"THE CONTRIBUTIONS OF INFORMAL HOUSING IN URBAN HOUSING DEVELOPMENT: A CASE STUDY OF KAWANGWARE IN NAIROBI."

BY

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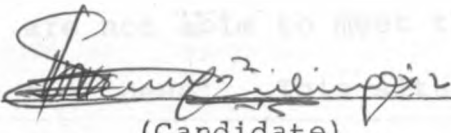A THESIS SUBMITTED IN PART FULFILMENT FOR THE DEGREE OF MASTER OF ARTS (PLANNING) IN THE UNIVERSITY OF NAIROBI.
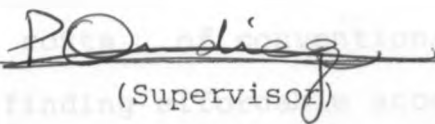
JUNE 1986
NAIROBI, KENYA.

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A B S T R A C T

Existing evidence shows that Nairobi is experiencing a serious housing problem. The existing housing stock is wholly deficient while the existing conventional housing supply mechanisms, both private and public, are not able to meet the housing 'demand' leave alone the 'need'. This situation is worsened by the rapid urbanization process Kenya is experiencing accompanied by the accelerated growth of the urban population through natural increase and the unprecedented movement of people from the rural areas to urban centres (Nairobi receives a disproportionate share of the migrants).

The lower income groups are the worst hit by the urban housing. With their low levels of income and the high costs of conventional housing these are confined to finding affordable accomodation in informal housing areas which are mainly characterised by semi-permanent and temporary housing, and lack of services, utilities and ammenities. The persisting nature of informal housing in the urban areas and the fact that they house about 40% of the urban population shows that there is need to recognize the contribution of such settlements to the expansion of the urban housing stock especially for the low income groups.

It is on the basis of the above that this study
was designed to examine the possibilities of
incorporating informal housing into the official urban
housing stock. Taking Kawangware as a case study data
are presented to   show that informal housing are
characterised by low levels of education with most of
the inhabitants employed in informal sector activities
mainly located in the residential area itself. The
residents fall in the low income category of urbanites
defined as those whose monthly earnings are less than
Kshs. 2000. This limits the rent payment capacity
of such a population; the majority of the residents,
going by the Kawangware case study, can only pay
maximum rents not exceeding Kshs. 200 per month.

It is also evinced by this study that informal
housing dwellers consider their housing adequate and
are content with living in such dwellings built of
non-conventional materials. The basic problem faced
here is therefore one of poor health and sanitation
(manifested in poor toilets, stagnant dirty water, and
uncollected garbage, among others) and the lack of
proper access roads, rather than of dwelling units.
Using such findings, the study recommends the
incorporation of informal housing into the official

urban housing stock without upgrading at higher costs
by improving only services and facilities. Such
upgrading of services and facilities should therefore aim
at minimum standards to avoid incurring alot of
costs to the tenants through appreciated rents. This
way informal housing can help increase the urban
housing stock much faster.

A C K N O W L E D G E M E N T

my respondents during the field survey. Not forgetting

Mr. Anyatei of Nairobi City Housing Department, the

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manuscript, and many others whose names are not mentioned

here but gave generously of their time during this

study.

Mulinge Munyae Masai.
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CHAPTER ONE

1.0 INTRODUCTION

Housing is one of man's basic needs. Despite
this the problem of housing has continued to persist
all over the world being worst in the developing
countries. The worst hit group of the society
by this housing shortage is the low income households.
So far these have continued to find the answer to their
problem in informal housing areas which are excluded
from the official housing stock. Here is where they find
affordable shelter. It is here also where most of
them find their employment.

Past attempts to recognise the contributions
of informal housing in urban housing development,
and therefore incorporate it into the official
housing stock, in Kenya are reflected in the
existence of an upgrading policy. But the upgrading
processes of these areas usually take the form of
rehabilitating not only the infrastructure and services,
but also the dwelling units. Such a process in
most cases raises the level of the housing (the
infrastructure and the dwelling units) beyond what
is affordable to the residents. With the
improvements rents go up and this leads to a displacement
of some of the target tenants.

The part informal housing plays in housing
especially the urban poor is crucial in understanding
affordability and therefore planning for and providing
what the people can afford.   It is thus the aim of
this study to try and develop a case for informal
housing in urban housing development without necessarily
having to make these areas beyond the economic reach
of the poor. Improvements, where necessary, should
not raise the level of the housing beyond what is
affordable to the target population. It is on the
basis of this that the study focuses on:

(a)   the housing and sanitation conditions in
       these areas,
(b)   the population structure in these areas,
(c)   the immigration patterns in these areas, and
(d)   the socio-economic characteristics of the
       population in these areas.

1.1   THE PROBLEM STATEMENT

A large proportion of the urban population
in almost all developing countries lives in sub-
standard housing, in areas which have been termed
squatter settlements, slums, spontaneous or
unauthorized settlements; terms which describe a
variety of different conditions with respect to
standards of housing and services layout, legal

status and historical background. In Nairobi, for
example, estimates show that 38% of the housing stock
can be classified as unauthorized.   In Kisumu
it is estimated that 40-45% of the population live
in unapproved housing whereas in Mombasa the same
percentage is estimated to be near 50% (Agency for
International Development, Office of Housing; 1979:
12).

The problem of housing especially in the
developing countries is not a new phenomenon. It is
part and parcel of a wider problem, that of
unprecedented rate of urbanization taking place in
all developing countries. The growth of   the
population is in turn tied to the phenomenon of rural-
urban migration which many nations (Kenya included)
have attempted to reverse but in vain. With the
increased population and the low rates of increase
in the urban housing stock the housing needs are
stretched beyond limits and cannot be met by the
supply. Consequently informal housing areas have
continued to feature prominently in the urban scene.
Even with the official attitude towards these areas
by city and town authorities (they are termed as
illegal and substandard dwelling areas) they have
continued to persist   in the urban areas and
their growth may be expected to continue for
sometime to come.

The housing of many urbanites in informal housing areas implies that informal housing has a contribution to make in urban housing development which has not been adequately appreciated. Their persisting nature seems to indicate that they are the immediate answer to the housing problem for a certain group of urbanites. One cannot therefore help to pose questions like, 'Who are the urbanites who seem to only find accommodation in these areas?, How can we as planners and policy makers best help them without necessarily having to uproot them from their settlements?; What is it that makes these people opt for informal housing for their homes or rather what attracts these people to such areas?" If answers could be found to these and other questions, invaluable information would then be availed which the planners and policy makers can use in planning for urban housing and especially in an attempt to house all the urbanites.

Although the Kenya Government has a stated aim of housing everyone in a sanitary and healthy environment, housing supply has continued to lag behind the need. Deficits have therefore continued to exist (see Literature Review) and hence the development of informal housing. Even when formal housing is provided it is beyond the economic reach

of especially the low income groups and those

without any or formal employment. Informal housing

therefore do offer a roof over the head of the poor

at a price they can afford. Where sub-leting

occurs, they offer often the only source of income

to their owners. Despite all these the building

standards and regulations remove them from the

official housing stock; they are considered

substandard and illegal. But it seems that the

urban housing problem will never be minimised, if not

solved, as long as the contributions made by

informal housing continue to be ignored. The

Government's aim of providing a house for everyone

will also continue to be frustrated.

From the above one conclusion seems inevitable:

that there is need to understand and appreciate the

contributions made by informal housing in urban

housing development. This would possibly lead

to policy modifications resulting in the incorporation

of such areas within the overall urban housing

development. It might also remove the fear inherent

in the concept of illegality and hence lead to an

encouragement of more investiments by residents in

these areas to better them. Also we know that

informal housing areas are so termed because they

do not comply with all legal ordinances and generally

lack services such as water, roads, electricity and

social ammenities, services which cannot be provided

by the people themselves. By appreciating the
contributions of these areas in urban housing
development the Government will in effect be
acknowledging what the people can provide (the
housing units), and therefore intervene to provide what
is beyond the people's economic reach.

1.2   NEED FOR THE STUDY : IMPORTANCE OF THE PROBLEM

As has been demonstrated through various
development plans, the Government places a lot of
emphasis on the need to house everyone in a sanitary
and healthy environment. Despite this, however,
deficits have continued to exist since private and
public efforts cannot meet the housing need. In most
cases also what is provided is beyond the economic
reach of a certain category of the urban population
who find affordable accommodation in informal housing
areas and hence their persistence in the urban areas.

As the housing deficit in urban areas
continues to grow so does the proportion of the
urban population, especially those who cannot afford
high rents, dependent on informal housing for their
housing needs. Excluding informal housing from the
official housing stock therefore swells the numbers
of those who can be considered homeless further.

Unfortunately this has been the trend in the past
where planners and policy makers have simply
continued to view informal housing areas as illegal,
substandard, a health hazard and unfit for human
habitation. But if the part informal housing plays
in urban housing development is recognised and these
areas officially incorporated as part of the urban
housing stock the urban housing problem will be
narrowed down faster. This might require a shift in
the thinking and attitude of policy makers as far as
informal housing is concerned.

Not all informal housing is only fit for
demolition. Some structures are sound and are capable
of being repaired, if necessary, without incurring a
lot of expenses. An appropriate understanding of
informal housing areas therefore means that measures
can be taken to make them (the housing areas) serve
the community rather than demolish them. This again
might involve a change in the existing housing policy
and building standards which do not take an overall
view of the capacity of the people and the Government
to produce shelter and thus leads to expensive
programmes ill-suited to the scarce financial resources
available. A revision in policy can include tenure
policy and this will guarantee security to the
informal housing inhabitants removing the inherent fear

found in the concept of illegal housing. This will
in effect make it possible for housing owners to invest
more in the housing and thus improve it considerably.
For such a policy change to be appropriate and suited
to the people's needs a proper understanding of the
informal housing inhabitants' needs is necessary.

That informal housing areas have continued to
persist in urban areas despite legal action
against them implies the need for serious thoughts
about their place in shelter provision and how they
can be incorporated to become part of the official
urban housing stock. Given that we cannot accommodate
everyone in what is termed standard housing - some
urbanites cannot afford the rents - then our next
alternative should be to turn and exploit the
potentials provided by informal housing which reflect
private individual efforts to house themselves.
Otherwise without these areas about 40% of our
urbanites would have no roof over their heads and
would simply be city nomads with no place to call
a home. The persistence of informal housing also
seems to suggest that unless these areas are
incorporated to become part of the urban housing stock
they will continue to haunt planners and policy makers
whose past attempts to rid cities and towns of such
housing have proved fruitless.

Man's first necessity is to live. And where
else can man live but in a house. But people have
to be satisfied with their housing if their housing
is to contribute towards social stability. Consequently
it is of great importance to study and find out
whether or not the inhabitants of a particular area
are satisfied with the type of housing they are
residing in. It might also be of importance to
understand what it is that informal housing residents
like about their environment and what they see as
the priority problems facing them.

1.3   AIMS AND OBJECTIVES OF THE STUDY

The main objective of this study is to explore
the contributions of informal housing in urban housing
development. This broad objective aims at the
incorporation of informal housing into what is officially
recognized as urban housing and therefore encompasses:

(i)   Establishing the potentials which exist in
       informal housing areas which the planner and
       policy maker can use to help reduce the ever
       persisting urban housing problems.

(ii)   Establishing some form of security for the
       informal housing residents which they can use
       as a base for better housing and environment.

(iii) Suggesting ways through which these areas can
be improved, where necessary, without having to
displace the residents by making the areas
expensive.

To achieve the above objective, the study
through the analysis of the housing conditions,
infrastructural facilities and environmental standards
in these areas, the socio-economic characteristics of
the residents, and their views about their housing
will examine:

(a) Current housing policies, programmes and
strategies to determine the extent to which
they have been successful in increasing the
housing stock for the lower income groups; and

(b) the implications of the existing housing By-
laws, standards and existing legislation on the
provision of housing for the lower income groups.

1.4 THE SCOPE OF THE STUDY

The study is limited to housing in informal
housing areas taking Kawangware village in Nairobi
as a case study. But several aspects of informal
housing areas are covered in an attempt to explore the
contributions of these areas in shelter provision in
the urban areas. Areas of coverage include the
housing and social and physical infrastructural

facilities, availability and their conditions. This
general aspect includes building materials combinations,
size of units occupied, occupancy rates, housing
tenuership, health and sanitation, among others.
The socio-economic characteristics of the residents -
age and sex; household sizes and composition; education
levels, occupation and incomes; migration into and
the length of stay in Kawangware; rent payment
capabilities; and the problems faced by the
residents; among others - are also studied.

An analysis of the above aspects by the study
will procure essential information which might be
considered necessary for planning informal housing
areas. With such invaluable information a case will
then be advanced as to how best these areas can be
incorporated into the official urban housing stock.

1.5 THE STUDY ASSUMPTIONS/HYPOTHESES

On the basis of the literature reviewed
(Chapter two) the following assumptions/hypotheses
have been made and studied:

(i) That with the high rates of urban population
growth - for Nairobi the 1969-79 inter-censual
growth rate was 5% per annum - the Government
will continue to find it hard to satisfy the
housing needs for all and the housing problem
will therefore continue to escalate.

(ii)   That conventional low-cost (subsidized and upgraded) housing ends up by being beyond the economic means of the urban poor and the lower income groups.

(iii) That households and individual developers are constrained to invest more time and funds in developing better but cheaper housing for their own bv the lack of security of tenure.

(iv) That existing housing policies and By-laws do not cater for the lower income groups; they are inappropriate, impertiment and unrealistic as far as the housing need for the lower income groups is concerned.

(v)   That informal housing is normally the home of the less educated urbanites and are characterised by a higher rate of illiteracy.

(vi) That informal housing provides affordable accommodation to the low income groups, the urban unemployed, and those employed in the informal sector.

(vii) That residents of informal housing have a positive attitude towards their housing and these areas will therefore continue to play a major part in adding to the urban housing stock.

The first four of the above assumptions/
hypotheses were studied using secondary data in the
form of written documents while the rest three
were subjected to field testing.

1.6 JUSTIFICATION OF THE RESEARCH SITE

This study was carried out in Kawangware in
Nairobi. The choice of Nairobi in general and of
Kawangware in particular as the research site
was influenced by certain factors: Being the capital
city of Kenya, Nairobi receives a disportionately
large share of the rural-urban migrants compared to
other urban centres in the country. Because the supply
of housing cannot meet the need the housing problem,
especially for the lower income groups, is more
acute in Nairobi than in any other town and the
number of those living in informal housing is
disproportionately bigger than in any other town in
the country.

The decision on Kawangware as the specific
site of study in Nairobi was mainly a function of
its suitability for the purpose of the problem
under investigation. Kawangware, although an
informal housing estate just like Mathare and
Korokocho, among others, does not compare
favourably with its likes. This particular site is

what I might term an improved/better informal housing
estate; in terms of the level of services and the
housing conditions, these are of a higher level and
quality than in most other informal housing areas.
Kawangware was therefore considered to be a suitable
case for demonstrating how informal housing can
contribute to the urban housing stock without
having to displace the residents by raising rents.

The freehold title land tenure system in
Kawangware also affected its choice. Through it
the area was found suitable for demonstrating
how security of tenure can encourage the people
to invest more on the land and therefore improve
the standards and quality of the environment.

1.7   THE   STUDY METHODOLOGY

To procure the data used for this study a
random sample of 210 household heads were interviewed.
Information gathered covered the housing and environmental
conditions in Kawangware as well as the socio-economic
characteristics of the residents. Secondary data
was also gathered from written documents. Most of the
the information gathered from the field was analysed
through the tabulation of responses using simple
percentages and frequency tables were formed and
used to depict the intended picture. Averages
(means) were also calculated and utilized where

appropriate. From the secondary data some conclusions were also reached.

From the field and secondary data it was evidenced that the security of tenure can act as an inducement to the residents of informal housing to improve the quality of the environment. It also became evident that the housing By-laws and standards are the main constraint to the incorporation of informal housing into the official urban housing stock, and that wholesale upgrading of informal housing makes it beyond the economic reach of some of the tenants leading to a displacement. The study, in addition to the above, adduced evidence to show that informal housing areas are the homes of the less educated urbanites, that they offer affordable accommodation to the lower income groups, and that the residents of these areas are satisfied with their housing. The major problem identified to be facing these areas, and which needs priority attention, was one of sanitation and access rather than of dwelling units.

On the basis of the above findings recommendations are made including the provision of security of tenure to informal housing dwellers so that they can be encouraged to improve their environment. Other recommendations aim at the preservation of the dwelling units, especially those not built of

materials very prone to fire like grass and cartons,
and the improvement of infrastructural facilities
and services as well as health conditions. The
upgrading of these should, however, be at a minimum
cost to avoid high increases in rents. This calls for
the sanctioning of traditional building materials,
the lowering of health and sanitary standards, and
the gravelling and   murraming of roads and access
paths rather than tarmacing them.

1.8   PROBLEMS   ENCOUNTERED IN THE   FIELD AND THE STUDY
       LIMITATIONS

       The research was not without difficulties.
During the surveys for example, difficulties were
encountered in translating questions and answers
from English into Kiswahili and vice versa.
Another problem faced had to do with the availability
of respondents because most people in the study
area, save housewives, go to work early in the
morning. Also some respondents, especially male
ones, received the researcher with hostility.
Generally however, most respondents were hospitable
and very co-operative.

       The language used by the subjects under study
can be a problem in field research and therefore
a limitation to the study findings. During this study

a lot of translation had to be done especially
from English to Kiswahili and vice versa. Usually
where such is the case the loss and/or distortion of
information is likely to occur. The study also
interviewed mainly housewives because most people go
to work in the morning and can only be available in
the late evenings. Some of the information provided
by the housewives especially on income levels of the
husbands and other working parties of the household
might not have been precise. Some aspects of the
data gathered could thus be treated with some
elements of doubt. Such data can lead to wrong
conclusions.

Time and resources were other limiting factors
to the study. These affected not only the quality of
the data realized from the field but also the depth
of the analysis which could be reached.

1.9 ORGANIZATION OF THE STUDY

The thesis is organized into six chapters.
The first chapter is the introduction and
encompasses the problem statement, the importance of
the problem, the aims and objectives of the study,
the scope of the study, the study assumptions
justification of the research site, the research
methodology, the fieldwork experience and the
limitations of the study, and the study organization.

The second chapter which forms the theoretical
background to the study is a presentation of the
reviewed literature. It discusses the housing
problem from a global perspective narrowing down
to the national (Kenyan) level and further down to
the regional (Nairobi) level. Chapter three
discusses the urbanization process in Kenya and its
implications on housing, and the housing policy,
programmes and strategies in Kenya. It also includes
the background information to the research site,
a preview of the housing by-laws in the country
and the housing problem for the low-income groups.

Chapter four and five are the field data
presentation chapters. Chapter four covers the
housing and environmental conditions in the research
site whereas chapter five presents data on the socio-
economic charecteristics of the respondents including
their views about the study area and the problems
faced there. Chapter six is a summary of the major
findings and the policy recommendations made on the
basis of the findings.

LITERATURE REVIEW

2.1   DEFINITION OF   TERMS

2.1.1.   Housing

A house "is a structure   intended for human
habitation especially a humble habitation   which is
fixed in   a   place   and is intended for the private
occupation of a family or   families" (Karanja;   1980:5).
Housing basically is   a   product   which is bulky,
durable and permanent.   Once built, it tends to
remain   in   existence   for many years   and becomes
almost part of land.   Although Jorgensen (1977:12)
argues that in   official terminology a house is not a
house unless it   is   approved   under existing laws,
Beyer   (1965:3)   concedes that housing is not highly
standardized and   m any   types of materials are used
in both the structure and in the finishing in   the
different   types   of housing which   include single family
housing, duplexes,   apartments, row-houses and many
other types.   The word housing   can   also be used to
refer to the process of creating shelter(s) for human
being.

2.1.2 Informal Housing

Informal housing or settlements are those
settlements   which do not comply with one   or   more
of   the existing legal regulations on planning or
development of residential areas. They comprise

mainly squatter settlements and slums (spontaneous
or unauthorized settlements)(Hoek-Smit; 1976). Some-
times the dwellings might be built on Government
land while in other cases the owners of dwellings are
also the owners of the plots on which dwellings
stand.

As indicated above informal housing is illegal
because it does not meet set building standards and
sometimes because it is built illegally on Government
or private land. Kawangware in this study is viewed as
an informal housing area because structures do not
conform with the building by-laws (the Grade I by-
laws of 1968). The housing is not built of
conventional building materials and the size of units
occupied by households are below the prescribed size,
that is, a minimum of two habitable rooms plus a
kitchen, a toilet and a shower.

Informal housing is characterised by the
lack of good drinking water, communal services such as
schools, clinics and police stations, good roads,
street lighting and good housing. The housing units
are built incrementally, that is, extension and
improvement of buildings overtime, and a greater variety
of buildings materials are used (Lindgren: 28, Muller;
1977:149). Rents here are lower than in other areas

of the city/town and the areas therefore provide
cheap (affordable) housing for the poor, and the low
income groups in the urban areas and also accommodate
penniless rural migrants and immigrants who need
a first living base at the lowest possible prices
(Clinard; 1966:17-18). Based on the 1985 Economic
Survey, which uses 1975 as a base year, a low income
person is anybody earning Kshs. 699 and less per
month. In this study,however,a low income person is
taken as any person earning less than Kshs. 2,000/-
per month. This figure was arrived at after
adjustments for inflation, which has grown by about
three times since 1975, were made on the 699 shillings
figure. The low income group can further be broken
down into the low low, the midle low and the upper
low comprising those earning Kshs. less than 700,
700-1500 and 1500-2000 per month respectively.

Informal housing residents normally have
less education and a higher rate of illiteracy than
those in other areas of the town (Beyer; 1965:339).
The population hence comprises mainly those
unemployed and those working in the informal sector
(the self-employed) and whose place of work is in
most cases the residential area itself. The causes
of these areas can be summed through the high
rates of urban growth due to rural-urban migration
coupled with natural population increase (Beyer; 1965:
342). Lack of employment and therefore assured income

and low wages to workers which means low rent
paying capacity (forcing workers to seek cheap
quarters) are some economic factors explaining the
existence and persistence of informal housing areas.

2.1.3 Housing Need and Demand:

To understand any given housing situations it is
necessary to examine the various aspects which conduce
the housing situation. This, however, cannot be achieved
unless a distinction is made between two important
concepts, that of housing 'need' and housing 'demand'.
Having distinguished these two concepts then one
can examine the factors which influence them.

Housing need has been defined as:

The extent to which the quality and quantity
of existing accommodation falls short of that
required to provide each household or person in
the population, irrespective of ability to pay,
or particular personal preferences, with
accommodation of a minimum specific standards
and above (Murie et al.; 1976:253).

Housing need can be explained in terms of three
primary aspects:

(a) The need emanating from net additions to the
     population whether through natural increase
     or migration; increases in population will
     necessitate addition in the housing stock.

(b)   The need ensuing from decrement of housing units
       through demolition or absolescence: constant
       depletion of the housing stock can   result from
       the loss of dwelling units through absolescence
       or destruction through calamities such as fire
       and floods.

(c)   The backlog of housing need composed of people
       who are either inadequately housed or without
       housing of any kind at the present time. This
       relates to the annual construction required to
       eliminate deficiencies in the existing housing
       supply.   It comprises the number of dwelling
       units required to house that part of the
       population which is either homeless or can be
       considered to be occupying overcrowded, unsanitary
       or improvised housing (United Nations,
       Department of Economic and Social Affairs; 1965:1).

       Housing demand on the other hand is an economic
concept in that the standard and amount of housing a
household can command will be   determined by the
income and ability to pay. The   achievement of a
specific minimum standard of housing is not implied in
the concept of demand (Murie, et.al.; 1976:253).
Housing demand can be assessed from the consumers
point of view or from the standpoint of the non-consumer

who may be defined as both the state or the upper-
echelon housing policy makers, and the low and
moderate-income household which is a non-consumer of
housing unless assisted (Kokus Jr.; 1974: 3-5).
Housing demand is affected by the number of people
and their income.

2.1.4.   Housing Supply:

Housing supply consists of a multiplicity of
factors. First is an inventory of housing units in
use. This includes not only those units which are
occupied, which may be defined as primary units,
but also those that are unoccupied. The latter category
consists of vacant, habitable units which are either
non-primary residences, that is, second houses or units
which are up for sale or for rent, that is, vacancies.
Secondly there are the additions of new housing
under construction (prefabricated housing units and
mobile units), and additions of "new" housing units
as a result subdivisions of existing residential
structures, conversion of transient and semi-permanen
quarters into permanent units or adaptation of other
existing structures into housing units. Thirdly,
there are removals of existing housing units as a
consequence of man-made causations like demolit on and
abadonment (usually uninhabitable units) as well as

natural causes (Kokus Jr.; 1974:3).

The total housing supply equals the inventory of the existing units plus additions of new housing units minus removal of existing units. This however, only takes into account conventional housing ignoring the contribution of non-conventional housing to the total housing supply by dismissing such dwelling units as falling below a stipulated standard of construction, servicing or accommodation and hence regarding them as temporary and unsafe (Wakely et. al.; 1976:7). But the contribution of non-conventional housing to the total housing supply cannot be ignored especially when one bears in mind that housing needs are being met to a large degree, albeit inadequately, by the rapid growth of squatter settlements, which in some cities already accommodate over one third of the population (World Bank; 1972:5).

2.2   THE HOUSING PROBLEM : ITS NATURE

The housing problem is more acute in the developing countries particularly in urban areas which are marked by rapid population growth, scarce job opportunities, and inadequate welfare systems. Large uncontrolled settlements of substandard housing , whose development has a lot to do with finance for housing, occupied by low income groups are the result

(Malombe; 1981:11). A common phenomenon in the
development of cities therefore is the widespread
proliferation of shanties and other structures of
temporary nature. Although this state of affairs
is very peculiar of third world cities, it has also
occured in the western cities (Karanja; 1980:5).

The housing problem is an inevitable feature
of our modern industrial civilization and does
not tend to solve itself. The poor income
members of the population due to economic means
and limited public investments allocated to their
areas of the city, live in the poorest environmental
conditions. Their low income is evident in their
type of dwellings; their construction characteristics are
likely to be determined by the availability of
discarded materials, or those provided by local
natural resources that have no market price
(Mabogunje; 1978:26).

2.2.1 The Housing Problem in Development Countries

Although the housing problem is world wide,
the seriously affected areas today are the
developing countries of Africa, Asia and Latin
America where new building have not kept pace
with the increasing population (Beyer; 1965:540).
In these countries an average of more than 1/3 of
the urban population is living in slums and squatter
areas; Africa is by far leading this sad record

followed by Asia and Latin America. In many cities
in the developing nations the squatter population
outnumber the non-squatter by far, and averages
30-60% of the overall urban population (Altmann;
1982:417).

In the developing countries a high proportion
of the urban (and rural) populations is living in
conditions of overcrowding and illhealth (Table 1).
The typical dwelling of the working-class family
in these countries is a single room without any
private facilities for cooking or bathing and
with no indoor toilet. Frequently dwellings are
built out of scrap materials by their occupants
without even rudimentary system of water supply or
sewage disposal. But even with the ever-growing
dimensions of urban squatter housing the problem
has generally neither been accorded corresponding
attention nor priority in development planning and
policy. An indication of this is that the
population living in squatter areas (as well as
those living in urban slums) is commonly referred
to as "marginal population" (Altumann; 1982:417).

2.2.2.   The Housing Situation in Kenya

Kenya's housing situation like that in many
developing countries is characterised by a severe

TABLE 1: <u>EXTENT OF SLUMS AND UNCONTROLLED SETTLEMENTS</u>

<u>IN SELECTED CITIES IN DEVELOPING COUNTRIES</u>

CONTINENT/ COUNTRY	CITY	YEAR	CITY POPU-LATION (THOUSANDS)	UNCONTROLLED SETTLEMENTS	
				TOTAL THOUSANDS)	%AGE OF CITY POPULATION
LATIN AMERICA					
Brazil	Reclife	1970	1,046	520	50
Chile	Santiago	1964	2,184	546	25
Columbia	Bogota	1969	2,463	1,478	60
Mexico	Mexico City	1966	3,287	1,500	46
Peru	Lima	1969	2,800	1,000	36
Ecuador	Guayaquil	1969	742	363	49
Venezuela	Maracaibo	1966	559	280	50
ASIA:					
India	Delhi	1970	3,524	1,057	30
Indonesia	Djakarta	1961	2,906	745	25
Malaysia	Kuala Lumpur	1971	240	52	22
Pakistan	Karachi	1970	741	274	37
AFRICA					
Nigeria	Ibadan	1970	736	552	75
Ethiopia	Addis Ababa	1968	737	663	90
Senegal	Dakar	1969	650	390	60
Somalia	Mogadishu	1967	206	158	77
Tanzania	Dares Salaam	1967	273	98	36
Morocco	Casablanca	1971	1,445	1,011	70
Cameroon	Douala	1970	250	200	80
Ivory Coast	Abidjan	1964	437	262	60

Source: Developed from Mabogunje A.L. "<u>Shelter provision</u>

<u>in Developing countries</u>", 1978 p.28.

deficiency, both quantitatively and qualitatively.
Despite concerted efforts on the part of the
Government and other agencies, Kenya is still
unable to meet the national housing demand not
to mention the housing need. The housing problem
is, however, especially acute in the urban
areas. Here the problem can be explained through
the rapid process of urbanization that the country
has undergone accompanied by an accelerated
growth of urban population through natural increase
and also rural-urban migration. The overall effect
of this together with the persistent rise in the
cost of living has been the acute housing shortage.

Because of the rising proportion of Kenya's
inhabitants coming to work and live in urban
areas the urban population-defined as those living
in centres with more than 2,000 inhabitants - is
expected to reach 5.3 million by 1990 representing
21.4% of the total population and will rise to
11.4 million or 30.4% of the total population by
2,000. Assuming a constant average household of
4.22 people the number of households is expected to
increase from just over half a million in 1979 to
1.3 million in 1990 and 2.7 million by the year
2000 (C.B.S. and Ministry of Finance and Planning;

1985:28-29). This requires an increasing share
of the national resources needed to accommodate the
increasing urban population.

If factors contributing to the growth of
urban population in Kenya were to remain constant,
then close to 300,000 additional urban households
can be expected to form between 1985 and 1990,
a little under 1.1 million more between 1990
and 2,000 (C.B.S. and Ministry of Finance and
Planning; 1985:29). But urban housing output
has not kept pace with the formation of new households.

For the period 1979-84, for example, the total
recorded output of formally authorized housing by
public agencies and the private sectors combined
amounted to only 44,000 units representing an
average of some 7,300 units per annum with production
varying widely from 4,024 in 198ᴐ to as high
as 9,567 four years earlier (Table 2).

TABLE 2:   COMPLETION OF DWELLINGS   BY PUBLIC AND
           PRIVATE SECTORS COMPARED WITH FORMATION
           OF NEW URBAN HOUSEHOLDS, 1979-84

Agency	1979	1980	1981	1982	1983	1984	Total	%
NHC	4,085	3,527	2,755	2,928	687	2,398	16,380	37.2
Site and Service	2,389	2,454	2,719	2,550	598	2,099	12,809	29.1
M.O.W.&H.	156	432	471	49	968	154	2,280	5.2
Other public sector	221	481	206	443	790	155	2296	5.2
Private Sector	2,716	2,065	1,918	2,033	981	451	10,214	23.5
Total	9,567	9,009	8,069	8,053	4,024	5,257	43979	100.0
Estimated new urban Households	29,800	32,100	34,700	37,400	40,400	43,600	21,800	
Recorded new units as %age of new House-holds	32.1	28.0	23.3	21.5	10.0	12.1	20.2	

Source: C.B.S., Ministry of   Finance   and Planning

Economic Survey 1985;   Republic of Kenya, Nairobi,

May, 1985 p.38.

Between 1976-82 the recorded output of housing units

by public agencies and the private sector combined

accounted for only 20% of the increase in new urban

households.   Even allowing   for   the   fact that

some   households may share the same dwelling unit,

the conclusion remains that the greater part of the

new urban housing is produced outside the formal
system (C.B.S., Ministry of Finance and Planning; 1985:38).

?.2.3   Housing Need, Demand and Supply in Nairobi

In Kenya, the housing problem is more acute
in Nairobi where it is estimated that a third of
the population lives in unauthorized housing and
that a much higher proportion lives in public
housing which is critically overcrowded and
inadequately serviced (Owino; 1975:33). According
to England and Alnwick (1982), the growth rate
of squatter settlements in Nairobi in 1980 was
estimated at 22.5% per annum compared to the 10%
per annum growth rate of the city's population
at the same time.

The housing problem in Nairobi is by no means
recent. It dates as far back as early 1900's when
several legislations were enacted as a reaction to
the housing shortage. As early as 1918, for example,
the first Rent Act was passed to be followed by
the distress for Rent Act. The official awareness
of the housing shortage continued and in 1948 we had
the Municipal Affairs Office stating that:

> It is disheartening to see legitimately
> employed Africans sleeping under verandahs in
> River Road, in dangerous shacks in swamps, in
> buses parked by the roads and fourteen to a
> room in Pumwani, two to a bed and the rest on
> the floor (Report of Nairobi Municipal Affairs
> Office; 1948:11).

Later in 1953, the Chairman of the African Affairs

Committee in Nairobi City Council had this to say:

> Let us recognise that the housing problem
> is becoming increasingly serious in the
> Nairobi City area and this no doubt
> equally applies to other urban districts
> in the colony. It has to be tackled
> vigorously (Alderman George; 1953).

Even with independence the housing problem

did not stop and has kept on growing to alarming

proportions. In Nairobi it is characterised by

accumulated deficits and deterioration of housing units.

The situation here can be explained through two

prime factors : the population growth leading to

more household formation, and the income growth

and distribution. According to the 1979

population census, for example, Nairobi had a

total of 827,775 inhabitants. By 1983 the population

was estimated at 1,006,000 persons, with a projected

population of approximately 1,284,000 persons in 1988 at

an annual growth rate of 5% (Development Planning Unit;

1983:30). Assuming a constant growth rate, the city

by the turn of the century will have 2.3 million

persons. The population growth rate is primarily

affected by in-migration which accounts for

approximately 75% of the growth (Coopers and Lybrand

Associates Ltd., et. al.; 1976:2).

The statistics for Nairobi when translated
into data regarding households and household
formation give a more clearer picture of the
severity of the housing problem. The 1979 census,
for instance, reported a total of 200,474 households
in the city and it was estimated that there would
be an increase of 67,800 households between 1983 and
1988. This represents approximately an additional
13,600 households annually meaning that if a
dwelling unit was to be provided for each
additional household, 37 units would have to be
provided daily (Development Planning Unit, London;
1983:39). Of course not forgetting that deficiencies
already exist in the present housing stock. But
while there is need for about 13,600 supplementary
units annually, the total output in both the
formal and informal sectors totalled only to about
5,000 units in 1983 which represents less than 40%
of the city's requirements (Development Planning Unit,
London; 1983:39).

The formal housing supply in Nairobi can only
provide a minimal fraction of the required housing
production and present housing production are more
than inadequate for meeting the requirements of the
ever-increasing population. The problem is clearly
demonstrated in the 1984-88 National Development Plan

in which the planned physical housing output
between 1984/85 - 1987/88 is outlined. It is
indicated that in Nairobi there is a planned output
of 7,000 serviced plots, 400 rental units, 200
upgraded units and a further 1,150 units for
mortgage/tenant purchase or owner builder
(Republic of Kenya; 1984). This translates to a
total output of only 8,700 units compared to a
need of 68,000 additional units over the five year
plan period at a continued rate of 13,600 households
per annum.

The housing problem in Nairobi is, however, in
its acute form for the low income groups which
comprises people who cannot afford to live in a
decent housing unit and at the same time make ends
meet (Here a decent housing unit is taken to mean
the minimum housing unit that public policy demands.
It includes two rooms with separate kitchen, W.C.
and shower). This group comprising about 70% of the
city's population is harboured in some of the squatter
settlements with housing of the flimsiest and most
makeshift construction (Karanja; 1980:8-9).

2.3   CAUSES OF THE HOUSING PROBLEM

Despite the importance of housing to man,
housing has continued to be a major problem in
especially the developing countries. Among the key
causes of housing shortage are the shortage of

finance, the policy on housing held by various state
Governments and the rate of urban growth and
increased population movement to the urban areas.
In Kenya the housing shortage can be explained
through more or less the same factors.

Income growth and distribution is an
important parameter affecting the housing situation
in any city/town (Nairobi inclusive). This is of
major importance because income will determine
households' purchasing power and ability to pay for
housing. In third world countries, however, the largest
groups are those below the "poverty" line who
cannot enter the recognized market even in theory.
The low level of income of the majority of the
wage employment population, not to mention those in
the informal sector or the unemployed, thus is of
grave consequence on the housing situation. 'This
however, does not mean that such large numbers of
households is homeless but it indicates that their
contribution to the housing stock is not officially
recognized because their dwellings fall below a
defined standard of construction, servicing or
accommodation (Wakely'1976:5). But the exclusion
of these people's homes from the official housing
stock has resulted in the existence of a big housing

deficit which is proving almost impossible to meet.

As alluded above the building standards and
policy in a country play a major role in the housing
shortage problem. At policy level we find that funds
allocated to housing by both the
Government and other financial institutions are
inadequate to meet the housing demand. In Kenya,
for example, the principal cause of the inability
of production to meet demand is the scarcity of
resources for Government and other agencies. Existing
housing policies not only exclude the poor but also
many middle-income families. Colonial Government's
policy on housing in Kenya was that the natives
place in the urban areas was only as a labourer and
a domestic servant who came to town to work and
went back home in the rural areas; as such African
housing was neglected in the urban areas. With
independence, Government policy on decent housing
coupled with lack of finance, lack of land, land tenure
systems,among others have continued to hinder the
implementation of large scale housing programmes and
the problem has continued to exist(Karanja; 1980:23).

The building standards in most developing
countries were inherited or imported from developed
countries and the technology involved is invariably

western. Governments therefore tend to promote
unrealistically high standards of housing for the
poor and housing built for the poor is raided by
middle-income groups whose demand for housing also
remains unsatisfied (Grimes; 1976:6). High standards
based on western technology is an obvious case of
the use of inappropriate technology where human
resource is the major asset and where effective
technology has to be labour intensive and capital
saving (United Nations, Department of Economic and
Social Affairs; 1962:12). Even in countries where the
concept of appropriate technology is much talked about offical
standards are still insensitive to it. In Kenya, for
example, the Housing Research and Development Unit
(HRDU) has done a lot in this area but the building
standards have not been adjusted to accommodate
the invaluable findings.

The crisis in the provision of shelter in most
developing countries today is also as a result of
the rapid increase in the population due to the
very rapid rate of rural-urban migration especially
to the large metropolitan centres of relatively poor
individual with low educational attainment and
scanty technical skills (United Nations,
Department of Economic and Social Affairs; 1962:26).
In Africa, for example, in 1900 no more than 1½
million Africans (about 1.5% of the total population)

lived in cities of 100,000 people and above.
By 1950 the figure had risen to over 10 million
or 5.2% of the total population. Within ten years
of that date it was already over 20 million or 8.1%
of the total. There is evidence that by 1970,
the figure had doubled again (Owino; 1975:1).

The urbanisation process has therefore become
one of the most potent factors affecting both the
efficiency of shelter provision and the general
environmental conditions in the developing countries.
The remarkable growth of urban population has been
accompanied by the challenging problems of
uncontrolled developments in most urban areas.
When these developments are subtracted from what
is termed as the urban housing stock due to building
standards and by-laws the housing problem is
magnified further; unrealistically high standards
for dwelling construction and the refusal to accept
existing low-quality dwellings as even an interim
solution makes it all the more difficult to meet
the investment needs of rapid urban population
growth (Grimes; 1976:6).

2.4 TOWARDS A SOLUTION TO THE HOUSING PROBLEM

In the past the major attempts to solve the
urban housing problem have concentrated on rehabilitation
of the existing housing stock and especially squatter

settlements and slums areas. Conserving and improving
such housing stock to assure its maximum usefulness
is an essential adjunct to the enlarged production
of new dwellings, and a systematic demolition or
removal of absolete buildings (Mayerson; 1962:178).
But for this to be successful to the extent of
avoiding previous trends whereby rehabilitated
housing has become economically beyond the reach of
the target group, it should only be done at
appropriately lower prices.   Lower prices can
be arrived at if the levels of the upgraded
services are kept at a minimum. For example,
roads could be murramed or gravelled rather than
being tarmaced. Preferably too a common water point
could be provided for a group of plots instead of
individual connections or a connection per plot.

Land tenure can be a major factor causing
housing shortage in urban areas especially when land
ownership is complex and inadequately distributed.
But introducing an element of equity into urban
land ownership by giving squatters security of
tenure is an urgent policy issue in most developing
countries which can lead to high income returns,
to retained and improved housing stock and to access of
earning opportunities (Grimes; 1976:96).   Giving
security of tenure not only encourages the individual

owners to develop the land but also presents
them with something they can use as a guarantee
to acquire a loan to develop the land.

2.5   CONCLUDING REMARKS

The housing problem in urban areas is so
serious that it will take a long time before it is
solved. Informal housing (unauthorized settlements)
will thus continue to exist and as Lindgren (p.29)
puts it:

> Pulling down a settlement would not solve
> the shortfall in housing. It would instead
> spoil the considerable investments already
> made by the inhabitants and to compensate
> them for this would be a further
> contribution to the total expenditure of
> replanning.

A house need not be costly. What is important
is that it should be related to the human needs.
Richardson, H.H., an American builder, must have been
supplementing this view when he said that, "a
dwelling house, in wood might be better related to
the human needs than a costly palace" (Mumford:408).

To construct better dwellings for all informal
housing dwellers is not economically attainable and
possible in the near future. Also at least till such
a time as even minimum of housing, that is, a roof
over the head and a wall, is not provided, it

would be difficult to plan and programme housing based
on the existing Government standards. Informal
housing will therefore continue to flourish and the
most crucial element in their development should be
their formalization rather than how to do away with
them; that is, how to incorporate them into the
legal framework.

Appropriate building standards can do much
to create a safe and pleasant environment. Misconceived,
however, they can contribute to depressing the
living standards of the poor. If set standards are
too high for existing income levels, for instance,
the primary effect will be to reduce the amount of
housing that is available. According to McOloo
(1986:7) poverty is in fact the cause of the
housing problem in developing countries; many
people are either unemployed or underemployed and
therefore cannot afford the conventional housing
constructed in the cities. Despite this, building
standards in developing countries have been
unrealistic to socio-economic realities and are
imitative of the western world. But standards
should reflect the capacity of the individuals,
societies and institutions to meet the housing
shortage and to enhance the quality of life. They
should distinguish between what is essential and

what is merely highly desirable (Mabogunje; 1978:80).

The above literature reveals that a lot of work has been done on housing in general and on informal housing in particular in the form of slum and squatter settlements. In Kenya some work has been done on settlement upgrading as a strategy towards a solution to the housing problem for the lower income groups. The kind of settlement upgrading recommended by previous studies not only covers infrastructure and other facilities but also the dwelling units themselves. This study, on the contrary, examines informal housing with a view to preserving most, if not all, the dwelling units as they exist and improving only infrastructure and services. Such improvements, however, should not raise the levels of these facilities and services beyond what is affordable to the tenants who usually pay for the improvement costs through increased rents.

CHAPTER THREE

URBANIZATION AND HOUSING POLICY IN KENYA

3.1 URBANIZATION IN KENYA : THE GROWTH OF NAIROBI

Urbanization in Kenya is comparatively recent. It is only with the coming of colonial rule that we could speak of large scale urbanization. Before the construction of the Kenya-Uganda Railway what existed were highly rural settlements. It is only at the coastal region, which had early contact with Arab and Portuguese civilizations, that urban settlements of some significance existed. The railway line and the consequent colonial rule was however followed by the springing up of many towns to act as administrative centres or as commercial centres for the exploitation of local resources, collection and distribution of goods and ports for overseas trade. This had a great effect in determining the number, size and distribution of urban areas today and has resulted in three major areas of urban centre concentration in Kenya:

(a)   along the railway line from Mombasa to Kisumu,

(b)   along the coast, and

(c)   within the farming heartland of Kenya, the former 'White Highlands' (MacOloo; 1986:3).

Although the number of urban centres

(inhabited by 2000 people or more) is relatively few
in Kenya, their growth has been very rapid during
the last two decades. The towns have continued to
grow both in size and number (Tables 3 and 4). The
1948 census which gives the first statistical
evidence of urbanization in Kenya, for example, shows
that at that time there were 17 towns (defined as
settlements inhabited by 2000 or more people) ten of
which were inhabited by less than 5000 people. The
urban population amounted to 5.1% of the total.

TABLE   3:   THE GROWTH IN   NUMBERS   OF KENYA'S URBAN
CENTRES BETWEEN 1948 AND 1979

Number of Centres	1948	1962	1969	1979
	17	34	47	95
Total urban Population	286,000	671,000	1,080,000	2,309,000
%age of total population	5.1	7.8	9.9	15.1

Source: Calculations based on previous census results.

The number of urban centres doubled between
1948 and 1962 but the rate of growth slowed down
between 1962 and 1969. The growth rate, however,
picked up again after 1969 and the number more than

doubled between 1969 and 1979. But there has been
a tendency towards the concentration of population
and urbanization in the major towns of especially
Nairobi, Mombasa and Kisumu; these three together
account for about 75% of the total urban population,
with 47% in Nairobi alone. The rapid rates of
population growth in these three towns and other
towns exceeds the towns' capacity to provide not
only physical infrastructure like housing, health
and education, but also employment opportunities.

TABLE 4: THE   POPULATION   OF MAJOR TOWNS   IN KENYA

AND THEIR GROWTH   RATES BETWEEN 1948 AND 1979

TOWNS	TOTAL	POPULATION			GROWTH RATES		
	1948	1962	1969	1979	48-62	62.69	69-79
NAIROBI	118,976	266,794	509,286	827,775	8.9	13.0	6.4
MOMBASA	84,912	179,595	247,073	341,148	8.0	5.4	3.8
NAKURU	17,625	38,181	47,151	92,851	8.3	3.4	8.5
KISUMU	10,952	23,526	32,431	152,643	8.3	5.4	20.8
ELDORET	8,258	19,605	18,196	50,503	9.9	-1.0	12.5
KITALE	6,338	9,342	11,573	28,327	3.4	3.4	12.5
THIKA	4,435	10,448	18,387	41,324	15.3	4.5	12.4

Source: Computations from previous censuses results.

The history of Nairobi dates back to 1896 when a transportation depot was set up there. But the actual growth of this town began after the arrival of the Kenya-Uganda railway in 1899. It is then that the railway authorities decided to move their headquarters here and began the intensive development of the small town. This was followed in the same year by the transfer of the Government administration of Ukamba Province from Machakos (Malombe; 1981:24 and Etherton; 1971:1). Nairobi's first boundary was defined as 1.5 square miles from the office of the subcommissioner in 1900. There was subsequent boundary changes in 1919 to 9.8 square miles, 1948 to 32.4 square miles, and in 1963 to 266 square miles (Map. No.2).

As time passed the town continued to grow and by 1905 Government and railway administration offices had been established in distinct areas of the town centre. By 1906 the original railway depot and camp had mushroomed to a town of 11,000 people. With time the growth of residential areas started taking a racial segregation form and the town began growing in every direction (Temple; 1973:28). Nairobi continued to grow rapidly as manifested through the increases in African population: between 1906 and 1926 the African population doubled, and between

Map labels:
Moyale
Marsabit
Wajir
EASTERN
RIFT VALLEY
Kitale
Eldoret
NORTH EASTERN
Isiolo
Nanyuki
Meru
Kisumu
Nakuru
Nyeri
Embu
Garissa
NYANZA
CENTRAL
Magadi
NAIROBI
Machakos
EASTERN
Lamu
COAST
Mtitu Andei
Malindi
Voi
Mombasa

LEGEND
● Towns
■ Provincial Headquarters
..... Provincial boundaries

0   100   200km

N

mm
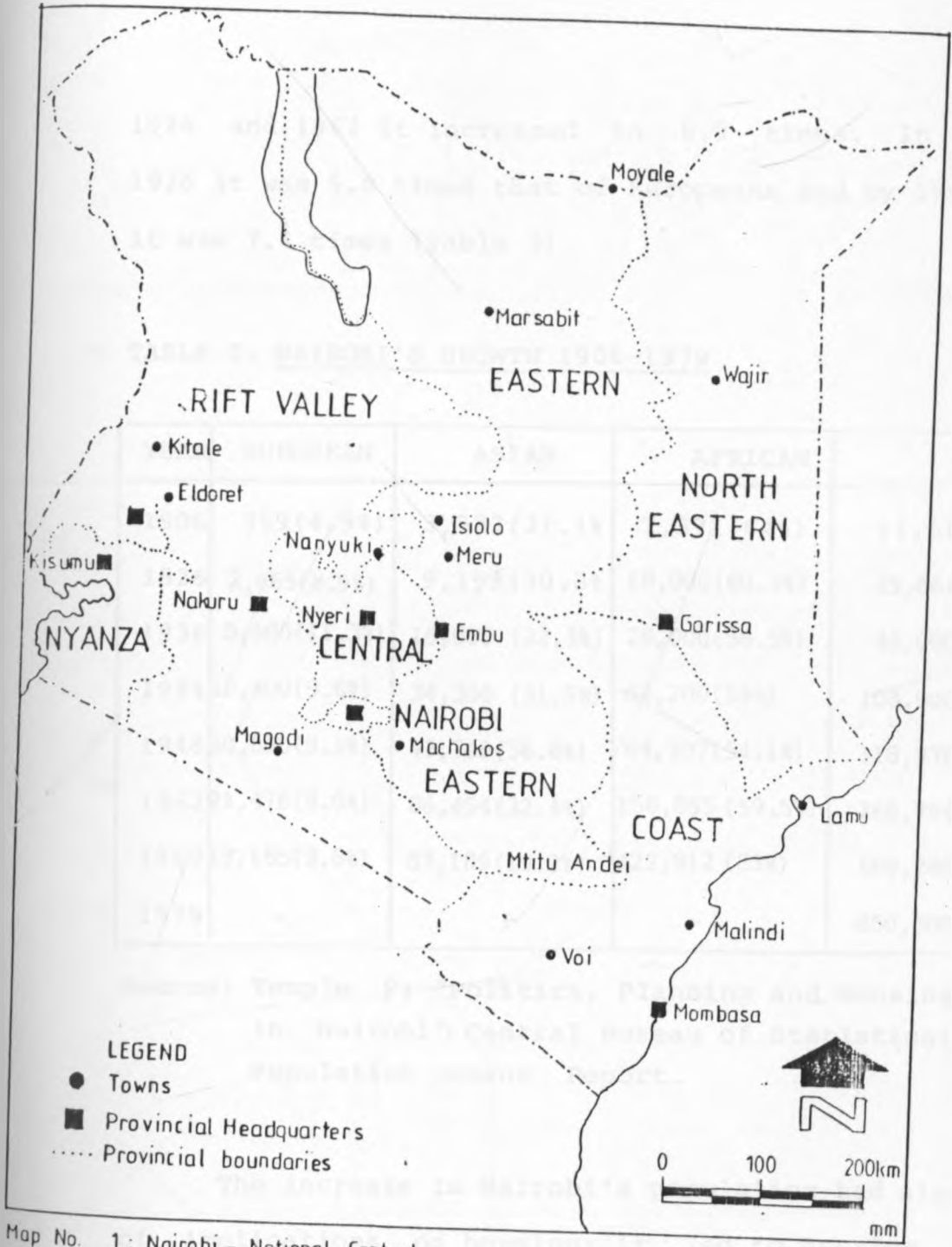
Map No. 1 : Nairobi - National Context.

1926 and 1962 it increased to 8.9 times. In
1926 it was 6.8 times that of Europeans and by 1962
it was 7.4 times (Table 5).

TABLE 5: NAIROBI'S GROWTH 1906-1979

YEAR	EUROPEAN	ASIAN	AFRICAN	TOTAL	
1906	559(4.9%)	3,582(31.1%	7,371(64%)	11,512	(100%)
1926	2,665(8.9%)	9,199(30.8%	18,000(60.3%)	29,864	(100%)
1936	5,600(11.3%)	16,000 (32.3%)	28,000(56.5%)	49,000	(100%)
1944	10,400(9.6%)	34,300 (31.5%)	64,200(59%)	108,900	(100%)
1948	10,830(9.1%)	43,749(36.8%)	64,397(54.1%)	118,976	(100%)
1962	21,476(8.0%)	86,454(32.4%)	158,865 (59.5%)	266,794	(100%)
1969	19,185(3.8%)	67,189(13.2%)	422,912 (83%)	509,286	(100%)
1979	-	-	-	850,000	(100%)

Source: Temple F; "Politics, Planning and Housing
        in Nairobi"; Central Bureau of Statistics;
        Population census Report.

The increase in Nairobi's population had alot
of implications on housing; it led to housing
shortages especially for the Africans whom the
Europeans were not regarding as urbanites but as
people who came to work and later returned to
the rural areas.   During the first 20 years of the
century almost all Africans lived in unregulated
settlements.   But these were gradually demolished and

TO THIKA

TO LIMURU

N

TO NAKURU

C B A

D

TO NGONG

LEGEND:

------- BOUNDARY

———— ROADS

A 1900

B 1920

C 1927

D 1963

2·5   0   2·5   5 KM

SCALE 1:125 000

TO MOMBASA
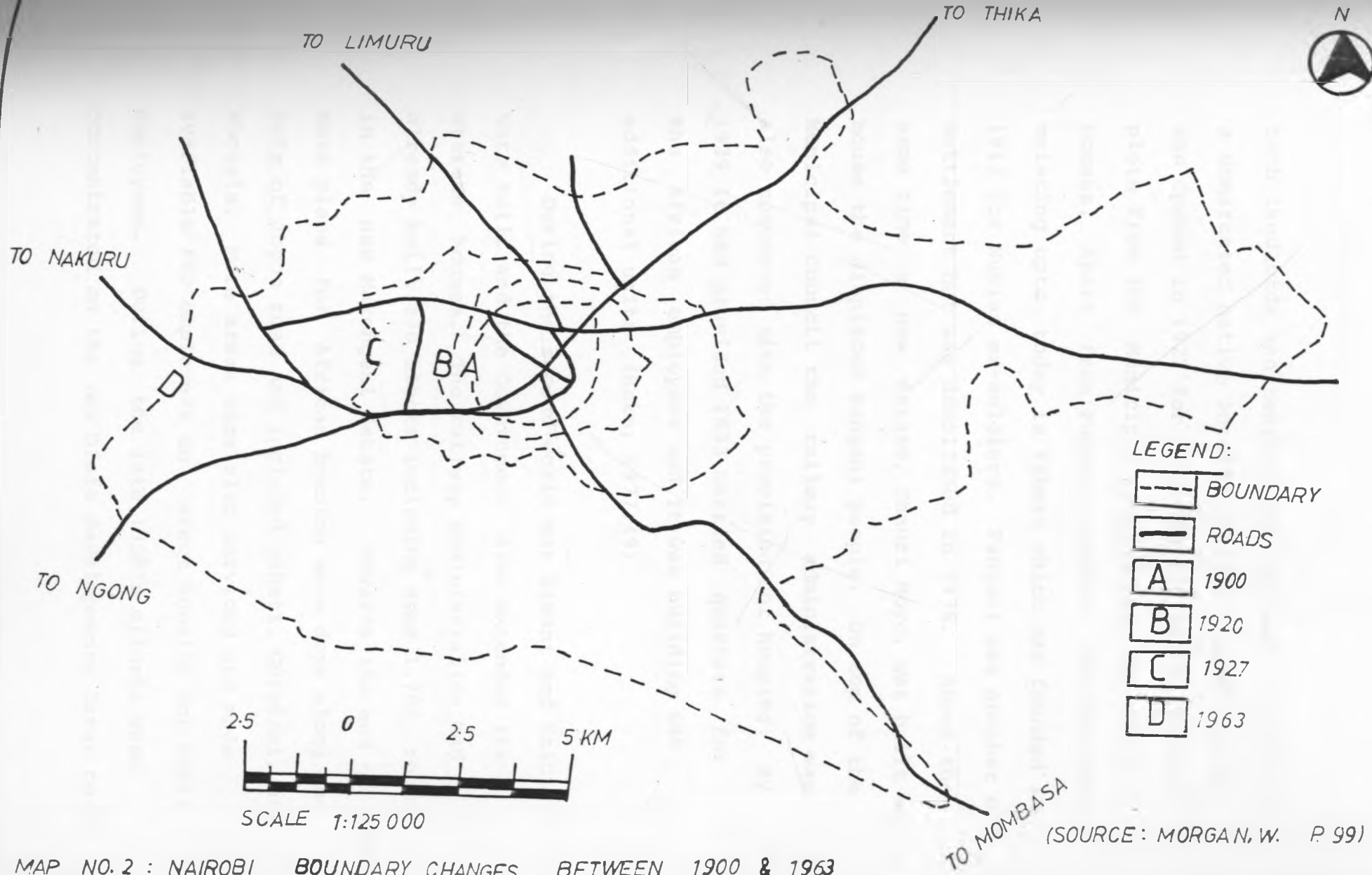
(SOURCE: MORGAN. W. P. 99)

MAP NO. 2 : NAIROBI BOUNDARY CHANGES BETWEEN 1900 & 1963

— 50 —

both landlords and tenants were obliged to live in
a demarcated native location called Pumwani which
was opened in 1922 for Africans and Arabs to rent
plots from the Municipal Council and to erect
houses. Apart from Pumwani another old settlement
existing upto today is Kibera which was founded in
1912 for Nubian ex-soldiers. Pangani was another old
settlement but was demolished in 1938. About the
same time a new estate, Shauri Moyo, was built to
house the displaced Pangani people. On top of the
Municipal Council the railway administration was
also concerned with the provision of housing. By
1939 it had provided 1633 married quarters for
the African employees and it was building 600
additional units (Hake; 1977:49).

During the second world war Ziwani and Kaloleni
were built and the Government also extended its
Starehe houses. The railway administration had
already built 170 blocks including some 1,700 rooms
in the new Makongeni Estate. Towards the end of 1940's
more plans for African housing were done along the
axis of Jogoo road and included Bahati, Gorofani, and
Mbotela. More areas were also serviced and made
available for employers to erect housing for their
employees. During the late 1950's efforts were
concentrated on the new Ofafa developments later to be
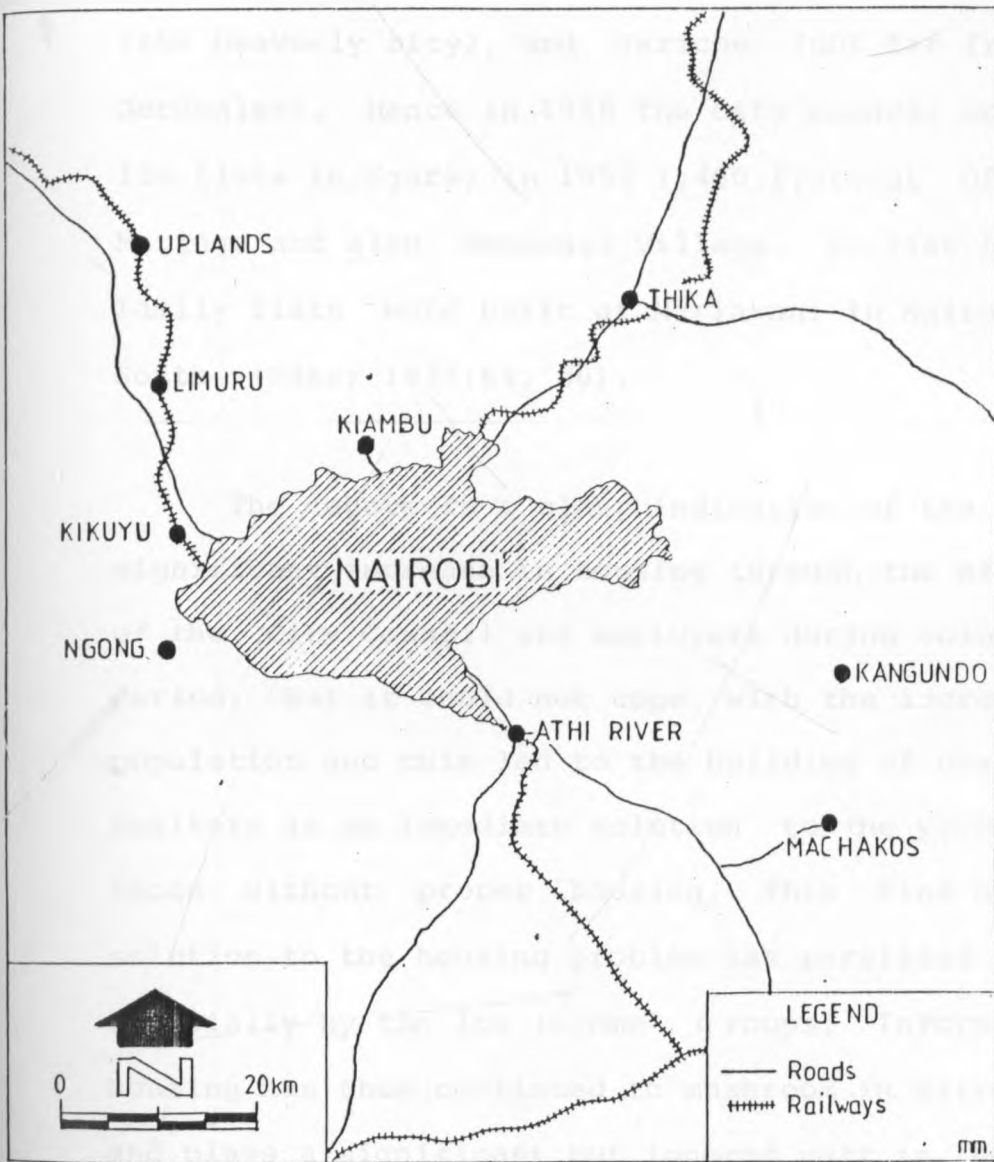
Map No. *3* : The Nairobi Region . (After Kingoriah)

named by the residents Maringo (Posh), Jerusalem
(the heavenly city), and Jericho (not far from
Jerusalem). Hence in 1958 the City Council completed
136 flats in Ngara; in 1959 1,400 flats at Ofafa
Maringo and also Embakasi Village. In 1960 500
family flats were built at Mariakani in Nairobi
South (Hake; 1977:64, 80).

The above is a clear indication of the
significant increase in housing through the efforts
of the City Council and employers during colonial
period. But it could not cope with the increasing
population and this led to the building of unauthorized
shelters as an immediate solution to the problem by
those without proper housing. This kind of
solution to the housing problem has persisted to date
especially by the low income groups. Informal
housing has thus continued to mushroom in Nairobi
and plays a significant but ignored part in housing
a certain group of the urbanites who might be
termed the urban low income and poor.

3.2 BACKGROUND INFORMATION TO THE RESEARCH SITE

This study was carried out in an informal housing
estate in Nairobi called Kawangware village. This is
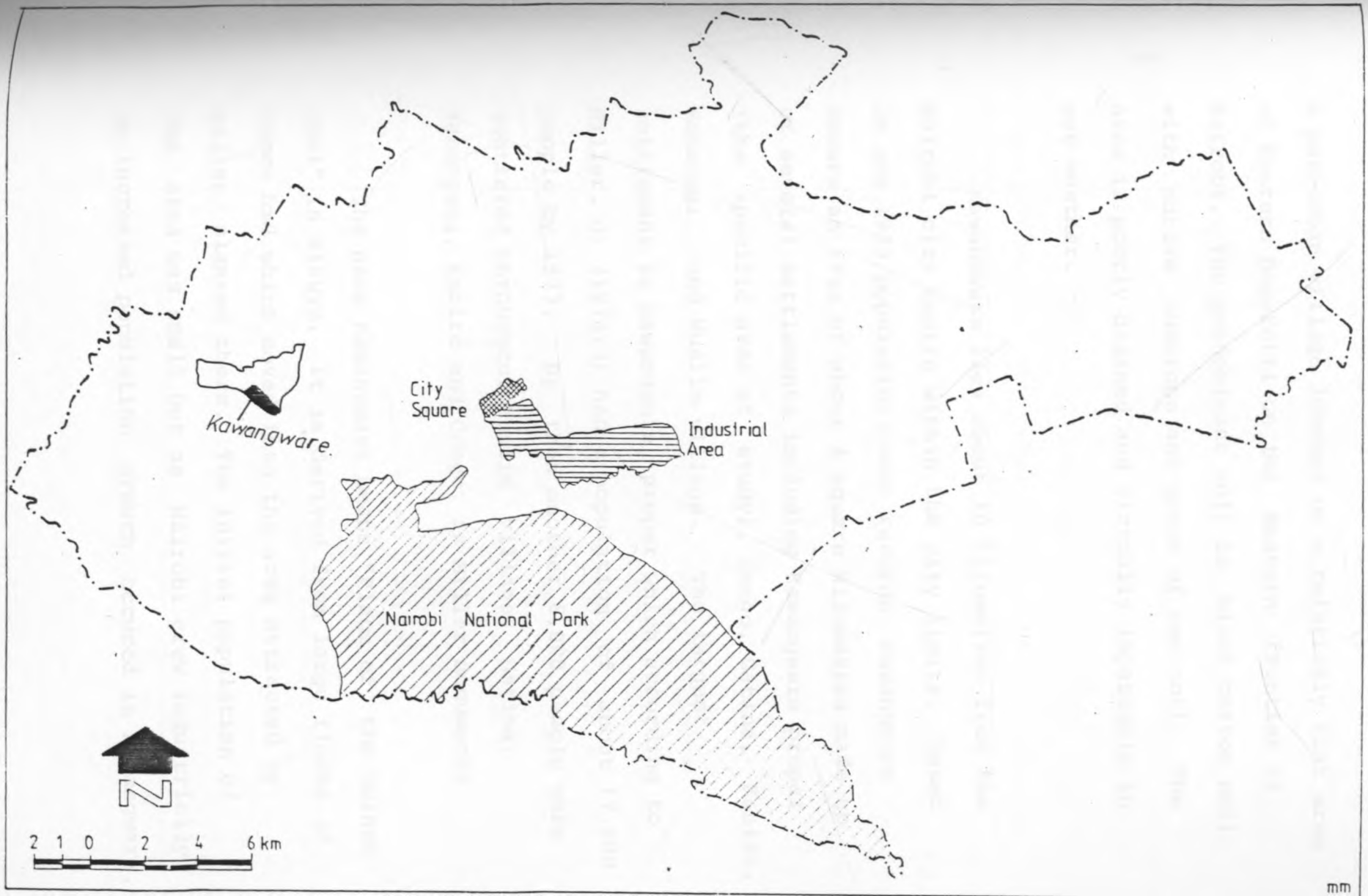
Map No. 4 : Location of Study Area within Nairobi.

a peri-urban village located on a relatively flat area
of Eastern Dagoretti on the Western frontier of
Nairobi. The predominant soil is black cotton soil
with murram outcrops and areas of red soil. The
area is poorly drained and virtually impassable in
wet weather.

Kawangware lies about 10 kilometres from the
Nairobi city centre within the city limits. Based
on the 1979 population census records Kawangware
covers an area of about 4 square kilometres made up
of several settlements including Kawangware proper
(the specific area of study), Congo, Gatina, Kabiro,
Kanungaga ., and Muslim village.   The largest
settlement is Kawangware proper which according to
Miller, J. (1978:3) had a population of about 17,000
people by 1977.   By then another 8,000 people were
scattered throughout Muslim village, Gatina,
Kanungaga, Kabiro and Congo, as Miller documents.

The name Kawangware means "Place of the Guinea
Fowl" in Kikuyu. It is derived from large flocks of
guinea fowl which moved into the area attracted by
millet planted there. The initial population of
the area was small but as Nairobi grew industrially
an increased population growth occured in Kawangware.

This resulted in a growing need for housing which
in turn encouraged many landowners to build rental
buildings for people moving into Nairobi. Up until
that time Kawangware had been almost totally
occupied by Kikuyus but many of the new renters
were from Western, Nyanza, and Rift Valley Provinces.
The trend has grown over the years and rental
rooms are being built constantly as the rental population
increases. Today the rental population exceeds the
homesteaders. But a large number of permanent families
do still live in the community and the land is almost
entirely owned by them.

Traditionally Kawangware was a settlement
outside of the Nairobi city limits. It was not
until 1964 that Kawangware became part of Nairobi
city. During this year the City Council of Nairobi
annexed Kawangware from Dagoretti location in Kiambu
district. With time Dagoretti location was included
in the Nairobi area and today Kawangware is found
in Dagoretti Division, Nairobi Provincial area.
Before 1964 the settlement had rural characteristics
typical of many rural districts in Kenya. But
through the efforts of private entrepreneurs (largely
individual landowners) wooden, mud-walled, corrugated
iron sheet walled and mud-plastered walled houses all
of which have iron sheet roofs have been constructed

TO NAIVASHA.

LAVINGTON

KANUNGAGA

GATINA.

MUSLIM

VILLAGE.

CONGO.

LEGEND:
- - - - - VILLAGE BOUNDARY
———— ROADS.
⬛⬛⬛ AREA OF STUDY

KABIRO

TO KIKUYU

NAIVASHA

KAWANGWARE

ROAD.

PROPER

150 0   300   600M.

SCALE 1:15000

N

MAP NO.5 : LOCATION OF STUDY AREA WITHIN KAWANGWARE.

TO NAIROBI

to become the most dominant forms of accommodation.
Most of these have cemented floors. Such housing
provides the badly needed accommodation to thousands
of low-income earners and to many people without
formal employment.

3.2.1   Population Projections:

Between 1969 and 1979 the population of Dagoretti
which encompases Kawangware/Riruta North, Kangemi,
Waithaka, Riruta South (Satellite), Uthiru,
Ruthimitu, Mutuini and Kilimani grew from 41,409 to
130,902 persons. This shows an annual growth rate
of about 12.2%. During the 1969 population census
Kawangware was not an enumeration unit. But based
on the 1979 census records, when it was an
enumeration unit, it accommodated about 18.65% of
Dagoretti's population, that is, 24,413 persons out
of 130,902 persons. Assuming that Kawangware must
have accommodated a similar percentage of Dagoretti's
population of 41,409 persons by 1969, its population
in 1969 should have been about 7,723 persons. The
calculation of an intercensus growth rate using the
calculated 1969 population and the 1979 census
record's population for Kawangware reveals that
Kawangware's population over those ten years was
growing at a rate of 12.2% per annum. This is higher

than that of the whole city within the same period
(that of 5% per annum).

Based on the above 12.2% calculated growth rate
for Kawangware the future population of the area was
projected as indicated in Table 6:

TABLE 6: POPULATION PROJECTIONS FOR KAWANGWARE TO THE
         YEAR 2000:

AREA/YEAR	1969	1979	GROWTH RATE	PROJECTIONS			
				1985	1990	1995	2000
NAIROBI	509,286	827,775	5%	1,164,763	1,486,565	1,897,275	2,421,458
KAWANGWARE	7,723	24,413	12.2%	48,699	86,584	153,942	273,700
KAWANGWARE AS %AGE OF NAIROBI	1.5	2.95	-	4.18	5.82	8.11	11.30

From the 1979 Census Report Kawangware covers
an area of about 4 square kilometres. The population
density for the area as at 1969 was therefore 1931
persons per square kilometre rising to 5261 persons
per square kilometre by 1979. The population density
for the years 1985, 1990, 1995 and 2000 is projected to
be 12,175; 21,646 and 68,425 persons per square kilometre
respectively.

During the 1979 Population Census Kawangware
registered about 7,512 households giving an average

of about 3.25 persons per household. Assuming that
the household size will remain constant, the area by
1985 had 14,985 households. This was projected   to
rise to 26,642, 47,368 and 84,219 households by the
years 1990, 1995 and 2000 respectively.

3.2.2.   Land Use Patterns

Traditionally Kawangware area was predominantly
agricultural. But today the main land uses in the area
include residential, industrial, commercial, agricultural
and public utilities. Generally speaking, however,
residential and commercial land uses take the lion's
share of the land. Industrial use can be ranked
third followed by public utilities, with agriculture
taking a minor portion of the land.   Residentially
the area is divided into various villages including
Kawangware proper, Gatina, Congo, Muslim village,
Kanungaga and Kabiro.

Industrially Kawangware is punctuated with
numerous welding and small-scale metal works which
are widely spread all over.   Most of these are, however,
to be found in Kawangware proper which borders the
Naivasha Road. Apart from the main shopping centres
at Kawangware proper, Kanungaga, Gatina and Muslim
village small shops and kiosks are widespread throughout
the area, again with Kawangware proper taking the lion's
share.

Other forms of land uses include schools,
roads, health facilities, churches and mosque(s).
Kawangware is served by four primary schools namely,
Gatina Primary school, Kawangware primary school,
(located in the unit area of research), Ndurarwa
primary school and Riruta H.G.M. Primary school.
Within the general Kawangware area there is only
one secondary school - Precious Blood (Riruta) Girls'
Secondary School - located adjacent to Kawangware
proper, the research site. There is no health
centre within the research site but there is one
located in the Western end of the area. There is
a major existing community market located within
Kawangware proper. Major roads in the area include
Naivasha Road, Muthiora Road and Kawangware Road among
others.

Land in Kawangware is privately owned; most of
it by residents of the area (absentee landlordism is
minimal). Apart from land accommodating public
utilities like roads, schools, among others, the
rest of the land is owned by private individuals
(freehold titles) who have taken the initiatives to
develop it. Private land is largely occupied by
residential houses which land owners let out to tenants
to earn some income. Most landlords, however, live
in part of the terraced housing they have erected. To
some of the landlords this is their only land and home.

These are mainly people who have been born and raised at Kawangware itself.

3.2.3. Kawangware and the Second Urban Project:

The second urban project dating back to 1978 was a project geared towards increasing the urban housing stock for the low-income groups. Through the project the Government was to achieve accelerated implementation of low-cost housing programmes in Nairobi and initiate similar programmes in Kisumu and Mombasa. The project was supposed to increase the supply of site and service plots, introduce upgrading of unserviced squatter settlements as an official policy, stimulate and encourage employment and income generating activities for the urban poor, and help Local Authorities to control patterns of urban growth and to develop their land more effectively, among others. Among the project components therefore were settlement upgrading (provision of infrastructure to existing unserviced settlements), site and services, settlement plots, low-cost housing plots for market-sale, housing loans, communities facilities, employment opportunities, and technical assistance (Republic of Kenya, and International Bank for Reconstruction; 1978).

Included in the settlement upgrading component for Nairobi was Riruta which covered Kawangware proper the research site. The upgrading programme was to

provide infrastructural services, community and social
facilities and secure tenure. Where private land was
involved, like in Kawangware, the tenure would remain
unchanged even with the upgrading programme. By the
time of the study,however, funds had not been released
from the World Bank and the Riruta project remained
deffered. But the funding for the upgrading of
Kawangware area was to come from the European Economic
Community (E.E.C.) and not the World Bank. Funds
were procured in 1978/79 and some upgrading was effected
on mainly water reticulation, tarmacing of major roads,
security/street lights, and the construction of
concrete drains along major roads. Although such
upgrading went along way to improve the level of
services in the area what was accomplished is still
inadequate; footpaths were not graded, drainage
within the built-up environment still remains a
problem, and garbage collection has continued to be
neglected.

3.3 HOUSING POLICY, STRATEGIES AND PROGRAMMES IN KENYA

The housing policy of any country is the frame-
work within which detailed planning for housing can
take place. The policy guides the formulation and
the implementation of housing programmes in the
country. But national housing policies in different
countries differ in terms of specific objectives and
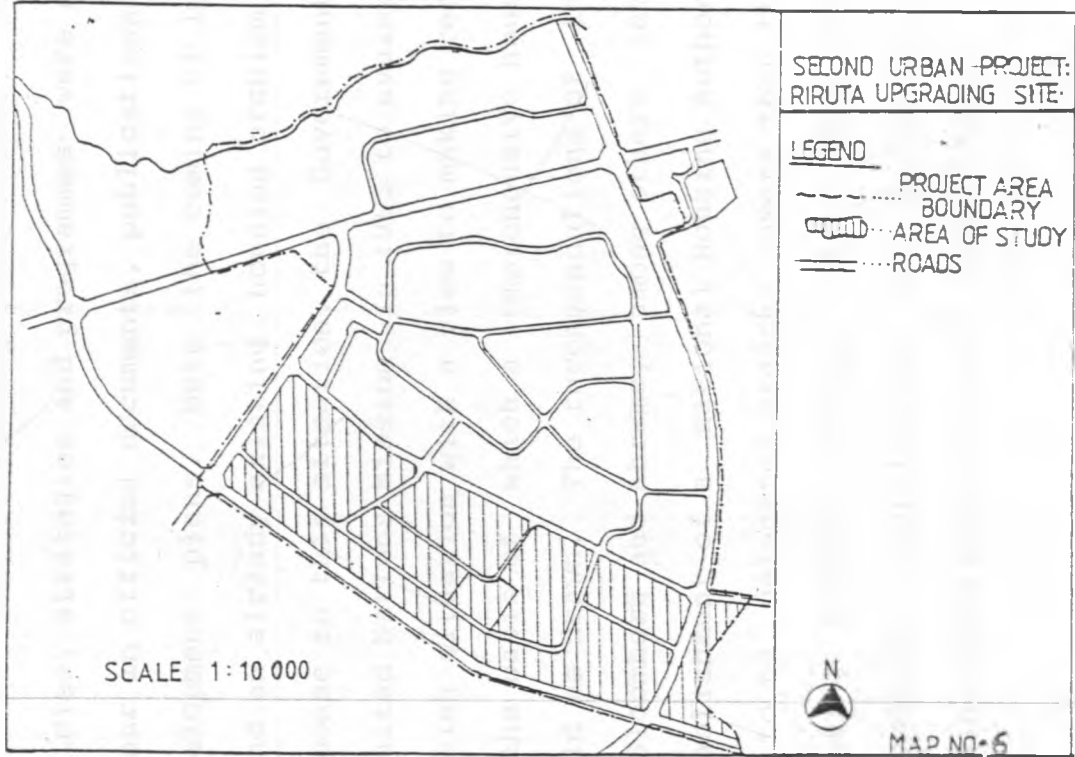
SECOND URBAN PROJECT:
RIRUTA UPGRADING SITE·

LEGEND

- - - - - PROJECT AREA
           BOUNDARY
⊂▭▭▭▭▷ AREA OF STUDY
═══ ROADS

N

SCALE 1:10 000

MAP NO· 6

and on the basis of financial conditions and
the existing housing stock.

In Kenya following independence, several
policies, strategies and programmes were made and
appear in official documents, publications and
development plans. Here the coming of independence
found an already existing housing problem and in
response to this situation, the Government commissioned
a United Nations Mission in 1965 to evaluate the
housing situation with a view to making recommendations
on the basis of which a comprehensive housing policy
could be drawn. The recommendations of the report
by Bloomberg and Abrams, among others, led to the
establishment of a National Housing Authority which
was to be delegated greater powers than the already
existing Central Housing Board. They also
recommended coordination and implementation of
housing programmes by Local Authorities.

Following the publication of the United Nations
sponsored report a Sessional Paper Number 5 of
1966/67 entitled "Housing Policy in Kenya" was
published to highlight the major housing policy.
It stated that the Government's urban policy would
be organising, in collaboration with the local
authorities, a programme which seeks to develop
housing projects which provide essential housing and

health environment to the urban dwellers at the
lowest possible costs to the occupants. It also
endorsed recommendations to the effect that a
National Housing Authority be established to
coordinate housing programmes particularly those
relating to Local Authorities (Chana; 1979:19).
Consequently in 1966, the Ministry of Housing was
created followed by the National Housing Corporation,
the following year. Also founded were the Housing
Finance Company of Kenya and the Rent Restriction
Tribunal (Malombe; 1981).

3.3.1   Policy, Strategies and Programmes in the National Development Plans:

The Government's aim has been to improve
housing standards. This has been illustrated in the
various development plans. The 1964-70 National
Development Plan was the first plan in independent
Kenya. Despite its having no priorities on housing it
reaffirmed the Government's housing policy by
focusing attention on such issues as the problem of
rural to urban migration and the inability of the
majority of the urban population to secure housing of
a reasonable quality. The Government saw site and
service schemes as a practical approach to the
housing problem of the low-income groups in the urban

areas (Chana; 1979:20).

The Second National Development Plan
(1970-74) however, carried a clearly stated Government
policy on housing. The plan in part stated that:

> The prime objective of Government policy in
> housing is to move towards a situation in
> Kenya where every family will live in a decent
> home, whether private built or state-sponsored,
> which provides at least the basic standards of
> health, privy, and security and is placed in a
> context which facilitates the use of
> communal social institutions and technical
> installations in both rural and urban areas
> (Republic of Kenya; 1970:513)

The plans principal objective with regard to housing
was therefore to increase the housing stock. Nevertheless,
it pointed out that due to the inadequate incomes for
many families, decent housing along with other
elements of a minimally adequate standard of living
will continue to be beyond the reach of a significant
portion of the population.

The 1974-79 Development Plan also highlighted
Government policy on housing. The policy on housing
was to continue on more or less the same way as
laid down in the previous plan. But priority was
given to the rapid improvement of housing standards.
The desire was to streamline housing designs and
construction with Government set standards. Every
house constructed in an urban setting was therefore

required to have a minimum of two habitable rooms
plus a kitchen, a toilet and a shower. The plan
advocated against the spread of squatter settlemens
and slum clearance through the resettlement and
improvement of substandard housing. This in
effect has,however, not worked because clearance and
improvement have led to the displacement of the
target group who in turn move to establish a new
similar settlement elsewhere.

During the 1979-83 Development Plan the objectives
of the government policy on housing remained as per
the 1974-79 Development plan. The plan mainly
delt with aspects regarding squatter upgrading and
promotion of site and service schemes and the advance-
ment of housing interests of the disadvantaged workers
through cooperative housing (Republic of Kenya, 1979:125).

The 1984-88 Development Plan,however, bears
the most comprehensive plan in terms of housing
policy and objectives to date. The specific housing
policies and objectives outlined in this plan are:

(a)   To formulate and adopt realistic and
       performance-oriented building standards
       especially in the area of low cost housing.

(b)   To encourage tenants and landlords protection

by strengthening and publicizing the role played by rent control tribunals.

(c)   To promote self-help housing construction both in urban and rural areas so as to increase housing stock at a reduced construction cost.

(d)   To intensify research on and use of local building materials and construction techniques.

(e)   To promote development of flats for sale through legislation for the registration of titles to individual flats.

(f)   To explore the feasibility of instituting a housing levy whereby employers contribute towards a Consolidated Housing Fund (Republic of Kenya; 1984:164-165).

The 1984-88 Plan also outlines housing strategies and programmes designed to alleviate the prevailing housing problem. The Government has proposed site and service programmes and settlement upgrading as the two basic strategies towards the production of low-cost housing for low income groups. In addition to these two, other strategies stipulated in the plan aimed at increasing urban low-cost housing production include cooperative housing, civil servants housing and private sector housing. Agencies anticipated to participate actively in the

implementation of the National Housing Programmes include the National Housing Corporation, the Housing Research and Development Unit; Local Authorities Housing Finance Institutions, National Cooperative Housing Union, and Private Developers.

From the above discussion it is clear that Kenya has had a clear policy on housing development especially in the urban areas. Even with the existence of such policy the housing problem has continued to prevail in urban areas where most of the housing provided is beyond the economic ability of the low income groups. These have continued to provide themselves with housing which, although of substandard nature, should be viewed as part of the urban housing stock. The Government's policies on housing spelt out in the various development plans and in publications and documents have not been implemented effectively as a result of which the housing output has remained inconsistent with the housing need. According to Malombe, J.M. (1981:38) "although several strategies have been adopted they all fall short of the requirement and thus substandard housing continue to increase".

3.4   BUILDING STANDARDS AND BY-LAWS

The Building Code in Kenya governs the
planning, design and construction of houses. It
comprises two distinct Local Government Orders, viz:

(a)   the Local Government (Adoptive By-Laws)
       (Building) Order 1968, generally termed the
       Grade I By-Laws, and

(b)   the Local Government (Adoptive By-Laws)
       (Grade II Building) By-Laws.

These two sets of Building By-Laws are legal
documents which have been adopted by majority of
the Municipals and County Councils to govern
virtually all erection of buildings in Council areas.

The Grade I Building By-Laws cover the erection
of buildings and the development of land in the
entire council area save those areas scheduled for
application of Grade II By-Laws. Lamentably however,
their content and format are modelled on
British building regulations and do not suit the
local situation. They contain space standards for
types of permanent buildings, materials specifications,
fire regulations, and standards related to all services
including lighting and ventilation. According to
the Grade I By-Laws the minimum dwelling unit

should not be less than one habitable room of
120 square feet (11.15 square metres). The minimum
floor area prescribed is 40 square feet (3.72
square metres). Combined toilet/ablution and
clothes washing slabs are permitted at a ratio of
one per six persons. The By-Laws recommend
the use of 'permanent' materials for building.

The Grade I By-Laws stipulate higher
standards than the Grade II By-Laws. But special
provision is made for high density and low-cost
residential areas. The Grade II By-Laws form a
document comprising 32 By-Laws and are self-
contained. Originally they were designed for
application in rural areas. But they may also be
adopted for certain parts of Nairobi and other
towns on the recommendations of the Council and with
the sanction of the Ministry of Local Government.
They permit mud-and-wattle walls, thatched roofs
and pit latrines. They also stipulate on the
limitation of distances between buildings and the
minimum plot size and the prportion of the plot
to be covered by the building.

The Grade II By-Laws also specify minimum
space and service standards by stating that every
dwelling home should consist of at least one
habitable room and a kitchen, ablution and privy

accommodation for the exclusive use of the house
occupants. The W.C. need not necessarily be an
integral part of the house on condition that
pit latrines are located 30 feet (9.14 metres)
from the habitable room or kitchen. The distance
may,however, be reduced with the permission
of the Ministry of Health. On density the By-
laws require that a minimum area of 40 square
feet (3.72 square metres) be provided for every
person within a habitable room.

As indicated above, the Grade I By-Laws are
designed for use in urban areas whereas the Grade II
By-Laws apply to rural areas. Using the Grade I
By-Laws informal housing, which is mainly built of
traditional building materials using traditional
building techniques, does not qualify as legal urban
housing and is therefore not counted to be part of
the urban housing stock. A shift to the Grade II
By-Laws in the provision of housing for especially
the lower income groups would, however, legalise
most of the informal housing areas and incorporate
them into the official urban housing stock. Hence
we find that the stress on the Grade I By-Laws in
urban areas for housing all income categories will
continue to be a major constraint to the incorporation
of informal housing to the official housing stock.

3.5   HOUSING SHORTAGE FOR THE LOW INCOME GROUPS
       IN NAIROBI

        Nairobi City covering an area of about 690
square kilometres has generally developed in
accordance with the master plan of 1948 which
advocated strict segretation of land uses and
income classes into well defined localities.
Based on this segregation policy industry has come
to be concentrated to the south of the Central
Business District (CBD) while residential areas for
the high and middle income groups are located to
the west and north respectively. The low income
groups are found to the east of the city centre.

        The public sector has been the most active
in the provision of housing for the low income
groups.   But with the rapid increasing number of
low income households and the inability of the
city to keep pace with the demand for low cost
housing the situation is changing drastically and
private individuals and other agencies have began
to actively participate in the provision of low
income housing, some for the sole purpose of
making a profit (Morris; 1974:279). The provision
of low income housing and especially by the public
sector has however been crippled by the failure of
projects to reach the target group due to prohibitive

land construction cost and the low purchasing
power of the low income households. We therefore
find a situation where the middle income groups,
who are able to afford what was originally designed
to be low income housing, profit from such schemes.
Examples of such cases include California, Umoja,
and Dandora housing schemes.

Due to the very low levels of affordable housing,
the low income groups have been constrained to turn
to illegal forms of housing provision. This has led
to the mushrooming of such unauthorized settlements
like Mathare and Korogocho. We hence find a
situation in Nairobi whereby, in addition to the
large numbers of people living in overcrowded
conditions, 1/3 of the population lives in
uncontrolled and illigal housing whose degree of
physical development depends on the amount of
security of tenure assumed (Etherton; 1971:4).
Some of these settlements are potentially improvable
areas, but unless these receive official recognition
and planning guidance they may be overrun by
demolition.

The emergence of unauthorized settlements in
Nairobi can mainly be attributed to the history
of Nairobi as a city for the Europeans where
immigration of Africans was strictly controlled

prior to independence. African housing was therefore ignored and with the subsequent rise in in-migration the result was a demand for housing which greatly exceeded supply and hence unauthorized settlements characterized by a lack of services, utilities and amenities and some also by a paucity of employment opportunities in their vicinity (Development Planning Unit, London; 1983:35).

Most squatter settlements are centrally located. This added to the minimum cost commitment makes it possible for the low income groups to survive in them. In most cases the land tenure form, building subdivision pattern and construction standards are not within the legally acceptable development framework or the planning process as it presently operates (Racki et. al.; 1974:286). Land in the squatter settlements, for example, is for the most part government owned. Despite their illegality,however, squatter settle- ments play a very important role in urban housing. This can be appreciated in light of the population they house, that is, approximately 40% of Nairobi's population as at 1982 (Development Planning Unit, London; 1983:35).

Illegal settlements are an indication of the housing need for the low income groups and constitute

a major housing resource. But due to the limited
access to employment opportunities, coupled with
the unavailability of suitably located and basically
serviced land, restrictive building standards and
legislation and demolition practices, attempts by
low income groups living in these settlements to
improve their lot are constantly frustrated. The
repression squatters are faced with can be noticed
in the Mathare Valley case where endeavours by
the village residents to purchase the land on which
they were located were hampered by steeply rising
land values which priced them out of the market
(Racki; 1974:286).

Although the most commonplace building
materials used in illegal settlements are mud and
wattle, timber houses are gaining popularity as
speculative built rental housing for low income
groups in Nairobi. Such housing is being erected
in an increasing number of localities particularly
where there is security of land tenure. The layout
of rooms, which are rented to households, follow
a simple floor plan with minimum finishes and
the other outer timber walls, corrugated iron
roofs and concrete floor left bare (Morris; 1974:279).
While this form of housing represents the closest to
conventional housing construction, in the majority
of cases the low income groups who inhabit it still

have to do with deficient services, utilities and
ammenities which are beyond their economic reach.

3.6 PAST APPROACHES TO THE PROBLEM

The housing problem in Nairobi can be
explained through the rapid urbanization process
the city has experienced together with the
natural population growth and the phenomenon of
rural-urban migration. The ever increasing
number of low income households has led to the
increased demand for low income housing and this has
had far reaching implications as far as supply of
low income housing is concerned. A number of
diverse strategies have therefore been adopted by
the Government, the Nairobi City Council, and
other agencies in response to this problem.

At first eradication was adopted as a
method to eliminate several unauthorized settlements
within the city. This involved bulldozing by city
authorities of shanty settlements without resettlement
of the inhabitants. The squatter settlements were
seen as "eyesores" and the authorities were also
concerned with the public health aspect whereby
unhealthy and unsanitary conditions found in these
settlements were viewed as a great threat to the
entire population. The wholesale demolition of

slum areas for health or developmental reasons
however exacerbates rather than solves the housing
problem especially when dwellers have no viable
alternative form of shelter (the Kenyan Government
recognises this fact and advocates for demolition
only where alternative accommodation has been provided).
Frequently residents return to original sites on
completion of demolition and rebuilt their shelters
or move to an adjacent site. There were efforts
also to relocate squatters from areas in the vicinity
of the city centre to the outskirts of the city.
These too met with limited success as the inhabitants
wanted to be near to employment opportunities.

The provision of conventional housing in the
form of flats, as well as site and service schemes
for the low income groups are other attempts in
solving the housing problems for the lower income
groups. These projects which incorporate both
rental and tenant purchase schemes have, however,
been commonly confronted with technical difficulties
and have seldom succeeded in reaching the target
groups due to unfavourable financial position
of the low income groups. Under the site and service
scheme strategy, for example, it is assumed that those
who are allocated serviced plots (plots with
infrastructural services) and given a small materials
loan can build house using their own labour to

reduce total costs. This way site and service
schemes would go along way in increasing the supply
of building plots with economic infrastructure
and services, providing better living conditions
among the urban poor, restraining the growth of
unplanned squatter settlements, providing security
of tenure, and reducing the overcrowding in squatter
settlements (World Bank; 1974).

Existing evidence, however, shows that it
proved impossible for low income groups to build
to the prescribed standards and serviced plots
went into the hands of the urban wealthy; allotees
sold their plots to the better off. In 1982,
for example, the basic minimum monthly wage in
Nairobi and Mombasa was Kshs. 480 whereas it
was Kshs. 442 in Kisumu (Republic of Kenya; 1982).
According to this wage guideline the majority of
the urban workers would be earning below
Kshs. 1,000 per month, and consequently would not
be able to pay the Kshs. 700 down payment for site
and service plots and other charges. Due to this
financial incapability of the majority of would-be
allotees therefore, there is growing incidence
of plots changing hands to the higher income groups.

To reduce the cost of each housing unit
within reach of the low income group a strategy
of building 'core housing' was also adopted for

Nairobi. Core housing schemes include the basic
infrastructure for the estate and other facilities
on each plot: kitchen, toilet and, in some cases,
a living room. The basic assumption here was that
those allocated such core houses would be in a
position to complete it to the standards required
by the city council. Low income occupiers however
were unable to complete their property and sold
it to raise money. Such a scheme hence ended
up in the possession of middle and high income
families rather than low income families.

Settlement improvement or squatter upgrading
schemes is another method employed in fighting
the urban housing problem for the low income groups.
This can involve the provision of water, sewers,
sanitary facilities and access roads. Such schemes
have nevertheless tended to be relatively slow
moving in the past owing to the heavy reliance on
self-help (Morris; 1974:280). Where majority
of the residents in upgrading areas are tenants, any
improvements of the dwellings may have the negative
result of raising the rents, thus either contributing
to house-sharing or out-migration of the tenants
from these houses to cheaper squalid environments.
Hence, where tenancy is the order of the day, the
application of the principles of squatter upgrading
will benefit the landlords and not the poor for
whom they are inteded.

CHAPTER FOUR

HOUSING AND ENVIRONMENTAL ANALYSIS

4.0   INTRODUCTION:

The data presented in this chapter and in chapter
five was gathered from Kawangware using a sample of
210 households. In order to draw the sample a base
map of the study area showing plots and access roads
was acquired from the Nairobi City Planning Department.
From the Map 357 plots were identified. Actual
counting on the ground showed that there were between
5-9 households in a plot. The average of the two figures,
that is, 7, was assumed to be the number of households
per plot and on the basis of it and the number of plots
identified on the base map, the number of households
in the study area was calculated at 2499 households.
Using the plot numbers as a sampling frame, 210 households
were selected randomly and studied.

The field surveys were conducted in the study
site between August and October 1985. This involved
the face to face interview whereby the researcher asked
questions directly to the 210 randomly selected
respondents using a carefully designed questionnaire
(see Appendix). The questionnaire was drawn in
English and translation was necessary from English
to Kiswahili since respondents were not fluent in
English. To enrich the information observations were

MAP NO.7 : KAWANGWARE BASE MAP.
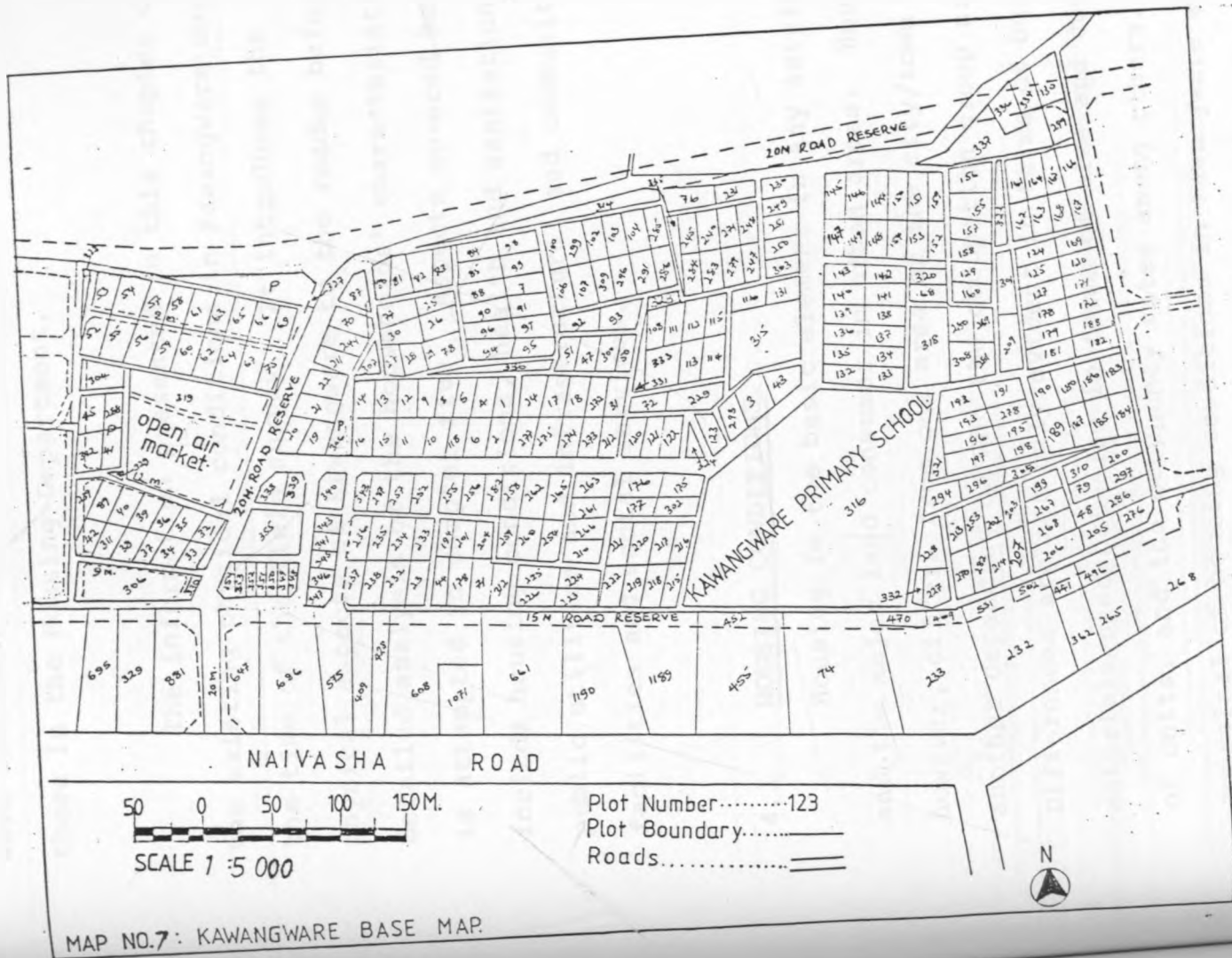
also made and recorded in the field. Indeed most of
the information gathered by section two of the
questionnaire was got this way. Informal discussions
were also held with City Council employees especially
those in the Housing Department.

The information presented in this chapter covers
the existing physical conditions in Kawangware during
the time of the field survey. It introduces the
physical aspects of Kawangware to the reader before a
detailed analysis of the households' characteristics
is attempted in chapter five. Aspects covered here
include housing conditions, health and sanitation,
public utilities and infrastructure and community
facilities and social services.

4.1   HOUSING CONDITIONS

Housing is the basic element in any settlement
and the major land consumer in urban areas. Housing,
however, differs from one area of the city/town to
another depending on who the occupation group are.
Differences are not only evident in terms of building
materials used but also in terms of size and design
of units, and the occupancy rates among others. An
appraisal of housing conditions in Kawangware will
therefore be covered under certain specific aspects
including:

(i)   Building materials used;

(ii)   Size of units occupied;

(iii) Occupancy rates; and

(iv)   Housing tenureship.

4.1.1. Building Materials Used:

A classification of housing occupied by the sampled households based on the type of building materials used brought out three types of housing in Kawangware, that is, semi-permanent, temporary, and very temporary (see Table 7). Building materials used included cement, concrete, and earth for floors; wood, poles with mud and sometimes with plaster and paint, flattened tin sheets, and cartons for walls; and corrugated iron sheets and tin sheets for roofs. From the material combination classificaton about 66.66% of the units were grouped as semi-permanent, 28.56% as temporary, and the remaining 4.78% as very temporary.

4.1.2 Size of Units Occupied:

Kawangware housing is mainly comprised of terraced blocks each block having various rooms. A single rooms is meant for occupation by one households. Some households however occupy more than one room. The area of units occupied ranged from 12 square metres to 80 square metres (see Table 8 for details). From

TABLE 7:   CLASSIFICATION OF HOUSING USING BUILDING MATERIALS COMBINATIONS

| TYPE OF HOUSING | BUILDING MATERIAL COMBINATIONS | | | NO. | % |
	FLOOR	WALL	ROOF		
SEMI-PERMANENT	Smooth Cement	Wood	Corrugated iron sheets	78.	37.14
	" "	Poles + Plaster	" " "	24	11.43
	" "	Poles + Paint	" " "	9	4.28
	" "	Corrugated iron sheets	" " "	16	7.62
	Rough Concrete	Wood	" " "	15	2.38
	Smooth cement	Poles + mud	" " "	6	2.86
	" "	Plattered tin sheets	" " "	2	2.09
			TOTALS	140	66.66
TEMPORARY	Compact earth	Poles + mud	Corrugated iron sheets	41	19.52
	" "	Poles + plaster	" " "	9	4.28
	" "	Wood	" " "	10	4.76
			TOTALS	60	28.56
VERY TEMPORARY	Compact earth	Poles + mud	Tin sheets	8	3.82
	" "	Wood + cartons	" "	1	0.48
	" "	Tin sheets	" "	1	0.48
			TOTAL	10	4.78
			AGGEGATE TOTAL	210	100.00

Plate 1: A wooden house in Kawangware.
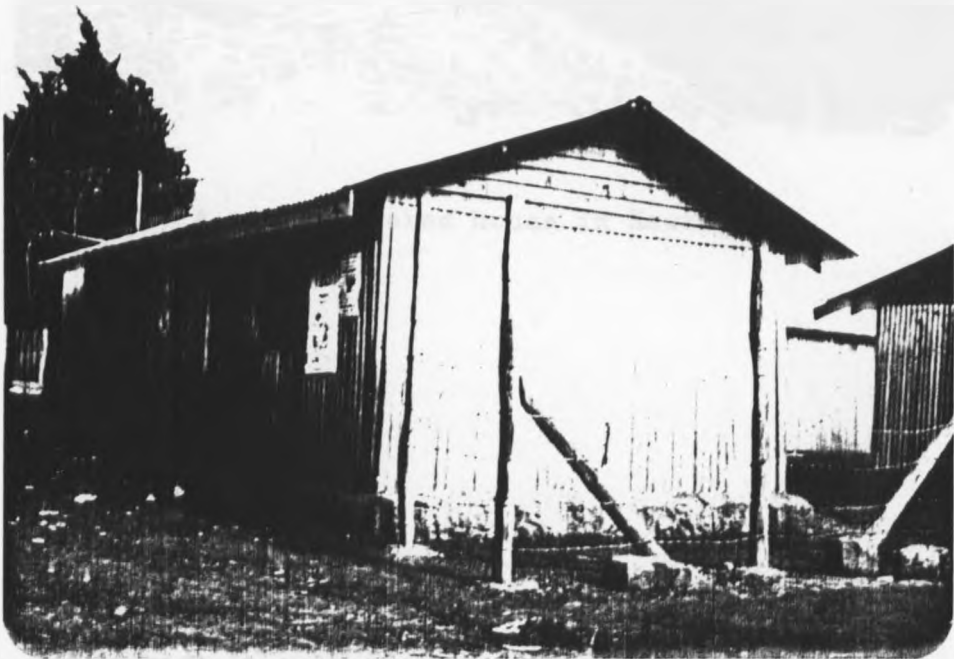
Plate 2: A mabati - walled house in Kawangware.

Plate 3: A mud plastered house in Kawangware.

the   table it is evident that rooms in Kawangware meet the existing requirements for a habitable based on the Grade I By-Laws of 1968, that is, 11.5 square metres.

TABLE 8:   SIZE OF UNITS OCCUPIED IN SQUARE METRES

AREA IN M^2	NUMBER OF UNITS	PERCENTAGE
12 - 16	27	12.86
17 - 21	68	32.38
22 - 26	47	22.38
27 - 31	39	18.57
32 - 36	1	O.48
37 - 41	13	6.19
42 - 51	5	2.38
52 - 61	7	3.33
62 - 71	O	O.OO
72 - 82	3	1.43
TOTALS	21O	1OO.OO

In terms of age of units, variation was observed in the field. The study recorded the age of housing units as ranging from one to 27 years. A detailed

analysis placed 6.19%, 31.9%, 24.76%, 24.76%, 10.49% and
1.9% of the units in the 1-5, 6-10, 11-15, 16-20,
21-25, and above 25 years age categories respectively.

4.1.3   Occupancy Rates:

Occupancy rate is a function of the number
of habitable rooms and the total number of occupants.
It is the average number of persons per habitable room
and can be used as a determinant factor of overcrowding
or space under utilization.   Although there is no
universally accepted definition of overcrowding,   as
for the developing countries the United Nations
maintains that overcrowding occurs when there is an
occupancy rate of 3 or more persons per room (Odongo,
1979).

The field survey shows an average room occupancy
rate of 3.78.   Occupancy rates however ranged from
one person per room to 9 persons per room.   Going by
the united Nations definition of overcrowding one can
reach a conclusion that there is overcrowding at
Kawangware (though not very serious).

4.1.4   Housing Tenureship:

While there are landlords who reside in their
own housing in Kawangware, on top of a few absentee
landlords, the resident population is composed
primarily of households who are constrained to seeking
rented accomodation in the estate probably due to
their low income, or because Kawangware is their place
of work, among other reasons.   Indeed 181 (86.19%)
of the sampled households lived in rented rooms while
only the remaining 29 (13.81%) units were owner-occupier.

As indicated above there is only a handful
of absentee landlords in Kawangware.   About 85.71% of
the landlords in Kawangware are resident within the
estate compared to only 14.29% absentee landlords who
reside in other estates within Nairobi or live outside
Nairobi.   Those resident within Nairobi live in places
like Waithaka, Lang'ata, Ngong, Riruta/Satellite,
Kibera and Dagoretti while those residing outside
Nairobi live in Ndongoro, Gikambura, and the Rift-
Valley (including Naivasha).   Landlords own both the
housing units and the land (plots).

4.1.5   Housing Maintanance:

For housing to live long and remain in good
conditions, constant repair might be necessary.   In

Kawangware however, the situation was found to be
abit different with only 33.81% of the units being
constantly repaired; the remaining 66.19% units were
not being constantly repaired. Expenditure on housing
repair varied from as low as fifty shillings per annum
to as high as 400 shillings per annum. Of course
investments on housing repair by landlords are not
uniform year in year out but vary with the
magnitude of the repairs to be made. All landlords
who constantly repair their houses had own savings
as their only source of finance.

Tenants and landlords interviewed identified
certain factors which they felt hindered the constant
repair of most of the housing units. The most pressing
factors identified were:

(i)   Lack of adequate funds (identified by
      67.14% of the respondents).

(ii) Low rent paying capacity of the tenants
      because of their low incomes (given by
      47.14% of those interviewed): By investing
      alot in housing repair a hike in rents
      could be necessary and this was feared
      could displace tenants and make units
      remain vacant for long.

(iii) Unwillingness of landlords expressed by
25.71% of the respondents.

The other negligeable factor expressed by only one person
who was a landlord was that 'tenants don't take great
care of the housing units.'

4.2 HEALTH AND SANITATION:

Earlier, in chapter three, it was indicated
that Kwangware was a part of the second Urban Project
Upgrading Programme of 1978. Using funds from the
E.E.C. some attempts were made to upgrade especially
infrastructural facilities and to improve health and
sanitation. The approach taken was, however, expensive
and what was achieved remained inadequate. Upgrading,
for example, took the form of tarmacing roads and
providing individual plots with piped water whereas
murram roads and common water points for groups of
plots could have sufficed for an area like Kawangware.
Among the major problems identified by study as facing
Kawangware residents was therefore health and
sanitation. This problem was ranked first by being
isolated by all 125 respondents who identified problems
facing Kawangware.

The health and sanitation problem in Kwangware was reflected through poor toilet conditions, unhygienic open drainage systems and lack of any form of drainage in certain areas, the existence of big heaps of garbage acting as breeding grounds for flies, rats and other dangerous animals/insects, among others.

4.2.1   Surface Drainage

The 1978/79 E.E.C. upgrading efforts in Kawangware managed to instal concrete drains along the major roads which are tarmaced. But these are open drains and because of the soil and garbage which collects in them they harbor stagnant water which poses a health hazard. The open drains are characterized by stagnant dirty stinking water where mosquitoes, flies and other insects detrimental to the well being of man find breeding grounds.

The drainage problem in Kawangware is experienced not only with rain water but also with waste water from the dwelling units. All households studied (except 13.8% which had access to open drainage at the main road sides) were having problems with waste water disposal from the housing units. The housing units lack any provision for the disposal of waste water and stagnant rain and waste water is a common feature within housing units

Water

Plate 4: Lack of waste water disposal system.

Open
drainage

Plate 5: A garbage filled open drainage system.
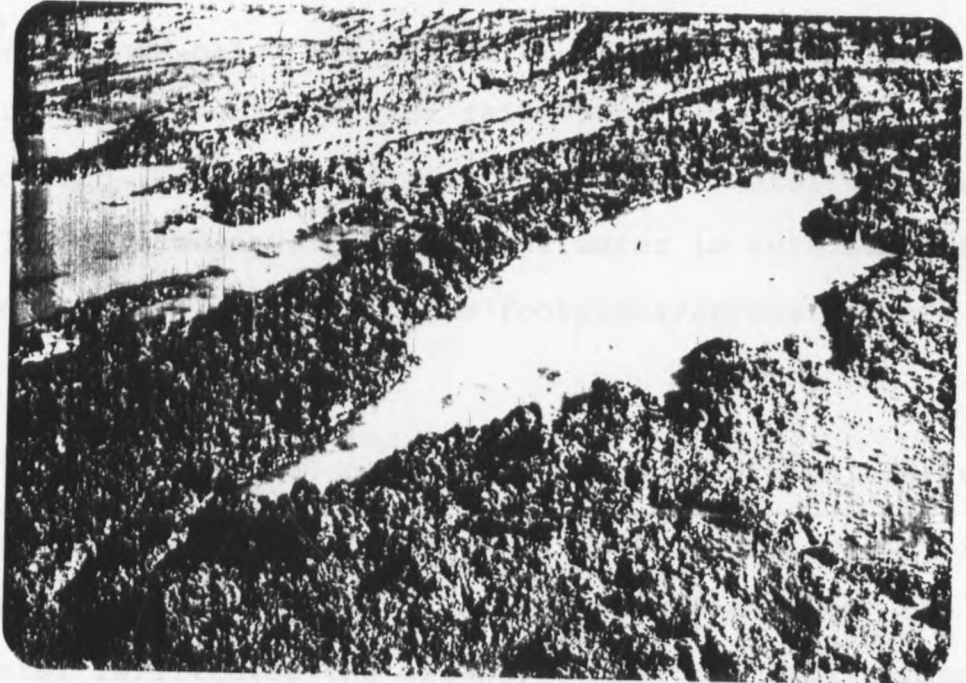
wate

Plate 6:   Stagnant rain water.
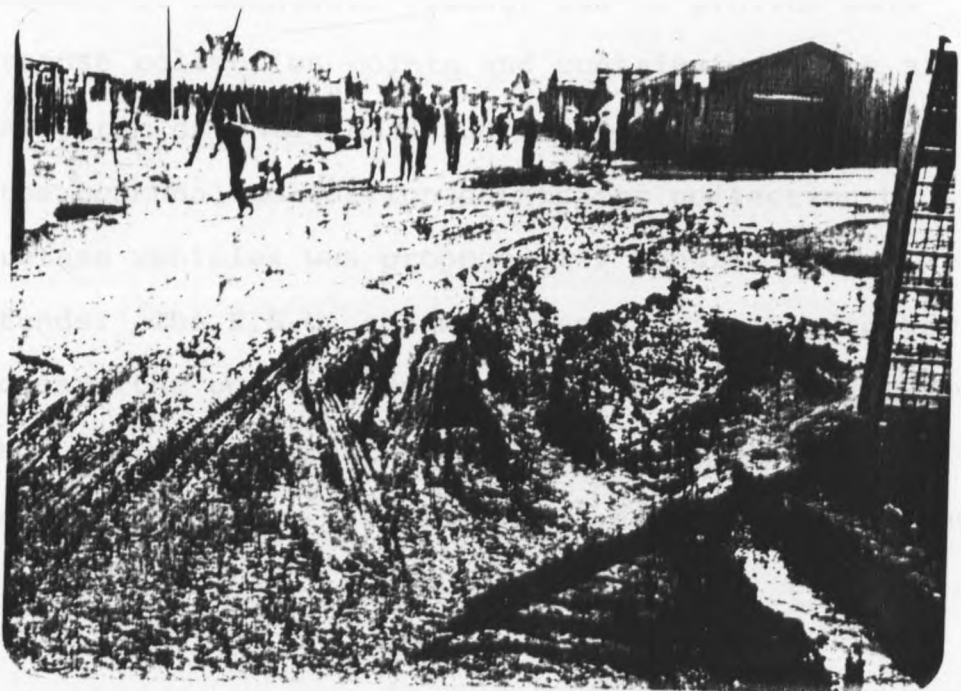
Plate 7: Mud during rains due to stagnant water.

Kawangware being a fairly flat area. The stagnant
water increases with the rains and it is not a surprise
to find big pools of rain - cum waste water scattered
all over Kawangware. Stagnant water in turn leads to
very muddy and impassable footpaths/access roads.

The disposal of waste water mainly involves just
pouring it outside the housing units. Solids contained
in the water remain on the ground surface when the
water infiltrates the ground. Where no infiltration
occurs these rot in the water. On roting some of
these solids emit very bad smells.

4.2.2. Solid waste disposal:

One of the objectives the of E.E.C. upgrading
scheme of Kawangware village was to provide bulk
refuse collection points and containers in the area.
A system of individual rubbish bins to be emptied into
the communal collection points for collection by special
refuse vehicles was proposed for funding by E.E.C.
funds. The E.E.C. scheme however only managed to
create the communal dumping points but never provided
the individual rubbish bins. The disposal of solid
wastes therefore still remains a problem in Kawangware.

Of the households surveyed all consented to a problem of solid waste disposal and indicated that they disposed of their solid waste on rubbish heaps within the vicinity of their homes. Big heaps of scattered rubbish are therefore a common sight in Kawangware and have become the feeding grounds of sheep and goats found in the estate, the same way the stagnant usually very dirty water in the open drains is the feeding ground for ducks in the estate.

Improper solid waste disposal poses an additional health hazard to the Kawangware residents on top of the open drains filled by stagnant dirty water. The E.E.C. funded vehicles for collecting garbage from the common disposal grounds have never materialised and inability to collect the garbage by the City Council aggravates the problem in this area. Garbage therefore piles and rots on the communal damping grounds posing a health hazard. Currently,however, the problem of uncollected garbage in Nairobi is city-wide and as such it does not affect Kawangware alone.

4.2.3 Excreta Disposal

Kawangware as at the time of the field survey had no sewer reticulation system. Sanitary facilities
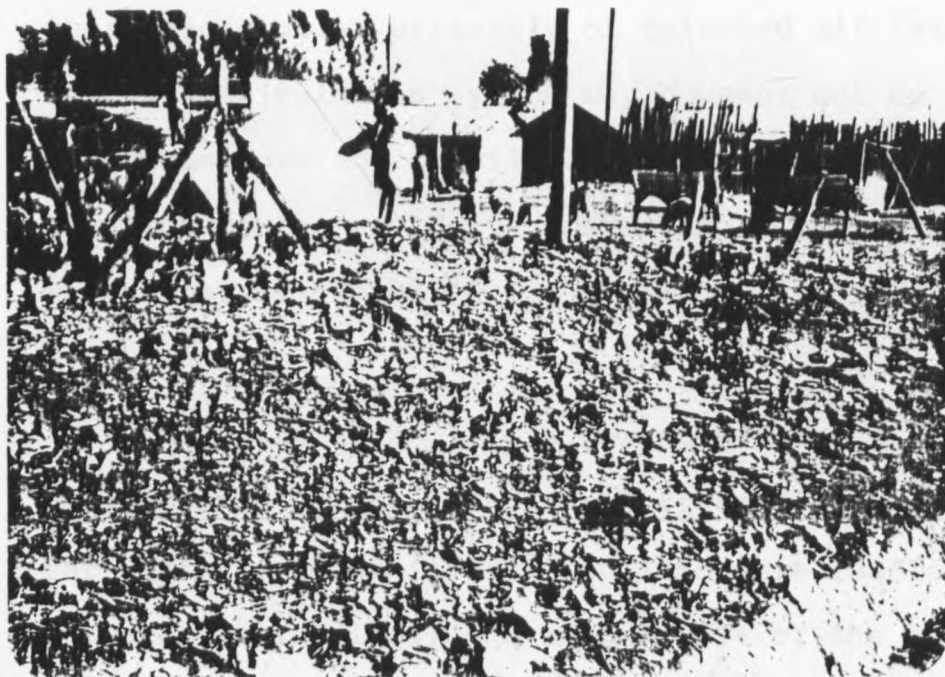
Plate 8: Uncollected garbage.
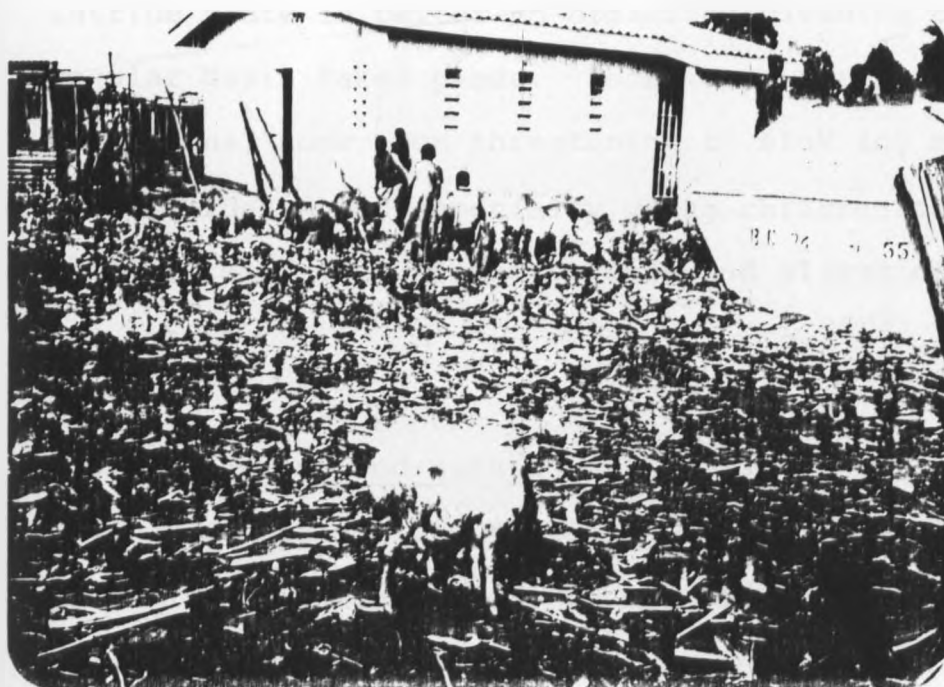
Plate 9: Uncollected garbage.

therefore consist primarily of detached pit latrines.
A sewer reticulation system may however not be desirable
for Kawangware for it will lead to unnecessary
taxation of the residents most of whom earn very little,
with some unemployed.

At least each plot in Kawangware has a pit latrine
to serve the residents of the different units. Except
for 3.81% of those interviewed (who were landlords with
private pit latrines) the rest 96.19% of the population
relied on common pit latrines. The latrines in most
cases were in a deplorable state and are a potential
health hazard. With some being at the verge of collapse
with no proper walls and floors flies can move in and
out of them uninterrupted. Also because of the state
of most of them cleaning is inpossible. Even where the
latrine state is better no organized cleaning on a
regular basis takes place. Because of the poor toilet
conditions, some even threatening to sink any moment,
some residents and especially young children commonly
relieve themselves in the streets and alleys of
the estate.

4.2.4   Washing and Bathing:

In certain plots fenced cubicles purpotedly to
be used for bathing in are found. Out of the 210
surveyed households 77.15% had access to such but
communally used bathrooms, 3.33% had access to private

Plate 10:   A bathroom-cum-toilet

Plate 11:   A - toilet without proper walls,
            roof and floor.

bathrooms, and the rest 19.52% had no access   to any
bathroom. What is perplexing however is that most
of these so termed bathrooms are in very poor conditions.
Some are only a fencing of cartons or old sacks with
no proper floor. Majority lack proper doors. Because
of this majority of the households reported that they
bathe in their rooms; children are bathed immediately
outside the rooms and some adults also bathe outside the
rooms at night.

No proper provision for washing of clothes has
been   made in Kawangware. Clothes are washed outside
the rooms with water fetched from the common taps
within the plot. Such washing activities coupled with
outside bathing adds to the volume of stagnant water
outside dwelling units. A few residents also take
their washing to a stream which is near the estate just
after crossing the Naivasha road.

4.3   PUBLIC UTILITIES AND INFRASTRUCTURE

4.3.1. Water Supply:

Generally speaking Kawangware is served with piped
water. In each plot, save a few, there is a common
water   tap from where residents fetch their water.
Indeed out of the 210 households surveyed, 79.52%
had access to a common water tap, 17.62% were lacking

water within their dwelling plots, and 2.86% had
a private water tap. Those lacking water within the plot
of residence were buying water from other plots except
for two households which used spring/well water.
Even with the above situation where 82.38% of the
Kawangware residents have piped water within their
plot of residents, the problem of constantly dry taps
continues to torment the residents.

The average distance travelled by residents
to reach a water point according to the field survey
findings was 46 metres. Distances however varied
from one metre to 300 metres with 85.23% of the
households having their water not farther than
20 metres away. The rest 10.48%, 2.86% and 1.43%
either had their water sources 20-50 metres, or
51-100 metres or over 100 metres away respectively.
Water collected within the plot of residence is
free of charge; landlords charged a combined rent-cum
water fee. But those who have to get water from other
plots have to pay for it.

4.3.2. Cooking Facilities:

Tenants in Kawangware do not have special
cooking places and rented rooms are kitchens-cum
bedrooms. Except for 4.76% (who were landlords) who

owned private kitchens, the rest 95.24% of the
respondents had no access to any kitchen facilities.
Big families renting more than one room however
sometimes use one room as a kitchen-cum bedroom for the
children and the other as a bedroom for the parents.
Otherwise the general trend is where cooking takes
place in the same room as sleeping. But some families
prefer to cook outside in the open and then take the
cooked food to be consumed indoors.

4.3.3   Transportation/Access Roads

In terms of connection to the rest of the city
and especially the C.B.D. Kawangware is well served
with all weather roads. Road services in the site
are adequate for domestic traffic; the E.E.C. upgrading
scheme managed to tarmac the main roads in this area.

A part from the main tarmaced roads however
access within housing units is mainly by unmade
earth tracks and is therefore inadequate especially
during wet weather. Only housing units which are
near the tarmaced mains do not suffer from poor access.
Circulation by pedestrians within the estate therefore
becomes very difficult and almost impossible during
the rains when residents have to wade through very
muddy paths. Indeed 93.33% of the residents complained
of lack of or poor access roads.

Plate 12: A tarmaced main street with
street lights.

Plate 13: Lack proper access paths between plots.

4.3.4   Public Transport:

Kawangware is well served with public transport. Several public transport buses and matatus ply to and through the estate. The Naivasha road also passes through the estate and this adds   to the number vehicles passing through the estate. No wonder a major reason given by some of the residents for residing here was the abudance of convenient transport to and from the city centre.

4.3.5   Electricity and Lighting

The major source of energy used by the residents for cooking is charcoal. Some residents also use paraffin. For lighting kerosene lamps were the most dominant. About 81.9% of the respondents identified kerosene lamps as their source of light, 17.62% were using electricity and 0.48% used candle light. Electricity services are however available in the area and following the normal procedures with the Kenya Power and Lighting Company Limited individuals can make connections.

Street lights are provided along the major tarmaced roads in the estate. But they are not sufficient to guarantee security at night and thuggery

continues to be a major problem in Kawangware.

4.4. COMMUNITY FACILITIES AND SOCIAL AMMENITIES

Apart from the numerous bars in Kawangware shopping centre which serve as community social facilities, Kawangware residents lack a public hall where gatherings could be held. Through their own efforts the residents have however managed to erect churches and a mosque within the general Kawangware area to serve the interests of the christians and the muslims respectively.

Within reach, to the western end of the study area is Riruta Health centre which is Missionary owned. Within the study site is found Kawangware primary school but there is no secondary school. Other primary schools are found outside the research area but are within easy reach. Precious Blood Secondary School Riruta and Kinyanjui Technical High school are the nearest secondary schools to the study area. Schools offer recreation in the form of sports fields where football and volleyball can be played. There are no public football and volleyball pitches within reach of the Kawangware residents.

4.5   CONCLUSION

The European Economic Community funded Kawangware
upgrading scheme of 1978/79 no doubt went along way
in unproving the level of services in this informal
housing estate. What the project achieved was
however inadequate and apparently poor sanitation,
among others, remains a major problem in Kawangware.
But more could have been achieved using the same amount
of funds if lower level services were aimed at.
Instead of tarmacing the major roads and providing
each plot with piped water, for instance, roads could
have been murramed and common water points provided
to serve groups of plots.

More improvements are still necessary in
Kawangware especially in the area of excreta disposal,
access, drainage, and garbage collection. This
however does not call for an approach which will raise
the levels of these services beyond the economic
reach of the residents. For excreta disposal,   for
example, we do not necessarily need water closet
services which will call for septic tanks or a sewage
reticulation system. What we need here are better pit
latrines with washable floors and better walls and
roofs to offer the necessary privacy; the ventilated

improved pit latrine would be ideal here. Gravelled
footpaths, on the other hand, could suffice in the area
rather than tarmaced ones which are costly. Only
through such an approach can we be sure to keep the
costs to be met by tenants through increased rents at
a minimum.

CHAPTER FIVE

SOCIO-ECONOMIC CHARACTERISTICS OF KAWANGWARE
RESIDENTS

5.1 INTRODUCTION:

The chapter mainly covers data gathered through
the first season of the research questionnaire. It
examines the socio-economic characteristics of
Kawangware residents including:

(i) Population composition and marital status;

(ii) Household sizes and composition;

(iii) Education, employment and incomes;

(iv) Migration and the length of stay in Kawangware

(v) Rent payment capabilities; and

(vi) The residents' view about Kawangware.

5.2 SAMPLE COMPOSITION AND MARITAL STATUS

As outlined in chapter one the research involved
a sample of 210 households whose heads were interviewed.
About 36.67% of those interviewed, that is, 77 of them,
were males; the remaining 63.33% (133 persons) were
females. This shows a predominance of female over male
respondents. Such a situation is,however,understandable
since those interviewed included single mothers and
housewives who were treated as household heads in the
absence of the husbands who were away at work. Indeed

the few males interviewed were those either withou

any form of employment, or those self-employed and

those working at night like watchmen.

In terms of age respondents ranged from those

as young as 17 years old to those in their 50's and

above (Table 9). The table shows that over half of

those interviewed (81.90%) were young adults

aged between 17 and 35 years. The.rest 17.62% were aged

between 36 and 60 years with only one person (0.48%)

aged over 60 years.

Among the respondents 110 (52.38%) of them were

married, 85 (40.48%) were single and the rest,

that is, 3.33% and 3.81% respectively were either

widowed or separated. Table 10 below analyses this

trend in details.

TABLE 9: SAMPLE COMPOSITION BY AGE AND SEX

AGE/SEX		NUMBER		PERCENTAGE	
18 years	M	0	7	0.00	3.33
	F	7		3.33	
18 - 25	M	31	90	14.76	42.86
	F	59		28.10	
26 - 30	M	13	54	6.19	25.72
	F	41		19.53	
31 - 35	M	9	21	4.28	9.99
	F	12		5.71	
36 - 40	M	6	9	2.86	4.29
	F	3		1.43	
41 - 45	M	8	12	3.82	5.72
	F	4		1.90	
46 - 50	M	7	11	3.33	5.23
	F	4		1.90	
51 - 60	M	3	5	1.43	2.38
	F	2		0.95	
61 - 70	M	0	1	0.00	0.48
	F	1		0.48	
Totals		210		100.00	

TABLE 10:   MARITAL STATUSES OF RESPONDENTS

MARITAL STATUS	MALES NO.	%	FEMALES NO.	%	TOTALS NO.	%
Married	50	23.81	60	28.57	110	52.38
Single	23	10.95	62	29.52	85	40.48
Widowed	1	0.48	6	2.86	7	3.33
Separated	3	1.43	5	2.38	8	3.81
Totals	77	36.67	133	63.33	210	

5.3   HOUSEHOLD SIZES AND COMPOSITION

The demographic survey of Kawangware revealed a
variation in household sizes. Households ranged from
a membership of a single person to as high as 11
members per household. The average household size,
however, was 3.96 persons compared with that of Nairobi
in general of 4.2 persons (Development Planning Unit,
London; 1983: 139). Households with big membership
were mainly those of people who have been living in
Kawangware their entire life, that is, those having
Kawangware as their only home. Small households on the
other hand were those of rural migrants who still kept
their rural homes.

From the 210 households studied a population
of about 831 persons was included. This population,

as indicated earlier, was distributed in households
ranging from one to eleven members (Table 11). The
table indicates that 28.58% of the households studied
had membership of between one and two person, whereas
the rest 50.95%, 16.18%, and 4.29%, had membership
ranging from 3 - 5, 6 - 8, and 9 - 11 persons
respectively.

TABLE 11:   HOUSEHOLD SIZES AND COMPOSITION

Household size	Number	Percentage	Total Persons
1	30	14.29	30
2	30	14.29	60
3	31	14.76	93
4	39	18.57	156
5	37	17.62	85
6	20	9.52	120
7	11	5.23	77
8	3	1.43	24
9	5	2.38	45
10	3	1.43	30
11	1	0.48	11
TOTALS	210	100.00	831

In terms of sex, the surveyed population showed
a predominance of females over males. Out of the 831
persons included in the 210 households surveyed 441
of them, that is, 53.07% were females compared to 390
males or 46.93%. The area was also depicted to have
a large number of children under 18 years of age. An
analysis of the sample population (detailed in Table
12 below) showed that 56.2% of the population was aged
below 20 years. The rest of the population, that is
33.45%, 9.75% and 0.6% was aged between 20-34 years,
35-59 years and 60 and above years respectively. What
this means is that over 50% of the Kawangware population
are children with only less than 1% aged 60 years
and above.

5.4 EDUCATION, EMPLOYMENT AND INCOME

Education levels and the kind of formal training
an individual has are important in determining the
type of occupation or employment the individual can
have access to. Education therefore has some
bearing on employment and hence the income one can earn.
Income on the other hand constitutes an important
variable affecting housing; the standard and size of
housing a household can have access to is determined
by the income and the ability to pay.

TABLE 12:   SAMPLE POPULATION BY AGE AND SEX

Age Group	Number		Total	Percentage
	Males	Females		
0-4	86	87	172	20.82
5-9	59	86	145	17.45
10-14	32	46	78	9.37
15-19	25	46	71	8.54
20-24	56	62	118	14.20
25-29	53	56	109	13.12
30-34	28	23	51	6.14
35-39	16	7	23	2.77
40-44	12	12	24	2.89
45-49	15	10	25	3.00
50-54	3	1	4	0.48
55-59	3	2	5	0.60
60-64	1	2	3	0.36
65-69	0	1	1	0.12
70 +	1	0	1	0.12
Total	390	441	831	100.00

The socio-economic survey of Kawangware residents
revealed that the estate is the home of people with
little or no education at all. This is in line with
one of the study assumptions that informal housing
provides accomodation for people with little education
and is characterised by high levels of illiteracy.
Although some respondents with as high as form four and
form six levels of education were interviewed (Table
13) these were quick to point out that they were using
Kawangware as a stepping stone to a better home elsewhere.
Some of these were staying here with relatives by the
virtue of their being unemployed and indicated their
intentions to migrate as soon as they got employment.

TABLE 13:   LEVELS OF EDUCATION OF KAWANGWARE RESIDENTS

Grade	Number	Percentage
None	42	20.00
Below C.P.E.	43	20.00
C.P.E. level	73	34.76
K.J.S.E. level	26	12.38
K.C.E. level	24	11.43
K.A.C.E. level	1	0.48
Adult education	2	0.95
Totals	210	100.00

There were others, especially the form four dropouts
who saw little income as the constraining factor to
their moving to a better home; but they expressed the
desire of wanting to migrate to better housing.

From table 13 it is evident that about 74.76%
of those interviewed had either no education or had
only reached C.P.E. level. The rest 23.81% and
0.48% respectively had had secondary schooling and
high school education.

The survey also revealed that the population of
Kawangware is composed of both the employed and the
unemployed. Of the 210 household heads interviewed
47.62% were without any form of earning a living
(they were housewives or unemployed), 28.57% were
self-employed,[1] 3.33% were working as casual
labourers and the remaining 20.48% were in monthly
wage employment (Table 14).

A further analysis of employment in terms of
household members uncovered that in Kawangware it is
not surprising to find households where all members
are unemployed. Indeed 23 (10.95%) of the households

1. The self-employed included those engaged in: business
    and trade (18.10%), capentry (12.86%), tailoring
    (2.38%), cartpulling (1.43%), shoe-repair, blacks-
    mithery, and mechanics (0.95% each), and decoration and
    saloon (0.48% each).

studied were of this character. The remaining
149(70.95%), 32(15.24%), 5(2.38%) and 1(0.48%)
households had one, two, three and four members
unemployment respectively. Out of the 831 persons
included in the study households only 232 (27.93%)
were in any form of employment giving a dependency
ratio of 1:3.58 persons.

TABLE 14: OCCUPATION TYPES IN KAWANGWARE

Occupation	Number	Percentage
Housewife/unemployed	100	47.62
Self-employed	60	28.57
Casual worker	7	3.33
Watchman	12	5.71
Barmaid	8	3.81
House servant	6	2.85
Industry	5	2.38
Other[1]	12	5.71
Totals	210	100.00

1.   'Other' entails civil servants, teachers, cleaners
     and hoteliers (0.95% each); and drivers,
     mechanics and those employed in tea kiosks
     (0.48% each).

As indicated earlier, the level of education
and trainin affects the employment type an individual
would have access to. This emerged to be true
of Kawangware where about 88.09% of the respondents
were of K.J.S.E. level of education and below. With
the current saturation of the labor market in Kenya,
people with such qualifications are rarely considered
for employment in the formal sector and especially in
white collar jobs. No wonder therefore only 20.48%
of those interviewed were in monthly wage employment
(some in the informal sector e.g. those employed in
Kiosks, small bars, and as houseboys and ayahs) while
the bulk of the population were either unemployed,
self-employed in informal sector activities, or were
casual labourers with no assured income.

Places of work for Kawangware residents varied
from those working in Kawangware itself to those
working elsewhere within Nairobi. Kawangware area
workers comprised 54(25.71%) of those interviewed
whereas the rest 56(26.67%) and 100(47.62%) were
those either working in other parts of the city or those
unemployed respectively.

For those working outside the research site,
the journey to and from work was done either on foot
or by public transport. Only two individual (who were

prominent businessmen) had private cars and spent as
much as Kshs. 800 and 3,000 monthly each on transport.
Of the remaining 54 workers commuting to and from
other parts of the city, 21 were footing and spent no
money on transport to work whereas the rest 33 were
using public transport with expenditures ranging
from Kshs. 90 to 300 per month. The majority of these,
that is, 23 persons, were spending Kshs. 150 monthly
on transport to work. Only 2, 4, 1, and 3 persons
were spending Kshs. 90, 120, 200, and 300 per month
respectively.

Incomes for the household heads surveyed ranged
from Kshs. 180 to 6,000 per month (Table 15). The
average monthly income was calculated to be Kshs.
358.52 , that is, total income from all household
heads (Shs. 75,290) divided by the 210 household heads.

TABLE 15:   INCOME DISTRIBUTION IN KAWANGWARE

Income/month (Kshs.)	Number	Percentage
None	100	47.62
1-500	48	22.86
501-1000	47	22.38
1001-1500	11	5.24
1501-2000	2	0.95
over 2000[1]	2	0.95
Total	210	100.00

1.   Only 2 individuals earning 2,500 and 6,000 shillings
     each were included in this category.

Earlier in chapter one a low income person was
defined as any person earning less than Kshs. 2,000
per month. This group was further broken down into
those earning less than Kshs. 700 per month called the
low-low income group, those earning Kshs. 700-1500 per
month called the middle-low income group, and those
earning Kshs. 1501-2000 referred to as the upper low
income group. On the basis of the above classification
51.43% of those interviewed in Kawangware are in the
low income group while 47.62 are non-income earners
and the rest 0.95% earn over Kshs. 2,000 per month.
A detailed analysis shows 32.86% to be in the low-low
income group, 16.19% to be in the middle-low income
group, and 0.95% to be in the upper-low income group.
This means that on top of the 47.62% who have no
income at all, there is another 32.86% who barely
survive. Such evidence, coupled with earlier findings
that a substantive percentage of the residents are
employed in the informal sector, is consistent with
the study assumption which states that informal
housing is the home of the low income earners, the
urban unemployed and those employed in the informal
sector.

Narrowing down to the total household incomes
it was found that 23 (10.95%) of the households had

no income at all. This is because all the members
were unemployed. Total household incomes ranged
from Kshs. 120 per month per household to Kshs. 6,000
per month per household (Table 16). Further
analysis showed that, using the low-low, middle-low

TABLE 16:   INCOME DISTRIBUTION BY HOUSEHOLDS

Income/month (Kshs)	Number	Percentage
None	23	10.95
1 - 500	40	19.04
501 - 100	74	35.24
1001 - 1500	46	21.91
1501 - 2000	18	8.57
2001 - 3000	6	2.86
3001 - 4000	2	0.95
Above 4000[1]	1	0.48
Totals	210	100.00

and upper low classification about 34.28%, 41.91%, and
8.57% of the households fell in these income categories
respectively. The rest 10.95% were without any
form of income while another 4.29% of the households

1. The above 4,000   shillings category included only
    on case earning 6,000 shillings per month.

were outside the low income bracket. Again the study
hypotheses that informal housing is the home of the
low incomed, the non-incomed and those in informal
sector employment is supported by the total household
incomes evidence.

Average incomes per household range from
Kshs. 24 per person per month to Kshs. 6,000 per month
per person (Table 17) Households with many members,
however, have the lowest average monthly income per
individual because the number of dependants is higher
ins such households. In households with between 4

TABLE 17:   AVERAGE INCOMES PER HOUSEHOLD:

Income per person per month (Kshs.)	Number	Percentage
Nil	23	10.95
1 - 300	109	51.90
301-600	52	24.77
601-900	16	7.62
901-1200	5	2.38
1201-1500	3	1.42
1501-1800	1	0.48
Above 1800[1]	1	0.48
Total	210	100.00

---

1. This category includes only one case of Kshs. 6,000
    per month.

and 11 members, for example, the average monthly
income per person ranged from Kshs. 24 to 750.
Compare this to an average monthly income per
household member of Kshs. 100 to 6,000 for households
with between one and three members. This information
supports the earlier mentioned hypothesis by showing
10.95% of the households to be without any income and
placing the average monthly income per household
member to be within the defined low income bracket
for 88.57% of the cases with only 0.48% of the cases
falling outside this bracket.

If the total number of the members of the 210
households surveyed are allocated the total income
earned in all these households, that is, Kshs. 190,340
divided by 831 persons, the average income per
household member comes to Kshs. 229.05 per month.
This is also falls within the low-income bracket.
In fact, to be more specific it falls within what has
been referred to as the low-low income bracket where
individuals only barely survive.

5.4.1   The informal Sector:
Earlier in this chapter evidence was adduced
showing that informal housing residents, because of
their low levels   of education, are among the worst

hit sections of the urban population by the employment
shortage problem. In response to this these people
engage in what is called"informal occupations"
either inside their houses or near the houses. Estimates
show that in most less developed countries the informal
sector employes well over 50% of the urban labor
force. In some African cities,however,tnis   figure
is between 30% and 50%, perhaps due to lack of reliable
statistics (MacOloo, 1986:22).

The informal sector as a source of employment plays
a crucial role in Kawangware. In fact save for about
three prominent businessmen all those who cited self-
employment as their occupation were engaged in the
informal sector. Even most, if not all, of those who
identified themselves as unemployed must have been
engaging in one form of informal sector activity or
another. Thus deduction is supported by the fact that
it is quite difficult to distinguish between self-employment
and unemployment given that many people who engage in
illicit activities such as chang'aa   and buzaa brewing,
prostitution, among others will always indicate that
they are unemployed and not self-employed.

Informal sector employees in Kawangware range from
those working within the area itself to those working

outside the area but within the Nairobi City limits. Those working outside the research site included vegetable and fruit hawkers who display their wares in the streets of the Nairobi Central Business District. In Kawangware itself informal sector activities are widespread. Although no detailed inventory of these activities was actually taken, it was nevertheless possible to identify, especially through observation, a number of dominant activities in the estate. These included blacksmithery, welding, car repairing , carpentry, tailoring and cloth retailing and the keeping of small shops. Other activities included hawking and vending of vegetables, fruits and foodstuffs, shoe making and repairing, hair dressing (barbers and saloons), laundry services, cart pulling, small hotels and kiosk, and the selling of snacks and foods in the estate streets.

Because of the different informal sector activities carried out in Kawangware incomes must vary with the activities. What is, however, important is that these people contribute substantively to the efforts of curbing unemployment. It is only through illicit (illegal) activities, for example, that households identified as having no member in employment could survive in terms of rent payment, food, clothing and other needs. In fact one single mother who indicated that she was unemployed pointed out that "we only survive by loitering in town at night, if we get anything we are happy if we don't we come back home and try our luck the following night". This is

just but an indirect way of saying that one is a
prostitute.

The above discussion makes one point very clear;
that informal housing areas are not only residential
areas but also areas of employment. Like in Kawangware,
alot of informal sector activities are carried out in
such housing estates both within and without the
dwelling units. This is, however, rarely the case
for middle and high income housing areas. Such findings,
although outside the topic of study, are significant
and have implications on the planning of any housing
estate meant for the low-income groups and the urban
unemployed; planning schemes for these areas should
encompass both the employment and residential functions.

5.5 MIGRATION AND LENGTH OF STAY IN KAWANGWARE

The socio-economic survey of Kawangware residents
also elicited considerable variations in the ethnic
and religious composition of the population. The
Kikuyus were found to be the most dominant group
accounting for about 56.19% of the population. The
Luhyas and Luos took the second and third position
making upto 18.57% and 10% respectively. Fourth
ranked Kambas composing about 7.62% of the population.

Other Kenyan ethnic groups combined accounted for 5.24%
of the population while non-Kenya's included only
2.38% of the population. Among the 210 household
heads interviewed protestants numbered 107 (50.95%),
catholics 86 (40.95%), traditionalists 12 (5.72%),
and muslims totalled 5 (2.38%).

Although about 16.19% of the respondents were
born in Kawangware and had Kawangware as their only
home, the population of this area is mainly composed of
migrants. Accounting for about 83.81% of the population
migrants into Kawangware come from all over rural Kenya,
some from other parts of Nairobi, and a few from
outside Kenya (Table 18). Those coming from Kenya but
outside Nairobi compose 77.14% of the estate population.
The remaining 4.29% and 2.38% come from other parts of
Nairobi and from outside Kenya respectively.

As indicated above about 83.81% of the Kawangware
population are in-migrants from rural Kenya, areas
within Nairobi and from outside Kenya. Reasons for
migration differed from respondent to respondent. The
search for employment was, however, the main cause of
migration from one's place of birth. Out of 176
in-migrants interviewed, for example, 109 (61.93%) of them

TABLE 18: VOLUME OF IN-MIGRANTS TO KAWANGWARE BY
PLACE/DISTRICT OF BIRTH

District/Place	Number	Percentage
Born at Kawangware	34	16.19
Other parts of Nairobi	9	4.28
Kiambu	40	19.05
Kakamega	35	16.67
Nyeri	16	7.62
Murang'a	14	6.67
Machakos	10	4.77
South Nyanza	9	4.28
Busia	7	3.33
Kisumu	6	2.86
Kitui	5	2.38
Siaya	5	2.38
Other Districts	15	7.14
Outside Kenya	5	2.38
Totals	210	100.00

came to look for employment (to earn a living). For
the housewives they either migrated to Kawangware
to join their husbands who lived there or got married
to Kawangware residents. These two categories

composed 24.43% and 3.41% of the in-migrants. The rest
of the in-migrants cited 'refugee' (2.84%), 'seek
education' (1.7%), 'to stay with parents' (1.14%),
and 'landlesses at home' (1.14%) as their reasons for
migrating from their place of birth. All other reasons
given could be summed up as 'to stay with relative'-
brother, sister or cousin - (3.98%) and misfortunes at
home' (0.57%).

The researcher also tried to elicit the reasons as to
why respondents opted to stay in Kawangware and not
elsewhere. Respondents gave a varied selection of
reasons with most of them giving more than one
reason (Table 19). The most dorminant explanation,
given by 78.57% of the respondents, emerged to be the
absence of an alternative on the part of those
interviewed. These explained such a situation through

TABLE 19: REASONS FOR OPTING TO RESIDE AT KAWANGWARE

Reason	No.	%
Had no alternative	165	78.57
Reasonable (low) rents	127	60.48
Relatives and friends live there	59	28.10
Kawangware nearest to place of work	20	9.52
Easy to get cheap house	15	7.14
Good prospects for business	10	4.76
Owner occupies house	7	3.33
Convenient transport to town	4	1.90

Note: Percentages in this table and in some other tables
      may not add upto 100 because respondents gave more
      than one response.

factors like the impossibility of getting accomodation
elsewhere because the only relative or friend the
new comer had in town resided in Kawangware, having
Kawangware as one's place of birth and hence the only
home one had, and, especially for the housewives,
having one's husband residing in Kawangware.

Another explanation, offered by 60.48% of the
respondents, was that rents charged in Kawangware are
low and reasonable and hence affordable. Such an
explanation is consistent with the study assumption
which sees informal housing as offering affordable
accomodation to the low income groups and the urban
poor. The explanation in essence tells us that low
(reasonable) rents charged in informal housing areas
like Kawangware will continue to act as a pull factor
to this category of urbanites and informal housing
will therefore continue to flourish in the urban areas.
(For other explanations see Table 19).

The survey also revealed considerable variation
in the length of residence in Kawangware- While the
minority household heads (16.19%) were in fact born in
Kawangware itself and had stayed there their entire
life, immigrants length of stay in Kawangware ranged

from less than one year to 52 years (which included
only one case) (Table 20). The average length of
residence in Kawangware for the immigrants was 6.07
years. Excluding the one immigrant who had resided
in Kawangware for 52 years the average,however,falls
to 5.81 years.

Asked whether they had any intentions of moving
from Kawangware 54.29% of the respondents answered
negatively whereas 34.76% were undecided. The remaining
10.95% had intentions of migrating from Kawangware and
their projected future stay here ranged from less than
one year to 8 years (Table 21).

TABLE 20:   LFNGTH OF RESIDENCE AT KAWANGWARE

Number of years	Number	Percentage
Entire life	34	16.19
1 year	17	8.10
1 - 4 years	72	34.29
5 - 9 years	58	27.62
10-14 years	15	7.14
15-19 years	9	4.14
20+ years[1]	5	2.38
Totals	210	100.00

1. Cases of 20+ years included one of 22 years, two of
   26 years, one case of 28 years and another one of
   52 years.

TABLE 21:   PROJECTED FUTURE STAY AT KAWANGWARE

Number of years	Number	Percentage
Entire life	114	54.29
I don't know	73	34.76
1 year	12	5.71
1 - 2 years	2	0.95
3 - 4 years	3	1.43
5 - 6 years	4	1.91
7 - 8 years	2	0.95
Totals	210	100.00

The 23 respondents (accounting for 10.95% of
the total respondents) who were decided and sure to
migrate out of Kawangware were found to include
mainly young in-migrants who had stayed in this area
for less than three years. In a bid to explain their
decision 56.53% of these (accounting for 6.19% of the
total respondents) said that poor housing conditions
in the area precipitated their desire to move. Another
30.43%, that is, 3.33% of the total respondents, gave
the lack of necessary facilities and ammenities as
the major cause of their decision to migrate. Other
reasons cited included 'to take care of rural homesteads'
21.74% (2.38% of the total respondents); thuggery and

insecurity in Kawangware' - 8.69% (0.95 of total
respondents), 'high rents' and 'long distances to
place of work' - each taking 4.35% of the out-migration
population or 0.48% of the total respondents.

The respondents who were sure to leave Kawangware
were also asked to indicate their future home. About
52.17% of these were not sure of the estate they would
migrate to. Another 17.39%,however, had their minds
set on Riruta satellite. Such a choice could be
explained through the better housing conditions found
in this target area. Those who chose this area, must
therefore in essence comprise some of those who
complained about poor housing conditions in Kawangware.
The rest 8.7% and 21.74% were moving to Kibera and
rural homes respectively. Those moving to Kibera,
where housing is not better than in Kawangware, were
probably guided by the desire to be near relatives and
friends and also by the wish to be nearer town. Out-
migrants to the rural areas included housewives who
only occasionally frequented this area to visit their
husbands.

From the above discussion it is evident that only
10.95% of the respondents were decided to migrate
from the research site, the rest 89.05% were those

to stay in Kawangware their entire life and the
undecided. It is also evident that 51.43% of the
respondents had stayed in the study area for over
5 years and that out-migrants from this area were
composed mainly of young immigrants who had stayed in
this area for less than 3 years. Such evidence is a
testimony to the long stays in this area by most of
the population.

Logically long stays in an area suggest that those
concerned have adapted to living in the area and that
they consequently like their environment. Sociologically
it implies that the people have established deep rooted
networks for interraction and survival. Such areas
should therefore be preserved because interferring
with them would be disrupting a people's way of living.
Any upgrading schemes which may lead to a displacement
of such a population by raising rents or by disrupting
the pattern of life should be avoided as much as
possible.

5.6   RENT PAYMENT CAPACITIES

Rents in Kawangware are not uniform but vary
according to the size of the room occupied and the
state of the structure occupied. A semi-permanent

structure will fetch higher rents than a temporary
structure, for example. Rent amounts are,however,
dictated and determined by the landlords and not the
tenants. But rents are set such that they do not lead
to displacement of tenants or to high rates of vacancy
of the units.

The rents paid by Kawangware residents vary from
Kshs. 30 to 540 per month (Table 22). Rents in
excess of Kshs. 200 per month were paid by those

TABLE 22:   DISTRIBUTION OF HOUSE RENTS

Amount/month Kshs.	Number	Percentage
None	30	14.29
Below 50	2	0.95
50-100	65	30.95
101-150	54	25.71
151-200	34	16.19
201-300	18	8.57
301-400	2	0.95
401-500	4	1.90
Over 500	1	0.48
Total	210	100.00

occupying more than one room. As indicated earlier
rents were dictated among others by the state of the
structure occupied. Monthly rents of below Kshs. 50
were therefore for structures classified in chapter
four as "very temporary". Rents of between Kshs. 50
and 100 were charged on units classified as "very
temporarily", and 'temporary' ones. Some of the units
classified as 'temporary' and those classified as
'semi-permanent' fetched rents of between Kshs. 100
and 150 and between Kshs. 150 and 200 per month
respectively.

Out of the surveyed 210 households only 30(14.29%)
were living in unrented units (owner-occupier). The
rest 180 (85.7%) were paying rents. The rent for a
single room lay between Kshs. 30 and 180 per month.
Indeed 77.8% (140 households) of the tenants were
paying monthly rents of Kshs. 180 and below. Further
narrowing down of this revealed that 67.22% (121
households) of the tenants were paying rents of
Kshs. 150 and below per month.

While the average rent paid per household by the
time of the survey stood at Kshs. 149.53 per month,
the maximum households were willing to pay lay between

Kshs. 90 and 800 per month (Table 23). The figure

offered seemed to vary with the conditions of the

TABLE 23: MAXIMUM RENTS TENANTS WOULD PAY:

Amount/month (Kshs)	Number	Percentage
Below 100	10	5.56
100 - 150	70	38.89
151 - 200	47	26.11
201 - 250	26	14.44
251 - 300	16	8.89
301 - 350	3	1.67
351 - 400	4	2.22
Above 400	4	2.22
Total	180	100.00

structure the respondent was occupying, the income of

the respondent and the number of rooms the household

was occupying. Maximum rents in excess of Kshs. 250

per month, for example, were cited by households

occupying two or more rooms or those, with intentions

of migrating to other residential areas like Riruta

Satellite where rents are higher than in Kawangware.

About the additional rents tenants were willing to pay per month, 15% of them were not willing to pay a anything higher than what they were paying them. This was probably because what they were paying then was the maximum they could afford. Some of them might also have felt that the units they were occupying could not fetch rents higher than what they were paying then. The main constraining factor to these people was most probably their income and a rise in rents meant their automatic displacement. An upgrading scheme for such an area, if necessary, should thus only involve a minimum rise in rents, if any, if these people are not to be displaced from their homes.

The remaining 85% of the tenants were those willing to pay additional rents. These included 40%, 36.67% and 9% of the tenants who were willing to pay extra monthly rents of below Kshs. 50, Kshs. 50-100, and Kshs. 101-150 respectively. The rest 2.22% and two categories of 0.56% each were willing to part with extra monthly rents of between Kshs. 151-200, 201-300 and above Kshs. 300 respectively. Again the size of the figure given was based on one's aspirations of either prefering one or more than one room, the desire to move to a better place, and, most important, the income of the household.

The rents charged in Kawangware and the desire
of tenants to pay more rents than what they were
paying by the time of the study and therefore their
rent paying capacities are mainly based on the incomes
of the tenants. Affordability thus must play a major
role in deciding who resides in Kawangware or in any
other area. This, coupled with earlier findings that
a substantive number of the in-migrants chose to reside
in Kawangware because the rents were low and/or
reasonable and hence affordable, is consistent with the
study hypothesis that informal housing provides a
affordable housing to the low-income urbanites and
then urban poor. There is a need therefore to preserve
this kind of housing and only improve it when the costs
will not boomerang on the tenants through increased rents
or any other charges.

5.7   RESIDENTS' VIEWS ABOUT KAWANGWARE

The seeking of opinions by residents about
Kawangware took the form of their feelings about their
housing and Kawangware in general, and the problems
faced by the residents plus the past attempts towards
solving the problems.

One of the study hypotheses stated in chapter one
was "that residents of informal housing have a positive

attitude towards their housing ..." Views expressed by
the Kawangware residents strongly came out in support
of this hypothesis. About 73.34% of those interviewed,
for example, expressed their satisfaction with their
housing units; they found them adequate. The remaining
24.76% and 1.9% were disatisfied with their housing units
or were not certain about their feelings respectively.
Those disatified with their housing units gave 'small
size' and 'poor conditions' as explanatory factors.

Asked about their likes about Kawangware as a
residential area respondents gave varied answers some
giving more than one response. Likes given included,
'low and reasonable rents' (70.33%), 'low cost of
living'-reflected in the ease of availability and
cheapness of basic foodstuffs - (48.09%), 'convenient
and abudant transportation to town' (21.43%), 'good
prospects for business and self-employment' (14.76%),
'possibility of owning a house and land' (3.81%), and
'the hospitality of the people in the area' (1.9%).
These factors and especially the first, third, fourth
and fifth are crucial factors which I feel should be
accorded a special place during the design/planning and
implementation of a residential estate for the low-
income groups. They are the determinants of whether
the housing goes to the target group. Another 14.28%
of those interviewed had no likes about Kawangware.

5.7.1. Problems Faced by Kawangware Residents:

Although 89.04% of the respondents felt that
Kawangware, compared to the past, was a much better
place to live in - the rest 5.24%, 2.86% and 2.86%
felt it was either the same, or a little worse, or
had no opinions respectively - certain problems were
identified as prevalent in this area. Only 55.24%
of the respondents, however, felt that Kawangware
residents were faced by any problems; the rest 44.76%
felt that there were no problems faced by the residents.
All the 125 respondents who identified certain problems
ranked poor health and sanitary conditions reflected
through poor toilet conditions, stagnant water due to
lack of proper drainage, big heaps of garbage and
open drainage as problem number one. In chapter four
it was stated that, even when appreciating what the
1978 E.E.C. upgrading scheme for Kawangware achieved
in this area, alot still needs to be done here.

With respondents identifying more than one problem,
other problems identified included 'water shortage'
(32.8%), 'thuggery' (24%), lack of proper footpaths/
access roads' (21.6%), 'lack of adequate and diversified
recreational facilities' (18.4%), 'poor housing'
(10.8%), and lack of electricity.

From the problem analysis it is evident that housing (the dwelling units) was not ranked highly as a problem in Kawangware. This seems to suggest that there are more pressing problems in informal housing areas, other than the conditions of the dwelling units themselves, which need priority attention by city and town authorities. Health and sanitation take the upper hand here.

In Kawangware attempts were made in 1978/79 to solve the problem of health and sanitation through an upgrading programme sponsored by the European Economic Community. What this project achieved, however, fell short of the expectations and the problem continues to torment this area. The residents have tried to solve some of the problems themselves. Efforts this way include the demolition of old pit latrines to be replaced with new and better ones, digging of trenches for water pipes to combat the water shortage problem, and police patrols or the reporting of suspected thugs to the police and the construction of open drainage systems for especially waste water from the dwelling units.

Community feelings and mutual assistance are seemingly quite strong in Kawangware; 71.43% of the

respondents were confident that the people of
Kawangware can work as a team. But very little was
being done by the residents themselves to solve
their problems. Factors explaining this state of
affairs include the fact that some problems like
sanitation (especially garbage collection) water
shortage, and health are beyond the economic reach
of the people (they cannot finance them). Also the
solution to some of these problems may rest with the
City Council and not the people themselves. This
factor, identified by 60.8% of the 125 respondents who
felt that Kawangware residents had any problems facing
them, calls for an intervention by city authorities
to solve the associated problems. A shift from
previous trends whereby city authorities' attention
to informal housing areas was focused on the dwelling
units with a view to improving them either through
complete replacement or upgrading of existing units
is called for here.

The lack of a proper co-ordinating force was
seen by 40.8% of the 125 respondents mentioned above
as another major factor explaining why little has
been done to solve Kawangware problems. This
factor seems to suggest that what is needed in
Kawangware is proper co-ordination and leadership and
the people can do alot to improve their lot. A third

explanatory factor (given by 72% of the said

respondents) was that because of their poverty the

people of Kawangware spent most of their time eking

a living. They therefore had no time left to spare for

bettering their environment. Other negligible reasons

like 'unco-operative landlords' (0.8%) were also adduced.

5.8   CONCLUSION:

Kawangware is composed of an old established

community of lifetime residents and a fairly new group

of recent migrants. Although 10.95% of the residents

had intentions of moving from the area further analysis

showed that these include mainly recent immigrants who

have been in the area for less than three years. The

rents charged here are affordable to the residents

and the area not only offers accomodation but is also

a source of employment (provides informal sector

employment). The people are generally satisfied with

their dwellings which they do not see as a problem.

The major problem identified,however, was the poor

sanitary and health conditions in the area. This

means that improvements in the physical quality of the

environment and not of the housing, would meet the top

priorities of the Kawangware residents in particular

and generally those of informal housing residents.

Otherwise aside from the physical environment Kawangware

does not present any other serious problems to the

residents.

SUMMARY OF FINDINGS AND POLICY RECOMMENDATIONS

6.1   SUMMARY OF MAJOR FINDINGS:

Kawangware is an informal housing estate in that it does not meet the legal regulations in terms of building standards and materials used on housing construction. The most dominant forms of accommodation in the area are wooden, mud-walled, corrugated iron sheets walled, and mud-plastered walled houses which have been erected by private entrepreneurs. A classification of the housing based on building materials combinations placed 66.66% of the units as semi-permanent, 28.56% as temporary and 4.78% as very temporary. The housing mainly comprise of tarraced blocks sub-divided into single room dwellings. Occupancy rates per room range from one to 9 persons the average being 3.78 persons per room. Using the United Nations definition of overcrowding as 3 or more persons per room then there is overcrowding in Kawangware (though not very serious).

Land in Kawangware is privately owned and housing units belong to the landlords 96.19% of whom stay here. The existence of freehold titles here removes the fear of squatting inherent in most informal housing areas. With the security of tenure, landlords have taken the initiative to improve

on the quality of the housing and dwelling units
in Kwangware are thus of a better quality compared
to those in other informal housing areas. The basic
problem here is not one of dwelling units but rather
that of poor health and sanitary conditions, and
impassable or non-existent footpaths. Efforts made
in 1978/79 to upgrade these through an E.E.C. funded
scheme were inadequate and costly.

The demographic analysis of Kawangware
showed that Kawangware is the home of people with
little or no education.   Only 11.91% of the
residents have attained K.C.E. and above levels
of education. About 20.48% of those interviewed
were in monthly wage employment while 47.62%, 28.57%
and 3.33% were either unemployed, or self-employed,
or casual labourers respectively. The self-
employed were engaged in informal sector activities
mainly located in Kawangware itself.   This shows
that informal housing play both a residential and
an employment role and any wholesale upgrading
for such an area should thus take care of both
aspects.

Individual as well as total household monthly
incomes in Kwawangware fall within the study's defined
low-income group. Ranging from Kshs. 180 to 6000, the
average income was Kshs. 358.52 per month with only

0.95% of the interviewed earning more than
Kshs. 2000 per month. Total household incomes,
however, ranged from Kshs. 120 to 6000 per
month the average being Kshs. 229.05. Only 4.29%
of the households had total incomes lying outside
the defined low income bracket. The incomes have
an impact on the amount of rents tentants can pay.
With monthly rents per single room ranging from
Kshs. 30 to 180, the maximum rents which 70.56%
of the renters could afford is Kshs. 200 and
below per month. Any upgrading scheme which would
raise rents beyond this figure would therefore
displace a big proportion of the residents.

About 83.81% of the residents of Kawangware
are in-migrants who have been attracted to this
area mainly by the reasonable/low rents. The
length of stay of residents in the area ranges
from less than one year to 52 years for in-migrants,
and entire life for those born here. The long stays
in the area by most of the residents suggest that
they have adapted living in the area and they have
established deep rooted networks for interraction
and survival. Costly improvements which would lead
to high rents and consequently a displacement of
some of these residents should therefore be avoided
as much as possible.

The people of Kawangware have a positive
attitude towards their housing. About 73.43% of
them found their homes adequate and only 10.95%
of the residents who are mainly young migrants who
have lived here for less than 3 years were
determined to migrate out of the area. The major
problems in this area, as pointed out earlier, are
poor sanitary and health conditions, and the lack
of proper access roads.

6.2   POLICY   RECOMMENDATIONS

The major constraints to the incorporation of
informal housing areas into the official housing stock
are the existing policies regarding land, planning
regulations and the building standards and By-Laws
which also hinder the development of housing for the
lower income groups. Using the Kawangware case
study policy recommendations are made mainly
addressing these factors.   The recommendations
not only address problems in Kawangware itself but
also generalise on other informal housing areas
with Kawangware as the teaching example:

6.2.1. A fundamental issue in housing development
especially for the lower income groups is the
security of tenure whose absence leaves little
incentive for betterment. Although land tenure was

not a problem in Kawangware where freehold titles
exist, the area provides a teaching example which
can be used to generalise on other informal housing
areas. The existence of freehold titles in
Kawangware has led to much better dwelling units
compared to other informal housing areas like
Mathare. An important reform which would therefore
have the greatest effect on the housing of the
poor in other informal housing areas would be
to give occupants of these areas security of
tenure. This would not only free the housing
from the stigma of illegality but would also
release the untapped energies of squatters giving
them the incentive to improve their homes and
so invest incrementally in property.

6.2.2. Where informal housing is located on
private/freehold title land like in Kawangware,
public funds should not be wasted in trying to
acquire the land for housing development. Rather
such funds should be concentrated on servicing
the private land by providing roads and other
services. In such a case the authorities should
negotiate or find means and ways of acquiring
land for these infrastructure and services without
incurring expenditure; this can take the form of
resettling those whose land is taken in public land

elsewhere. Where acquisition without expenditure
is not realizable compensation can be paid to the
private owners affected.

6.2.3 For long there ha existed an inherent
conflict between standards and means. Although the
urban society is stratified into low income, middle
income and high income categories, common standards
have continued to guide the development of shelter
for the poor and rich alike. But for standards to
be more realistic, more acceptable, and more easily
enforceable, we need separate sets of standards to
govern shelter provision for the different economic
groups. The standards to govern housing provision
for the low-income groups should be aimed at ensuring
minimum standards of dwelling units, sanitatation
and infrastructural facilities and services.

6.2.4 The Kawangware case study shows that
residents of informal housing are content with
living in housing made of traditional building
materials using traditional building techniques.
The priority problems these people are faced with
are mainly poor sanitary and health conditions, and
lack of access roads. It is therefore recommended
that:

6.2.4.1. The toilet conditions in Kawangware should be improved. Such improvements (in Kawangware and elsewhere) do not necessarily call for water closet services leading to the conventional sewerage system or to septic tanks. What is needed are better pit latrines (one per each plot) with proper washable floors, and proper walls and roofs to offer the necessary privacy. The ventilated improved pit latrine which does not smell at all and takes very long to fill would be ideal here.

6.2.4.2 Despite the E.E.C. upgrading scheme for Kawangware what was achieved was inadequate and more improvements are needed on infrastructural facilities and services. On access, improvements are necessary on especially footpaths. But the E.E.C. scheme approach of tarmacing rather than murraming or gravelling roads should be avoided in Kawangware and in any other informal housing estate. Main roads in informal housing estates should be murramed and access paths gravelled since there is little vehicle traffic in these areas. This also cuts very much on the costs ploughed back to the tenants through increased rents.

6.2.4.3. Although water connection is not a problem in Kawangware except for the constantly dry taps (almost all plots have piped water connections),

the upgrading of water services in informal housing
areas need not necessarily take the approach in
Kawangware where connections were made to each plot.
Common water points serving groups of plots could
be adequate. What can,however, be provided are more
than one tap at each water point to ensure efficiency.

6.2.4.4.   More paved surface drains should be
provided in Kawangware. But to avoid the situation
where existing drains are a health hazard
because of stagnant dirty water, the tendency to
use these for   refuse disposal should be checked.
These should be cleaned periodically to ensure that
the water flows uninterrupted. The cleaning can be
done by the City council or through locally
organized labour. The same should apply to other
informal housing areas.

6.2.4.5.   The study showed that the residents of
Kawangware are content with living in housing
constructed with traditional, non-conventional
building materials using traditional building
techniques.   There should hence be a   shift from
the use of the Grade I Building By-Laws to the
Grade II By-Laws to sanction the use of traditional
building materials for low-income housing and also
legalise the already existing housing built of such
materials.   The Hassan Fathy (1973) Egyptian

experience where he pioneered the large utilization of indigeneous materials in the construction of both residential and public buildings, strongly comes out in support of this. The buildings were found to be not only adapted to the local climatic conditions and keeping with the vernacular tradition, but also overcame the constraints experienced as a result of using conventional building materials. Materials which can easily catch fire like cartons and grass should, however,be discouraged.

6.2.4.6. A common bathroom should be provided per plot in Kawangware and in any other informal housing area. It should have a cemented floor, proper walls, and a proper roof plus a lockable door to ensure the privacy needed by the users.

6.2.5 The aim of social policy in all countries should be to provide everyone with a choice of making a decent home for themselves and their families at a price they can afford rather than provide everyone with a decent and healthy home (Pat Niner; 1976). The study evinced that the residents of Kawangware find their single room dwellings adequate. But public policy insists that a minimum dwelling units should comprise two rooms, a kitchen, a toilet and a shower. This not only excludes

Kawangware from what is legally urban housing but also all other informal housing which is mainly characterised by single room dwellings. There should thus be a shift of policy from this minimum dwelling unit to focus on one room dwellings for low income groups. Stipulations could, however, be adopted on the minimum size of the one room dwelling unit. A common bathroom and toilet could suffice for single room dwellers in a plot.

6.2.6 Planners should come to play in informal housing areas to ensure good and adequate layout of roads and access paths. Where this involves an already established residential area, like Kawangware, the planner should try as much as possible to facilitate access without having to knock down many dwelling units. The planners should also ensure that land is set aside for public uses like schools, clinics, open spaces and public halls especially where a young residential estate is concerned. Those whose land is taken for such purposes can be compensated or offered alternative sites in other areas where public land exists. Compensation is only for cases where private land is involved like in Kawangware.

6.2.7 A thriving informal sector which generates income for a significant proportion of the inhabitants

of Kawangware exists there. In light of this it is recommended that the planning of a layout for an informal housing area should provide spaces for cottage industries and commercial purposes to avoid the conversion of dwelling units into workshops and commercial buildings. Where public land is involved the land for this purpose can be taken from the residents and those involved settled elsewhere. But for private land alternative sites can be offered or compensation paid.

6.3 CONCLUSION

The principal aim of this study has been to examine the possibilities of incorporating informal housing into the official urban housing stock and therefore help reduce the housing problem for the lower income urbanites who are the ones mainly confronted with the housing problem. Public and private sectors efforts have so far failed to remedy the housing problem and the lower income groups are constrained to seeking shelter in informal housing settlements. This implies that one cannot prepare and pursue a realistic housing policy which excludes or fails to recognise informal housing estates as part of the urban housing stock in Kenya. The government should therefore review its stand as concerns informal housing given that the

housing problem is increasing with time. In essence
the crying need is for a well thought out,
practical housing policy for the country and a
suitable programme and appropriate machinery to fulfil
the policy.

Through this study, the possibilities of
incorporating informal -housing into what is officially
urban housing stock without wholesale upgrading are
examined. The conclusion is reached that such can
only be possible if informal housing is protected
through standards which realistically can be met by
this housing. These standards must take into account
the fact that considerable investments in upgrading
informal housing have in many cases resulted in
increased rents by informal housing landlords,
making them beyond the reach of the lowest income
inhabitants. Indeed, in Kawangware one of the
impediments to housing repair was the fear of
investing a lot in the housing and thus having
to raise the rents which would displace some of
the tenants. Past attempts to solve such a
problem through rent control have proved fruitless
in Kenya; it has become impossible to exert the
control in practice.

Where improvements are thus necessary high
standard improvements should be avoided. The upgrading

scheme should also try to avoid involving the
dwelling units save where materials which easily
catch fire are used like cartons, polythene paper
and grass. This calls for a sanctioning of
traditional building materials which do not pose
a fire hazard and traditional building techniques.
The improvements of facilities and services should
be to a minimum standard and this calls for new
approaches to urban sanitation to avoid those that
raise the costs beyond what is affordable to
the lowest income urbanites. Where necessary
allowance should be made for the   phased provision
of infrastructural facilities. If these factors
among other, are addressed fully the contributions
of informal housing in urban housing development
will be magnified and the housing problem in Nairobi
(and other urban areas), and especially for the lower
income groups, will be narrowed down considerably
and much faster.

6.4   SUGGESTIONS FOR FURTHER RESEARCH

As indicated through the policy recommendations
by this study, there is need for a very clear cut
and explicit Government policy for the low income
group housing. This is because the existing policy
is vague, and unrealistic and advocates for housing
without the economic reach of the low income groups
leading to acute shortages in housing for these groups.

To facilitate such a realistic and performance
oriented policy and thus avoid the displacement
of target tenants with the improvements of
residential areas it needs a clear understanding of
expenditure patterns and affordability capacity of
the low income group.   This calls for intensive
research on expenditure patterns and affordability
capacity of low-income groups.

    There is also room for research in informal
housing areas as to the   role these areas play
in creating employment. The Kawangware case
study revealed that informal housing areas play
the dual role of offering both accommodation
and employment.

APPENDIX

INTERVIEW SCHEDULE

Questionnaire Number _____

SECTION I : SOCIO-ECONOMIC CHARACTERISTICS OF RESIDENTS:

1. Sex : 1. Male   2. Female

2. Age: 1. Below 18   6. 41 - 45

           2. 18 - 25   7. 46 - 50

           3. 26 - 30   8. 51 - 60

           4. 31 - 35   9. 61 - 70

           5. 36 - 40   10. Over 70

3. Marital Status:

    1. Married   4. Widowed

    2. Single   5. Separated

    3. Divorced

4. Level of Education:

    1. None   6. K.A.C.E. level

    2. Below C.P.E.   7. University level

    3. C.P.E. level   8. Technical Training

    4. K.J.S.E. level   9. Other _____

    5. K.C.E. level

5. Ethnic group ----------------------

6. Religion:

    1. No response   4. Protestant

    2. Indigeneous   5. Muslim
        traditional

    3. Catholic   6. Other ---------------

7.   Occupation:

1.   Unemployed   6. Civil servant

2.   Housewife   7. Industry

3.   Self-employed   8. Commercial

4.   Seasonally employed 9. Scholar

5.   Casual workers   10. Other -------------

8.   Place of work:

1.   None   4. Outside Nairobi

2.   Kawangware   5. Other-------------

3.   Outside Kawangware
      but in Nairobi

9.   How much money (Kshs. per month) do you
      spend on transport to and from work?

      ----

10.   Income level (Shs/month) --------------------

11.   Place of birth:

1.   Kawangware   3. Kenya (specify)

2.   Nairobi (specify)   ------------------

      ----------------   4. Outside Kenya

12.   How long have you lived in Kawangware?

13.   Why did you migrate from your place of birth?

      ----

14.   Why did you choose to live in Kawangware?

      ----

15. How long do you plan to live in Kawangware
    in the future?

    ----

16. If you plan to move where would you like to go?

    ----

17. What reasons do you have for wanting to move?

    ----

18. Do you:

    1.   Own the land and the house you live in

    2.   Rent the house you live in

    3.   Live with relatives who rent the house

    4.   Own the house and not the land

    5.   Live with relatives who own the house
         plus the land

    6.   Live with relatives who own the house

         and not the land

19. If you rent the house, how much is the
    rent (Shs. per month)

    ----

20. If you were to pay a higher rent what
    would be the maximum you would be capable of
    paying?

    ----

21. Where does the owner of this unit you are
    staying in stay?

    ----

22. Does he own:

    1.   The dwelling unit and not the land

    2.   Both the dwelling unit and the land

23. Approximately how old is this dwelling ----- years

24.   Household composition:

	Relationship to Respondent	Age	Sex	Marital status	Education	Occupation	Income per month
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8							
9							
10.							

25.   What do you like about living in Kawangware?

----

26.   Comparing Kawangware in the past would you
      say that it is:

      1.   a much better place to live in now

      2.   a little worse place

      3.   the same

      4.   Other .-------------------------------

27.   Regarding the house would you say that

      1.   you are satisfied

      2.   you are disatisfied

      3.   Don't know yet

28. What do you see as major problems in this area

    ----

29. Has any attempts been made to solve these
    problems? (specify)

    ----

30. What have the local people done to solve some
    these problems? (if nothing indicate why)

    ----

31. Can the people of Kawangware work together for
    the good of the community?

    ----

32. Is this house constantly repaired? -----------

33. Approximately how much does it cost per year?

    Kshs. --

34. What are the sources of finance for repairs?

    ----

35. Are there any problems faced in repairing
    th house which discourage one from doing it?

SECTION II : HOUSING AND SANITARY CONDITIONS

1.   Building materials used:

    (a)   floor 1. Earth

               2. Concrete

               3. Wood

               4. Cemented

               5. Other --------------

    (b)   Wall 1. Poles + mud

               2. Poles + plaster

               3. Poles + paint

               4. Wood

               5. Bricks/blocks/stone

               6. Polythene paper

               7. Cartons

               8. Tin sheets

               9. Other ----------------

    (c)   Roof 1. Corrugated iron sheets

               2. Asbestos

               3. Grass thatch

               4. Cartons

               5. Polythene paper

               6. Tin sheets

               7. Other ------------------

2. Type of housing:

    1. Permanent

    2. Semi-permanent

    3. Temporary

    4. Very temporary

3. Number of rooms occupied -------------------------

4. Size of unit occupied ----- by ----m = sq.m.

5. Nature of ownership of

Facility	None	Type of ownership:	
		Private	Communal
1. Kitchen			
2. (a) pit latrine			
(b) water-borne			
3. Bathroom			

6. How is waste and rain water removed:

    1. No drainage

    2. Open drainage

    3. Covered drainage

    4. Other ------------------------

7. Water availability within the plot of residence:

    1. Private tap --------------

    2. Communal tap -------------

    3. None ----------------------------

8. If not in the house distance from the house to the source:

   ----

9. Type of access roads:

   1. None

   2. graded (earth)

   3. murramed

   4. tarmaced

10. Source of energy for lighting:

    1. None

    2. kerosene lamp

    3. electricity

    4. candle

    5. other

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