AN ASSESSMENT OF URBAN DECAY IN RESIDENTIAL NEIGHBOURHOODS:

A CASE STUDY OF JERUSALEM ESTATE, EASTLANDS, NAIROBI

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DECLARATION

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

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DEDICATION

I dedicate this planning research project to all physical planners.

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ABSTRACT

Cities all over the world undergo change. This change is characterized by many forces which are social, economic, environmental, physical/spatial, cultural, political and institutional in nature. The changes bring about challenges and opportunities which require innovative planning interventions. Urban decay is manifested in the form of Social decay, Economic decline, Physical and environmental degradation and institutional and management decay. Nairobi like other cities in the World has experienced decay. This urban decay has mostly been witnessed affecting old residential areas, old industrial areas and recreational areas such as rivers. Jerusalem Estate is one of the estates in Nairobi City County that have been affected by urban decay. The study therefore set out to examine urban decay in Jerusalem Estate with respect to social, economic, environmental and institutional aspects and propose ways of ensuring that it meets both current and future needs.

The study involved secondary and primary data collection approaches, a field survey was carried out by involving the households through the use of household questionnaires and key informants through the use of interview schedules. Data collected from the primary sources is presented in chapter three and four in the form of photos, written texts, pie charts and bar graphs which brings out a clear picture of the situation on the ground.

The research revealed that there was inadequate technical, financial, and institutional capacity within the Nairobi City County Government in its management and maintenance of Jerusalem Estate, in its enforcement of policies and in the implementation of the prepared renewal plans, high rates of poverty among the residents in Jerusalem Estate which may be partly attributed to decay in the residential neighbourhood. The findings of the research show that inadequate maintenance of the previous good status and image of the estate could be attributed to the inadequate social cohesion among the residents, inadequate capacity of the residents to maintain and repair their houses and other infrastructure services. The research revealed that poor solid waste management and maintenance of the sewerage and drainage system led to sanitation problems and hence to a deteriorated healthy environment for residents to live in. The research further indicated that poverty and unemployment status among the residents resulted to crime and insecurity issues in Jerusalem Estate. According to the findings of the research, the decaying

condition of Jerusalem Estate could be attributed to the ageing condition of the estate since the Estate was built in 1959. In addition, the findings indicated that age had come with exceeded capacity of the infrastructure due to the growth of the Estate.

The interventions by the area residents to address the challenges they face are indications of their needs all of which must be incorporated in the chosen re-planning model. In this regard, the renewal approach should holistically address all the issues of urban decay all over the estate. There are two possible renewal models for the estate examined which includes; rehabilitation and repair and the integrated approach. All the alternatives have their pros and cons. However, under careful evaluation, the one which addresses fully the problem of urban decay and has greater economic gains was chosen.

Thus, the study recommended an integrated approach of the estate by observing measures that promote sustainability. The new developments will comprise recreational, commercial, public utility, transportation and residential land uses at the site of development which is the waterfront of Jerusalem Estate. The integrated approach will encompass several aspects which include: provision of a range of affordable and quality housing typologies, encouraging community and stakeholder participation, mixing of land uses and provision of quality public spaces and recreational areas.

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LIST OF ACRONYMS AND ABBREVIATIONS

CCGN   City County Government of Nairobi

EMCA   Environmental Management and Coordination Act

EIA   Environmental Impact Assessment

GIS   Geographical Information Systems

KRC   Kenya Railways Corporation

NHC   National Housing Corporation

SPSS   Statistical Packages for Social Sciences

NUC   Neighbourhood Unit Concept

CHAPTER ONE: INTRODUCTION

1.1. INTRODUCTION AND BACKGROUND TO THE PROBLEM

Cities all over the world undergo change. This change is characterized by many forces which are social, economic, environmental, physical/spatial, cultural, political and institutional in nature. The changes bring about challenges and opportunities which require innovative planning interventions. Couch (2009) notes that the high rate of urbanization due to an ever growing population exerts very powerful forces to urban residential areas, making them undergo internal spatial restructuring in response to social, environmental and economic pressure. Poor maintenance and poor urban planning policies under this pressure may result to urban decay.

Urban decay is manifested in the form of Social decay, Economic decline, Physical and environmental degradation and institutional and management decay. Social decay is manifested in the form of crime where people are made unemployed due to reasons such as industry decline which is caused by both external and internal factors. External factors include competition, new technologies and physical advantages. Internal factors are for example resource depletion, mechanization, environmental degradation and civil unrest. When people are made unemployed they have less money to spend hence they turn to crime to supplement income.

Educational gap between the poor and the rich is another social problem. This is as a result of the less money to spend caused by unemployment hence the poor lack money to educate their children. Changing family structure is also a form of social decay. Single parent households are high in number due to higher rate of teenage pregnancies and incarceration rates.

The variables associated with economic decline include unemployment, property values and investment levels. Increase of poor population affect property value negatively. (David Harris, 1999).

Among other factors, urban decay is one of the problems and challenges affecting proper utilization of land and other resources in urban areas for housing provision. Nairobi like other cities in the World has experienced decay. This urban decay has mostly been witnessed affecting old residential areas, old industrial areas and recreational areas such as rivers. Nairobi is faced by

many development, planning and management problems. With an urban population growth rate of 4.8 per cent (Kenya, 2009) and a high population, which is estimated to vary between the official census figures of 2.1 and 4.0 million, it accounts for 21.4 - 40 per cent of the total urban population and 40 per cent of the national gross domestic product (Syagga et al, 2001). This immense contribution to the national economy is not, however, accompanied by similar growth in housing provision leading to a great strain on the housing sector.

These old estates were built during the colonial period by the colonial government but as at now, all these estates are under the County Government of Nairobi. Such residential areas include Jerusalem, Makongeni, Kaloleni, Majengo and Pumwani among others. Some of these estates like Pumwani and Majengo have been renewed through a comprehensive redevelopment project. This redevelopment of the mentioned estates was done to respond to the decaying conditions of these neighbourhoods.

These urban decay issues need to be addressed in Kenya and in Nairobi because maintain the efficiency of the capitalist system, including the maintenance of adequate markets for goods and services. This brings about pressure from capital to improve the efficiency of the transportation system, to refine ways in which land is parceled and exchanged and to improve the efficiency of the built environment so as to minimize waste in the production process (Couch, 1990).

1.2.   PROBLEM STATEMENT

With the current gap between demand and supply of housing in urban areas where supply is achieved by only 15-20% (GoK 2008) especially for low income population, there is need to focus and plan for maximum and suitable utilization of land, especially that which is suitable for low income population since there has been a rise in the development of informal settlements in the city. There is also need to preserve and prevent decay of different neighbourhoods in urban areas and also need to maintain the best profile of the city.

When one takes a critical analytical view of most Nairobi estates, especially in the Eastlands part, there is evidence of decline in quality of good condition of housing and the concomitant services such as infrastructure. This has influenced migration of city residents to the urban suburbs located away from the CBD resulting to urban sprawl.

The colonial government, which based its housing policy on racial segregation, provided public rental housing to the African workers in this residential area, the Eastlands. They were seen as temporary urban workers and were not allowed to live with their families. Earlier studies by Shihembetsa, et al (1989) indicate that the housing units, in which they lived, consist of row housing typologies and are mainly single rooms with shared communal sanitary facilities and common open spaces and recreation facilities. Over the years, their capacities have been overstretched by the influx of the African workers' families who moved in after independence.

The Nairobi City County Government (NCCG), who is the main landowner in Eastlands, is mandated with the constant general maintenance of the entire neighbourhoods Jerusalem Estate being not an exception. Over the years the institution has been afflicted with numerous problems leading to inadequate, inefficient and ineffective capacity to manage the housing units. The current situation in Jerusalem Estate indicates a debilitating residential environment with dilapidated physical structures coupled by a restrictive framework of maintenance. It is characterized by uncollected solid waste, derelict land and run-down infrastructure services. The deteriorating social environment is characterized by insecurity and social maladjustments. The quality of the spatial layout presents disharmonious configuration and inadequate articulation of the inside and outdoor activities especially for family set-ups. The single rooms perform multiple functions and are disjointed from the communally shared sanitary facilities, which are inconveniently located outdoor. The external environment depicts very low land-use densities against the planning zoning regulations for the area.

The need to undertake urban renewal is further demonstrated by the declining economic life of a building, which contributes to decision-taking towards the timing and nature of refurbishment, conversion, replacement or abandonment (Couch 1990). This refers to a situation where the high operating and maintenance costs exceed the income accrued out of the building. The building then requires to be turned into a more profitable use, perhaps after modification or conversion, or it will be demolished and replaced if the returns on the recycled building exceed the costs of demolition and reconstruction.

1.2.1. Research Questions

1. What are the indicators of urban decay?
2. What are the various approaches, forms of urban renewal and policy options that are appropriate in order to solve urban decay?

1.2.2. Aim and objectives of the Research

The aim of the study is to investigate urban decay problems in Jerusalem Estate and to propose plausible approaches and policy options towards its renewal. The specific objectives of the research are:-

1. To examine the existing situation of urban decay in Jerusalem Estate.
2. To examine the urban decay problems in Jerusalem Estate from a social, Economic, Physical, Environmental and Governance point of view.
3. To propose plausible urban renewal approaches and policy options that are appropriate in Jerusalem Estate.

1.3. Justification and significance of the study

The study of urban decay in Jerusalem Estate will be useful in development and formulation of a broad-based policy that will guide eradication of this vice in even other residential neighbourhoods especially in low income and old residential estate.

There is a very high rate of urbanization in Kenya, where population in the Nairobi City County is growing at the rate of 4.5% per annum. This calls for proper utilization of land to accommodate the increasing population. Urban decay in developing countries is characterized by poor utilization of land and other resources, urban sprawl, poor housing conditions, crime and insecurity, environmental degradation, infrastructure decay and so on. Jerusalem Estate is one of the estates in Nairobi City County that have been affected by urban decay. A research in the area is therefore important to urban planners in that it will try to examine urban decay vices and problems that will motivate solutions from different actors such as the Nairobi City County Government, Local Community, Ministry of Lands, Housing and Urban Development, CBOs, and NGOs.

1.4. Assumptions and Limitations of the study

The biggest problem facing Jerusalem Estate is old age and low income residents' hence urban decay. If nothing is done in terms of Urban Renewal, the situation in Jerusalem Estate might worsen threatening the wellbeing of the residents of Jerusalem Estate.

1.5. Scope and organization of the study

The study is conducted in Jerusalem Estate located along Ajuoga road, Athi Road and Wangu Avenue. It neighbours other estates located in Eastlands Nairobi that include Kimathi Estate to the west, Ofafa Jericho to the South and Uhuru Estate to the East. The study examines urban decay by looking at the indicators of urban decay from a social, economic, environmental, physical and governance point of view. The study aims at reviewing related and comparative case studies from other cities and countries in the form of best practices. Information is collected on all the stated aspects both at the household and community level. The study further covers administrative and policy aspects with respect to the respective institutions who are the custodians of the estate. In addition, the study recommends ways of improving the estate in the view of both the current and future housing demands.

The study is organized in the following chapters:

Chapter One: Introduction

The introduction chapter outlines the background information, problem statement, research purpose, research questions and objectives, justification and significance of the study, the scope of the study as well as the methodology followed in carrying out the research.

Chapter Two: Urban Decay in Residential Neighbourhoods

This chapter focuses on the review of the related literature on urban decay in Residential Neighbourhoods. It also examines related case studies and best practices on how urban decay has been tackled through urban renewal initiatives. The chapter is concluded by developing a conceptual framework which guided the research project.

Chapter Three: Background to the study area

This chapter outlines the existing situation of Jerusalem Estate. It presents the historical aspects of the site, land use patterns, locational setting, the element of growth and change in determining urban decay in the area since Jerusalem was built in relation to the available physical infrastructure facilities. The study further describes the nature of the problem in Jerusalem Estate with respect to its maintenance, tenure system, space use and institutional management.

Chapter Four: Urban Decay in Jerusalem Estate

This Chapter examines the urban decay problems in Jerusalem Estate from a social, Economic, Physical, Environmental, and Governance point of view. Data collected from the field is presented articulating the real issues of the problems with respect to the field findings.

Chapter Five: Urban Renewal Approaches

This chapter examines the various approaches and forms of urban renewal that have been attempted in Jerusalem Estate.

Chapter Six: Summary of Recommendations and Conclusions

This chapter will summarize the findings and conclusions of this research and thus propose plausible urban renewal approaches and policy options that are appropriate in Jerusalem Estate.

1.6. Research Methodology

1.6.1. Overview

This study employs both quantitative and qualitative methodological approaches to investigate the research problem and to achieve its objectives. This section provides a detailed methodology that will be utilized throughout the study. It details out the data types, needs, and sources, data collection methods, field survey instruments, process and analysis of the data and techniques of presentation of the data. A summary of the research methodology is presented through the use of a comprehensive data needs matrix (see Table 1). The research recognizes that there are certain

limitations that the study is likely to encounter and proposals are made on ways of countering the anticipated challenges.

The subjects targeted for the study include;

- The area residents(individuals, households, tenants, sub-tenants), informal sector, entrepreneurs, private sector businesses,
- Community leaders,
- Policy makers(Nairobi City County)

1.6.2. Sample procedure

The target population of this study includes the area residents (individuals' households, tenants, and sub-tenants), informal sector, entrepreneurs, private sector, community leaders and policy makers (Nairobi City County Government).

Stratified random sampling of the urban residential land use indicates that the low-income segment of the urban population requires the most urgent attention towards urban renewal. Factors such as wide geographical area, financial resources, and time constraint lead to further select of the sample size of the accessible population through cluster sampling. The sample size constitutes the spatial units represented by block J, K, L, M and N in Jerusalem estate. The sample frame constitutes all the physical and environmental, socio-cultural, economic and institutional framework aspects that characterize Jerusalem Estate. This will be observed from the study area in order to examine urban decay, its indicators and effects.

1.6.3. Data Needs and Data Sources

The data needed for the research project will be guided by the research questions and objectives as presented below:

To examine the indicators of urban decay and the approaches, forms of urban renewal and policy options that are appropriate in resolving problems of Urban Decay

This will include looking at the urban decay and renewal approaches that are appropriate in resolving the urban decay problems. The indicators of urban decay will be discussed by looking

at the indicators of Social decay, economic decay, physical decay and environmental degradation and indicators of institutional decay and management issues. The urban renewal approaches that will be discussed include rehabilitation and upgrading approaches, conservation and preservation approaches, redevelopment approach (partial and total), privatization approach and integrated approach. The main source of data will be secondary sources of data that discuss the listed indicators of urban decay and the various approaches of urban renewal.

To examine the existing situation of Jerusalem Estate

The data needs concern looking at the social structure of Jerusalem Estate, physical/neighbourhood structure, land use and economic activities of the Estate, environmental characteristics and the institution framework of the Estate which will be mainly the CCN. The data required include finding out the number of people per household, the number of households per unit, characteristics of the residents: age, place of work, education level, reason for staying in Jerusalem Estate and efficiency in land use. The economic activities carried out by the residents of Jerusalem Estate will be of great importance. The main source of this data will be the field surveys-observation and administering household questionnaires. The households will help unveil their interaction with the urban decay condition of the dilapidating character of the Estate. Secondary sources of data will also be useful to give data on the initial condition of Jerusalem Estate and the historical changes that have taken place in Jerusalem Estate.

To examine the urban decay problems in Jerusalem Estate from a social, economic, physical, environmental and institutional point of view.

The data needs include investigating the indicators of urban decay from a social, economic, physical, environmental and institutional point of view, the causes of the different indicators of urban decay and their effects in Jerusalem Estate. Physical indicators include location, dwelling units, physical infrastructure, social facilities, natural environment, beauty and other aesthetic values. The social indicators include population and demographic characteristics, migration trends, family fragmentation, security and crime, prevalence of cultural and social behaviors, income disparities, community and social cohesion. The economic indicators include income, purchasing power, number of businesses, profits to business persons, value of land and houses and expenditures of households. The institutional part will mainly focus on the role that the City

County of Nairobi has been playing in maintaining the Estate since Jerusalem Estate is under its maintenance. The role played by other stakeholders on management of Jerusalem Estate will be of great importance: CCN, NGOs, CBOs, NHC. The testing cases of the effects of urban decay in Jerusalem Estate include population flight, loss of value and form of Jerusalem Estate, pollution, poor solid waste management, poor living conditions, economic disparities, fear, most prevalent diseases, and poverty levels of the residents and change of culture of the residents.

To examine the various approaches and forms of urban renewal that have been attempted in Jerusalem Estate

The various urban renewal approaches which include rehabilitation and upgrading approaches, conservation and preservation approaches, redevelopment approach (partial and total), privatization approach and integrated approach will be examined so as to identify the ones that have been attempted before in Jerusalem Estate. Secondary data sources will be of great importance, that is, previous researches and works that have been carried out in Jerusalem Estate or Eastlands in general.

To propose plausible urban renewal approaches and policy options that are appropriate in Jerusalem Estate.

The synthesis of the data in the above three objectives will aid in the formulation of possible policy options and suggestion of the best applicable urban renewal approaches and the sustainable use of residential land in Jerusalem Estate. Under this objective, the opportunities and weaknesses of planning the Estate will be identified. The financial, social and environmental implications of the intervention will be evaluated. The data sources include both primary data sources and secondary data sources.

1.6.4. Data Collection Methods

Both primary and secondary data sources will generate both quantitative and qualitative data.

a) **Secondary Data**

This data type will be obtained through literature review of existing publications relevant to the topic of study. This will aid in the understanding of the area of study and establishing what has

been previously been uncovered by others in the same area of study. This data type will be sourced from journals, internet sources, government publications, articles, maps and other sources.

b) Primary data

This form of data will form the main data source that will inform the study: as data straight from the field and from those in contact with the study area, this will be the most valuable source of data in giving the best picture of the situation at hand. The methods that will be used to collect primary data include:

- **Questionnaires**

This consist of a series of structured questions whereby some are closed while others are open ended and other prompts for the purpose of gathering information from the household respondents. The questionnaires will be presented to the respondents and answered in written form.

- **Interview schedules**

Interview schedules will be prepared for the key informants and stakeholders involved in the daily operations of Jerusalem estate. These include: the local (community) leaders, the NHC officials and the policy makers which in this case are the City Council of Nairobi.

- **Observation**

This involves the systematic selection, observation and recording of the characteristics depictable on site. The checklist will be used as the tool to aid in the observation which will complement the other aspects by facilitating the observation of key aspect which include the social structure, physical structure, land and economic structure and the institutional structure of Jerusalem Estate for later analysis.

- **Mapping, Photography and Sketching**

Maps will be employed to establish the spatial distribution of land uses in Jerusalem Estate. Photographs and sketches of the area will be taken to facilitate the analysis of the physical layout of the houses and other structures within the Estate.

- **Focus Group Discussion**

A group of the residents that comprise of the community leaders and residents from the respective house classes will be assembled. An informative discussion will be evolved and issues on the existing conditions of the facilities in the estate, the maintenance in place as well as future plans for elevating the estate will be discussed.

Quantitative data collection methods

The main tool for quantitative data collection will be a structured household questionnaire. Observation method will be used to determine, identify and get first hand data on the conditions of the estate with respect to sufficiency and state of the housing and infrastructure facilities. Sketching, photography, drawings, maps will also be used to supplement the other methods.

Qualitative data collection methods

The tools that will be used for qualitative data collection will be interview schedules and detailed questionnaires. Open-ended questions and interview schedules with County Government of Nairobi officials who are concerned with the daily management of the estate and key informants such as the estate managers will be useful in offering an in-depth understanding of the urban decay condition of this old institutional housing estate.

1.6.5. Data Collection Process

Pilot study

After designing and before administering the questionnaires, the questionnaires will be pilot-tested with a small number of respondents, for example, (three, one from each house typology). This will be done to reveal possible problems that will not have been anticipated during the

development of the research tools. The results from the pilot study will be then incorporated in the final questionnaire preparation to improve it. However, the results from the pilot study will not be included in final data analysis.

1.6.6. Data Analysis and Presentation Methods

Data analysis entails the use of appropriate methods to synthesize data to answer the research questions. This is therefore the aspect that seeks to make meaning of the data collected. At the end of the fieldwork all data collected from the structured questionnaires will be entered, coded, cleaned and analysed using the Statistical Package for Social Science (SPSS). The analysis of both the qualitative and quantitative data collected will be presented using simple frequency distribution and analytical tables. The analysis of the quantitative data collected will also be presented by the use of maps, plans, sketches, illustrations and photographs.

Sketches and photographs will be equally used to illustrate data, which will have been discussed in descriptive analysis. The overall information and findings will finally be interpreted and synthesized to facilitate the writing and composition of this research project.

All the gathered information will be synthesized and presented using simple tables, sketches, pie charts, bar graphs, maps and photographs into an integrated planning research report.

Expected Output

- Problems associated with the existing situation with respect to urban decay.

- The indicators of urban decay and how they have affected the lifestyle of the residents of Jerusalem Estate**.** The effects of the decay on the physical and environmental attributes and the economic effects.

- All management activities carried out in Jerusalem Estate by the various stakeholders.

- Applicable planning interventions.

Table 1: Data Needs Matrix

Research Objectives	Data Needs	Data Sources	Data Collection Methods	Data Analysis Methods	Data Presentation Methods	Expected Output
To examine the existing situation of Jerusalem Estate	• Adequacy, condition of housing • Condition, accessibility of infrastructural facilities • Reason for staying in Jerusalem Estate • Total population housed • Population characteristics; age, place of work, educational level,	Primary Sources-field visit; observation, interviews with the residents	Observation Questionnaires Mapping Photographing	SPSS MS EXCEL Spatial Analysis by use of GIS	Charts Maps Sketches Bar graphs Tables Photographs Written report	Problems associated with the existing situation with respect to urban decay

| To examine the urban decay problems in Jerusalem Estate from a social, economic, Physical, Environmental and Governance point of view. | Indicators of urban Decay, causes and effects

Physical Indicators

- Location
- Dwelling units
- Physical Infrastructure
- Social facilities
- Natural Environment
- Beauty and other aesthetic values

Social Indicators

- Population and demographic characteristics
- Migration trends
- Family fragmentation | Primary Sources-field visit; observation, interviews with the residents

Secondary sources to give data on the initial condition of Jerusalem Estate and Historical changes over time | Observation

Questionnaires

Mapping

Photographing | SPSS

MS EXCEL used to analyze;

Classification

Frequency

Distribution | Charts

Maps

Sketches

Bar graphs

Tables

Photographs | The indicators of urban decay and how they have affected the lifestyle of the residents of Jerusalem Estate

The effects of the decay on the physical and environmental attributes and the economic effects |

	• Security and crime • Prevalence of cultural and social behaviors • Income disparities • Community and social cohesion **Economic indicators** • Income levels • Purchasing power • Number and types of businesses • Profits of business persons • Value of land and houses • Expenditures of households **Testing cases of the effects of urban Decay**				

	• Population flight • Loss of value and form • Pollution • Poor solid waste management • Poor living conditions • Economic disparities • Fear • Poverty levels • Change of culture				
To propose plausible urban renewal approaches and policy options that are appropriate in Jerusalem Estate.	• Applicable and sustainable land use form • Opportunities and weaknesses of planning Jerusalem • Financial, Social, and Environmental implication of the	Primary sources Secondary sources	Observation Questionnaires Literature review	Synthesis of the finding	Maps Models Sketches Written report	Applicable planning interventions

	intervention					

Source: Author, 2015

CHAPTER TWO: URBAN DECAY AND RENEWAL APPROACHES

2.1   Definition of Urban Decay

Urban decay is also referred to as urban rot. It can be defined as the process whereby a previously functioning city, or part of a city fall into disrepair. Urban decay is characterized by vandalism, high crime rates, social deprivation in the form of bad housing, with obsolete schools, polluted air and a polluted river, with chronic unemployment, run-down dock system and large areas of industrial dereliction, (Marriner 1982). Generally decay of any neighbourhood is associated with deteriorating physical, social, environmental and economic condition that result to loss of its initial status, image and value of the neighbourhood.

Urban decay is also associated with population flight which can be used to define the migration of economically well-up population from the old decaying part of the city to better areas with good social and physical infrastructures or higher income residential areas. This population is generally replaced by poor population.

The Genesis of Urban decay can mostly be traced back in USA. During the industrial revolution, from the late eighteenth century to the early nineteenth century, rural people moved from the country to the cities for employment in the manufacturing industry, thus causing the urban population boom.

Figure 1: Urban Decay Cycle following Deindustrialization

External factors such as competition, new technologies, physical advantages, or internal factors such as resource depletion, mechanization, environmental degradation, civil unrest

Industry decline (deindustrialization)

Industries and businesses start to reduce workforce and relocate

People are made unemployed

Industry buildings sit empty

Low investor confidence in the area

People have less money to spend

Out-migration of skilled people in search for jobs

Dereliction of industrial premises, more waste land

Environmental and building quality decline

Local shops and services get less income or customers

Some people turn to crime to supplement income

Increase of burglary, graffiti, vandalism and fly tipping

People have less to spend on updating and renovating their properties

Population declines

Residential properties become abandoned as areas reputation decline

KEY

Social

Economic

Environmental

Source: Adapted from Huang, 1993

However, subsequent economic change left many cities economically vulnerable. Studies such as the Urban Task Force (Dert 1999), suggest that areas suffering from industrial decline-high unemployment, poverty, and a decaying physical environment (sometimes including contaminated land and obsolete infrastructure) prove "highly resistant to improvement".

At the end of World War II, many political decisions favored suburban development and encourages suburbanization, by drawing city taxes from the cities to build new infrastructure for remote, racially-restricted suburban towns. That was the context of racial discrimination exercised as "white flight" the middle and upper-class abandonment of U.S. cities, and the start of urban sprawl. Only the poor inhabited the cities.

This study focus on a Neighbourhood which in this concept can be defined as a comprehensive planning unit with some characteristics such as social-economic identity, common facilities such as school, recreational, shopping centers and so on, an almost self-contained and or may even include several estates (Physical Planning Handbook 2008, Kenya).

2.1.1   Social Decay

Although the declining housing stock may make housing more affordable for low-income minorities, studies across the fields of political science, sociology, and economics show that the negative social outcomes outweigh affordable housing prices. In the words of (Massey et al 1993), "residential segregation, by relegating disadvantaged minorities to areas with fewer opportunities and amenities, exacerbates the existing social distance between them and the high income."

One of the most researched areas is the connection between low-income high minority areas and crime. The literature shows an overwhelming connection between income and crime. (Sampson and Groves 1989). Several studies (Bursik and Grasmick 1993; Sampson and Goves 1989; Land et al 1991) find low social control to be the underlying cause of these connection between income and crime. (Shaw and McKay 1931) show that the highest delinquency rates in Cities were located in low-income, deteriorated zones next to the City's central business district and industrial areas. Not only do high crime rates make a neighbourhood dangerous but it also means an increase in drug traffic and high incarceration rate.

Educational gap between the poor and the rich is another social problem. This is also referred to as the academic disparity between students from low-income and well-off families. The achievement gap shows up in grades, standardized-test scores, course selection, dropout rates, and college-completion rates (Sampson 1989).

Another social effect of neighbourhood decay is changing family structure. Many studies find that blighted areas have a higher incidence of single parent households (Jargowski 1997, Krivo and Peterson 1996, Massey and Denton 1989, Massey and Denton 1993, Wilson 1987). This may be due to both a higher rate of teenage pregnancy and incarceration rates (Massey and Denton 1993). The literature finds that single parent households tend to have very negative effects on children, exponentially so for children in low-income areas. Many studies show that children of single parent families tend to perform worse in school and have more behavioral problems. These problems are attributed to the fact that single parents, under economic pressures, have less time to devote to their children (Krivo and Peterson 1996).

2.1.2   Economic Decline/Degeneration

The variables associated with economic decline include unemployment, property values and investment levels. When it comes to unemployment, many studies show that as a community declines and affluent consumers leave, so do retailers and industry. (Lauria 1998, Gotham 1988, Friedrichs 1993, Hanlon and Vicino 2007). Thus the demand for labour shifts away from declining neighbourhoods in favour of high-growth higher income areas. Adding to the problem, discrimination in the housing market and housing prices make it difficult for minority workers to move to these high-growth areas. This idea was first expressed by John Kain, 1968, and subsequently has been labeled the spatial mismatch hypothesis (SMH). According to this hypothesis, there will be fewer jobs per worker in minority dominated low-income areas than in higher income areas. Consequently, minority workers may have difficulty finding jobs, accept lower pay, or have longer commutes. The presence of longer commute times to work for poor workers in comparison to rich workers was found out in many cities. (Kain, 1985). Thus, the already low income residents of decaying areas of the city may lose jobs and have difficulty finding new employment for its residents.

In regard to housing market, increase in the minority population negatively affect property values. Values do respond negatively to increase in poor population. (David Harris, 1999). Housing loses at least 16% of its value when located in neighbourhoods that are more than 10% poor. The price of decline necessary to bring a dwelling unit within reach of an income group lower than that of the original group results in a policy of under-maintenance. Rapid deterioration of the housing stock is the cost to the community of rapid depreciation in the price of existing housing.

Although lower housing values may make housing more affordable to lower income residents, the decline in housing values also decreases the tax base and creates many economic and social problems.

2.1.3   Physical Decay and Environmental Degradation

The increasing pace of urbanization and growing scale of urban industrial activity is exacerbating environmental degradation in developing country cities, and increasing the vulnerability of urban dwellers to both natural and technological disasters. (Kreimer and Musnasinghe, 1992). In addition to intensifying the problems of the urban poor, such disasters result in a loss of productivity resulting from collapsed infrastructure and damage to industry. This has a secondary effect on the national economy, as investment often declines due to concerns about such losses. The resultant decline in growth and increase in poverty leads to a further strain on resources, thereby raising the vulnerability to future environmental disasters.

Across Asia, cities are expected to double in population in just over 20 years, and in African in just under 20 years. (Munasinghe 1992). The pace of urban expansion has led to increase in pressure on the environment, in terms of more air pollution linked to transportation, an increase in solid waste, the depletion and degradation of the fresh water supplies, damage to coastal zones and soil degradation.

The demand for more urban space has pushed the poor onto marginal, environmentally vulnerable terrain. At the same time greater demands are placed on forest resources for fuel wood, timber, raw materials, roads and recreation. Deforestation increases the vulnerability of

urban areas to droughts, fires, floods, runoff, landslides, sedimentation of dams and reservoirs, pollutants and diseases.

Disasters are relatively more costly in developing countries than in wealthier countries because losses are higher (as a percentage of natural wealth). Incentives for development and investment are undermined, thereby increasing poverty. Thus, poverty and environmental vulnerability leading to disasters are mutually reinforcing. Moreover, disasters are particularly damaging to the informal sector, which plays a significant role among the poor in large cities of the developing world.

2.1.4   Institutional and Management Issues

The concept of institutional decay is used to describe and explain the process leading to the failure of political pluralism. Pluralism is based on the concept of autonomous interaction of societal groups among themselves and with the government. (Luigi Manzetti). There are different institutions involved in the management of housing in Kenya and they include Ministry of Lands, Housing and Urban Development, the Department of Physical Planning under the Nairobi City County Government, NGOs and CBOs.

2.2   Urban Renewal Approaches

Urban Renewal is a very powerful force for urban change. The complexity of the process may not be satisfactorily embodied in a simple definition. Nevertheless, it is defined by Gibson and Langstaff (1982) as being the redevelopment or rehabilitation of the older parts of urban centers predominantly incorporating the improvement of housing and environmental conditions, and for the poor, their social services and infrastructure needs including economic regeneration and employment provision through state and local authority intervention, increasingly, with the participation of residents.

However, Couch (1990) gives a different definition of urban renewal by stating it as the physical change, or change in the use or intensity of use of land and buildings, that is the inevitable outcome of the action of economic and social forces upon urban areas. This renewal entails reorganization and restructuring of the physical fabric of an urban centre. It emanates from urban dynamics arising from demographic trends making the urban areas to constantly change either

through expansion, contraction or undergoing of internal spatial restructuring in response to subsequent economic and social pressures. The different approaches of Urban renewal include;

- Rehabilitation and upgrading approaches
- Conservation and preservation approaches
- Redevelopment approach (Partial and Total)
- Privatization approach
- Integrated approach

2.2.1   Rehabilitation and Upgrading Approaches

Rehabilitation, often termed conservation or preservation, is based on preserving, repairing, and restoring the natural and man-made environments of existing neighbourhoods. Rehabilitation is applicable to areas where buildings are generally in structurally sound conditions but have deteriorated because of neglected maintenance. It takes advantage of the existing housing stock as a valuable resource and adapts old houses to present-day life and acceptable standards by providing modern facilities (Miller, 1959 in Broudehoux, 1994).

The rehabilitation approach is underpinned by a recurring theme of citizen participation since the target population is already on site. People organize themselves into neighbourhood associations which lobby local governments to provide technical and financial assistance and improve public services, and to encourage other residents to fix up their housing (op cit). UNCHS (1991) considers security of tenure and homeownership to be essential ways to encourage self-help and community-based upgrading efforts.

The principles of rehabilitation recognize that the limited availability of funds for new construction and the serious housing shortage make the option of destroying already-existing housing appear both unaffordable and imprudent. They recognize the value of old neighbourhoods and, by preserving what is unique, ancient, and specifically local, it can also contribute to the development of the tourism industry and stimulate the economy. From the standpoint of energy, time and cost, rehabilitation is a sensible solution to the problem of urban renewal (UNCHS, 1985).

However, rehabilitation still has its limitations due to the technical difficulties and the amount of work and research involved. Rehabilitation is often perceived as a complex and time-consuming process, which is more difficult to implement than redevelopment. It requires a high degree of social organization and social responsibility, as well as a total reorganization of the housing process. It is sometimes resisted by developers, who see it as an infringement on free enterprise and a barrier to large-scale redevelopment (op cit). In many instances, old houses are so dilapidated and their original character lost after so many years that it is unrealistic to attempt to upgrade them and to raise their conditions to appropriate standards. The introduction of new infrastructure to old and dense neighbourhoods can also be a difficult task.

2.2.2 Redevelopment Approach (Partial and Total)

Urban redevelopment refers to demolishing the original building in the renewal area, and reconstructing new buildings and accommodation, improving public facilities within the renewal area, and allowing the land use or usage density to be altered. Urban redevelopment is carried out for various reasons; slum clearance and replacing them with affordable, improved and well serviced buildings, crime reduction as old dilapidated estates seem to be abandoned and are dangerous as they house those who do crimes but when they are renewed it is reduced. Redevelopment is also an avenue towards increasing the housing stock and achieving a vibrant economy.

Redevelopment consists of the removal of existing buildings and the re-use of cleared land for the implementation of new projects. This approach is applicable to areas in which buildings are in seriously deteriorated condition and have no preservation value, or in which the arrangement of buildings are such that the area cannot provide satisfactory living conditions. In such cases, demolition and reconstruction, of whole blocks or of small sections, is often thought to be the only solution to ensure future comfort and safety of the residents (Miller, 1959 in Broudehoux 1994).

The historical evolution of redevelopment notes that it originated after the industrial revolution when there was a dire need of stepping up the supply of housing units and to replace the back-to-back row housing. The revolutionary introduction of the railway as a 44 form of transport equally made a remarkable impact on the built environment. It caused the displacement of

population, pushed up the demand for accommodation elsewhere in the urban centers and increased overcrowding and proliferation of slums. Commercial activities that sprung up near railway stations comfortably outbid and displaced existing housing and small-scale workshop activity (Couch, 1990).

In the twentieth century period, redevelopment presents developers with maximum profit through the sale of new centrally located units. For local governments this approach presents opportunities for maximum use of land, higher floor area ratio, and has the advantage of introducing higher income groups and commercial activities to the urban center, which increases tax revenues. It also leads to higher population density and improved services and infrastructures, which is highly desirable for modernizing inner urban areas. Redevelopment is equally a desirable way of supplying mass housing to meet the needs of rapid population growth. (Mwaura, 2001)

However, the negative effects of redevelopment are noted by the heavy social and environmental costs that it generates. The demolition of architectural environments is probably the most serious consequence of the redevelopment approach. It brings about the sacrifice of a community's cultural heritage and the destruction of viable neighbourhoods, depriving people of valuable housing resources, which in many cases still serve a useful function. Redevelopment generally involves the relocation of the original population to another part of the urban area. Even when the residents are re-housed on the same site after its redevelopment, the transformation of the neighbourhood beyond recognition has inevitable psychological impacts upon the community.

The need to shift from the policies of redevelopment are underpinned by its limitations since it leads to the destruction of the badly needed housing units and the re-emergence of slums in other parts of the urban centre. It also contributes to the impoverishment of the original residents by reduction of job opportunities, as resettlement areas are usually located outside of the city proper (Goodman and Freund, 1968). For tenants, owners, and businessmen alike, the destruction of the neighbourhood exerts social and psychological losses. The clearance destroys not only old buildings, but also a functioning social system. The scattering of families and friends isespecially harmful to the many older people.

In the majority of western countries, redevelopment has been discarded as a way to rejuvenate old urban centers. However, in many developing countries, redevelopment through slum clearance and reconstruction is still regarded as the only viable way to improve housing conditions and to modernize inner urban areas (Broudehoux, 1994).

2.2.3 Privatization Approach

In some areas within urban areas, housing and housing services are provided by the public sector. In most cases, these services are underprovided or provided in poor quality due to laxity experienced in the public sector and this leads to some sort of urban decay within these areas. To prevent this from happening, privatization approach is a strategy that can be applied to counter these phenomena. Privatization of housing sector refers to changing of housing and housing service provision from public sector to private sector so as to improve the quality and the standards of the services to the public. The government my lease the estate or sell it completely to the private developer on a freehold tenure depending on the location of the estate. Privatization of public housing sector is advantageous as it makes the houses be constructed to the expected standards and improves service provision but on the other hand, it makes housing units unaffordable to some low income earners.

2.2.4 Integrated Approach

The integrated approach views rehabilitation and redevelopment as complementary forces and combines the best aspects of both approaches. It consists of rehabilitation of what can realistically be saved, combined with reconstruction of new buildings in the place of those beyond the reach of feasible rehabilitation.

The integrated approach is considered today to be the most acceptable way to regenerate old neighbourhoods. It allows for flexible project implementation, which can preserve the traditional urban environment while achieving respectable densities. It respects the social order of the community by re-housing the majority of the original residents on the site and invites mass participation. The integrated approach results in the creation of rich environments through the integration of new buildings within the existing neighbourhoods and allows for the development of a new form of contemporary architecture with local characteristics, enriching the appearance

of the old city while maintaining its identity. However, for many developers and local authorities, the integrated approach remains a time-consuming process, less profitable than redevelopment, when the objective is to supply mass housing.

2.3 Global and Local Urban Renewal Approaches

2.3.1 Urban Renewal and Regeneration in Developed Countries

Generally speaking, developed countries have a relatively earlier start of urbanization than developing countries, i.e. England in the last century since the Industrial revolution, United States after the Depression of the 1930s, (Eisner, 1993), while most Third World nations have been urbanizing rapidly since 1950 (Mc Auslan, 1985).

Just the urbanization resulted in the problems of slums appearance, inner city deterioration and land dereliction and so o in the developed countries. These problems do not go on only in the residential areas, but also have overflowed this scope and include all kinds of building like commercial and industrial.

Initially, developed countries focused on slums clearance and redevelopment. However, with the gradual improvement of neighbourhoods in those years, the emphasis has been moved from redevelopment to rehabilitation or upgrading. By now, the redevelopment almost has been discarded as a way to revitalize the old city areas in developed countries. Eisner, S et al. 1993, said after the 1960 Housing Act in America, concern about the displacement of families from renewal areas and the destruction of socially viable communities led to a new emphasis on rehabilitation rather than wholesale clearance. Following with the developed countries, urban renewal, as a response to urban decay and a strategy to solve slums problems, has been paid attention to in the developing countries too.

 In developed countries, urbanization was caused by the Industrial Revolution that made many industrial areas located in the city center and provided large quantity of employment to the immigrants. Then the urban expansion resulted in high land value in the city center, which made many industrial activities move outside the inner areas to cheaper land. At the same time, poor environment and less attraction in inner city caused by urban expansion led many high and middle-income people leave for the suburbs of city, and then some commercial activities have

shifted to the best locate areas together with high and middle-income people following. All these contributed the land dereliction in city center and the slum appearances. Finally, urban renewal appeared in order to solve the problems. The detailed process of urban decay in developed countries is shown in the figure below

Figure 2: Process of Urban Decay in Developed Countries

The Industrial Revolution began in cities	→ Suburb urbanization and urban expansion appeared → As the city expands, the land value in the inner areas rose rapidly → Some industrial activities moved outside of inner areas to cheaper land → Site is redeveloped if market value is high, or is allowed to be vacant possibly inviting squatters

Pollution, congestion and decay reinforce

The process areas becomes less attractive. Commerce begin to move to sub-center

As the city expands, the area becomes less attractive to affluent families who move to suburban location

Large quantities of urban land and building are abandoned and left dereliction.

Property becomes dangerous and uninhabitable or it may collapse while still occupied

Rent control imposed by government to protect tenants. Owners of building cannot afford to carry out repairs

Low income jobs remain in central area; poor families seek accommodation in older buildings; densities increase

Lack of maintenance causes further deterioration. Population growth and house shortage create overcrowding

Urban renewal appeared

Source: Adapted from Huang, 1993

2.3.2. Urban Upgrading and Renewal in Developing Countries

In developing countries, urban growth was not caused by such obvious industry development and the cities could not absorb or provide enough employment to the immigrants, which led to more problems on economic and social aspects. At the same time, the problem of land dereliction is not as common in developing countries as in developed ones. Mc Auslan 1985, talked about three kinds of squatter appearance in Third World, which are Private urbanization, Squatter invasions and Squatter Infiltration. None of them resulted from land dereliction as those of developed countries did. Finally, urban renewal in developing countries appeared for solving the urban problems, especially the problem of squatter settlement appearance. The figure below shows the detailed process of urban decay in developing countries and how Urban Renewal appeared.

Figure 3: Detailed Process of Urban Decay in Developing Countries
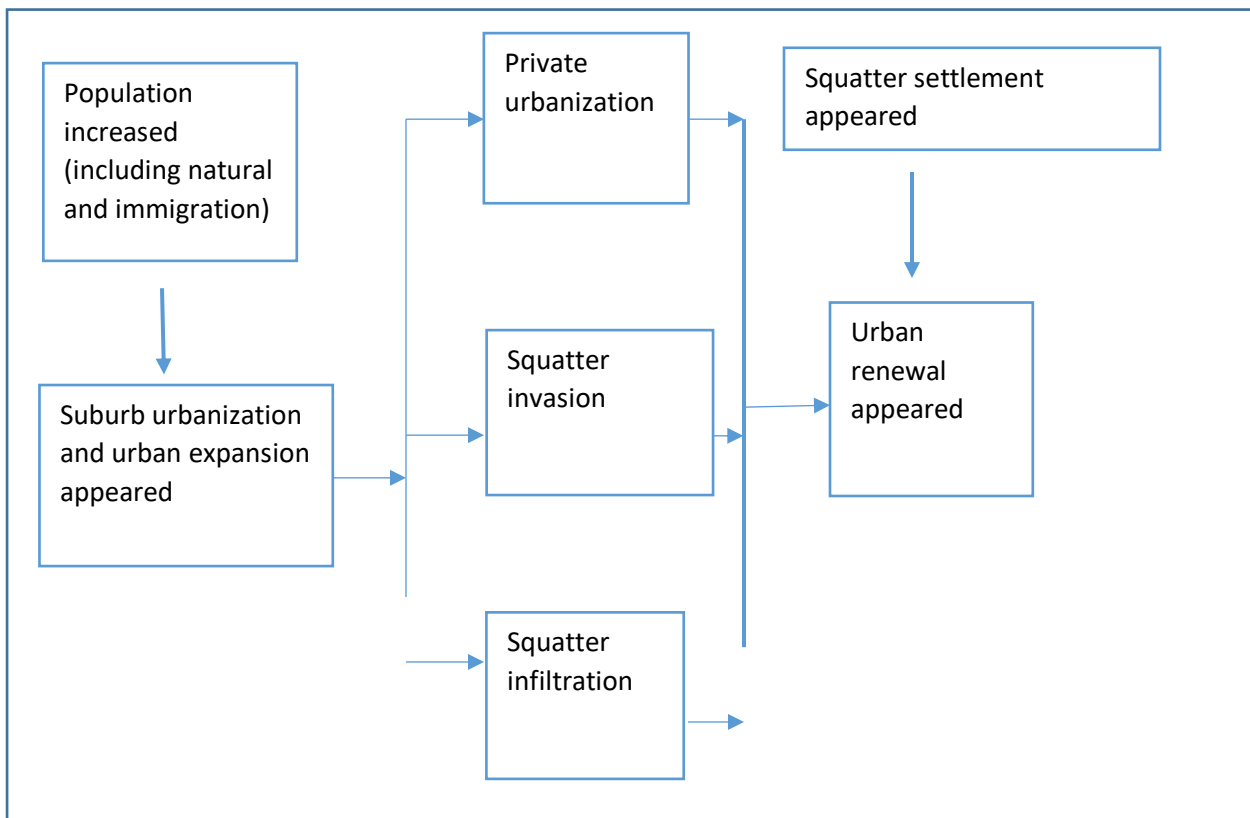
Source: Mc Auslan, 1985

2.3.3. Past Efforts of Urban Renewal in Nairobi, Eastlands and in Kenya

Nairobi is the most populous city in East Africa with an estimated population of about 3 million and it is home to Kenyan businesses and over 100 major international companies and organizations inclusive of UNEP headquarters for UN in Africa & Middle East.

There has been renewal efforts in Nairobi which have been undertaken before and these projects include; upgrading of hospitals, for example Pumwani and Mutuini hospitals, development of markets such as Mwariro market, solid waste management which majorly involved redevelopment of Dandora dumping site and urban renewal housing projects. The renewal housing projects that have been undertaken in Nairobi include Bachelor's/jevanjee Estate, Ngong Road Estate, Old Ngara Estate, New Ngara Estate, Pangani Estate, Uhuru Estate and Suna plot.

The development principles applied in the past urban renewal efforts in Nairobi are;

Densification: Involves highest and best use of land. The current use of land is 8 units per acre.

Compact development: This is vertical development due to scarcity of land.

Mixed income groups: This is about catering for different income groups

Self-reliance: Involves support services like playgrounds, schools and community halls

Environmental Sustainability: Use of green technology and energy conservation

Human Centered Development: This involves starting with the people and designing and developing according to their needs

The Socio-Economic benefits of the renewal and redevelopment projects that have been carried out in Nairobi in the past include;

- Creation of employment and ownership opportunities to citizens and contribution to Kenyan's Gross Domestic Product.
- Increased demand for water and other public utilities including electricity.
- Development of markets will support the Nairobi City County in successfully managing hawkers and other traders within town.

- The redeveloped markets will also create a revenue stream for the Count y Government which can be channeled to other development projects.
- Majorly the main reason why urban renewal housing projects have been carried out in Nairobi and especially in Eastland's old houses into modern and affordable houses to the residents, it's so that even the lower income residents can be accommodated in the formal housing market to reduce the number of upcoming slums in Nairobi.

22% of Kenyans live in cities and the projects will help solve the housing shortage in Nairobi.

Plate 1: Current Situation and Proposed Redevelopment of Ngong Road Estate

Source: presentation made on urban renewal projects in Nairobi Continental Hotel, 2014

The above figures shows the current situation and the proposed redevelopment of Ngong Road Estate located near the Kenya Meteorological department headquarters as an example of the past urban renewal efforts in Nairobi.

Current situation

The site is approximately 25.37 acres and has 80 units consisting of studio and 3-bedroom sizes. Within its proximity there are schools, health facilities and shopping facilities which are at Dagoretti Corner.

Development Recommendation

High Density – 15 floors

3 bedroom - 360

2 bedroom - 1440

1 bedroom 720

Total Units-2520

The new proposal is of 24 blocks of Type A 15-storey apartments. The total number of units proposed for this site is 2520

2.4. Case Study

Ibadan, Oyo state, Nigeria

Ibadan is the capital of Oyo State in Nigeria. Its exact population is not known, in spite of the national census of 1991 (Fourchard, undated). However, current population estimates of the city vary from 3 to 5 million inhabitants. Ibadan is a city that is growing amorphously and characterized by traditional slums and spontaneous slums (Agbola, 1987 and Abumere, 1987). It is heavily overcrowded and the environment is largely degraded. In terms of its spatial spread, Ibadan sprawls over a radius of 12-15 km and it is still expanding uncontrollably, due to rapid and uncontrolled urbanization. Most parts of the city, particularly the inner core and southeastern section, are unplanned and lack basic facilities due to the inability of municipal governments to keep pace with the level of infrastructure needs and the speed of growth.

The need to make Ibadan sustainable has resulted in several interventions in recent years, including the renewal or upgrading of some slums in the city and the participation of the city in the Sustainable Cities Programmes among others.

Critical environment-development problems affecting Ibadan include:

- Inadequate provision and management of environmental infrastructure. There is poor access to potable water, unstable electricity supply and haphazard physical development which constrains the provision of facilities.
- Poor waste collection and management: wastes often block drain roads, waterways and the stench from dumpsites cause severe air and water pollution.
- Flooding due to the invasion of flood plains by through illegal buildings and construction, inadequate storm drains, acute deforestation and poor solid waste management which have resulted in perennial floods; and
- High health risks due to poor water supply, inadequate and unreliable refuse collection services, water pollution, overcrowding, and flooding among others.

At the instance of then Ibadan Metropolitan Planning Authority in conjunction with Oyo State

Ministry of Lands and Housing, a World Bank assisted urban renewal scheme was considered for implementation in 1988. This move, however, was preceded by a pilot study commissioned in 1984 by the World Bank to the Town Planning Division of the Ministry of Local Government of Oyo State and called Upgrading of Core Areas.

Sustainable Ibadan Project (SIP)

Since several conventional urban planning and management strategies actually failed in addressing the environmental and physical development problems in Ibadan, new approaches were explored, such as the Sustainable Cities Programme (SCP). The SCP itself was a joint initiative of the UN Habitat (United Nations Centre for Human Settlements) and the United Nations Environmental Programme (UNEP). It was launched in August 1990, as a component of the Urban Management Programme. The SCP is guided by the principle of widespread participation by stakeholder groups in the public, private and community/popular spheres, such that they can have improved abilities and capacities for environmental planning and management (UNCHS 1996). The Sustainable Ibadan Project (SIP) is a component of the SCP.

The creation of the SIP was preceded by a request from the Oyo State Government in February 1991 to include Ibadan in its SCP. Following the signing of a project document in April 1994,

SIP became one of the 12 cities in the world selected for the demonstration of the SCP. Consequently, the City Forum/Consultation adopted the "Ibadan Declaration" focusing on three priority cross-cutting environmental issues for SIP: waste management, water supply and the institutionalization of the Environmental Planning and Management (EPM).

Plate 2: Demolition of the existing structures

Source: Ibadan Project Team, June 2010.

Lessons Learnt

Experiences, Achievements and Challenges in the Sustainable renewal of Ibadan, Nigeria

Experiences	Achievements	Challenges
• The inclusion of many stakeholders encouraged and strengthened partnerships among them and this promoted lasting solutions to many environmental problems. • Stakeholders were able to choose priority projects based on widespread consultation and were in	• Setting up of a Resource Centre for Environmental Data/Information. • Devising Waste Management and Water Supply Strategies and associated Action Plans. • Mobilization of various stakeholders to deal with identified environmental problems in Ibadan. • Establishment of	• Poor, and sometimes very frustrating, level of cooperation from public agencies in institutionalizing the EPM process because it calls for transparency and accountability visa-vis apathy by the communities and members of the private sector to Local Government activities (Asamu, 2004) • Inadequate financial support from

charge of project execution and sustenance. • Inter-relationship among stakeholders from different sectors enhanced access to relevant information. • Resources for implementation of investment projects became more readily available. • Enhancement of performance obligation such that relevant agencies that have embraced the SCP/EPM Process has performed and even received awards. • The significance of having adequate data an information for planning purposes is a key lesson learnt. For instance, the Regional Centre for training in Aerospace Surveys (RECTAS), Ile-Ife, produced a Topographic "Digital Base Map of Ibadan" for decision makers, engineers, urban planners and managers as well as various map users. The map revision exercise was largely for the SIP.	sustainable Ibadan Project Trust Fund (SIPTF) in June, 1996, to support projects that show clear evidence of cost-sharing and arrangements for cost recovery. • Initiating various sustainable and innovative community-based projects, such as the organic fertilizer plant in Bodija Market, Osun and Agbadagbudu natural spring water project, Ayekale rain harvester and several other ongoing projects.	the Local Authorities (the eleven LGs in Ibadan Region), especially in recent years. • Frequent changes of government have hampered timely implementation of SIP projects. Each new government entailed renegotiation or reapproval of the process and the selection of the project manager became a political issue. • Generally, there has been a sharp decline in interest on the part of the relevant stakeholders in implementing SIP programmes and projects (Adesanya, 2000). Ibadan North Local Government leadership from 1995 to 1998 refused to participate in the improvement activities in Bodija Market (Wahab, 1998). • Lack of coordination between the stakeholders and the different levels of government and even among local governments.

Source: Author, 2016

Ibadan, Oyo Estate after Sustainable Urban Renewal.

Source: Ibadan Project Team, June 2010.

2.5.   Legal, Institutional and Policy frameworks

2.5.1. Legal framework

The Constitution of Kenya, 2010

The Constitution of Kenya, 2010 gives every person the right to a clean and healthy environment, which includes the right to have the environment protected for the benefit of present and future generations through legislative and other measures and to have obligations relating to the environment fulfilled. Article 43 section 1b gives every person the right to accessible and adequate housing, and to reasonable standards of sanitation. The environmental conditions in Jerusalem Estate do not meet this constitutional requirement as different profiles of waste lies everywhere within the estate. Raw sewer runs through the storm water drainage channels as the sewer capacities provided do not meet the current needs. Moreover, the building densities in the estate do not lead to the achievement of adequate housing for all as the vertical space has not been realized. There is need therefore to come up with strategies of realizing this

constitutional right for both current and future generations.

The County Government Act, 2012

This is an act of Parliament to give effect to Chapter Eleven of the Constitution to provide for county governments' powers, functions and responsibilities to deliver services and for connected purposes laws that will guide planning in the devolved system. Part XI of the act provides for county planning where its principals and objectives are outlined. The act provides for the establishment of a county planning unit which will be responsible for: coordinating integrated development planning within the county; ensuring integrated planning within the county; ensuring linkages between county plans and the national planning framework; ensuring meaningful engagement of citizens in the planning process; ensuring the collection, collation, storage and updating of data and information suitable for the planning process; and ensuring the establishment of a GIS based database system. The act also provides for the preparation of; county integrated development plans, county sectoral plans, county spatial plans and cities and urban areas plans as provided for under the Urban Areas and Cities Act.

Urban Areas and Cities Act, 2011

This is an act of Parliament to give effect to Article 184 of the Constitution to provide for the, classification, governance and management of urban areas and cities to provide for the criteria of establishing urban areas, to provide for the principle of governance and participation of residents and for connected purposes. Part V of the act alters the contents of the plans to be prepared from those provided by the Physical Planning Act. The act also lays emphasis on integrated plans therefore calls for broader participation. It also calls for city or urban area integrated development plan to be aligned to the development plans and strategies of the county governments

The Physical Planning Act 1997 (cap 208)

This is an act of parliament for preparation and implementation of physical development plans and for related functions.

Section 29 states that the director of Physical Planning may prepare with references to any government land, trust land or private land within the area of authority of a city, municipal, town

or urban council or with reference to any trading or marketing, a local physical development plan for purpose of guiding and coordinating development. The section provides for each local authority's empowerment in; prohibiting or controlling the use and the development of land and building in the interest of an orderly development of its area. The act as well explains development control measures that can be taken in order to ensure compliances with the plan's proposals.

In Jerusalem Estate policy and legislative interventions are needed with respect to land use intensities and density of development. The act also empowers the County Government of Nairobi to ensure controlled and organized development, that is, to regulate zoning, to control and prohibit subdivisions of the land into small and uneconomic plots.

The Local Government Act (Cap 265)

The key mandate of the local authorities is to implement the local development plans. Section 162 of the act empowers the local authorities to control or prohibit subdivisions of land of existing building in to smaller areas. Section 166 of the act provides for every municipal council to prohibit and control development and use of land and building in every municipal council in the interest of the proper and organized development of its area.

With respect to land use, the County Government of Nairobi has not followed up the issues of prohibiting the land use of building since there exists illegal extensions, unauthorized commercial activities along the walking path and in the open spaces. Other services such as water, sanitation and sewer facilities has not fully been catered for by the County Government.

Environmental Management and Coordination Act (No. 8 of 1999)

EMCA aims at promoting a safe, clean and healthy environment. Section 4 and 7 of the act provide for the establishment of environmental conflicts and the national environmental management authority (NEMA) as the institutions responsible for execution of the requirements stipulated in the act including erection, reconstruction, placement, alteration, extension, renewal, or demolition of any structure, of any structure or part of it on land.

Section 58 of the act requires that every development project likely to have an impact on the environment to undertake an environmental impact assessment (EIA).

When Jerusalem estate was being developed, EMCA did not exist and therefore it was not applied. In this regard, there was no EIA that was prepared. There is therefore need to develop measures to respond to pollution, greening, and public awareness on the ecological impact of some activities the residents of Jerusalem estate engage in such as waste disposal among others.

2.5.2 Institutional framework

Physical Planning Department

The key mandate of this department is to prepare physical development plans. The urban and rural areas of Kenya are facing problems related to resource utilization and distribution, sustainable space use, poor infrastructure, poverty, declining urban areas and environmental degradation. All these have directed implication on the well-being of the society and the physical planning department is duty bound to provide solution to the mentioned issues in conjunction with other players or stakeholders.

The declining physical fabric of Jerusalem estate calls for immediate redevelopment actions yet there lacks sustainable building densities prescribed for the area.

Ministry of Housing

The ministry of housing under the National Housing Corporation intends to achieve the following by the year 2020;

- To provide the minimum level of basic infrastructures that are related to health
- To set up the production of dwelling units in the urban areas where the main problem is the acute shortage in the number of dwelling units
- To improve the existing stock of housing
- To enhance affordability of the housing by producing urban stock for low and middle income housing at an affordable price

The ministry could as well set minimum housing standards with respect to the density and typologies for the various income groups. This is however left in the hands of developers who either capitalize on land availability by developing without considering open spaces or enhancing

compactness. The goals of the housing policy have not been observed in Jerusalem estate yet as stated above.

NEMA

The major roles of NEMA are to coordinate the various environmental activities being carried out by the lead agencies, promotion of the integration of environmental concerns into development policies, plans, programs and projects with the view to ensure appropriate management and sustainable utilization of environmental resources for the improvement of the quality of human life in Kenya, take stock of the natural resources in the country and their utilization and conservation, to establish and review land use guidelines, to examine land use patterns, to determine their impacts in the quality and quantity of natural resources, carry out surveys which will assist in the proper management and conservation of environment of the implementation of the relevant international conventions, treaties and agreements to which Kenya should be part of.

2.6. Conceptual framework

This framework is based on the analysis of urban decay in Jerusalem Estate. The causes of urban decay in Jerusalem estate are identified to be both external and internal. The external causes of urban decay include inadequate capacity of service provider, land tenure and ownership, poor capacity to implementation of renewal plans, poor application of policies and guidelines and high rate of poverty while the internal causes are poor management and maintenance, poor community cohesion and sense of ownership, poverty and unemployment, old age of the estate, vandalism and abandonment by residents. These causes have led to the urban decay in Jerusalem Estate.

The study also seeks to understand how through urban renewal, it can address the urban decay. This can be achieved by planning and addressing the issues of Jerusalem Estate with respect to its decayed environment. The aim of the study is to investigate urban decay problems in Jerusalem Estate and to propose plausible approaches and policy options towards its renewal for it to meet both current and future demands.

From the literature reviewed, certain principles and concepts for urban renewal of sustainable neighbourhoods emerged. The principles included connectivity, mixed land use and diversity quality architecture and urban design, increased density, sustainability as well as quality of life. The concepts on the other hand included: well designed and built forms, environmental sensitivity, well connected and economic thrive. Moreover, important lessons were deduced from the case studies reviewed. These included: incorporation of a participatory planning approach in any development process, erection of high rise high density developments to replace low density developments, incorporation of a mixed land use structure in current developments as well as incorporation of the above principles, concepts and lessons from the case studies in the renewal of Jerusalem Estate can help in ensuring its sustainability. Thus, guided by the principles and lessons from the literature reviewed above and the case studies, the conceptual framework is presented by figure 4 below.

Figure 4: Conceptual Framework

External causes

- Inadequate capacity of service provider
- Land tenure and ownership
- Poor capacity to implement renewal plans
- Poor application of policies and guidelines
- High rate of poverty

Internal causes

- Poor management and maintenance
- Poor community cohesion and sense of ownership
- Poverty and unemployment
- Old age of the estate
- Vandalism and abandonment by residents

Actors

- City County Government of Nairobi
- Ministry Lands, Housing and Urban Development
- Local community
- CBOs
- NGOs

Maintenance, Repair, Renovation, upgrading, rehabilitation (conservation and preservation), Redevelopment

URBAN DECAY

Effects

- Loss of value and form
- Outmigration of skilled labour and people with high income (population flight)
- Poor living condition
- Insecurity
- Poor utilization of resources
- Increasing poverty
- Economic disparities
- Loss of aesthetic value

Indicators of urban decay

- Physical infrastructure decay (roads, dwelling units, drainage and sewer system)
- Environmental degradation
- Family fragmentation
- Insecurity and crime
- Poor community and social cohesion
- Poor management

- Involvement of all stakeholders
- Alternative land use model with mixed land use
- Sustainable policy framework
- Plan implementation and monitoring

- Good governance
- Compact and vertical development
- Sustainable management
- Local employment-improved income
- Better living condition
- Social equity and cohesion
- Proper security
- Adequate services and facilities

Urban Renewal appears

Sustainable Neighbourhood

Source: Author, 2016

CHAPTER THREE: STUDY AREA BACKGROUND

3.1. Location

Jerusalem neighbourhood is located along Ajuoga road, Athi Road and Wangu Avenue. It neighbours other estates located in Eastlands Nairobi that include Kimathi Estate to the west, Ofafa Jericho to the South and Uhuru Estate to the East. The study area/scope will cover the whole of Jerusalem Estate as it is mapped by the Nairobi City County Government.

LOCATIONAL CONTEXT OF THE STUDY AREA

Map 1: Regional Context of the Study area

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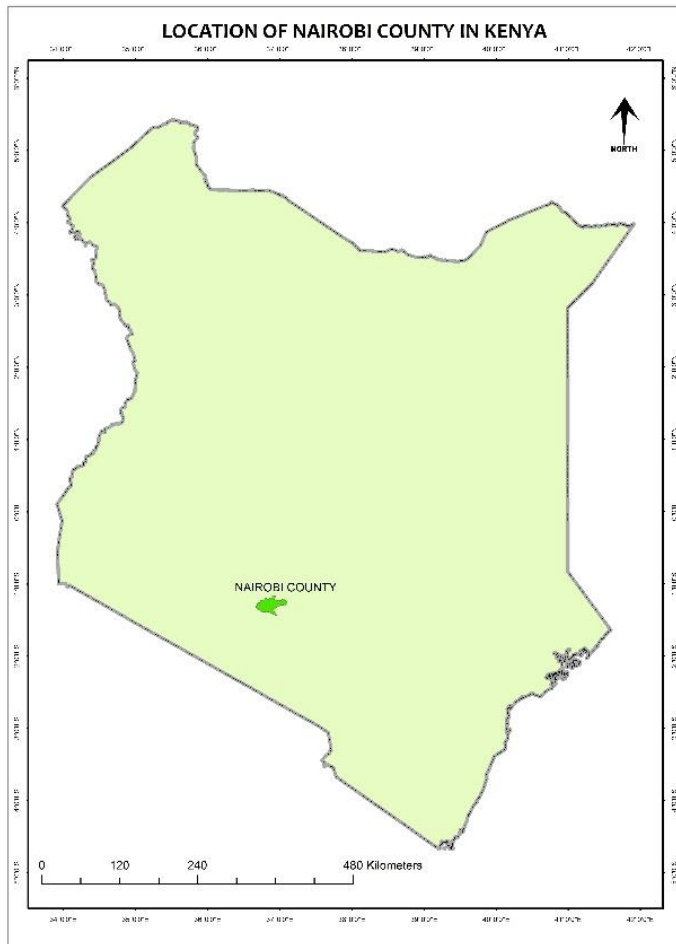
Source: Author, 2016.

Map 2: Urban Context of Jerusalem Estate
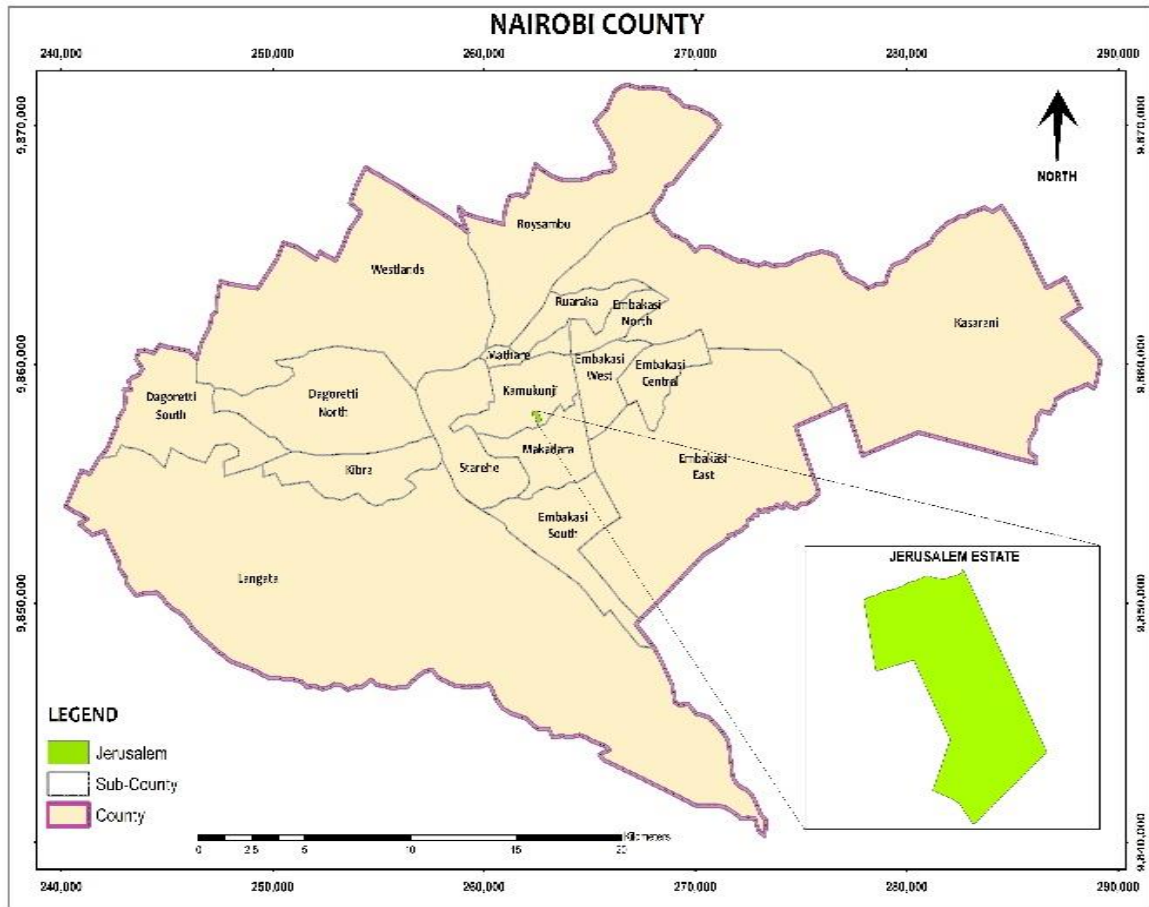
Source: Author, 2016

Map 3: Neighborhood context of Jerusalem Estate
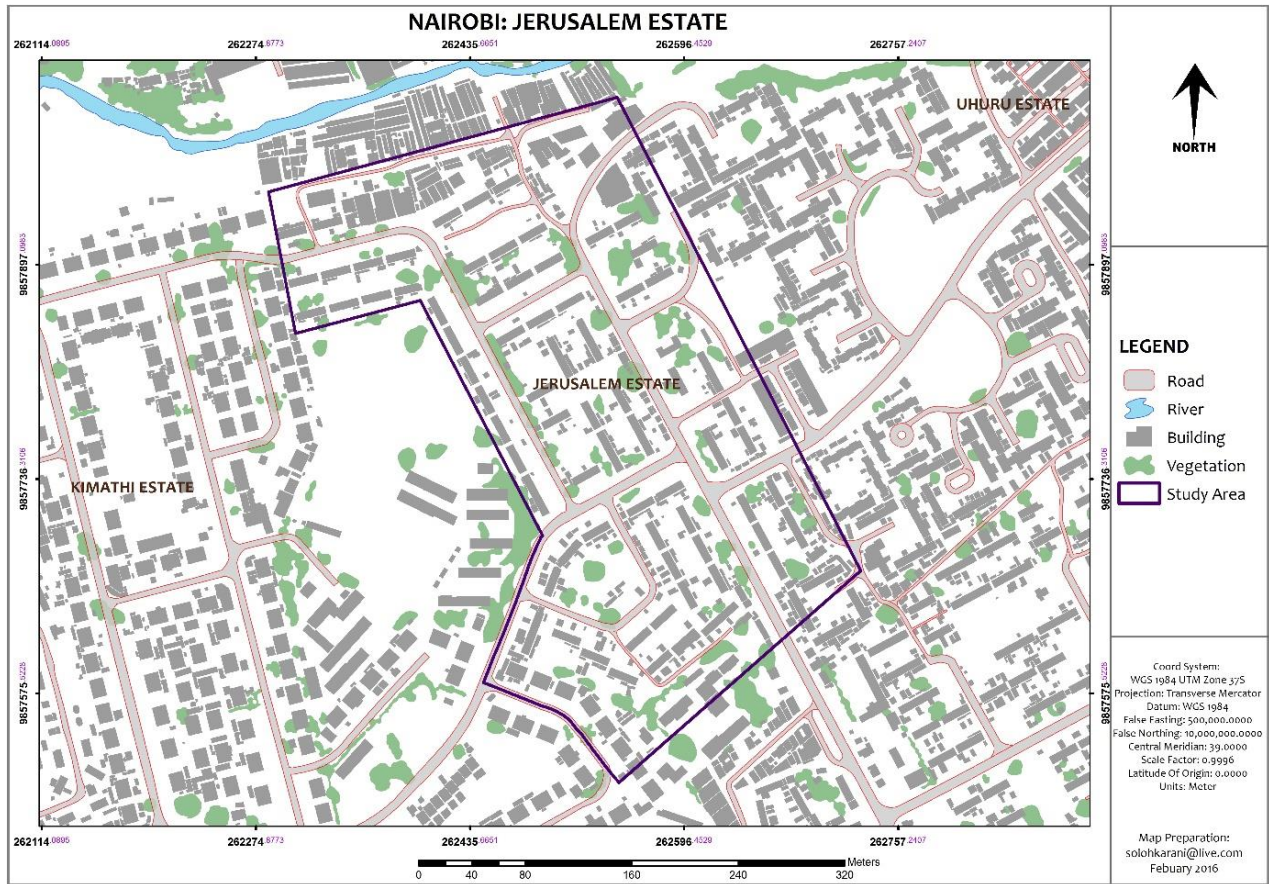
Source: Author, 2016

Map 4: Map of Jerusalem showing the land use structure
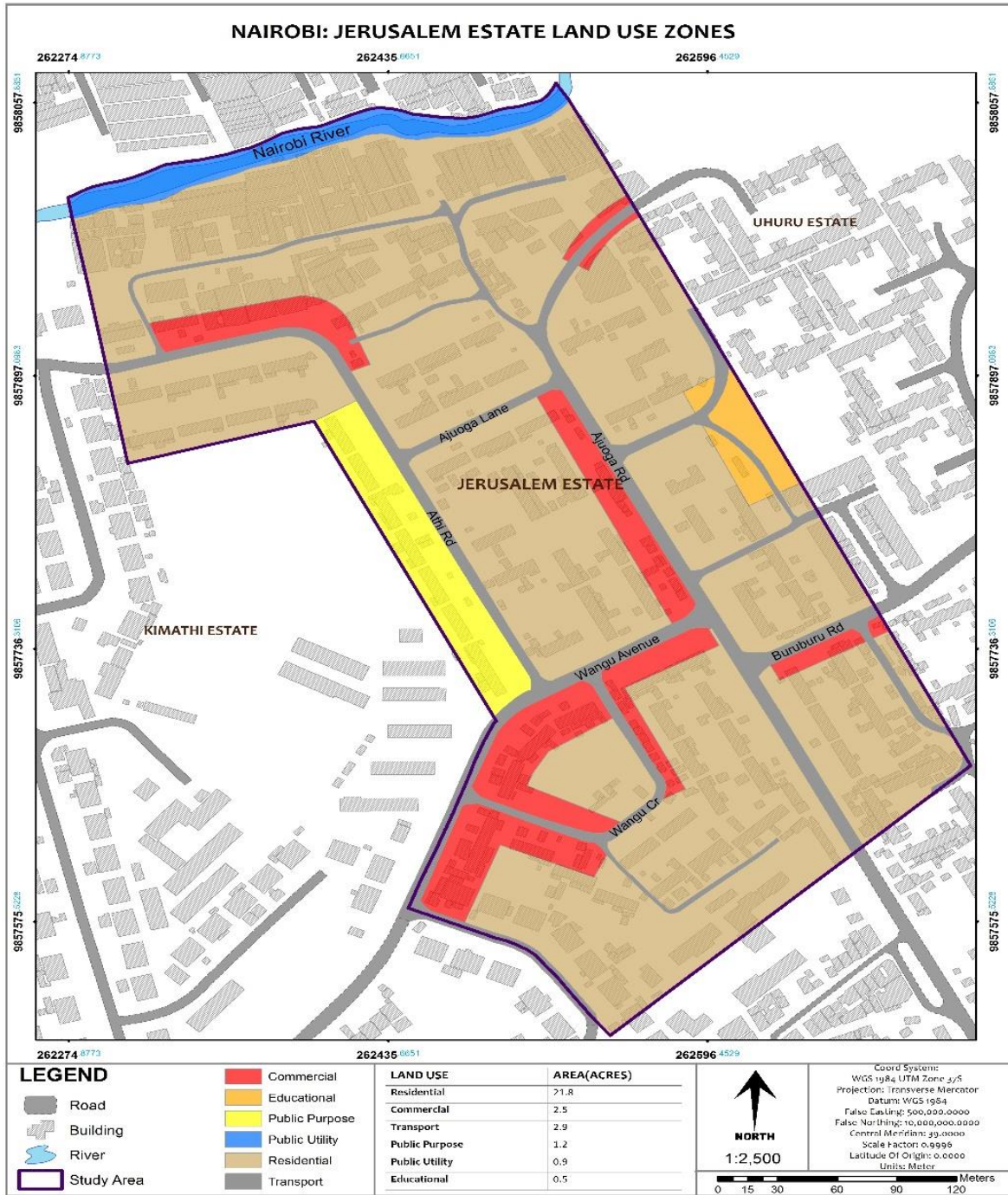
Source: Author, 2016.

3.2. Historical Background of Jerusalem Estate

Jerusalem Estate was developed during the colonial government with the perception that African males were not allowed to stay with their families in Nairobi. It was developed in 1959 by the Kenya-Uganda Railway Corporation to house various classes of its employees (Mwaura 2001). It was therefore able to accommodate the low income residents of Nairobi who were working for Kenya-Uganda Railway Corporation. The construction of the estate was motivated by the City County Government of Nairobi's decision to set up housing stock for low income in Nairobi that targeted mostly the black. During the development of Jerusalem estate. The housing typology included terraces (row).

3.3. Population densities

There has been a positive population growth in Jerusalem Estate. The table below shows the total population, average household size and the area of the study area.

Total population		Area (KM^2)	Average HH size
1999	4883	0.082	3.6
2009	8595	0.082	5.4

Source: Census, 1999, 2009

3.4. Housing and Land Use Pattern

The total number of dwelling units in Jerusalem Estate is 243 where by each dwelling unit has an average number of 8 households. Housing typology include; Highrise to 2 floors (terraced row housing), flats and temporary extensions made of iron sheets. Residential land use in Nairobi occupies about 60% of the total land where housing take about 70% of this land. (Shihembetsa 1995). In Jerusalem Estate, out of the total land size 0.082km^2, about 73% of the area is built up yes, but most of the built up area is occupied by the illegal extensions that the residents have brought up to accommodate the increasing population. In a low income estate with a high

demand of low income housing there is need for proper utilization of land by increasing building density.

3.5. Infrastructure and Natural Environment

From a critical observation, Jerusalem Estate is characterized by the decaying conditions of infrastructure and degrading of the natural environment. The roads have potholes and the pedestrian lanes are eroded and during the rainy season they are muddy and dusty during the dry season. The sewer and sanitation facilities are in bad condition that is a threat to the health of the residents. Sewer pipes are broken, the toilets leak and there is inadequate water supply hence insufficient water for flashing the toilets. Drainage and sewer channels are blocked by poorly disposed solid waste. There is poor solid waste management in Jerusalem Estate whereby solid waste is dumped in Nairobi River making the river dirty, unhealthy and making it loose its aesthetic value as a recreational facility. The natural vegetation is in poor condition. The grass is overgrown all over the open spaces in Jerusalem and there are shrubs scattered all over. Life fences are not trimmed or maintained. This has attracted unfriendly wild animals and rats and it also becomes a threat to the security of the entire neighbourhood.

3.6. Social Economic Characteristics

There has been a negative economic growth condition of Jerusalem Estate expressed by decreasing purchasing power of the residents and income despite increase of the cost of living in the country. This negative economic growth in Jerusalem is also influenced by the out migration of the initial residents of the Estate and are replaced by poor population. Due to decreasing purchasing power and depopulation the businesses and other local jobs have migrated or closed.

The social concept of Jerusalem Estate can be described as deteriorating as it is characterized by; long-term unauthorized use of properties such as parking spaces, recreational facilities, business space, insecurity that is manifested by extensive robbery cases as state by the area chief, family fragmentation due to out-migration and dilution of cultures due to in-migration. Basically, decay in Jerusalem Estate can be explained by the "broken window theory" where lack of repair and maintenance of the neighbourhood has cumulatively accelerated the decay of the place.

3.7. Local institutional framework

Jerusalem Estate is an estate owned by NCCG. The NCCG is responsible for the management of the estate. Due to the small size of Jerusalem Estate (only 70 acres), there are no administrative institutions within the estate. For example the police station that serves the area is located at Makadara which is a bit far from the estate.

There is an estate manager whose offices are located at the Nairobi City County Government headquaters. The estate manager is responsible for the daily operations of the estate. At the grass-root level there is a community leader who resides in the estate and is accountable to the estate manager located in the County.

Both the community leaders and the estate manager played a crucial role in this research. They were the key informants in the provision of the information concerning the historical development of the estate and its growth since then, the current conditions of the estate and the future prospects of improving the estate to meet both current and future housing demands.

Map 5: Existing land use activities in Jerusalem Estate
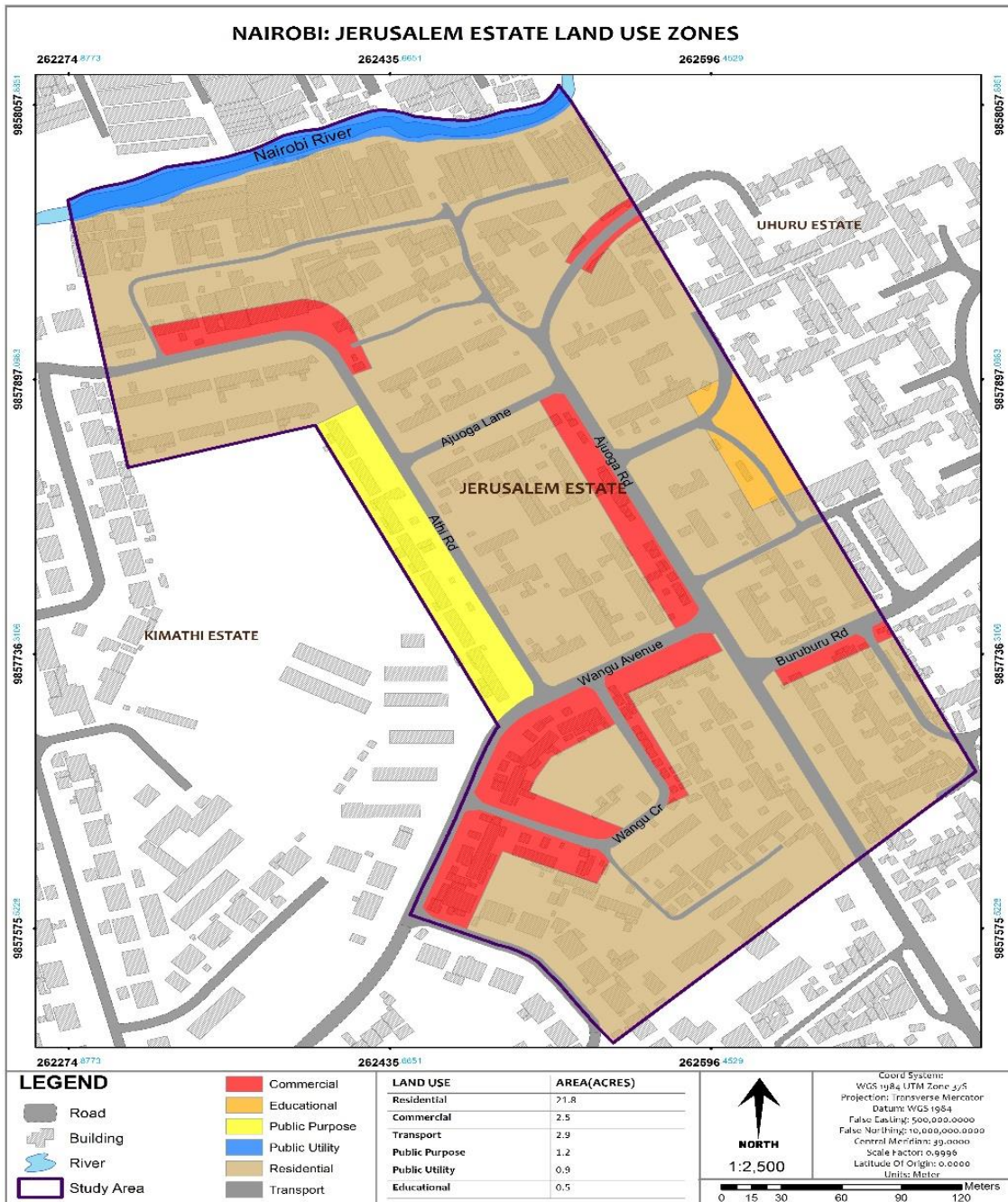
Source: Author, 2016

4.1 Introduction

This chapter will focus on the finding mainly from the field survey. The chapter will articulate the respondents from the household interviews, key informant and other stakeholder and the observation from the checklist. It will address the main characteristics of the residents and the estate's urban decay, causes, effects, reactions of the residents and other stakeholders to urban decay. The main areas addressed during data collection to come up with findings are physical, social and economic characteristics. The chapter will give the possible recommendations and solutions for urban decay in Jerusalem Estate.

4.2 Respondent characteristics

Chart 1: Household Size
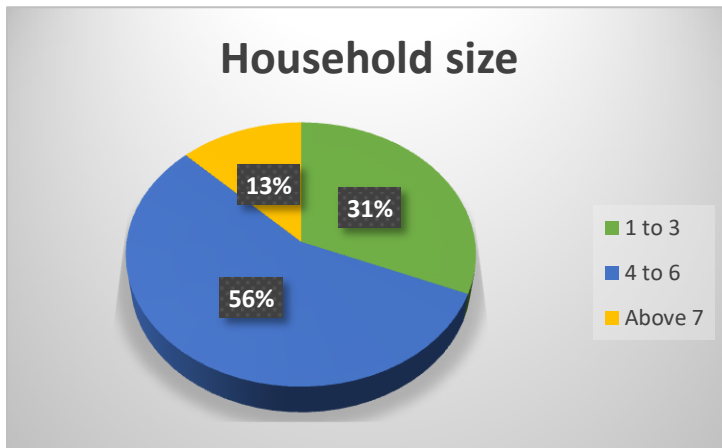
Household size: from the 30 questionnaires administered, most of the households had 4 to 6 members (56%). The households that had 1 to 3 members gave a 31 % while just a few households had household members above 7 (13%).

Source: Author, 2016.

Chart 2: Educational Background
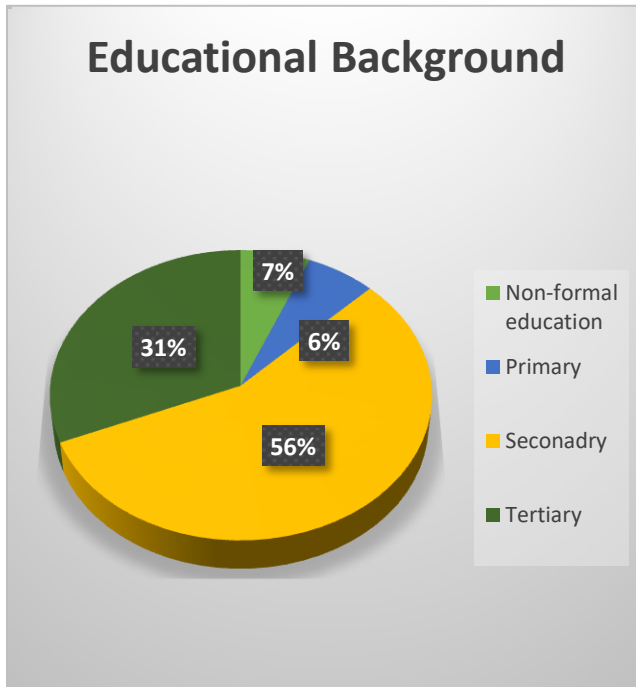
Educational background: Out of the household interviewed, 7% had attained non-formal education, 6% primary education, 56% secondary and 31% tertiary. The 56% that have attained secondary education, most of these respondents talked of dropping out of form two hence a high school dropout recorded. The respondents who talked of attaining tertiary level of education (31%), have just either attained a certificate after high school or a diploma indicating a lower level of skilled labour hence this can be attributed to the low income level in Jerusalem Estate.

Source: Field Survey, 2016

4.3 Economic characteristics of the residents

4.3.1   Employment

Chart 3: Employment Status
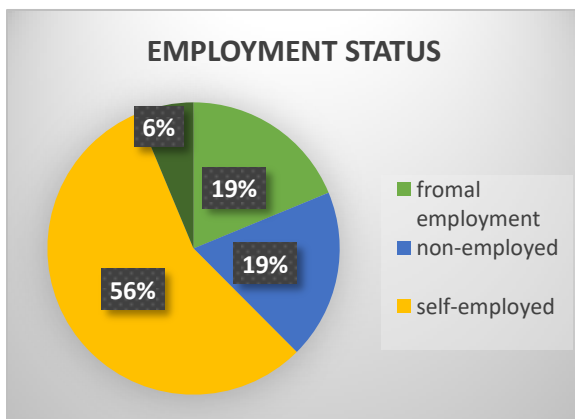
From the chart, about 98% of the self-employed persons live within Jerusalem and are involved in businesses or Jua Kali production. 69% of the respondents work within Jerusalem Estate and as stated earlier they involve themselves into business, while 25% are not employed and are without any stable employment. This percentage of the unemployed can be attributed to the theft cases always reported to the chief as the chief stated during his interview due to a high level of idling. 6% were working outside Jerusalem.

Source: Field survey, 2016

Chart 4: Place of work

PLACE OF WORK

25%

6%

69%

- Within Jerusalem
- Outside Jerusalem
- Not employed

Source: Field survey, 2016
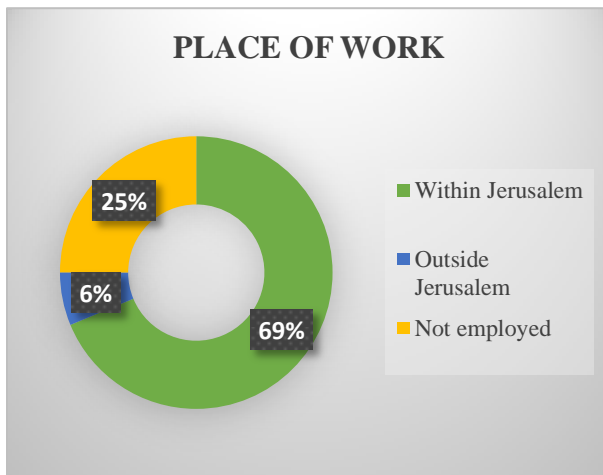
The average distance to work place was 2 kilometers, 44% of the respondents walk to work, 26% use public means of transport, while 5% use other means of transport and the common other means of transport stated during the household interviews was Bodaboda. Of course the other 25% don't have any work place so they don't travel to anywhere. 12% of the respondents have an additional source of income and most of these practice urban agriculture.

Plate 3: Urban Agriculture

Source: field survey, 2016

4.3.2 Income of the Household

Chart 5: Total Household income

TOTAL HOUSEHOLD INCOME

- Below 5000
- 5001-10000
- 10001-15000
- 15001-20000
- 20001-25000
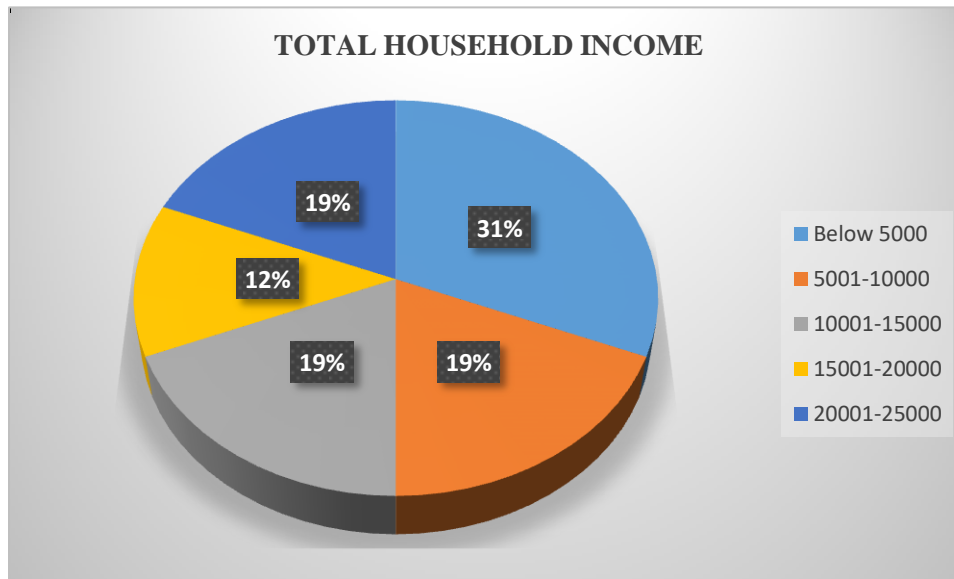
Source: field survey, 2016

Most of the residents in Jerusalem Estate (31%) have a household income of below Ksh 5000. 19% earn between Ksh 50001-10000 per month. From the above, 50% of the residents can only use their income for only basic household needs like food, clothes and shelter comparing their level of income to the economy of Kenya especially living in Nairobi. Approximately 19% have an income of Ksh 10001-15000, 12% earn Ksh 15001-20001 while 19% earn more than Ksh 20001. The income levels are also manifested in the housing typology of the residents. Only 12% of the respondents said that they have additional source of income and most of them practice urban agriculture and informal businesses.

4.3.3 Income Status and Achievement of Financial Needs

Income status and achievement of financial needs go hand in hand. About only 25% of the respondents said that their income has been increasing for the time they have been living in Jerusalem Estate and the same 25% have an improving achievement of the financial needs. 44% have experienced a neutral economic status where by this leads to a constant achievement of financial needs, that is, just paying rent, buying food and clothes hence one cannot be able to get

some more income to either start a business or cater for other needs such as travelling hence the high percentage of walking to work (44%). 31% have experienced a negative change of their income. The income status did not fully test the changes in economic performance due to inflation and increasing cost of living and therefore the achievement of the financial needs showed that the economic status of the residents have been deteriorating proving increasing level of poverty in Jerusalem Estate. This is shown in the graph and chart below.

Graph 1: Income Status

INCOME STATUS

increasing: 25
not-changing: 43.8
decreasing: 31.3
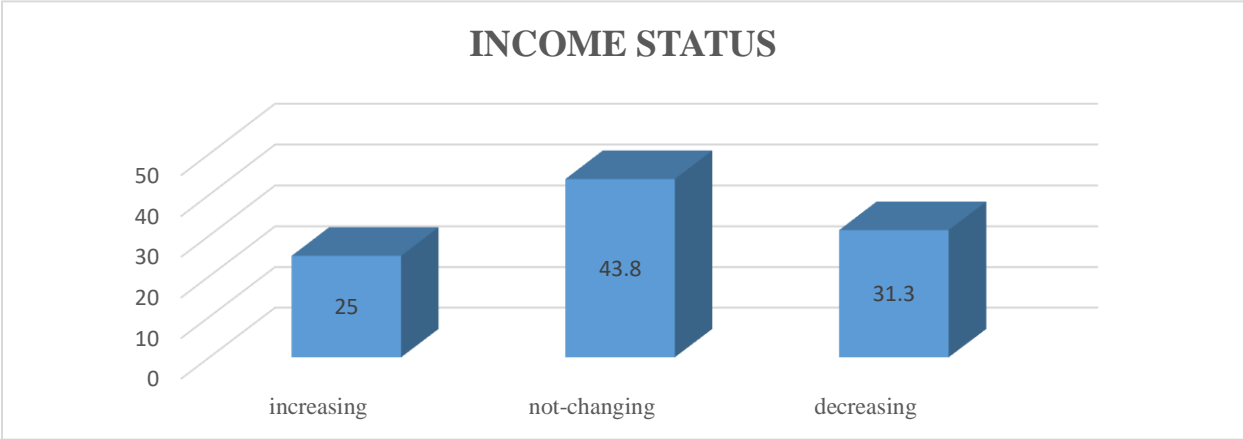
Source: field survey, 2016

Chart 6: Financial Needs Achievement

ACHIEVEMENT OF FINANCIAL NEEDS

- improving: 25%
- not changing: 44%
- deteriorating: 31%
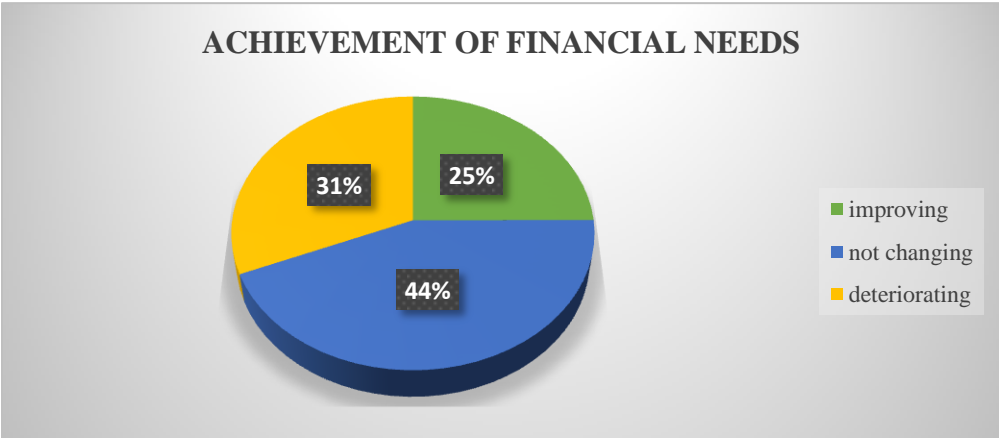
Source: field survey, 2016

4.4 Resident characteristics

4.4.1   Migration trend in Jerusalem Estate

A highest percentage of the respondents (56%) have lived in Jerusalem Estate for more than 30 years. 19% have lived in Jerusalem for more than 10 years while about 25% are new migrants who have been in Jerusalem Estate for less than 5 years. The new migrants mostly were the people interviewed in the flats. The new high rise buildings that have started coming up in Jerusalem Estate.

Table 2: Migration Trend in Jerusalem Estate

Less than 5 years	10-30 years	30+ years
25%	19%	56%

Source: field survey, 2016

4.4.2   Reasons for Residing in Jerusalem Estate

Chart 7: Reasons for living in Jerusalem Estate
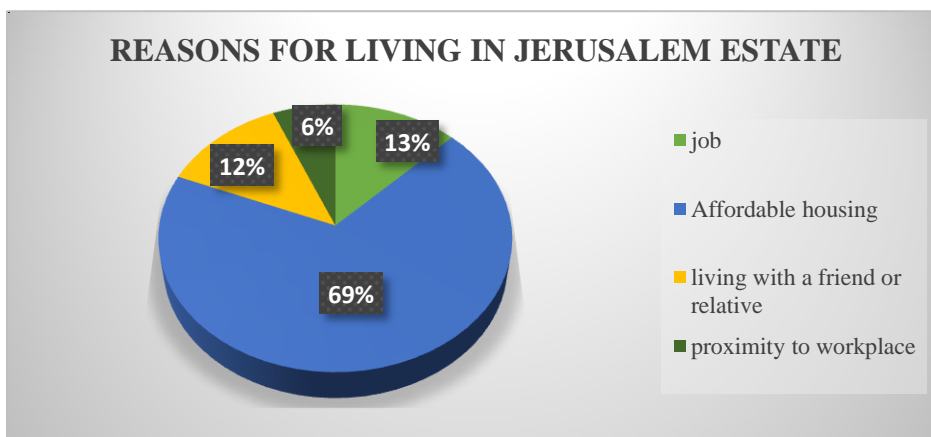
Source: field survey, 2016

Most of the residents in Jerusalem Estate (69%) are living there because of affordable housing while 13% are living there due to job since most of the residents work within Jerusalem Estate

(69%). 6% live in Jerusalem Estate due to proximity to workplace while 12% are either living with a relative or a friend. Out of the respondents interviewed, none was the initial occupant of the houses but most of the respondents were children of the persons allocated to those houses the high percentage of the people who have lived in Jerusalem Estate for more than 30 years (56%).

4.4.3   Problems experienced in rent payment

Table 3: Problems experienced in Rent payment

Problem	Percentage
High cost of rent	56
Not able to meet deadline of payment	38
Mode of payment	6

Source: field survey, 2016

56% of the residents find the rent high since 31% of the residents earn below 5000. 38% of the respondents said that they have been having problems in paying rent at the required time while 6% find it hard to pay rent through Bank and they could prefer payment by cash. The consequences of all these problems is that the residents are harassed as they are forced to vacate their rooms/houses.

4.5 Dwelling units

The total number of dwelling units in Jerusalem Estate is 243. Housing typology include high-rise to one floor (in a terraced housing), flats and temporary housing. Dwelling units in Jerusalem Estate can be described to be in a rapidly decaying condition. This can be manifested by the status of the old buildings, broken windows which have not been repaired or they are replaced by wood or torn sacs. The decay is also manifested in the form of worn out floors and leaking roofs which are hardly repaired. Most walls are in bad condition and have not been repainted or repaired ever since construction.

4.5.1 Housing Typologies in Jerusalem Estate

Plate 4: High-rise to one floor (in a terraced row housing)

Source: Field Survey, 2016

Plate 5: Flats

Source: Field Survey, 2016

Plate 6: Temporary Housing (Illegal Extensions)

Source: filed survey, 2016

4.5.2   Number of rooms

Majority of the respondents (75%) said that they were living in a two roomed house. 19% are living in a single room while only a 6% of the residents of Jerusalem live in 3 roomed house.

4.5.3   Adequacy of number of rooms

100% of those living in a single room said that the room was not enough for their needs. 63% of the respondents living in 2 or 3 roomed housed said that the number of rooms was not enough while 37% of the same were okay with living in a 2 or 3 roomed house.

4.5.4   Number of rooms that would be enough

The study sought to know the number of rooms that would be enough for the residents' housing needs. 38% said they were okay with two roomed house, 31% said that 3 rooms would be okay

and again 31% of the respondents would be comfortable in a four roomed house. This is summarized in the charts below.

Number of rooms at the moment and those that would be enough

Chart 8: Total number of rooms at the moment
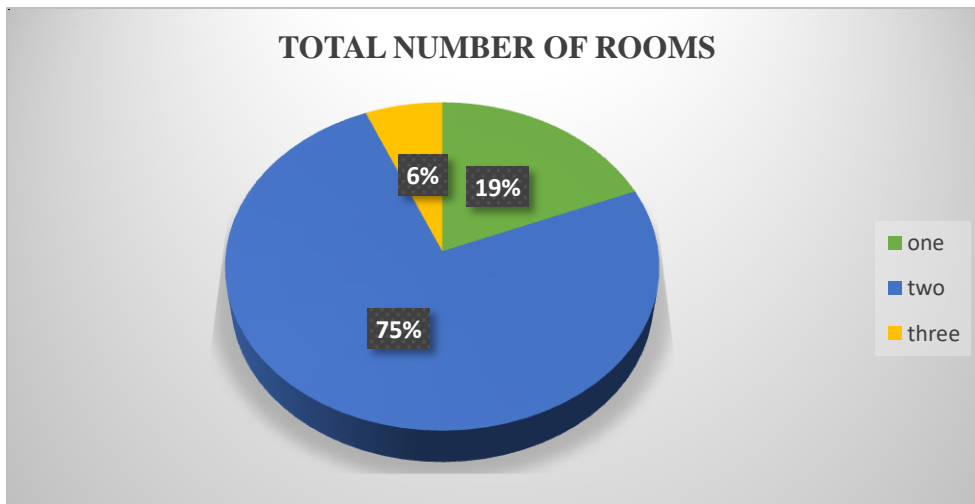
Source: field survey, 2016

Chart 9: Number of rooms that would be enough
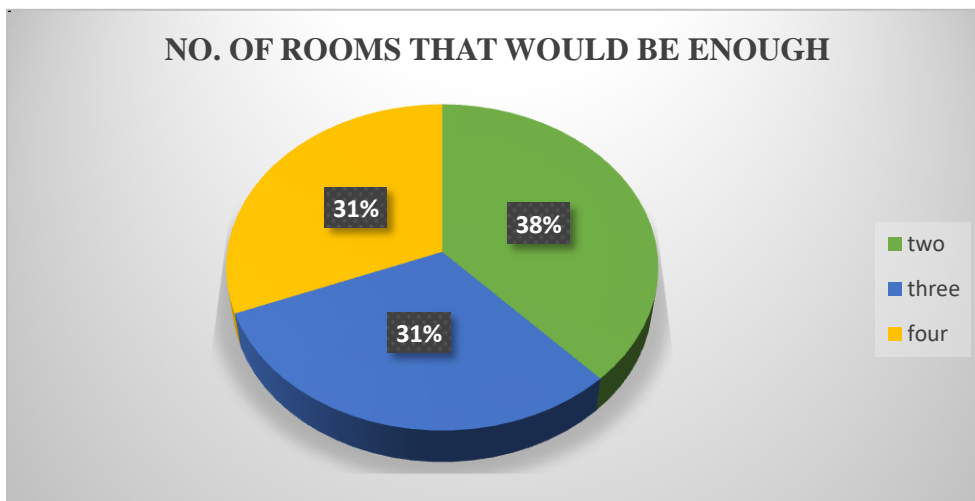
Source: field survey, 2016

4.5.5 Main problems experienced in the dwelling units

The main problems experienced in the dwelling units are leaking roofs, poor drainage, blockage of sewer pipes, inadequate water supply, poor solid waste management and insecurity. Due to the mentioned problems experienced in the dwelling units, the dwelling units are in bad (69%) or very bad condition (25%) and only 6% of the residents feel that the households are in good condition. The changing condition of the dwelling units has been to the negative mostly (57%) and only 38% feel the dwelling units are just the way they found them meaning there has not been any maintenance. 6% of the respondents feel that the dwelling units are positively changing and it was observed that the 6% were the people living in the recently constructed flats and other which are coming up.

4.5.6 How the residents cope with the above mentioned problems

It is evident that the people of Jerusalem have much problems with water and sanitation (blockage of sewer pipes, poor drainage, and poor solid waste management). Insecurity is also a major issue. The residents of Jerusalem Estate cope up with these problems by buying water and contributing towards maintenance of the sewer line. Some of the residents do repair to the households while others contact the County Government to do repair in the houses. About insecurity, the residents report to the chief. Concerning the above mentioned problems, 64% of the residents try to do maintenance in their households while 36% of the residents don't maintain.

4.6 Natural environment and physical infrastructure

The condition of the vegetation in Jerusalem Estate can be termed as poorly maintained and it is manifested by uncontrolled long grasses, shrubs and live fences that are not trimmed. This has resulted to breeding and hiding places for rats and other wild animals such as snakes that are dangerous to human health. Other indicators can be seen from the graffiti painted on the walls of the buildings.

Plate 7: Condition of the Natural Environment and Physical Infrastructure

Graffiti painted on the wall   **Poor Drainage System**

Stagnant dirty water   **Overgrown Grass**

Source: filed survey, 2016

Opened Sewage   *Poor Solid Waste Management (Dumped in Nairobi River)*

Source: field survey, 2016

4.6.1   Condition of the infrastructure

Table 4: Condition of the Infrastructure

Services	State and condition %			
	Very good	Good	Bad	Very Bad
Road	-	50	50	-
Drainage	-	12	25	63
Pedestrian lane	-	13	36	50
Water supply	-	-	25	75
Sewer system	-	-	63	37
Solid waste management	-	-	38	62

Natural environment and vegetation	-	18	75	7

Source: field survey, 2016

From the above table, the conditions or state of the natural environment and the physical infrastructure are either in bad or very bad condition; drainage, sanitation and water supply seem to be the greatest problems.

4.6.2   Main problems, cause and effect on infrastructure and natural environment

Table 5: Main problems, cause and effect on Infrastructure and natural environment

Service/infrastructure	Main problems	Cause	Effect
Road	Potholes	Lack of maintenance	
Drainage system	Stagnant water Dirty environment	• Blockage of the drainage system • Poor maintenance • Population pressure	• Breeding of disease causing organisms • Air and soil pollution • Loss of aesthetic value
Pedestrian path	Inadequate for the population	Increased population	Traffic congestion

Water supply	Inadequate water supply	• Vandalism of water pipes • Increased population	• Poor sanitation • Unnecessary expenses buying water
Sewer system	• Blockage of sewer system • Bursting of sewer pipes	• Population pressure • Poor maintenance	• Diseases • Air pollution • Loss of aesthetic value
Solid waste management	Dumping of solid waste anywhere and everywhere	No regulations concerning solid waste management Increased population	• Loss of the aesthetic value of the area • Attracting birds and rats • Can lead to diseases
Natural environment and vegetation	Long shrubs and grasses	Lack of maintenance	• Increased insecurity • Loss of aesthetic value

Source: field survey, 2016

4.6.3   Community and social facilities

The study established that all the community facilities and services are in bad condition and if not in bad condition some of the community facilities and services do not exist in the area. The condition of these facilities has also been changing negatively over time. This is evident by looking at the condition of schools, health facilities, recreational facilities, social and sporting facilities and religious facilities. This condition is brought about by poor maintenance of these community facilities by the City County Government and the community itself, pressure on the

facilities due to increasing population, poor and inadequate human resource in administrative offices and increased cost of living. The effect of all these is poor performance academically, loss of aesthetic value of the environment and poor learning and living conditions.

4.7 The reaction of residents to urban decay

4.7.1 Reactions of residents to control decay

The Residents of Jerusalem Estate felt that undertaking maintenance of the infrastructure services, engaging in urban agriculture to supplement the household budget, implementation of the "Nyumba Kumi" initiative, management of solid waste management at the household level and unity among the residents would solve the problem of urban decay. This is summarized in the table 6 below.

Table 6: Reaction of residents to control Urban Decay

Reactions of the residents to the decaying conditions	% of the respondents who does this
Undertake maintenance of the infrastructure facilities	64
Urban agriculture to supplement HH budget	12
Nyumba kumi initiative for security purposes	13
Reporting to the City County Government	19
Unity among the residents	6
Managing solid waste at household level	2

Source: field survey, 2016

From the above table;

Majority of the residents only respond to the issues that affect their dwelling units but not those affecting them as a community. It can also be deduced that there is no a strong sense of belonging in Jerusalem Estate and most people feel they live in Jerusalem because they have no alternative due to their low levels of income.

4.7.2   Solutions of urban decay according to the residents

Some residents of Jerusalem Estate felt that upgrading of drainage, sewer system and the dwelling units would solve the decay. Others wished that the Estate would be redeveloped completely while some residents felt that comprehensive renovation should be carried out.

Chart 10: Suggested solutions to urban decay
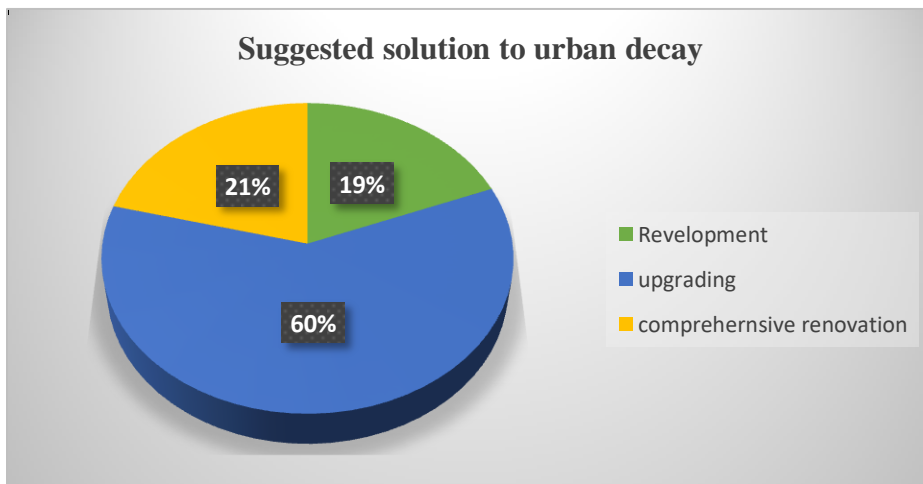
Source: field survey, 2016

4.7.3   Reasons why the residents may choose to leave the Estate

From the findings, it was deduced that a highest percentage of residents in Jerusalem Estate are living there because of low income and in case there income increased they were ready to leave the estate. Other reasons that would make the people residing in Jerusalem Estate leave include business failure, increment of rent, retirement and higher paying jobs. This information is shown in Graph 2 below.

Graph 2: Reasons why residents may choose to leave Jerusalem
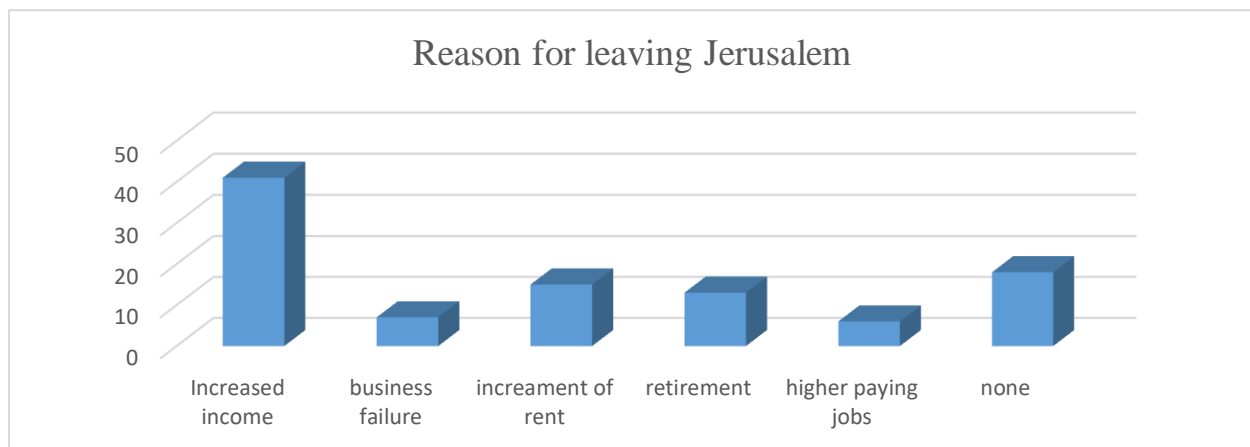
Source: field survey, 2016

4.8. Urban renewal approaches applicable in Jerusalem estate

From the research findings explained in chapter four, urban decay is evident in Jerusalem Estate. The findings can be summarised as;

The research revealed that there was inadequate technical, financial, and institutional capacity within the Nairobi City County Government in its management and maintenance of Jerusalem Estate, in its enforcement of policies and in the implementation of the prepared renewal plans.

The research further demonstrated that there was unprecedentedly high rates of poverty among the residents in Jerusalem Estate which may be partly attributed to decay in the residential neighbourhood. This was revealed by the residents who indicated that they did not have any extras residual finances to use in the renovation of their dwellings and other buildings in the Estate.

The findings of the research show that inadequate maintenance of the previous good status and image of the estate could be attributed to the inadequate social cohesion among the residents, inadequate capacity of the residents to maintain and repair their houses and other infrastructure services. The research also revealed that poor solid waste management and maintenance of the sewerage and drainage system led to sanitation problems and hence to a deteriorated healthy environment for residents to live in.

The research further indicated that poverty and unemployment status among the residents resulted to crime and insecurity issues in Jerusalem Estate.

According to the findings of the research, the decaying condition of Jerusalem Estate could be attributed to the ageing condition of the estate since the Estate was built in 1959. In addition, the findings indicated that age had come with exceeded capacity of the infrastructure due to the growth of the Estate.

The findings of the research demonstrated that the decaying condition of Jerusalem Estate could be attributed to lack of maintenance of the houses by the tenants. The tenants claimed that they could not afford to spend money on maintenance since their incomes are low and again they are ready to leave the Estate anytime their incomes improve.

From the findings therefore, the following urban renewal approaches are considered to be applicable in solving the urban decay in Jerusalem Estate.

Rehabilitation and Repair

Rehabilitation, often termed conservation or preservation, is based on preserving, repairing, and restoring the natural and man-made environments of existing neighbourhoods. Rehabilitation is applicable to areas where buildings are generally in structurally sound conditions but have deteriorated because of neglected maintenance like the findings stated. The rehabilitation approach is underpinned by a recurring theme of citizen participation since the target population is already on site.

The principles of rehabilitation recognize that the limited availability of funds for new construction and the serious housing shortage make the option of destroying already-existing housing appear both unaffordable and imprudent. They recognize the value of old neighbourhoods and, by preserving what is unique, ancient, and specifically local, it can also contribute to the development of the tourism industry and stimulate the economy. From the standpoint of energy, time and cost, rehabilitation is a sensible solution to the problem of urban decay.

However, rehabilitation still has its limitations due to the technical difficulties and the amount of work and research involved. Rehabilitation is often perceived as a complex and time-consuming process, which is more difficult to implement than redevelopment. It requires a high degree of social organization and social responsibility, as well as a total reorganization of the housing process. The introduction of new infrastructure to old and dense neighbourhoods can also be a difficult task.

The Integrated Approach

The integrated approach combines the best aspects of rehabilitation and redevelopment approaches. This will be done at the waterfront of Jerusalem Estate. There will be combination of different land uses which include transport, recreational, public utility, commercial and residential. It consists of rehabilitation of what can realistically be saved, combined with reconstruction of new buildings in the place of those beyond the reach of feasible rehabilitation.

The integrated approach is considered today to be the most acceptable way to regenerate old neighbourhoods and therefore recommended for Jerusalem Estate whose one contribution to the Estate's decay is old age. It allows for flexible project implementation, which can preserve the traditional urban environment while achieving respectable densities. It respects the social order of the community by re-housing the majority of the original residents on the site and invites mass participation. The integrated approach results in the creation of rich environments through the integration of new buildings within the existing neighbourhoods and allows for the development of a new form of contemporary architecture with local characteristics, enriching the appearance of the old city while maintaining its identity. However, for many developers and local authorities, the integrated approach remains a time-consuming process, less profitable than redevelopment, when the objective is to supply mass housing.

4.9. Conclusion from the research findings

From the research findings, it can be concluded that Jerusalem estate houses a section of the middle income people in the city engaged in formal employments with monthly personal incomes of above Kshs.20, 000. The number of residents in one dwelling unit ranges from 20-40 people. This indicates that the dwelling units are inadequate for the increased population. Most

of the residents in the estate migrated to the estate from other estates in Nairobi, mainly due to affordable rents.

Jerusalem estate is predominantly residential with informal structures coming up to serve as retail shops, eating areas, service centres among others and also for residential purposes. These informal structures can mainly be observed at the waterfront of Jerusalem estate.

There is poor maintenance of both the housing and infrastructural facilities by both the residents and property owners who is the Nairobi City County. The housing facilities are dilapidated characterized by ugly walls, oxidized iron sheet roofs and unkempt walls. Also most of the infrastructural facilities dysfunctional; especially the sewer lines and storm water drainage channels.

From the findings it was found out that some of the area residents have adopted ways of renovating the houses by re-painting the ugly walls as a way of addressing the dilapidation problem.

Therefor there is need of urban renewal in Jerusalem Estate so as to solve the urban decay problem. This can be done through either repair and renovation or by using the integrated approach as discussed earlier on the applicable renewal approaches in Jerusalem Estate.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

From the study conducted about Urban Decay in Jerusalem Estate, it is evident that the causes of Urban Decay are both Internal and External factors. The external factors include inadequate capacity of service provider in terms of resources, material, finance and staff, land tenure and ownership whereby the City County Government are the current owners of the land in Jerusalem Estate hence reluctant to work on the land compared to if the land was owned by private individuals, Poor capacity to implement renewal plans and poor application of policies and guidelines that can effectively respond to urban decay. Internal factors include high rate of poverty among the residents, poor management and maintenance by the locals, poor community cohesion and sense of ownership, unemployment, old age of the estate, vandalism and abandonment by residents. These all factors manifests Physical, Environmental, Social and Economic Decay.

In conclusion there is need to come up with a comprehensive approach to solve the housing and neighbourhood problems through urban planning approach. This Urban Planning Approach is expected to respond to the issues of Social decay, economic decay, environmental decay and Physical decay. A comprehensive urban renewal of the estate is considered to be the most appropriate approach to deal with all the above mentioned forms of decay and of course this will require the involvement of the stakeholders in the neighbourhood development concept.

5.2. Research Recommendations

From the above, the research recommends;

Total Redevelopment of the Estate

Having examined Urban Decay of this old institutional housing estate Jerusalem, it is considered that the use of land in the estate is not sustainable. It comprises of low density, single use developments and large unused spaces of idle land. The policy makers, CCGN in agreement with the estate owners considers the estate ripe for redevelopment. Due to the proximity of the estate to the city centre, they consider the estate an ideal area for the City Center's decongestion and

recommend urban Renewal of Jerusalem Estate. This study thus recommends a holistic approach to address the above challenges in the form of total urban renewal of the estate. The summary of the subsequent recommendations is as follows.

Provision of a Mixed Land Use Structure

Mixed land uses within the estate will facilitate both residential and economic use with the establishment of different housing types, office spaces and social functions all in one. The spatial integration of housing, transportation and commercial land uses in mixed-use developments will also economically regenerate the estate. This will largely address the creation of employment opportunities for the unemployed proportion of the population and in turn address the problem of haphazard sprouting of commercial facilities.

Construction of High Rise, High Density Developments

The problem of low density developments in the estate is the main cause of inefficient land use in the estate as the existing structures inhibit further development. The returns from the existing structures do not correspond to the current land value either. There is therefore need to construct high rise, high density developments just like the neighboring estates for example the newly constructed civil servants houses by NHC on the other side of Desai road. This will address the problems of inefficiency of space use and inadequate housing facilities as a larger population will be accommodated per unit area. Construction of high density developments will also ensure that the vertical space has been optimally utilized leaving part of the horizontal space for greenery and quality open spaces.

Provision of a Range of Housing Types and Choices

The housing typologies to be established should additionally allow for flexibility and variety in their planning and design dimensions to accommodate subletting (by designing houses with servant quarters which can be rented out by the main occupant), elasticity of household sizes and home-based economic enterprises. This will reflect the dynamic social, cultural backgrounds and economic demands of the circumstances of low-middle-income households.

Improvement and Upgrading of Infrastructure and Service Facilities

The existing infrastructural and service facilities require some improvement to transform their conditions to reasonable standards. The vehicular roads need some widening for them to be able to accommodate the high traffic flow that will be generated by the high density as well as paving to improve their conditions. The capacity of the sewer and drainage channels need to be expanded for them to meet both the current and future demands.

Provision of Street Lights within the Estate to Enhance Security at Night

As the estate awaits redevelopment, street lights should be installed along the roads to ensure security at night.

Proper Maintenance of the Housing, Infrastructural Facilities and the Physical Environment

This is a short term recommendation. The Kenya Railways Staff Retirements Benefits Scheme should provide a proper maintenance of the infrastructural facilities and the physical environment within the estate. They ought to regularly clean up the drainage channels, initiate a proper solid waste management system and ensure a routine landscaping of the vegetation. The area residents should adopt an initiative of upgrading the individual dwelling units by re-painting the walls, windows and doors to make them more appealing. The CCN should effectively carry out its power of development control in the estate. It should also ensure that its responsibility of managing and maintaining the two community facilities (dispensary and the nursery school) is efficiently done.

Ensure Participation of All Stakeholders

Past experience worldwide has revealed that stakeholder participation at all levels of the planning is an important factor for the success of any programme. A strong emphasis should be put on the public, private and community participation. Thus, the involvement of the resident community, along with the policy makers and technical experts, during the entire decision-making process is crucial. This will provide a broad framework for plan implementation through the organization and management structure of the institutional arrangements. It will also enable the harnessing, stimulation and mobilization of the natural, material, financial and human

resources needed for the plan implementation.

5.3. Areas for Further Research

This study recommends further study on the urban decay in waterfront neighbourhoods, City of Nairobi's commercial centres, the main industrial area, the transportation land use and in other middle-income residential areas such as Buruburu.

Some parts of Jerusalem estate and in oitger low-income residential neighbourhoods have undergone urban renewal in part or in whole. The impacts of urban renewal on the residents of Jerusalem estate and in virtually all planned and unplanned low-income residential neighbourhoods in Nairobi would be useful in order to propose the requisite mitigation plans.

The sustainability of urban renewal policy options in various spatial areas of Jerusalem Estate such as the waterfront, the housing units, the community facilities, the transportation system, the infrastructure services and the institutional system in general could be useful as a futher area of research.

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Appendices

Appendix 1 - HOUSEHOLD QUESTIONNAIRE

UNIVERSITY OF NAIROBI

DEPARTMENT OF URBAN AND REGIONAL PLANNING

Title of RESEARCH PROJECT: URBAN DECAY IN RESIDENTIAL NEIGHBOURHOODS: A CASE STUDY OF JERUSALEM ESTATE, EASTLANDS, NAIROBI.

Declaration; this questionnaire is meant for academic purposes only and any information collected will remain confidential

HOUSEHOLD QUESTIONNAIRE: Questionnaire No……………….

Date…………………………………..

A. Personal details

Name   of   the respondent……………………………………………………………………………………

Phone number……………………………………………………………………….

1. Age………………………………..(years)
2. Sex……………(1) Male   (2) Female
3. Marital Status…………………………………………………………......
   (1) Married (2) Single (3) Separated   (4) Widower   (5) divorced   (6) others (specify)
4. Are you the household head   (1) Yes   (2) No
5. Household size……………………………………………………………..

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6. Educational background…………………………………………………………………………………
   (1) Non-formal education   (2)primary   (3)secondary   (4)college/university
      (5)other(specify)

7. Employment status……………………………………………………….
   (1) Formal employment   (2) not employed   (3) self-employed   (4) retiree   (5)
      other(specify)

8. Working place……………………………………………………………….
   (1) Within Jerusalem   (2) Outside Jerusalem

9. Distance to work place……………………………………………….(km)

10. Which mode of transport do u use to get to your work place? ....
   (1) Public transport   (2) walking   (3) private   (4) other(specify)

11. Do you have an additional source of income………………..
   (1) Yes   (2) No

   If   yes
   explain……………………………………………………………………………………
   ………………..

12. Total household income…………………………………………….(ksh)
   (1) 1-5,000   (2) 5,001-10,000   (3) 10,001-15,000   (4) 15,001-20,000   (5) 20,001-
      25,000

   (6) Above 25,000

13. How can you define your **income** and **achievement of your financial needs** over the
   time you have been in Jerusalem Estate

Income(tick)			Achievement of your financial needs(tick)		
Increasing	Not changing	Decreasing	Improving	Not changing	deteriorating

B. Resident characteristic

14. How long have you been living in Jerusalem Estate? ....year(s)…………..month(s)

15. Why do you prefer living in Jerusalem Estate?

    (1) Job   (2) Affordable housing   (3) Living with a friend/relative   (4) proximity to workplace   (5) other(specify)

16. Are you the initial occupant of this house?

    (1) Yes   (2) No

17. What are the major problems that you experience relating to the payment and tenancy of your house?

C. Dwelling units

18. What is the total number of rooms in your house? ....

19. Are the number of rooms enough for your household needs?

    (1) Yes   (2) No

    If NO, how many rooms do you think could be enough for your household needs?
    ....

20. What are the main problems you experience in your household dwelling unit?...
    ....

21. How can you describe the condition of your house and how can you also describe the changing condition?

State/condition of the dwelling unit (tick)				Type of change (tick)		
(1)	(2)	(3)	(4)	(1)	(2)	(3)
Very good	Good	Bad	Very bad	Positive (+ve)	Neutral	Negative(-ve)

				‖		

22. How do you cope with the above mentioned problems?

………..

23. Do you undertake any maintenance of your house to prevent loss of its value?

(1) Yes   (2) No

If   yes,

explain…………………………………………………………………………………………

………………..............

If   No,

why…………………………………………………………………………………………………

……………………………

D. Natural Environment and Physical Infrastructure

24. How can you rank the conditions of the following services in Jerusalem Estate and the main problem associated by their condition?

Services	Conditions and state (tick)				Problem/challenges
	(1) Very good	(2) Good	(3) Bad	(4) Very bad	What problem/challenges arise from these conditions
Road					
Drainage					
Pedestrian lane					

Water supply					
Sewer system					
Solid waste management					
Natural environment and vegetation					

25. Indicate the causes and effects of prevailing infrastructure services conditions in Jerusalem and the nature of change observed in these conditions

Service/infrastructure	Causes of its condition/state	Effects of its condition/state	Changing condition (tick)		
			(1) +ve	(2) Neutral	(3) -ve
Road					
Drainage system					
Pedestrian path					
Water supply					

Solid waste management					
Sewer system					
Natural environment and vegetation					

E. Community and Social facilities

26. How can you rank the condition of the following community and social facilities? How can you also describe the changes over time you have been in Jerusalem Estate?

Facilities	Distance	Condition/state (tick)				Changes (tick)		
	In KM	(1) V good	(2) Good	(3) Bad	(4) V Bad	(1) +ve	(2) Neutral	(3) -ve
Primary schools								
Secondary schools								
Higher learning institutions								
Health facilities								
Recreational facilities								

Police station/post									
Administrative facilities									
Social halls									
Sport facilities									
Commercial centers									
Communication facilities									
Transport facilities									

27. What do you think is the cause, effect and the main problem of the above named facilities?

Facilities	Cause of the condition	Effect of the condition	Main problem
Primary schools			
Secondary schools			
Higher learning institutions			

Health facilities			
Recreational facilities			
Police station/post			
Administrative facilities			
Social halls			
Sport facilities			
Commercial centers			
Communication facilities			
Transport facilities			

28. How can you rank the following social and economic aspects?

Social and economic indicators	Changes			Condition/state				Main challenge arising from these condition
	(1) +ve	(2) Neutral	(3) -ve	(1) V good	(2) Good	(3) Bad	(4) V bad	
Security								
Family								

fragmentation								
Dilution of culture								
Income disparities								
Household population								
Local community's unity								

29. What do you do as an individual or with other persons in Jerusalem Estate to respond to the problems associated with decay of this neighbourhood?

30. What do you think can be done to address the problem of decay faced by the entire neighbourhood of Jerusalem Estate?

31. What Reason can make you leave Jerusalem?

THE END, THANK YOU.

Appendix 2 - INTERVIEW SCHEDULE FOR THE DIRECTOR OF PLANNING

UNIVERSITY OF NAIROBI

DEPARTMENT OF URBAN AND REGIONAL PLANNING

RESEARCH PROJECT TITLE: URBAN DECAY IN RESIDENTIAL NEIGHBOURHOODS: A CASE STUDY OF JERUSALEM ESTATE, EASTLANDS, NAIROBI.

Declaration; this questionnaire is meant for academic purposes only and any information collected will remain confidential

INTERVIEW SCHEDULE FOR CITY COUNTY GOVERNMENT OF NAIROBI

Date…………………………

Name……………………………………   ………………………………………….

Office Tel No……………………………

<u>Director of Urban Planning</u>

1. What are the roles and responsibilities of City County Government of Nairobi in the overall management of Jerusalem Neighbourhood?

2. Kindly fill the table below on the initial physical planning provisions for Jerusalem under the following criteria

Population density	Ground coverage	Plot ratio	Housing typology	Income levels of residents	Building materials	Total No. of housing units

3. Who is the owner of the land where Jerusalem neighbourhood is located?..

4. How can you rank the condition of the following services and community facilities and how have they been changing over time?

Service/community facility	Condition(tick)				Change over time(tick)		
	(1) V good	(2)Good	(3) Bad	(4) V bad	(1)Positive	(2) Neutral	(3)Negative
Housing units							
Security							

Economic levels							
Economic disparities							
Population densities							
Natural environment and vegetation							
Service and infrastructure							
Community and Social facilities							
Aesthetic values							
Family Segregation							
Cultural identity							

5. What is the cause and effect of the above mentioned changes (Q4)?

Service/community facility	Cause of the change	Effect of the change
Housing unit		
Security		
Economic levels		
Population densities		

Natural environment and vegetation		
Service and infrastructure		
Community and Social facilities		
Aesthetic values		

6. How have these changes mentioned above (Q4) manifested themselves in Jerusalem Neighbourhood?
7. What values have been lost as a result of urban Decay in Jerusalem Estate?
8. Are there any previous physical planning efforts on Jerusalem estate?

Name of the physical plan	Year of preparation	Implementation		Reason for implementation status
		Yes	No	

9. Are there any current physical planning efforts the City County Government of Nairobi has for Jerusalem Neighbourhood?

UNIVERSITY OF NAIROBI

DEPARTMENT OF URBAN AND REGIONAL PLANNING

RESEARCH PROJECT TITLE: URBAN DECAY IN RESIDENTIAL NEIGHBOURHOODS: A CASE STUDY OF JERUSALEM ESTATE, EASTLANDS, NAIROBI.

Declaration; this questionnaire is meant for academic purpose only and any information collected will remain confidential

MAINTENANCE OFFICER JERUSALEM

Date…………………………

Name…………………………………… ………………………………….

Phone Number……………………………

1. What is the role of your office regarding the maintenance of Jerusalem to address and arrest the decaying conditions?
2. Why are there a lot of changes to Jerusalem neighbourhood without clear adherence to Development Control?
3. Why is it happening?
4. What are the main social-economic problems/challenges affecting the residents of Jerusalem?
5. How can you explain the state of population flight in Jerusalem neighbourhood?
   i) High income earners are migrating out of the estate and are replaced by low income earners
   ii) Low income earners are migrating out of the estate and are replaced by high income earners
   iii) The population migrating in and out of the estate are of equal economic ability

iv)   Others

(specify)………………………………………………………………………

………………

6. How can you rank the condition of the following services and community facilities and how have they been changing over time?

Service/community facility	Condition(tick)				Change over time(tick)		
	(1) V good	(2)Good	(3) Bad	(4) V bad	(1)Positive	(2) Neutral	(3)Negative
Housing unit							
Security							
Economical levels							
Economic disparities							
Population densities							
Natural environment and vegetation							
Service and infrastructure							
Community and Social facilities							
Aesthetic values							

Family Segregation							
Cultural identity							

7. What do u think are the main causes of the changes mentioned above (Q6)?
8. What are the effects of the changes mentioned above (Q6)?
9. What planning interventions have the following stakeholders applied in controlling and maintaining good condition of Jerusalem neighbourhood?
    i) Residents/local community
    ii) Community leaders/ politicians
    iii) NGOs and CBOs
    iv) The City County Government of Nairobi
    v) Ministry of housing
    vi) Others (Specify)
10. What are the plans ever prepared to respond to the decaying conditions of Jerusalem Estate?
11. What do you think can be the best planning interventions to maintaining the value and status of Jerusalem neighbourhood?
12. What planning opportunities do you think exist but have not been exploited?

END

THANK YOU

UNIVERSITY OF NAIROBI

DEPARTMENT OF URBAN AND REGIONAL PLANNING

RESEARCH PROJECT TITLE: URBAN DECAY IN RESIDENTIAL NEIGHBOURHOODS: A CASE STUDY OF JERUSALEM ESTATE, EASTLANDS, NAIROBI.

Observation check list

Checking on condition, state and maintenance issues on the physical facilities as indicators of Urban Decay in Jerusalem Neighbourhood

1. Renovation and maintenance of the dwelling unit in terms of floor,……………………………walls,…………………Roofing…………………………………….
2. Condition of the sewer system…………………………………………………..
3. Condition of the drainage system……………………………………………………………
4. Condition and level of the Solid waste…………………………………………………………
5. Road Conditions……………………………………………………………………………….
6. Road sizes……………………………………………………………………..
7. Condition and the state of the shopping center area on;
   - Solid waste management……………………………………………..
   - Renovation and maintenance of shopping stores……
   - Traffic issues……………………………………………………………
   - Cases of uncontrolled weeds, shrub and grass growing……………………………………………
8. Availability and state of recreational facilities
   - Children's playground…………………………………………………………..

- Old and disabled…………………………………………………………………..
- Youth………………………………………………………………………………
……

9. Condition and state of aesthetic attributes

Are you assessing other decaying social and community facilities as well? You would need to state which one they are based on the existing base map for Jerusalem estate.

Are other semi-permanent units in the form of dwelling units and business enterprises developed considered to be elements of physical decay?