of work	2
My relatives stay here	3
I own the plot	4
11. What is the size of the plot you occupy?	Acres
12. What is your ownership status?	1
Tenant	2
Owner	3

If tenant go to question 25

Other (specify)_

13. Do you own the plot where the house is constructed?

Yes

No

1	
2	

14. If yes, how did you acqui	re the plot?		
Allocated		1	
Bought		2	
Inherited		2	
Other (specify)		3	
15. What steps did you follow	w to obtain this plot?_		
16. Did you encounter any pr	roblems in obtaining th	nis plot?	
Yes		1	
No		2	
		2	
17. If	yes,		what
problems?			
18. How did you overcome t	them?		
19. Do you have any legal d	ocuments to prove own	nership? Yes/No	
20. If yes, which legal docur	ments do you have?		
Title			
Letter of allotment		2	
Power of attorney		3	
Other (specify)			
21. Are you satisfied with s	uch a legal guarantee?	Yes/No	
Why?			
22. Did you seek any de	velopment approval b	pefore constructing the	ne house?
Yes/No			
23. What authorities were o	concerned and involve	d in following closely	the actual
development you carrie	d out here		-
24. In what ways did they g	get involved?		
Structure/dwelling class			
25. What material is your ho	ouse wall?		
Mud		1	
		2	
Timber			
		3	

Stone	
Other (specify)	
26. What material is the roof of you house?	
Iron sheets	1
Tiles	2
Other (specify)	3
27. What material is the floor of your house?	
Mud	1
Cemented	2
Other (specify)	3
28. How many rooms does it have?	
Services	
29. What is your main source of water?	
Connection by the Nairobi water company	1
From the water vendors	2
Other (specify)	3
30. How do you dispose the sewerage wastes?	
Sewer connection	1
Septic tank	2
Pit latrine	3
Other (specify)	
31. Where is the nearest primary school?	
Less than 500 metres	1
0.5Km to I Km	2
More than 1 km	3

32. Where is the nearest public health facility?

Less than 500 metres	1
0.5km to 1 km	2
More than 1 km	3
33. Which services do you feel the	e area should be provided with?
34. Have you ever heard of the Nairobi No	orthern bypass?
Yes	1
No	2
35. If yes, do you know where it passes th	rough?
Yes	1
No	2
36. If yes, how did you know where it pas	sses through?
If owner of plot, answer the following quest	ion
37. If the ministry of roads informs yo	u that your plot is located on the road
corridor, how would you react?	
Seek legal redress	1
Demolish the house	2
Adopt wait and see attitude	3
Other (specify)	_

Thank you.

APPENDIX II: INTERVIEW SCHEDULES UNIVERSITY OF NAIROBI DEPARTMENT OF URBAN AND REGIONAL PLANNING M.A. PLANNING YEAR II –2008

A study on: The factors contributing to illegal occupation and developments on alienated public land for road corridors- A case study of Nairobi Northern Bypass.

Note: The information contained in this questionnaire/interview shall be treated with confidentiality and shall be used for academic purposes only

I. INTERVIEW SCHEDULE WITH THE LAND OFFICER; MINISTRY OF LANDS

	(OptionalDateDate
	nd Acquisition
1.	Land acquisition is carried out by your department. How is the acquired land
	registered to depict its tenure?
2.	Do you think there is a weakness in this form of registration of the land rights?
La	nd Allocation
3.	How is the process of land allocation carried out?
4.	Can land acquired for public use such as road construction be allocated to
	private individuals? Yes/No
	If yes, under what circumstances can the acquired land be allocated?
5.	What procedure is followed in the allocation of alienated public land?
6.	What happened in the case of the Nairobi Northern bypass?
	What happened in the case of the Nairobi Northern bypass?
De	
De	evelopment Control The department is involved in the process of development control. What data
De	evelopment Control

APPENDIX II: INTERVIEW SCHEDULE UNIVERSITY OF NAIROBI DEPARTMENT OF URBAN AND REGIONAL PLANNING M.A. PLANNING YEAR II –2008

A study on: The factors contributing to illegal occupation and developments on alienated public land for road corridors- A case study of Nairobi Northern Bypass.

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2. INTERVIEW SCHEDULE WITH THE DIRECTOR OF CITY PLANNING; CITY COUNCIL OF NAIROBI

OptionalDateDate
what data do you use in the process of development control?
How do you recognize whether the parcel is affected by the Nairobi Northern bypass?
Does the department keep records concerning development permission?
Land use plans (Yes/No) Building plans (Yes/No) If yes, are there plans showing the subdivisions approval of the proposed
Nairobi Northern bypass? The Nairobi Northern bypass having been proposed and subsequently acquired became a transportation land use. For the land to revert to residential
land use, there must have been a change of user or a replanning. What happened in the case of the Nairobi Northern bypass?
an implementation
Was the master plan of 1973 which proposed the Nairobi bypasses even implemented?
Is there a part development plan showing where the Nairobi Northern bypass

APPENDIX II: INTERVIEW SCHEDULES UNIVERSITY OF NAIROBI DEPARTMENT OF URBAN AND REGIONAL PLANNING M.A. PLANNING YEAR II –2008

A study on: The factors contributing to illegal occupation and developments on alienated public land for road corridors- A case study of Nairobi Northern Bypass.

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3. INTERVIEW SCHEDULE WITH THE DIRECTOR OF PHYSICAL PLANNING; MINISTRY OF LANDS

Name	(OptionalDateDate
1.	Does the department keep records concerning development permission?
	Land use plans (Yes/No)
	Building plans (Yes/No)
	If yes, are there records showing development permission for land within the
	Nairobi Northern bypass?
2.	It is the responsibility of your department to prepare part development plans
	for public utilities to guide development. Were there development plans
	prepared for the Nairobi Northern bypass?
3.	Some part of the road corridor has been changed from transportation land use
	to residential land use. Was there application for change of user and was it granted?
4.	The ministry of roads in its operations to design and construct roads usually
	acquires land. Is your department involved in the process of designing new roads?
5	. In your opinion what caused the illegal occupations and developments on the
	proposed road corridor?

APPENDIX II: INTERVIEW SCHEDULES UNIVERSITY OF NAIROBI DEPARTMENT OF URBAN AND REGIONAL PLANNING M.A. PLANNING YEAR II –2008

A study on: The factors contributing to illegal occupation and developments on alienated public land for road corridors- A case study of Nairobi Northern Bypass.

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4. INTERVIEW SCHEDULE WITH THE PRINCIPAL SURVEYOR; MINISTRY OF ROADS

me (Optior	alDate
Nairob bypass	airobi Metropolitan strategy group in 1973 proposed three bypasses in namely; the Southern bypass, the Eastern bypass and the Northern s. After these roads were planned for in this study there was need to and acquire the road corridors.
•	Was the northern bypass ever designed? How was the road corridor acquired and when? After the land acquisition, how was the land registered on the land register to depict it is owned by the ministry of roads? Is it possible to identify the road on the ground? When was the road opened for the first time?
maint	ly after the land acquisition it is the responsibility of the ministry to ain its corridors Are there any encroachments on the Northern bypass? Yes/ No If yes, being the responsibility of your department to maintain the roac corridor, what would you attribute to be the cause of these illegal occupations and developments?

3. According to the government land acts, alienated public land cannot be allocated unless the agency concerned declares that they have no interest in the said land. It has come to the public knowledge that some parts of the Nairobi Northern bypasses have been allocated to private individuals.

Did the ministry of roads at any time confirm that they would not need
the Northern bypass corridor?
• After how long did the ministry realize that a part of the bypass
corridor had been allocated?
 How did the ministry react to these allocations and when?
 How does the ministry inform the individuals occupying the road
corridors that they are there illegally?
In your opinion, what should be done at policy level to ensure that there are

4. In your opinion, what should be done at policy level to ensure that there are no illegal occupations and developments on acquired road corridors?

APPENDIX II: INTERVIEW SCHEDULES UNIVERSITY OF NAIROBI DEPARTMENT OF URBAN AND REGIONAL PLANNING M.A. PLANNING YEAR II –2008

A study on: The factors contributing to illegal occupation and developments on alienated public land for road corridors- A case study of Nairobi Northern Bypass.

Note: The information contained in this questionnaire/interview shall be treated with confidentiality and shall be used for academic purposes only

5. INTERVIEW SCHEDULE WITH THE DIRECTOR OF SURVEY: MINISTRY OF LANDS

Name (O)	ptionalDate
fo	is the responsibility of the survey department to provide and maintain plans or property boundaries in support of the land registration throughout the puntry.
	 After the land acquisition, how is the acquired land represented on the plans?
	 Does the department have a plan showing where the Northern bypass passes through?
	In there coordination or integration of data from different ministries to facilitate land management?
o c	The problem of illegal developments and informal settlements involve aspects of land tenure, land use and environmental regulation. In Kenya, the land is lassified as either government land or private land. The government land can arrive the classified as un-alienated and alienated.
	 Do you think the failure to register the acquired Northern bypass road corridor as to belong to the roads ministry could have played a role in the illegal allocation?
	your opinion, what do you think could have caused the bypasses to have een allocated to private individuals?

80013/

1..O. (Uentral)

BESTITIONTION OF PIPLE

I append herewith a summary of completed land acquisitions in respect of the above new read as at 11/6/72.

Compensation has been paid in full and final settlement of all claims, as far as is known.

It now remains for individual titles to be rectified. It sight also be considered advisable to lodge caveats against the titles as temperary measure.

It will be noted that most of the land has been acquired compulsorily under the Land acquisition Act 1968, but thet, in some eases, the compensation has been negotiated by agreement;

It will also be noted that some of the affected land to Schoduled Land and some is Registered Trust Lond, involving different procedures with regard to restification of title.

(1) Land seguired compulsorily under the Land

(a) Gazetta Notices 1545 and 5546 dated \$1/10/69. covering 201 registered plot number and 18 L.M. Nos.

Copy of notices at folio 56 on file VAL.

It is not clear whether Kiembu hand Registry was informed of the acquisitions of registered plots by the valuer responsible for this Inquiry.

(b) Gameste Hotices 168 and 169 dated 16/4/70 covering 5) registered plots and 4 L.R. Hos.

Copy of motions at fel. 9 on file VAL. 154/

Kismbu Land Megiatry was inferred of the acquisitions affecting registered plots in their district.

(e) Gazette Notices 1580 and 1581 dated 29/5/70, covering 17 registered plots (of which 7 were postponed to a later inquiry).

Copy of horious at folio 534 on file VAL.

Kiambu land Hegistry was informed.

APPENDIX IV: SAMPLE LETTER OF ALLOTMENT

- *	20B	CITY COUNCY		
TOWN CLERK FAX: 218291 TELEPHONE: 224281/217704			CITY HALL P O BOX 30075 NAIROBI KENYA	
	TOW	N CLERK'S DEPARTMENT	IVE/1/	
EXT2233				
Ref NoCPD-4429				
			25th April 2002	
C/O NAIKOBI CITY C	DUNCIL			
Dear Sir/Madam,				
		GO SETTLEMENT SCHEME O – PLOT NO. 186		
2001, Nairobi City Cour	cil approved	Town Planning Committee meeting (Min. No formalisation of the above mentioned schemowing terms and conditions:-	. 28) held on 16. March e and allocation of plot	
AREA	= Ap	pproximately 0.015haof hectare		
TERM		sidue of 99 years lease last three		
STAND PREMIUM) days from		
GROUND RENT		Shs 1.400/=revisable in accordance		
	W	ith Government Land Act.		
I should be glad to receive within 30 days after received.	I should be glad to receive your acceptance and payment for the amount as set above of KShs 8,600/w within 30 days after receipt of this offer.			
In addition, roads and so registration fees and any	In addition, roads and sewer apportionment rates for the rateable part, stamp duty, survey, conveyance and registration fees and any other incidental charges will be payable on demand.			
Upon payment of the an	Upon payment of the amount mentioned above, a surveyor will indicate to you the beacons.			
Yours faithfully,				
S. S				

APPENDIX V: NOTIFICATION OF ILLEGAL OCCUPATION BY THE MINISTRY OF ROADS

REPUBLIC OF KENYA



MINISTRY OF ROADS

NOTICE TO REMOVE STRUCTURES AND DEVELOPMENTS ENCROACHING ON NAIROBI NORTHERN AND EASTERN BY PASSES

The Ministry has awarded a contract for construction works of the above mentioned By Passes.

Pursuant to the provisions of Section 91 of the Traffic Act, Cap 403 read with the provisions of Section 49 the Kenya Roads Act, 2007 and our previous notices on removal of illegal structures and developments on the road reserves AND;

In order to facilitate smooth implementation and success of the project, the owners of all structures and developments previously identified by X mark, within the road reserves where the by passes traverse are hereby notified to remove them on or before 8th February 2009.

The affected areas include:

NORTHERN BYPASS

- Ruaka
- Kamiti Road Junction/Githural 44
- Githogoro Village
- Kahawa West
- Karnae
- Kiwanja Villages
- Kamuthi Farmers

2. EASTERN BYPASS

The areas/section between Outering Road and Airport North road Junction and the Embakasi Garrison.

Please note that the Ministry shall remove any such illegal structures and development after the lapse of the above mentioned date and the cost of such removal shall be recovered from the owners who also be prosecuted.

Eng. Mwangt Maingi
CHIEF ENGINEER (ROADS)
FOR: PERMANENT SECRETARY