

A STUDY OF THE HOUSING POLICY IN KIBERA

WITH SPECIFIC REFERENCE TO LOW-INCOME

COMMUNITIES.

By

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D e c l a r a t i o n

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

This Thesis has been submitted for examination with my (our) approval as University Supervisor(s).

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Any opinions expressed in this research, and all errors of analysis and fact that remain are my own responsibility.

Abstract.

The need for a housing policy becomes more apparent as the problem of uncontrolled settlement assumes major proportions of the urban sphere. The need for low-cost housing in urban areas is expressed through overcrowding in the existing low and medium income residential areas and the fast-growing shanty-towns everywhere in the city. The present study attempts to analyse the housing problem of low-income communities at Kibera, Nairobi.

The objective of the research is to examine the housing problems of low-income communities in Kibera. The study also makes an enquiry into how present and future housing projects in the area could be planned and organised so as to be more relevant and beneficial to the housing needs of the low-income people.

The research has indicated that a large proportion of both houseowners and tenants in Old Kibera are low-income. It also revealed that the conventional housing replacing Nubian and Squatter housing through the redevelopment programme is beyond the ability of the majority of the residents to afford. But the majority of New Kibera occupants are medium and high income people who have recently moved to the area as a result

of new housing. It is therefore concluded that new housing schemes in Kibera are not meeting the housing needs of low-income communities although they are contributing to the housing stock in the city.

Consequently the study recommends that the redevelopment of the area involving demolition of existing structures be discouraged. But in order to make the area more livable, an Up-grading and Improvement Scheme is proposed for the area. Since not all low-income people would be catered for by the proposed up-grading scheme, and since a few buildings would be demolished to allow for laying of infrastructure services, a Site and Service Scheme is proposed to cater for those affected and the squatters in the area.

The study in no way claims to be exhaustive in its findings or recommendations. Kibera is only a small area in the city and there are more areas in Nairobi with similar problems which need a study of this nature. Even in the case of Kibera it was impossible to examine every aspect of development and there is scope for further research as recommended in the text.

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## CHAPTER ONE

### INTRODUCTION

1.0 Kibera is a neighbourhood of about 332 Hectares to the south-west of the City of Nairobi. It is approximately 7 kilometres from the City Centre and has a characteristic appearance with its Nubian mud and wattle houses of the Swahili type, with roofs of flattened tine or corrugated galvanised iron sheets. As early as 1960 the area was earmarked by Government for redevelopment with conventional houses. By end of 1975, four National Housing Corporation housing estates had been completed but these appear to be unsatisfactory to the housing demands of the original Kibera residents they were meant to house. Whereas the Nubian Villages catered for low-income people, the new estates cater for medium and high-income people. The character of the neighbourhood is as such changing with the result that many low-income people are being displaced without a better housing alternative.

#### 1.1 OBJECTIVES

The purpose or objective of this research is to examine the housing problem of the low-income people of Kibera. The study makes an enquiry into how present and future housing schemes in Kibera could be planned and organised to be more relevant and beneficial to the needs of low-income communities in Kibera. The study therefore aimed at making recommendations

for future planning of the area. Subject to the outcome of the study recommendations are made along the following lines:

- (a) Improvement of the area, with respect to
  - (i) Subdivision into ratable plots,
  - (ii) Provision of infra-structural services,
  - (iii) Upgrading of the dwellings, and
  - (iv) Provision of community facilities.
- (b) resettling of the overspill population (as a result of (a) above) possibly in a site-and-service scheme within Kibera.

#### 1.2. The Choice of Kibera as a Study Area

There were mainly two reasons why I selected Kibera to be my Study area:-

1. Before independence Kibera had developed as a peri-Urban settlement of Nairobi City with a large low-income population living in cheap accommodation in the Nubian Villages but without proper services. During early 1960's the Government decided to redevelop the area with conventional housing. This meant demolishing the Nubian Villages and accommodating their occupants into the new houses. It was assumed that the redevelopment would proceed without interfering with the social and economic set-up of the communities living there. I therefore chose Kibera as a study area so that I could examine the effects of the redevelopment programme and how it is assisting in solving the low-income housing



problem in the city in general and in Kibera in particular, as well as offer recommendations to the authorities on how to improve the area and other areas with similar problems without necessarily demolishing the existing houses.

2. The redevelopment of the area is based on tenant-purchase schemes, the objective being to encourage ownership of better quality houses. I therefore undertook to study the area with the view of suggesting ways and means by which low-income communities in the area could be assisted to acquire and own houses that are within their financial abilities to afford.

### 1.3. The Problems of the Study Area

In Kenya housing is a country-wide problem but it is most acute and felt in the urban areas by low-income communities. The Nubian villages in Kibera provide housing for low-income people and are also used for commercial undertakings. The Nubian built houses for themselves plus extra-rooms for subletting. Thus the Nubian community find house ownership not only a social amenity but also a major source of income. However, with the present new housing schemes, the direct result of the redevelopment programme, it has become evident that not all the Nubian families can be rehoused in the area. For when their income is assessed it is found that about one-quarter can meet the present tenant-purchase terms, about one-half derive sufficient income from

their present dwellings in the form of rent collected to subsist on; and another quarter could be considered as being really poor. The last two categories are the ones who are hard hit when their structures are demolished. Further Nubians are not ordinary citizens who may have some ancestral or tribal land elsewhere in Kenya to go back to; their only home they know for all practical purposes is Kibera.

The Nubian Villages accommodate a large number of low-income people the majority of whom earn less than Shs.450 per month (66% in 1974). Should the Nubian villages disappear under redevelopment schemes these tenants to the Nubians will also be left without proper accommodation since their income does not allow them to rent a house in the new estates.

Certain parts of Kibera have been occupied by squatters who also have their tenants. These too present a formidable problem since demolishing their shanties means depriving them not only their shelter but also their income from subletting. Therefore the planning of the area has to be considerate enough if the housing needs of the present Kibera residents have to be met satisfactorily.

As the Nubian Villages and the squatter area were built without planning permission, these areas are without proper water supply, roads, sanitation and many other facilities. The houses are crowded and in some cases they are fire hazards.

Thus, Kibera experiences many of the problems found in other unplanned settlements such as Mathare Valley, Dagoretti, etc. In general squatter areas are believed to be the haunts of undesirable characters as well as likely places for breeding certain diseases. Although there is no documentary evidence to support such beliefs there could be certain elements of truth. In Nairobi, for instance, Mathare Valley, the oldest and largest squatter area is well known as a rough and unsafe neighbourhood especially at night. Cases of robbery, theft, homicide, prostitution, brewing and selling of "chang'aa" are fairly common. Hence, some parts of these unplanned and illegal urban settlements constitute a threat to public health and safety. Luckily enough, Kibera has not experienced many of these urban evils mainly because of the influence of the Nubian community which is mainly Muslim. Although a few bad characters have managed to infiltrate the area they are not yet a serious threat to the neighbourhood.

#### 1.4. General Approach

The main part of the study consists of a detailed description of the area and its inhabitants, covering the following aspects:-

- The historical development that gave rise to the present situation (chapter 2).
- The housing types and their related problems and housing policy for Kibera (chapter 3).
- Detailed description of housing for low-income

- communities and the role played by conventional
- housing is critically evaluated (chapter 4).
- Summary of the housing problems indentified in Kibera and discussion of possible solutions to the low-income housing problems, and policy recommendations (chapter 5).
- The last chapter summarises major conclusions and recommendations as presented in the text.

Obviously, apart from their common features, uncontrolled areas often differ in many aspects, which might affect their future planning, such as their size, the proportion of the total town population they accommodate, the proportion of owners/tenants, their location in town, the quality of the structures and the public facilities. All these individual differences will have to be taken into account when plans are prepared for their improvement or demolition. But it is hoped that the experience gained in the present study may contribute to formulating a common approach to future planning for these areas.

#### 1.5. Research Hypothesis

The research hypothesis in this context may be regarded as the research problem, that is, a set of propositions drawn by the author from past knowledge, documents, researches or practical experience about the study area. The research hypothesis therefore serves the following purposes:-

- (i) to show clearly why there is need to carry out

- communities and the role played by conventional
- housing is critically evaluated (chapter 4).
  - Summary of the housing problems indentified in Kibera and discussion of possible solutions to the low-income housing problems, and policy recommendations (chapter 5).
  - The last chapter summarises major conclusions and recommendations as presented in the text.

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- (i) to show clearly why there is need to carry out

the research.

- (ii) to show the kind of data required in order to answer the research question.
- (iii) the research hypothesis may be a useful instrument in analysing the data.

The writer has therefore endeavoured to formulate the following main research hypothesis, with specific reference to the study area:-

1. Unplanned housing areas lack basic infra-structure and community facilities.
2. Houses in squatter areas are of such poor quality that they ought to be demolished, although this may not be a solution to the housing problem of the low-income communities.
3. Whereas uncontrolled housing areas possess qualities of offering investments to residents they also harbour and shelter criminals who become social nuisance.
4. The urge for low-house rents facilitate the growth of illegal squatters.
5. Rural-urban exodus find a home in the uncontrolled settlements where the communities bear both rural and urban characteristics.

## 1.6. Previous Literature on Kibera

Teams of people and individuals have carried out studies in Kibera on different aspects of the area development. For instance, the Housing Research and Development Unit (HRDU) of the University of Nairobi has undertaken three different studies on 'Plot Size and Plot use Survey,<sup>1</sup> 'Selective Appraisal of a Courtyard Housing Scheme<sup>2</sup> and the Kibera Experimental self-help Scheme!<sup>3</sup> All these studies concentrated on parts of Kibera, and apart from the last scheme which is being planned by the Unit, the other two are among the completed conventional housing estates that have not been successful in housing the intended low-income communities in Kibera. The main failure of these schemes which are all tenant purchase has been due to the fact that they have tended to be beyond the financial abilities of the majority of people living in Nubian Villages and the squatter area to afford. The Kibera Experimental Self-Help Scheme is still in the planning stage and it is only fair to say that the scheme is in the right direction for it has the low-income household at heart.

In 1962, Mrs. Temple conducted a 'Housing Preference and Policy'<sup>4</sup> Study in the area. In her analysis she came to the conclusion that a large number of low-income people were likely to be ill-housed after the redevelopment than before, even though many would be willing to pay the economic rent of decent low-cost permanent quality accommodation. This was perhaps the first indication of the housing problem facing the Kibera residents. However, although the author made some useful remarks concerning

housing in Kibera, she did not go into the details of how the situation could be rectified or offer a workable solution. The present author therefore undertook to study the housing problems of the low-income communities in the area and offer suggestions which he believes will go far in dealing with the deteriorating housing situation. In this study the author has had to incorporate some of Mrs. Temple's data as he found it quite useful and relevant to the task at hand.

The National Housing Corporation Annual Reports contain useful statistical data on housing and the corporation has been the main developer of Kibera new estates.<sup>5</sup> But as Fred Temple has pointed out, "the most interesting point to note is that although the Development Plan specifies that the NHC is supposed to be concerned with units costing less than £1200, roughly 80% of the units constructed by NHC itself exceed this minimum<sup>6</sup>. This clearly explains partly the reasons why the new Kibera Housing Estates are unable to meet the housing demands of the majority of the residents.

According to the Nairobi Urban Study Group Kibera was zoned for medium and high density housing schemes. Under this zoning policy Kibera still has much room for more than double the present population. In addition, recent thinkers on slum clearance emphasises the fact that "existing housing stock even in slums and squatter settlements must be preserved wherever possible so that new housing results in the maximum net



gain"<sup>7</sup> Charles Abrams clarifies the point by stating that "Urban renewal and city planning officials would better earn their keep if they were trained in something more than demolition, zoning, density controls and their other stock of trade. They require a keen knowledge of the secrets of human interest; activity and recreation; of the needs and troubles of human spirit, of the forces that make one city beat and another languish."<sup>8</sup>

Nairobi City Council has time and again tried on demolition but has met with little success. For instance, the Pumwani Redevelopment Scheme ended up in housing medium and high income groups instead of the original Pumwani residents. Other demolition exercises have been carried out in many uncontrolled settlements in Nairobi, including Mathare Valley, Kigamba and along Nairobi River Valley but all these efforts have been in vain. This then calls for a thorough examination of this policy. As indicated above, merely demolishing houses without providing an alternative is not the solution to solving the housing problem. Even constructing modern houses such as those of Pumwani without considering the financial abilities of the people will not again solve the problem. There should be a change in the policy so that different income groups are considered accordingly.

## 1.7. Methodology

From the outset of the study it was obvious that the population of Kibera comprised two distinct groups; the house owners and their family members and the tenant population, spread over three areas we shall refer to as the Nubian Village, the squatter Settlements and New Kibera. (Map)

In order to draw the sample to be interviewed up-to-date maps of the area were necessary. Such maps were not readily available and it became imperative to prepare them from on-the-ground surveys supplemented by aerial photographs. During the initial phase of the study a preliminary appraisal of the physical quality of the buildings and the layout of the three separate areas were made. New buildings were appropriately added on the maps while the demolished structures were excluded.

In the Nubian Villages and the Squatter settlement each detached building was serially numbered. The author then used a random sample method to choose which buildings in which households could be interviewed. In the two areas, 92 buildings were picked from approximately 928 (representing a 10% sample). In New Kibera estates each housing unit was serially numbered and using the random number technique 64 housing units out of 642 were picked. Of the 156 buildings (representing 10% of all buildings in Kibera) picked interview was not conducted in four houses. One house was used as a dispensary, three houses

in New Kibera were unoccupied. Interview was refused in one house while in another the respondent gave fake information; the two were also not included in the analysis.

As most buildings had more than one households the interviewer asked the heads of households to pick small papers marked "Yes or No" to determine the ones to interview. This exercise was laborious and rather difficult to achieve.

Interviews were conducted in three languages; English, Swahili and Kikuyu. This was necessitated by the fact that some respondents preferred to be interviewed in the language they understood better. The author was assisted in this exercise by three assistants all of whom were fluent in all three languages. Translating the questionnaire in either Swahili or Kikuyu raised comprehension problems. This exercise wasted much of the interviewers time. Sometimes taking twice the time required to interview one household.

In the questionnaire the author included some questions on age, sex, relation to head, marital status, number of people and whether employed, how much they were earning, the house type and tenureship, the rent paid or the rent collected per month, etc. Such questions were posed to the interviewees in order to determine the problems they were facing and what the overall problem of Kibera area in general.

From the survey through the questionnaire and by physical scanning of the area, the following information was collected:

1. The physical set up of the area which consists of the soil types, drainage pattern, vegetative cover, road network etc.
2. On the social set up of the area, the various ethnic groups were known, the population and its composition, the number of houses and households, occupancy levels, active population, school age population, available community facilities, etc.
3. On the economic set up of the area the survey yielded information on the number of wage earners, how much they earn, types of employment, existing trading and shopping facilities as well as information on other economic factors.

While carrying out the survey there were some problems which the author encountered. For instance, it was rather hard to have a specific pattern to follow during the interview time. This was particularly serious in the Nubian and Squatter areas where houses are erected in unorganised manner and there is no pattern to follow. A more serious problem was to find the people to interview at the right time as some were employed in public and private sectors and could only be available after 5.0 p.m. after their duty. So the majority of the interviews took place after duty hours and quite a number during the week-ends.

It was noticed that some of the answers given, especially on incomes were not reliable. This was true of the self-employed people for the fear that the information may be

used to assess them higher taxes. Many of them just quoted any figure that was low enough. Even the landlords suffered from the same fear. Some landlords denied having tenants although it was clearly seen that the number of rooms on his building could not be wholly occupied by his household. Hence, the interviewers had occasionally to guess what the income of such a landlord was.

Generally the people were very cooperative and willing to give information as required. This was partly due to the fact that they thought the information would be used to allocate them with the badly needed houses and partly because they believed that certain services would be brought to the area immediately if they gave the information as requested.

Apart from the data obtained through surveys, the author collected case studies, life histories from elderly members of the Nubian Community, more information was obtained from the Nairobi City Council, Housing Research and Development Unit of the University of Nairobi, National Housing Corporation. A study of written materials was made e.g. records of government and Nairobi City Council, as well as a study of the relevant literature on the area. (See References)

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## CHAPTER TWO

### 2.0 BACKGROUND TO KIBERA

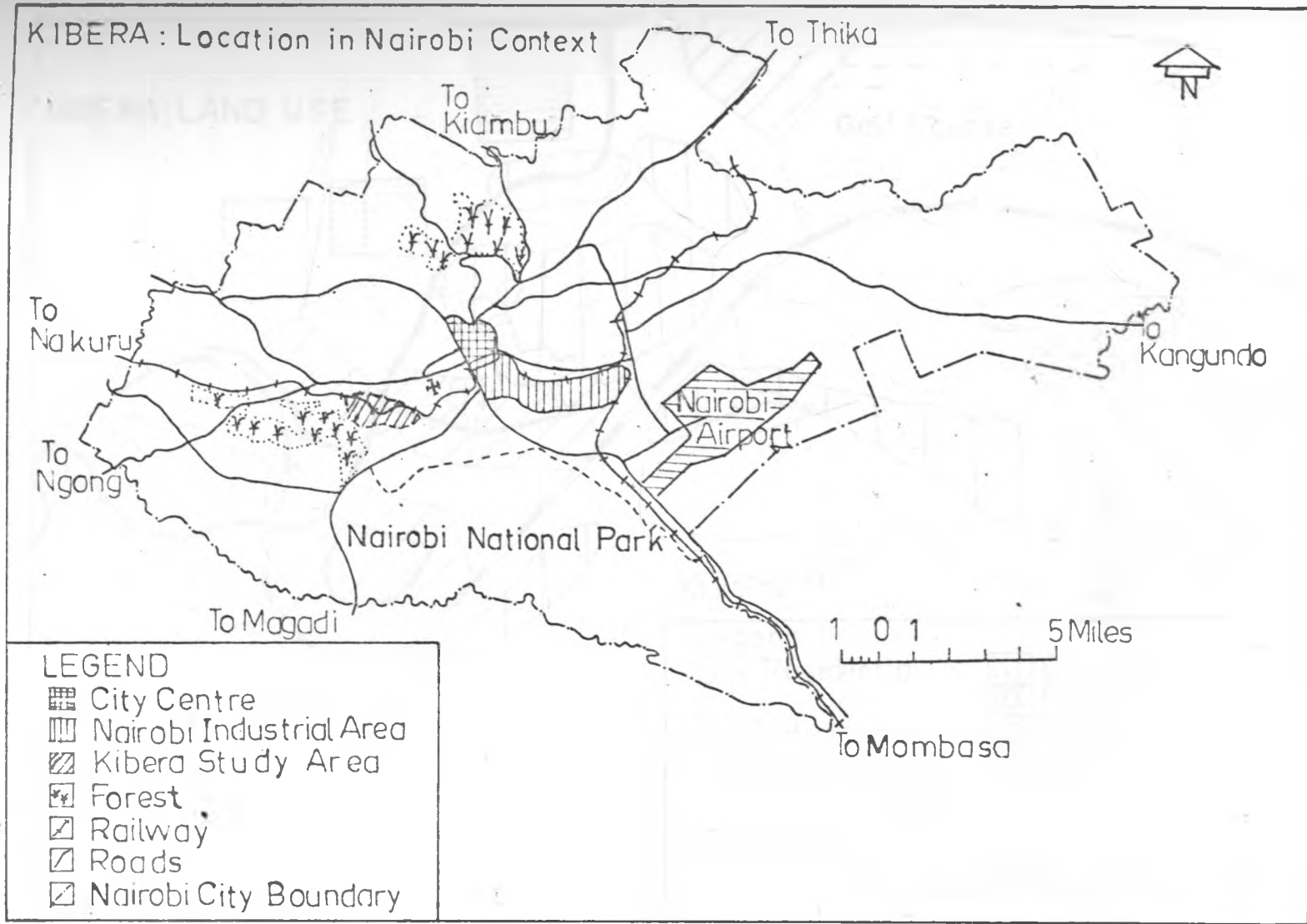
#### 2.1 Geographical Situation

Kibera Study Area is situated about 7 Km. South-West of Nairobi City Centre. It is bordered to the South by the rather steep valley of Mutuini river, to the east by the proposed National Sports Centre around Nairobi Dam, to the north by the Golf Course and Woodley estates and to the west by the Ngong Road Forest. The Uganda railway traverses the area from west to east. (Maps 1 and 2).

Kibera is about the same altitude as the City Centre (1680m). Climatically Nairobi lies in the Highland Zone and has an average annual rainfall of 855 mm distributed over the year in two rainy seasons. Much of the original vegetation has long disappeared due to a long history of settlement. Black cotton soil covers over half the area while the rest has patches of red soil and exposed rock which dominates the area south of the Golf Course. In planning for the area these geographical factors should be carefully considered and more so when a low-cost housing project is involved.

#### 2.2 Historical Growth

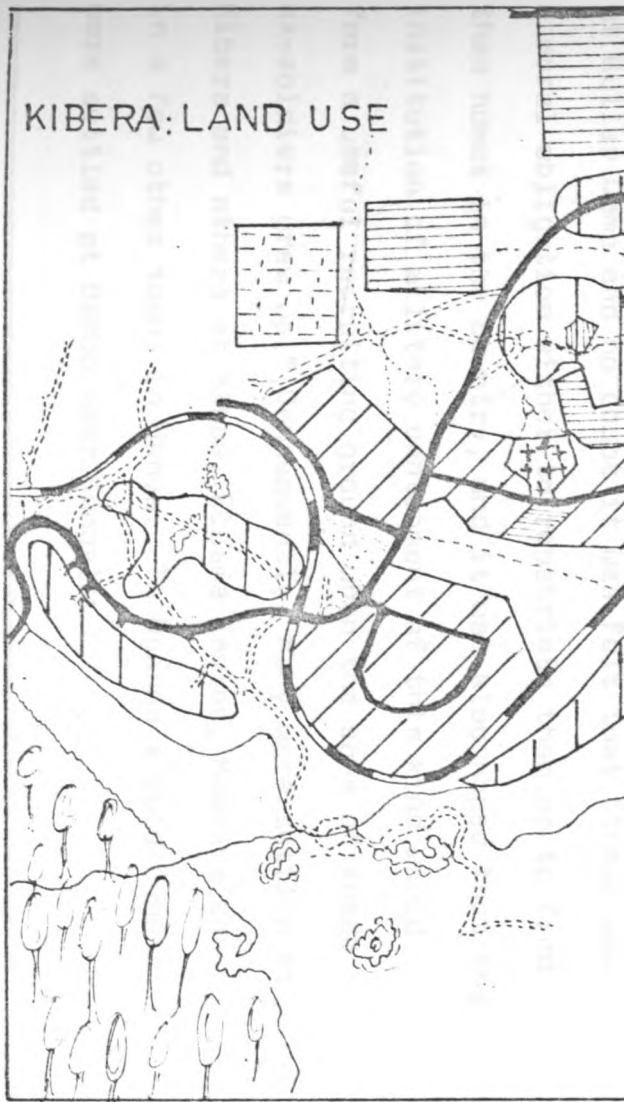
Kibera is a Sudanese word for forest. Before 1904 when the area was originally assigned to the King's African Rifles to settle Sudanese ex-soldiers<sup>2</sup>,

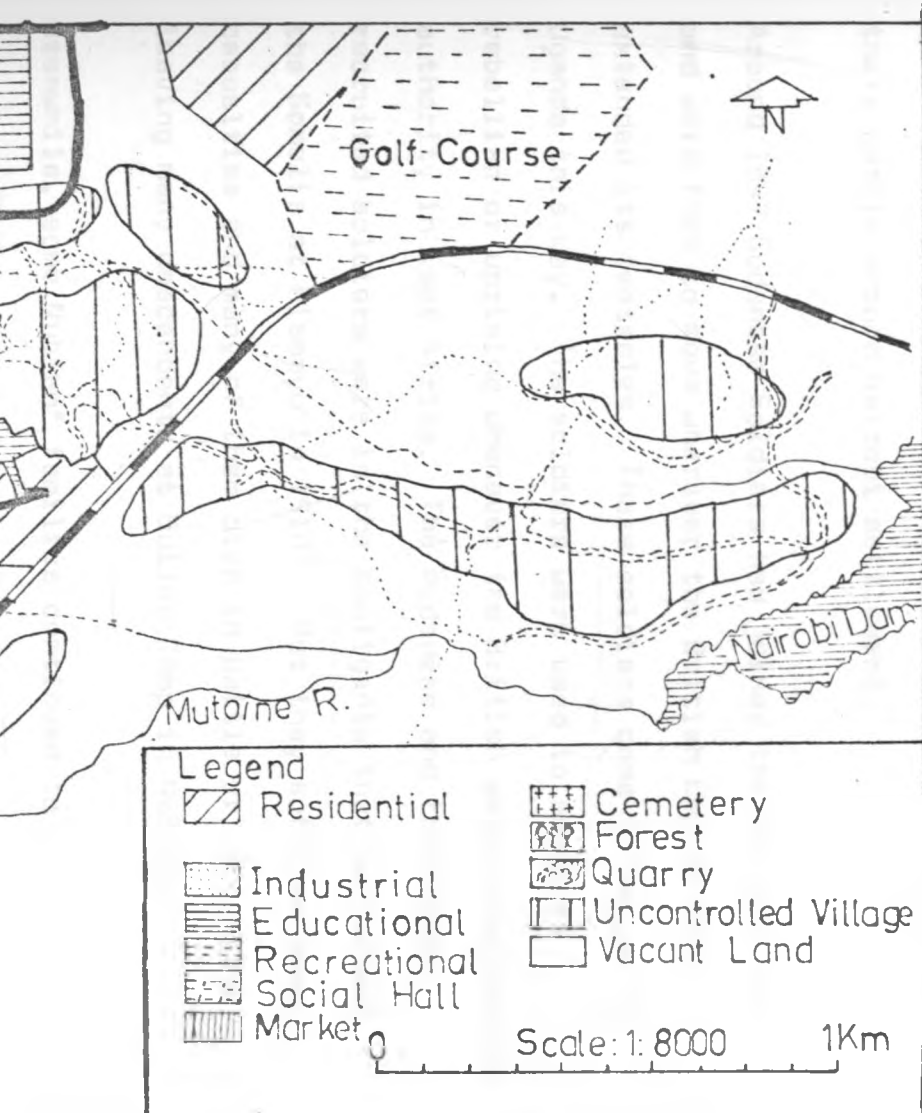


MAP 1



# KIBERA: LAND USE





it was part of the present Ngong Road Forest Map 1). The area probably formed part of Masai tribal land who herded their cattle around Nairobi settlement.

Around 1897 Sudanese Soldiers had joined the British Army and were free to move wherever the British Empire had extended its tentacles. These soldiers came to Kenya and Uganda this way. The soldiers were used to suppress rebellion or uprising whenever the British were establishing authority in East Africa. The Sudanese and the Kenyan recruited soldiers were in the contingents that suppressed the Somalis at Kismayu in 1910<sup>3</sup>. But they suffered heavy casualties and many of them died in battle or of disease leaving many descendants at Buller Camp in Nairobi.

Meanwhile, some Nubian\* families continued to be housed at Buller Camp and no doubt it was felt that "there was a moral obligation either to repatriate them or to find them homes in the country, and it was also hoped that the institution of military contonment of this kind would form a useful recruiting ground when the sons of these ex-soldiers grew up." Consequently, many were settled at Kibera and others at Kibos, Eldama Ravine, Mombasa and in a few other towns in Kenya. In Uganda a good number were settled at Bombo near Kampala.

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\* Descendants of the Sudanese ex-soldiers are better known as 'Nubians' as they speak the Nubian language.

Kibera was surveyed in 1917 as a military reserve and gazetted as such the following year<sup>5</sup>. The original 'Kibera Special Settlement Area' had a much larger area (1700 Ha.) and was partly inside and partly outside the Nairobi Municipal Boundary of 1928 (Map 3). No other tribal group were allowed to settle there. Hence the Nubians lived secluded from local people keeping to themselves their cultural heritage. Through gradual expansion of the city some Nubians integrated with local people and intermarriage even occurred. Nubians are overwhelmingly Muslim (100%) and live in closely-knit communities. They are keen on customary and communal ceremonies which are held frequently and whenever need arises. But most of them tend to keep aloof from other communities. Hence although many of them are fluent in common local languages, very few local people understand the Nubian language.

### 2.3. The changing face of Kibera

But Kibera is no longer the Nubian enclave it was before the 1930s. Although it remained outside the Municipal boundary it housed people working in the municipality. Thus Kibera and other estates (e.g. Karen, Spring Valley and Ruaraka) developed as per-urban settlements. The proximity of Kibera to the City Centre and the Nairobi Industrial Area, made it an attractive place for African migrants into the city. Soon after the second World War, and particularly, after the Mau Mau Emergency, non-Nubian peoples began to infiltrate the area, commonly as tenants to the Nubians and occasionally as squatters on vacant land.

The importance of Kibera to the growth of Nairobi could not be resisted by the team working on the Master Plan when they said,

"The Master Plan, therefore, aims to confine further growth within the existing boundaries of the Municipality. It will be advisable to make at least two exceptions: part of the present Kibera area should be taken into the Municipality and.....The inclusion of these areas raises no racial or political problem."<sup>7</sup>

The whole area was later included into the City Boundary by the 1962 Kenya Boundary Commission.<sup>8</sup>

The fact that Kibera developed at the periphery of the City has for years been the concern of the government. This was the reason why the Nubians were forbidden to build in permanent materials. Council's Building bye-laws lay emphasis on permanent structures and the developer must obtain a planning permission. Kibera's peripheral position meant that it was covered by the by-laws, but since its fate was still undecided no development was encouraged. The Carter Land Commission raised strong views about the government's plan to develop the area. In its deliberations the Commission said,

"The Kibera area urgently needs replanning, and it and the suggested area next to the aerodrome might well be put in hand immediately"<sup>9</sup>

The Government reacted by instructing the local authority not to allow the erection of permanent buildings with the possible exception of the Mosque and the Koran School.

In the late 1950's the Government finally became committed to redevelop the area. From 1961 the Government has pursued a series of redevelopment schemes. Four Housing estates have been completed and a fifth scheme, Kibera Experimental Self- Help Scheme, is under plan at Lomle Village. (Map 4)

In order to proceed with the redevelopment programme the Nubian houses are demolished. Hence Kibera is undergoing a quiet revolution both in housing and composition of its inhabitants. The redevelopment programme seem to have some negative effects that might not have been expected when the idea was conceived. This is one reason why it has become necessary to examine its effects in the light of how it is helping in solving the housing problem for the low-income communities in the area.

## 2.4 LAND IN KIBERA

### 2.4.1 Land Claim by Nubians

The conditions under which the Nubians were settled at Kibera remain dubious. Whereas they claim the land there is nothing whatever to support the contention that the whole area was given them as a reserve forever. Existing records show that they were merely given permission to live there. On land issue the Carter Commission concluded that,

"the legal position of the occupants of Kibera appears to be that they (Nubians) are tenants-at-will of the Crown (now Government of Kenya), and tenancy is liable to terminate by the Commissioner of Lands at any time"<sup>10</sup>

Since the colonial period, and even after independence, the Nubians have never been granted title to the land on which they live. This is a serious setback in the total development of the area due to lack of security of tenure.

#### 2.4.2 Land Ownership

As explained above, land in Kibera remains the property of the Government which decide on its use, by whom, and for how long. Hence land ownership does not pose a serious development problem. What seems to hinder development is to find the most appropriate alternative to appease the present settlers on the land. As stated elsewhere, the Government had a duty to these ex-soldiers either to repatriate them or to find them accommodation. They were told they might make homes at Kibera. Therefore any development plans in the area should provide them with good alternative for settlement.

#### 2.4.3 Land Values

Surveyed land in Kibera is confined to the N.H.C. housing estates. It is therefore difficult to establish land values for the whole area.

The adjacent Old City area (Map 3) has unimproved site value averaging about £1000 per Hectare. On the other hand, unimproved site value on Council's Role for Rateable owners in Kibera is £770 per Ha. It would therefore seem that the actual unimproved site value for the whole area lie between these two values. In any case land values are not a constraint to development since Government owns the land and can regularise land values in the area as need arises.

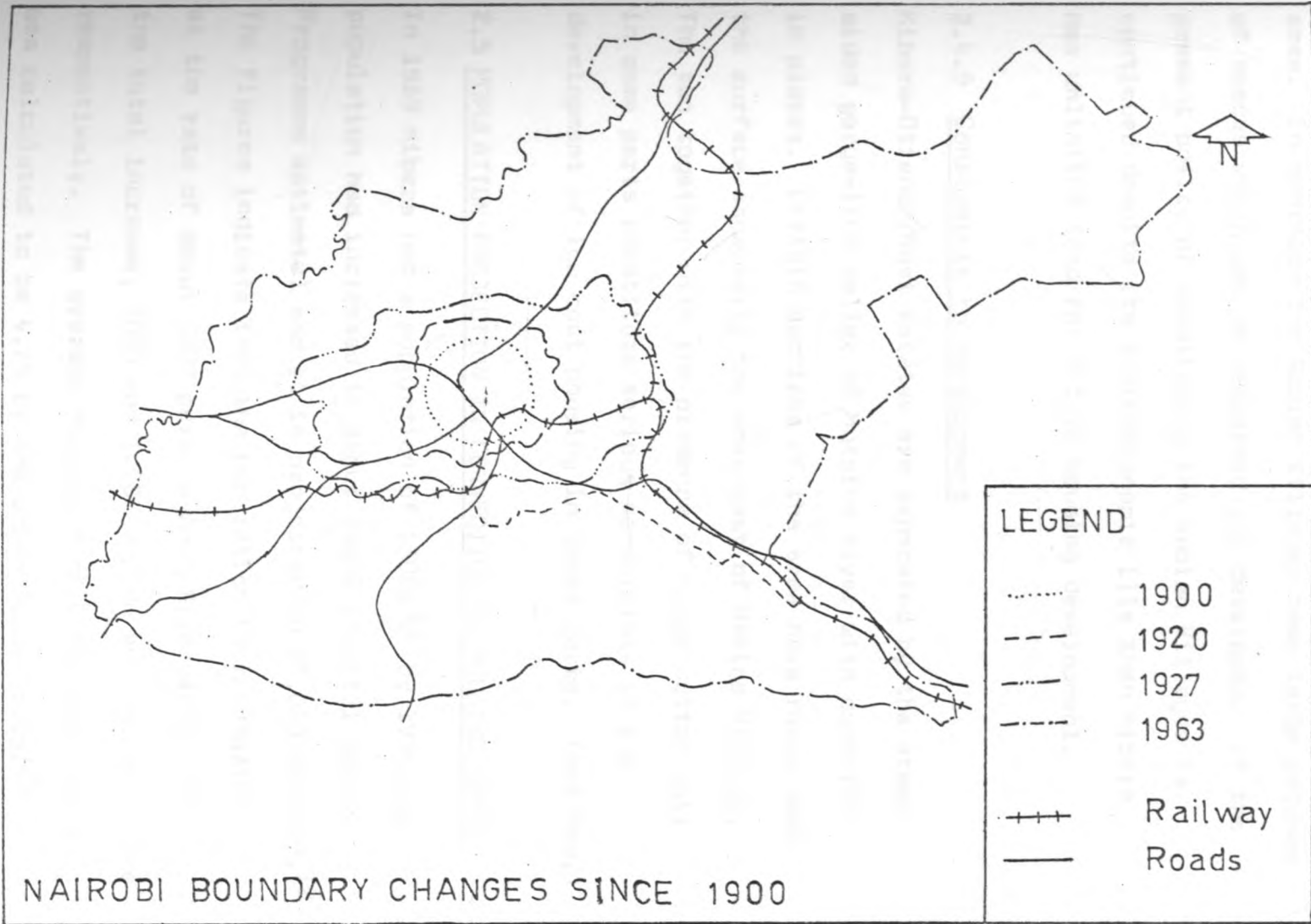
#### 2.4.4 Land Use

Kibera study area has a total area of 332 Ha. and is used as shown in Table I. Note that developed land includes housing and social infra-structure.

Table I - Land Use

Type of Use	Area	%
Developed Land	37.8	11.4
Committed Development	53.8	16.2
Nubian Villages	116.2	35.0
Vacant + Open Spaces	124.2	37.4
Total	332	100.0





NAIROBI BOUNDARY CHANGES SINCE 1900

MAP 3

Land available for development forms 37.4% of the total area. In addition the Nubian Villages have large patches of spaces which can be reclaimed and developed. If the present policy of demolishing the Nubian Villages is continued despite its socio-economic ills then Kibera has unlimited land for future housing development.

#### 2.4.5 Constraints to Development

Kibera-Otiende/Ngei estates are separated by the steep sided gorge-like valley of Mutoine river with quarries in places. Certain sections of the area have rocks near the surface especially the area east of Makina Village. The two together with the presence of black cotton soil in some parts constitute serious constraints in the development of low cost housing in those parts. (see Map.)

#### 2.5 POPULATION PROJECTION IN CONNECTION TO HOUSING NEEDS

In 1969 Kibera had a population of 13000<sup>11</sup>. By 1974 the population had increased to about 18000 (Capital Works Programme estimate) and it is projected to 25,000 by 1979.<sup>12</sup> The figures indicate that the population is increasing at the rate of about 6000 persons every five years. Of the total increase, 5000 and 1000 are low and medium income respectively. The average household size for low income was calculated to be 4.25 by the Urban study Group.<sup>13</sup> When this figure is applied to Kibera the implication is that there are 235 additional households which need accommodation every year. (Table II)

Table II total Population and Number of Households

	Nubian Villages			Squatter Area			New Kibera			Total
	Owners	Tenants	Total	Owners	Tenants	Total	Owners	Tenants	Total	
Total Population	3939	5274	9213	1661	1275	2936	1352	4652	5932	18123
No of Households	927	1241	2168	391	301	692	310	1060	1370	4166

Total	SQUATTER AREA				NEW KIBERA				GRANT TOTAL			
	Owners	Tenants		Total	Owners	Tenants		Total	Owners	Tenants		Total
No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
35 12	5 6	- -	5 5	10 17	44 23	54 21	15 6	74 20	89 14			
28 9	12 15	- -	12 13	13 22	15 8	28 11	43 16	23 6	66 10			
35 12	9 11	- -	9 9	7 12	21 11	28 11	47 17	25 7	72 11			
21 7	8 10	- -	8 8	8 13	21 11	29 12	31 12	27 8	58 9			
46 16	6 7	8 54	14 15	3 5	36 19	39 15	19 7	70 19	89 14			
31 11	9 11	2 13	11 12	8 13	31 16	39 15	26 10	55 15	81 13			
29 10	4 5	2 13	6 6	4 7	12 6	16 6	11 4	40 11	51 8			
17 7	7 8	- -	7 7	3 5	6 3	9 4	18 7	15 4	33 5			
9 3	6 7	2 13	8 8	2 3	2 1	4 2	19 7	12 3	31 5			
8 3	4 5	- -	4 4	1 2	3 2	4 2	9 4	7 2	16 3			
10 4	1 1	- -	1 1	- -	- -	- -	3 1	8 2	11 2			
5 2	4 5	1 7	5 5	- -	- -	- -	7 3	3 1	10 2			
11 4	7 8	- -	7 7	1 2	- -	1 1	15 6	4 1	19 3			
295 100	83 100	15 100	98 100	60 100	191 100	251 100	271 100	373 100	644 100			

This demand for housing is being partly met by the mushrooming illegal structures in both the Nubian villages and the Squatter Settlements.

It is worth to note that the household numbers were established on the basis of the 1974 population projections and by applying the average household size for each income group assumed by the Urban Study\*. Apart from the Squatter Area, Tenant households dominate in the area.

#### 2.5.1 Age and Sex Structure

In Table III the age of the owner and tenant population of the three areas are compared. These figures only show the sample population. Perhaps one of the most vital pieces of information on population characteristics is the age-sex distribution which is represented by the age sex pyramid. (Diagram 3).

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\*The average household sizes assumed by NUSG are Low-income 4.25, Medium-income-4.37 and High -income 4.33 persons per household.

Both Table III and Diagram 3 show that the three areas vary in age and sex structure. But it is clear that the tenants of all the three areas reflect in their age distribution a typical rural migrant population, with high percentages of adult working age (64%) but this again varies according to the area (e.g. Squatter Area 93%, Nubian Villages 72%, New Kibera 56%). The Squatter tenant population is almost devoid of children under 15 years. In contrast, the distribution of the

owner population in the Nubian Villages and New Kibera is fairly normal with about half the population being under 15 years of age. The number of males per 100 females is higher in the Nubian Villages and the Squatter area, while in New Kibera is almost 50/50. The higher number of males in the two areas is accounted for by the fact that many tenants there leave their wives in the rural areas to till the land to supplement their income but bring their children to learn in the better urban schools.

Among the heads of households there was a big difference between the owners and the tenants, particularly in the Nubian Villages.

Most Nubian homeowners were old men and women some of whom were staying with their grand children. Many could not tell the actual age but it was obvious that the majority were above 50 years. In New Kibera the majority of the heads were fairly young people (78% were under 34 years). It was noticed that the percentage of female heads of household was higher among house owners of the Nubian origin most of whom were widows while among tenants it was higher in New Kibera where young unmarried women rented rooms.

#### 2.5.2 Marital Status

In all the three areas about half of the owner heads were married (Nubian Villages 49% Squatter Area 48% and New Kibera 68%). There were a significant number of divorce and widow cases in the Nubian Villages and a few in the Squatter Area and New Kibera.

In all areas tenant population had over half the head of household married (Nubian Village 86%, Squatter' Area 73% and New Kibera 57%). However fairly large number of tenants in the Nubian and Squatters areas were not staying with their wives. (See Table IV).

Table IV Marital Status of Heads of Household

Marital Status	Nubian Villages		Squatter Area		New Kibera	
	Owners	Tenants	Owners	Tenants	Owners	Tenants
Single	31	910	44	20	28	42
Married	49	86	48	73	68	57
Widow/Widower	13	-	6	-	-	-
Separated	1	-	2	-	-	-
Divorced	5	4	-	7	4	1
Total %	100	100	100	100	100	
Total No.	25	74	28	11	10	46

### 2.5.3 Ethnic and Religious Structure

The inhabitants of Kibera fall into seven ethnic groups (see Table V and Diagrams 1 and 2). The owner group in the Nubian Villages is almost exclusively Nubian (98%) while in the Squatter Area the owner group is mainly Kikuyu (79%) and Kamba (22%). In New Kibera the owner and tenant groups are fairly distributed among the ethnic groups. There is a tendency for owner and tenant ethnic groups to localize in an area, eg. Nubian house owners in the Nubian villages, Kikuyu Squatter houses owners in the Squatter area. But among renters the Luo and Luyia ethnic groups are found in large numbers everywhere.

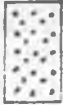




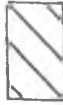



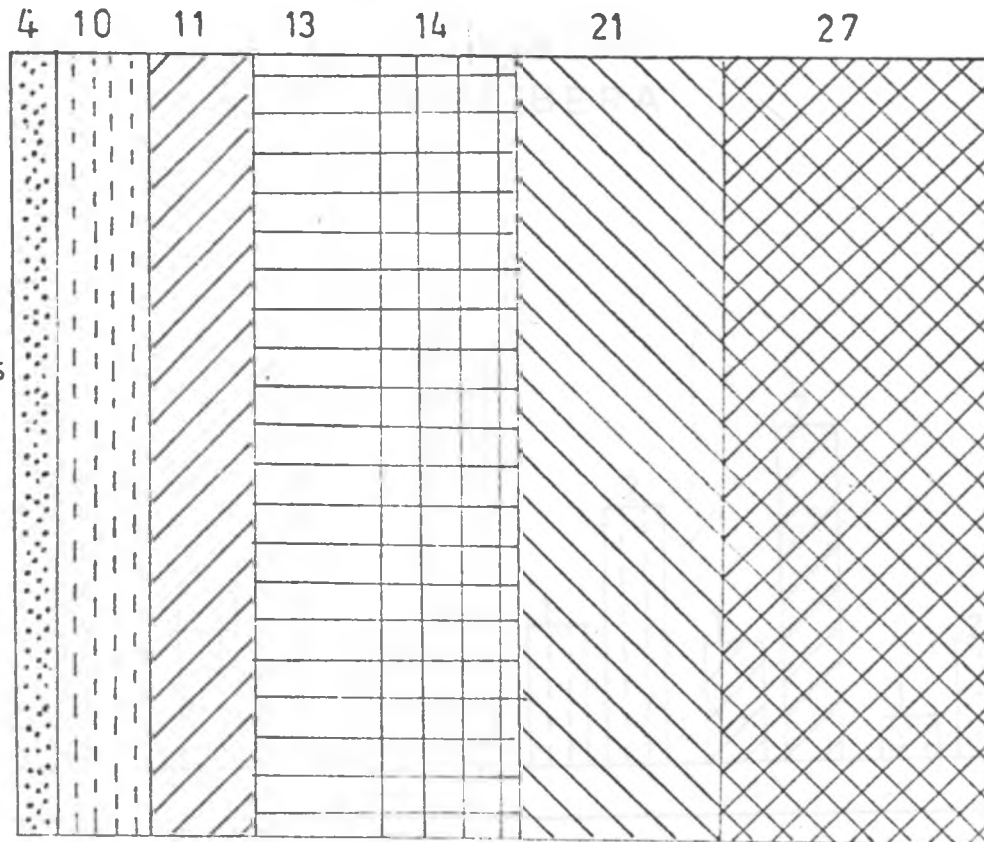
TABLE V - ETHNIC GROUPING IN KIBERA

ETHNIC GROUP	Nubian Villages			Squatter Settlements			New Kibera			Grant
	Owner	Tenant	Total	Owner	Tenant	Total	Owner	Tenant	Total	Total
	%	%	%	%	%	%	%	%	%	%
Nubian	98.4	1.8	43.7	-	-	-	18.3	-	4.4	21.7
Kikuyu	-	1.8	1.0	79.5	46.7	74.5	13.3	17.3	16.3	18.2
Kamba	-	17.4	9.8	12.1	40.0	16.3	21.7	18.3	19.1	14.4
Luo	-	30.5	17.3	-	-	-	5.0	29.3	23.5	17.1
Luyia	-	28.7	16.3	-	13.3	2.1	3.3	16.2	13.2	12.9
Other Kenyan tribes	-	15.6	8.8	8.4	-	7.1	33.4	14.2	18.7	12.4
Non-Kenyan	1.6	4.2	3.1	-	-	-	5.0	4.7	4.8	3.3
Total %	100	100	100	100	100	100	100	100	100	100
Total No.	128	167	295	83	15	98	60	191	251	644

# ETHNIC COMPOSITION AT KIBERA (Sample Survey 1974)

## LEGEND

-  Non\_Kenyan
-  Luyia
-  Other Kenyan Tribes
-  Luo
-  Kamba
-  Kikuyu
-  Nubian



P E R C E N T

DIAGRAM 1

# ETHNIC COMPOSITION IN OLD AND NEW KIBERA

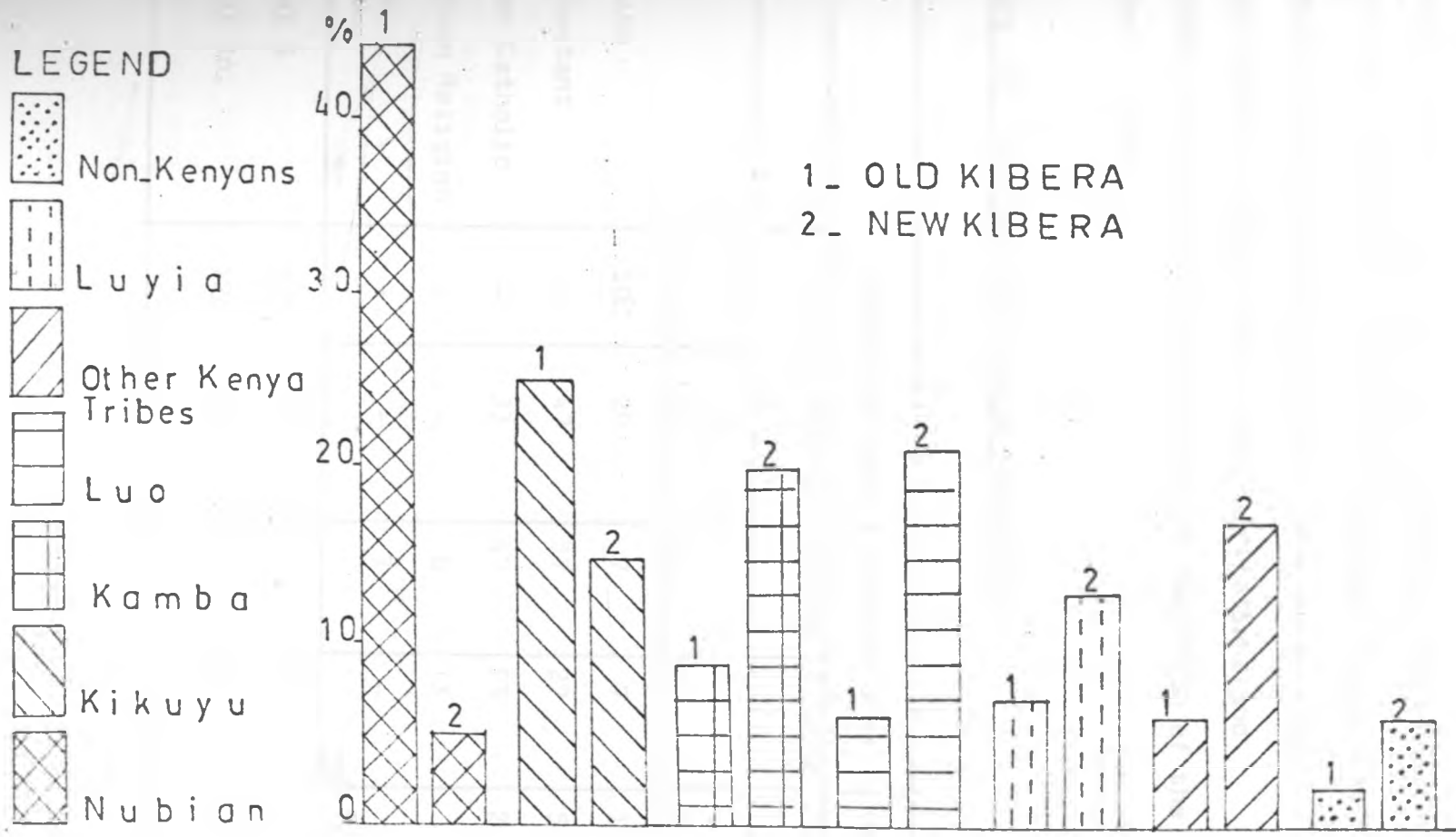


DIAGRAM 2

Religion appears to be a major dividing force among the ethnic groups in the area. The Nubians are 100% Muslims while the other ethnic groups are divided between the Christian denominations and quite a few are animists. Most tenants to the Nubians remain Christians and neither group seem to have influenced the faith of the other. (Table VI)

Table VI Religion of Kibera residents

	Nubian Villages		Squatter Area		New Kibera	
	Owners	Tenants	Owners	Tenants	Owners	Tenants
	%	%	%	%	%	%
Muslim	100	20	7	7	18	6
Protestant	-	47	37	27	55	45
Roman Catholic	-	33	47	53	25	43
African Religion	-	-	6	13	-	4
None	-	-	3	-	2	2
Total %	100	100	100	100	100	100
Total No.	128	167	83	15	60	191

#### 2.5.4 Education among Kibera residents

The standard of education among residents is shown in Table VII. This shows that Kibera share with other parts of the country in having illiterate as well as highly educated citizens. The percent of individuals with less than complete primary education is over 75% in both the owners and tenants in the Nubian Villages and the Squatter Area. In New Kibera the percent is below 50% and is lowest among the tenants.

The high percentage of people with less than complete primary education in the two areas could be due to the fact that many of the residents are elderly people who grew up when there was limited opportunity to attend school. On the contrary, many residents of New Kibera are fairly young people who grew up at the time there were ample opportunities for schooling in the country. As it will be shown later, the standard of education has a bearing on the type of employment and thence the household income.

As may be expected the situation is rapidly changing. Of all the school age children only a few do not attend school and quite a number attend secondary school. The presidential decree of free primary education in classes 1 to 4 has greatly increased the demand for primary school places, so that the two schools in the area are overcrowded.

TABLE VII - LEVELS OF EDUCATION IN KIBERA BY AREA OF RESIDENCE

Level of Education	Nubian Villages			Squatter Settlements			New Kibera			Grant
	Owner	Tenant	Total	Owner	Tenant	Total	Owner	Tenant	Total	Total
	%	%	%	%	%	%	%	%	%	%
None/Reads Koran only	31.1	32.2	31.6	31.4	20.0	29.4	16.0	15.9	15.9	25.3
Less than complete primary	44.8	42.4	43.6	52.9	40.0	50.6	32.0	17.2	21.0	36.2
Complete Primary	12.1	15.2	13.7	12.9	20.0	14.1	14.0	9.7	10.8	12.7
Less than complete Secondary	6.0	6.8	6.4	1.4	6.7	2.4	20.0	15.9	16.9	9.7
Complete Secondary (Fm. I-IV)	6.0	3.4	4.7	1.4	13.3	3.5	16.0	31.0	27.2	13.0
Higher Education (above Fm. IV)	-	-	-	-	-	-	2.0	10.3	8.2	3.1
Total %	100	100	100	100	100	100	100	100	100	100
Total No.	116	118	234	70	15	85	50	145	195	514

Many parents expressed a wish to have good nursery schools in the area for their infants. This was particularly emphasised by the residents of New Kibera. In other areas nursery education was being encouraged and the inhabitants had taken a further step by constructing three Harambee Nursery Schools through self-help efforts.

#### 2.5.5. Population and Employment

Kibera has a large proportion of active population between 15-54 years (59%). However, many of the 15-19 years age-group are either secondary school students or school leavers staying with parents or relatives and seeking employment. Thus the actual productive population is between 20 to 54 years (50%). In any case not all the active population is productively employed for many are unemployed and quite a number are under employed. This therefore implies that dependency ratio is high and the situation is further complicated by the prevalent underemployment. Table III and Diagram 3 and 4 summarises information on population and employment.

#### 2.6 LAND USE PATTERNS

Kibera is predominantly residential with housing ranging from Grade I houses in the NHC housing estates to sub-standard houses in the Nubian Villages and the Squatter Area. Industry and Commerce are poorly developed although cottage industry and retail trade make up for these important activities.

# AGE AND SEX STRUCTURE OF KIBERA RESIDENTS

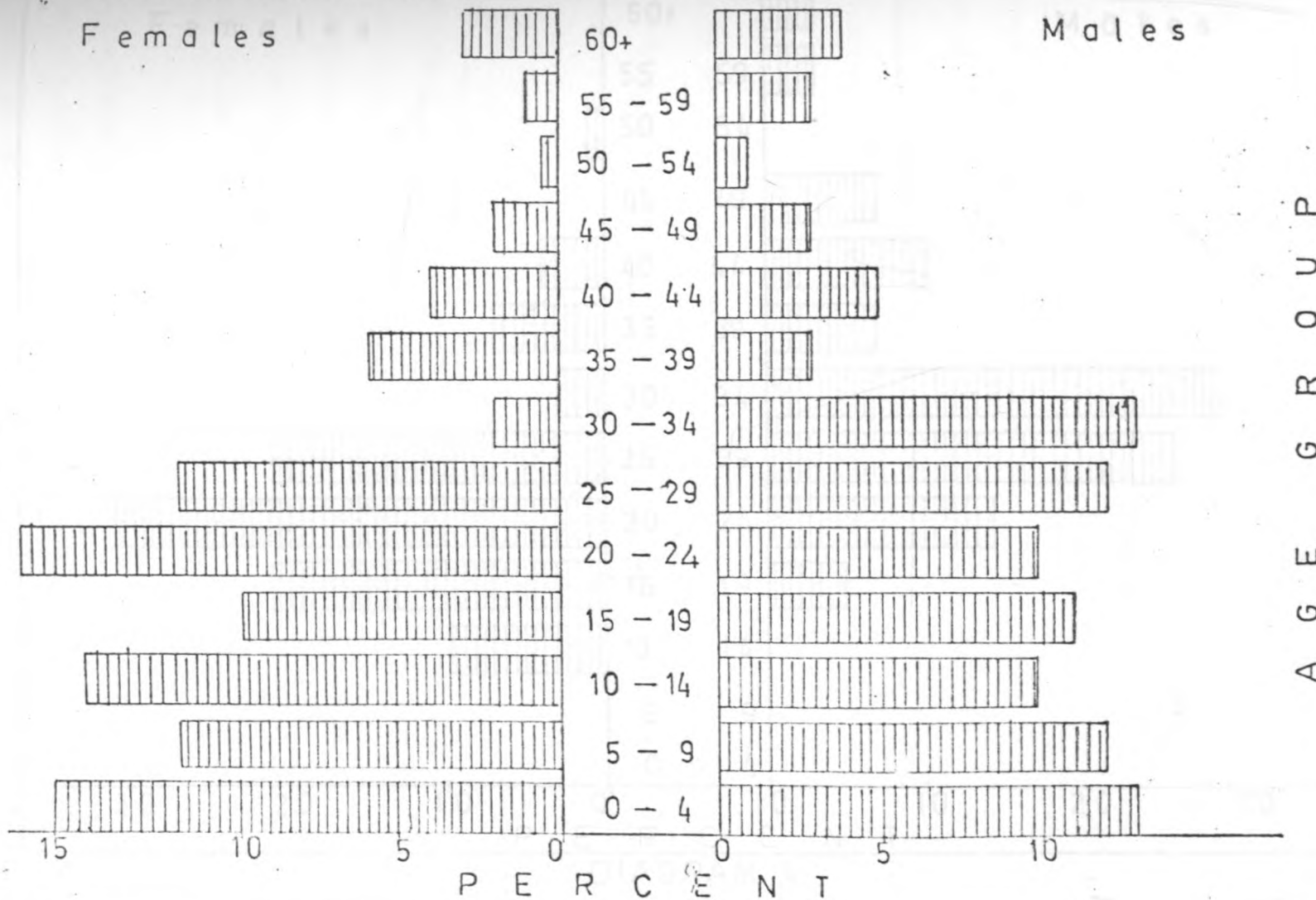


DIAGRAM 3



# AGE AND SEX STRUCTURE OF KIBERA WORKING POPULATION

Females

Males

A G E G R O U P

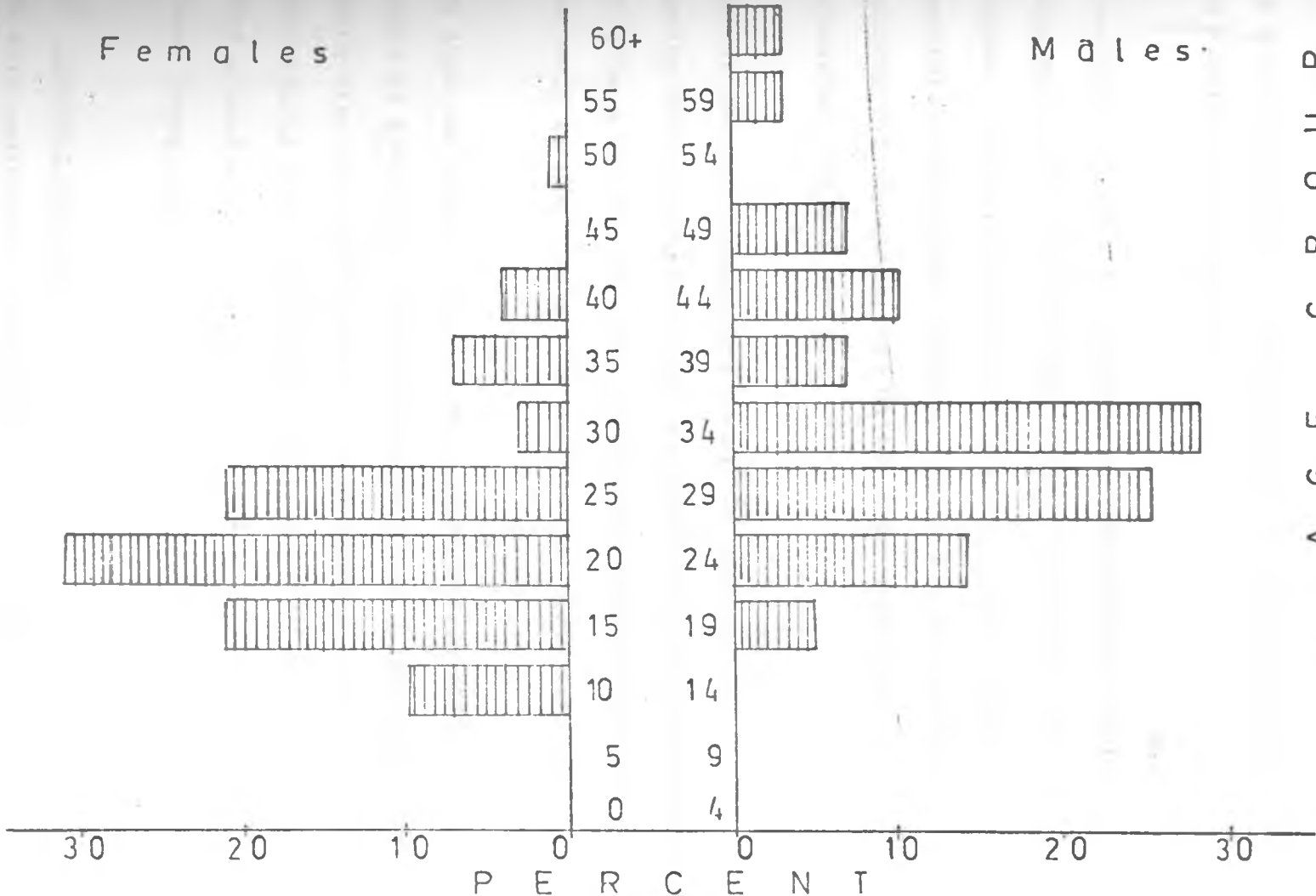


DIAGRAM 4

This often results in losses and sometimes trade items lose value because of too much exposure to the elements. The City Council has planned an open air market close to the present site and a new shopping centre has been built in New Kibera but is not yet in use.

Planned open spaces in the area are limited to school playgrounds and the small open spaces within the new estates. Luckily, Kibera still has much vacant land, especially along river valleys. These spaces could be improved and organised into better open spaces for recreation. (Maps 2 and 6).

Some of the land classified vacant is utilized for farming and grazing mainly by the squatter owner population; who grow a variety of crops, including vegetables which they sell to other people as well as for their own use.

The land use pattern created by present development in Kibera is therefore one that reveals a predominance of residential use superimposed on what appears to be agricultural land. Unplanned and unutilized open spaces exist almost everywhere within the Nubian and Squatter Areas; these could be properly put in use in future

## 2.7 Economic Patterns

The main employment centres for Kibera residents are indicated in Table VIII. Over two-thirds of them work,

## KIBERA RESIDENTS

NUBIAN VILLAGES				SQUATTER AREA				NEW KIBERA				TOTAL							
Owners		Tenants		Total		Owners		Tenants		Total		Owners		Tenants		Total		TOTAL	
No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
7	39	30	39	37	39	6	35	2	18	8	29	10	23	38	41	48	35	93	36
2	11	22	29	24	26	1	6	6	55	7	25	3	7	8	9	11	8	42	16
8	44	24	32	32	34	10	59	3	27	13	46	23	52	25	27	48	35	93	36
1	6	-	-	1	1	-	-	-	-	-	-	8	18	19	21	27	20	28	11
-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	1
18	100	76	100	94	100	17	100	11	100	28	100	44	100	92	100	136	100	158	100

outside the area and one third work in Kibera and environs.\*

In determining the industry of employees seven occupation categories were used (Table IX). Any person in the active age group not working but actively seeking employment was classified as unemployed. Table IX indicates that 14% of Kibera residents are in this group but the figure is highest among squatter homeowners.

Note that manual and domestic workers are a large portion of the working population in Kibera and these are concentrated in the traditional low-income area in Nubian Villages and the Squatter Settlements. Again tenants in the two areas are the majority while in New Kibera the percent for owners and tenants show little difference. The concentration of manual and domestic workers in Nubian and Squatter areas could be accounted for by the low-level of education by the majority of them.

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\*'Kibera and environs' refers to areas within 2 Km. from the Study Area, eg. Kenyatta Hospital Complex, Adams Arcade, Wilson Airport, Jamhuri Park, etc.

TABLE IX - OCCUPATIONS OF KIBERA RESIDENTS

Occupation	Nubian Villages			Squatter Settlements			New Kibera			Grant
	Owner	Tenant	Total	Owner	Tenant	Total	Owner	Tenant	Total	Total
	%	%	%	%	%	%	%	%	%	%
Managerial/Executive	4.2	-	1.1	-	-	-	-	4.6	3.8	2.3
Professional	20.8	-	5.7	-	-	-	-	13.7	11.4	7.7
Technical	8.3	6.2	6.8	-	23.1	7.7	18.2	22.0	21.4	14.3
Clarial/Administrative	20.8	12.5	14.8	11.5	23.1	15.4	50.0	27.5	31.3	23.3
Manual/Domestic worker	4.2	59.4	44.3	27.0	30.8	28.2	22.7	23.8	23.7	31.4
Self-employed	12.5	12.5	12.5	11.5	7.7	10.2	9.1	0.1	2.3	7.0
Unemployed	29.2	9.4	14.8	50.0	15.3	38.5	-	7.3	6.1	14.0
Total %	100	100	100	100	100	100	100	100	100	100
Total No.	24	64	88	26	13	39	22	109	131	258

An important industry in Kibera is the Concrete Block Industry whose products are utilized by NHC projects, but some of the blocks are sold to building contractors outside the area. The industry is located at the junction of Kibera Drive and the access road to New Kibera Village, and is bordered to the west by the railway line (Map 2).

Commercial activities are confined to retail trade which usually occupy the front part of the house. However, there are a few buildings specifically for trading purpose; many of these are located around Makina Local Market. Kiosks augment shops by providing essential household goods especially in New Kibera.

The Makina Local Market is stocked with a variety of consumer and non-consumer handy household goods, which include foodstuffs, clothing, utensils and many more. The market is the centre for cottage industries which are mainly repair services. These range from furniture making and repair in small workshops to local tailors, tinsmiths, cobblers, bicycle and watch repair services in front of the shops or houses.

The market is unconstructed and suffers from a number of disadvantages which make trading a risky business. Goods have to be packed and taken away every evening.

To minimize these expenses many low-income people choose to share a rented room in these villages and avoid renting rooms in New Kibera where rents are much higher. Though 24% New Kibera residents were manual and domestic workers the majority were houseservants accommodated free of charge by their employers.

The remaining occupation categories represent well paid residents with the majority having income which is above the average for the area. A few self-employed businessmen fall under this group and are better placed to meet house rent under or installment repayment in case of tenant purchase houses.

The poorest households possibly earn zero income and others have irregular and indeterminable incomes per month. This group embraces most squatter house-owners who do not sublet any of their rooms and a few Nubian houseowners.

On the other extreme are rich households with regular monthly incomes, in some cases exceeding Shs.5,000/= p.m. Some wealthy Nubians derive income from more than two or more sources (eg. employment, rent collected, and business).

The wide range in incomes earned by different households obviously has a bearing on the quality and size of accommodation each household can afford. Table X summarises the income earned by Kibera households.(also see Diagram 5).

TABLE X - INCOMES EARNED BY KIBERA RESIDENTS

Income Range	Mid-point Nubian Villages			Squatter Settlements			New Kibera			Grant	
	Owner	Tenant	Total	Owner	Tenant	Total	Owner	Tenant	Total	Total	
Shs. p.m.	Shs.p.m.	%	%	%	%	%	%	%	%	%	
Below 250	125	38.2	22.0	26.7	58.6	16.7	46.4	20.0	21.3	21.1	27.3
250 - 449	350	26.5	43.9	38.7	13.8	58.3	26.8	5.0	5.3	5.2	22.9
450 - 749	600	23.5	28.1	26.7	-	25.0	7.3	20.0	14.9	15.8	19.2
750 - 999	875	-	6.0	4.3	-	-	-	10.0	10.6	10.5	6.3
1000 - 1500	1250	2.9	-	0.9	-	-	-	20.0	25.5	24.6	10.7
Above 1500	1750	2.9	-	0.9	-	-	-	25.0	22.4	22.8	9.6
No income/ response	-	6.0	-	2.8	27.6	-	19.5	-	-	-	4.0
Total %		100	100	100	100	100	100	100	100	100	100
Total No.		34	82	116	29	12	41	20	94	114	271



Income wise the majority of manual and self-employed tenants were earning less than Shs.400 permonth, the average income being Shs.275 p.m. This low earnings could be restrictive on the amount of money to be spent on houserent. Some of them have an additional burden of meeting school fees for their children as well as bus fares for themselves and the children.

### KIBERA HOUSEHOLD INCOMES

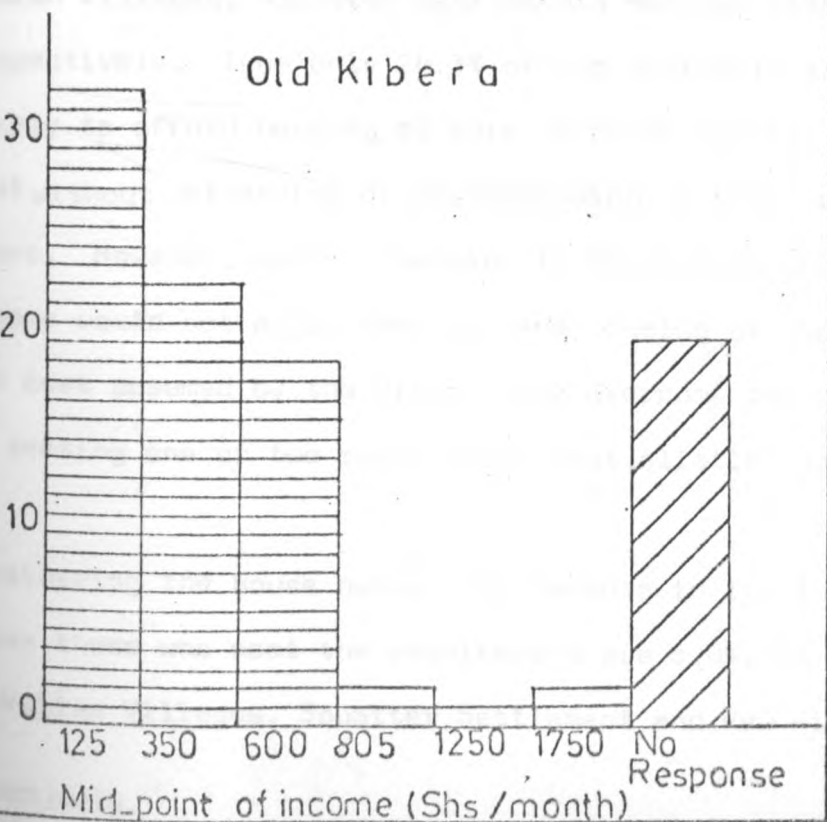
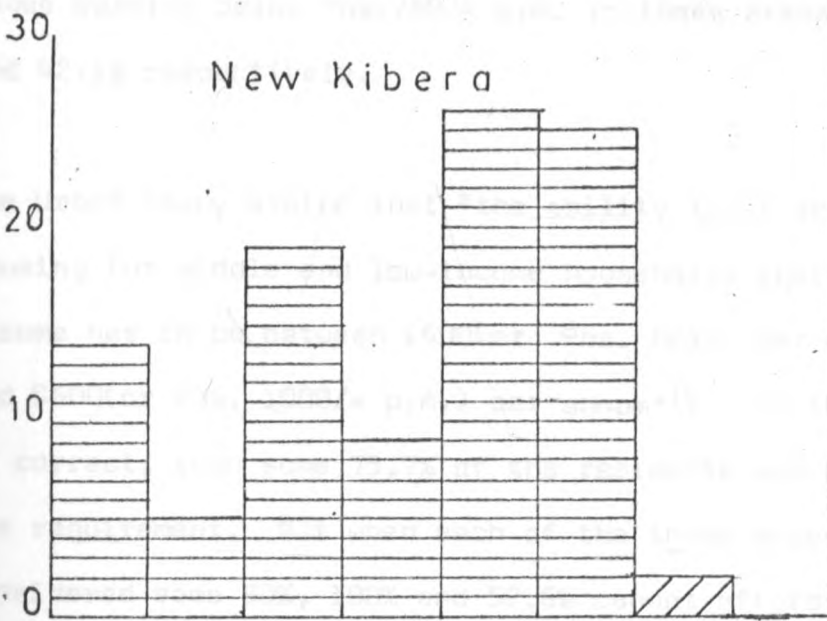
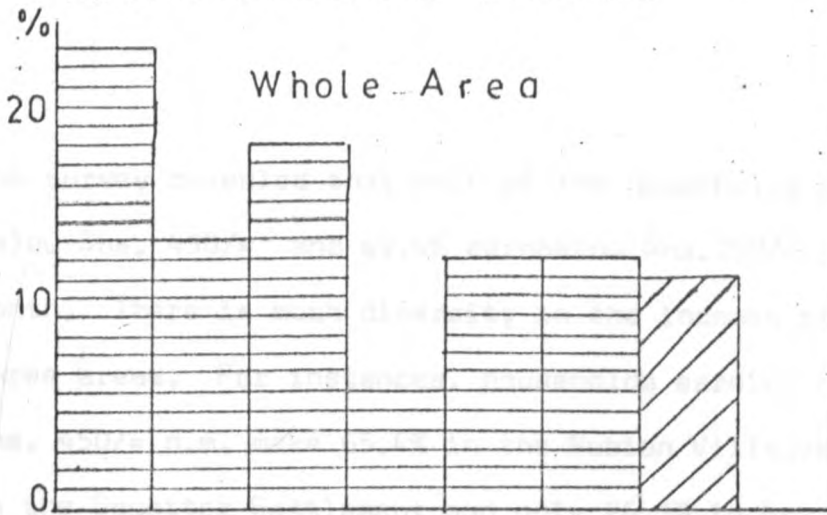


DIAGRAM 5

Mid\_point of income (Shs /month)

The survey revealed that half of the households earn below Shs. 450/= and 69.4% earn below Shs.750/= per month. There is much diversity in the incomes of the three areas. For instances, households earning below Shs. 450/= p.m. make 65.4% in the Nubian Villages, 72.8% in the Squatter Settlement and only 26.3% in New Kibera. Those earning below Shs.750/= p.m. in these areas are 92.1% 80.1% and 42.1% respectively.

The Urban Study stated that "the ability to afford housing for middle and low-income households their income has to be between £500(or Shs. 883/= per month) and £600(or Shs. 1000/= p.m.) per annum"<sup>14</sup> If this assumption is correct, then some 75.7% of the residents are below the requirement. But when each of the three areas is considered some 90%, 100% and 52.6% cannot afford in Nubian Villages, Squatter Settlements and New Kibera respectively. Thus only 24.3% of the residents are likely to afford housing at this level of quality and cost without straining or underspending on other essential items. However, some households in New Kibera whose income would not allow them to have housing at the level and cost assumed by the Urban Study overcome the problem by renting one or two rooms which cost a little less.

Considering the house owners and tenants in the three areas those who meet the requirement are 5.8%, 0% and 45% in Nubian Villages, Squatter Settlement and New Kibera respectively.

TABLE XI - LENGTH OF TIME LIVED IN KIBERA BY HEADOF HOUSEHOLD

No of years lived at Kibera	Old Kibera	New Kibera	Whole Area
Less than 1 year	11.0	15.4	13.3
1-2 "	6.0	36.9	22.2
2-5 "	8.5	27.7	18.5
5-10 "	11.0	8.5	9.7
10-20 "	22.8	2.3	12.9
More than 20 "	40.7	9.3	24.2
Total %	100.0	100.0	100.0
Total No.	139	55	194

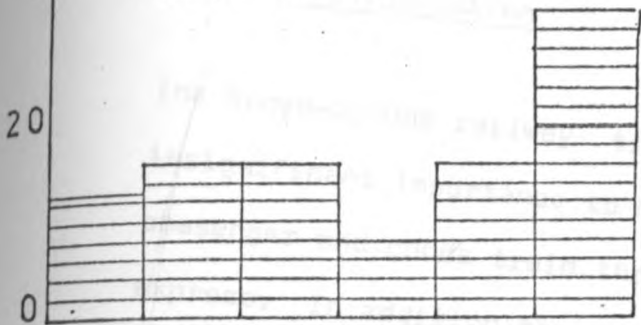
2.9 INFRASTRUCTURE AND DEVELOPMENT

The provision of suitable and adequate infrastructure is an essential prerequisite to the proper development of an area. The provision of a good road network, better educational and health facilities, other social and technical services may be a step towards the fulfilment of the overall objective of social and economic development. The existing infrastructure in Kibera is reviewed in the light of the part it plays to promote development.

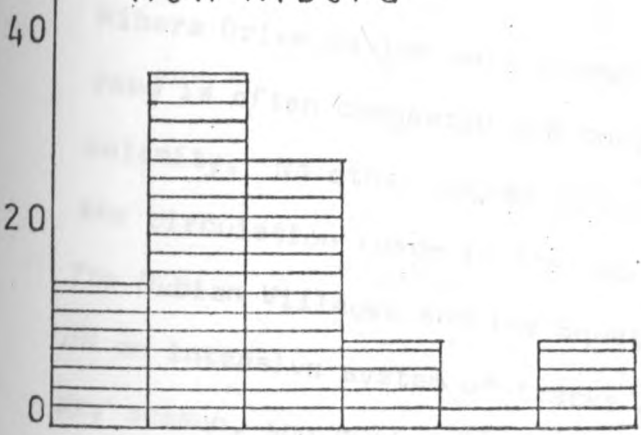
# LENGTH OF TIME LIVED IN KIBERA

%

## Whole Area



## New Kibera



## Old Kibera

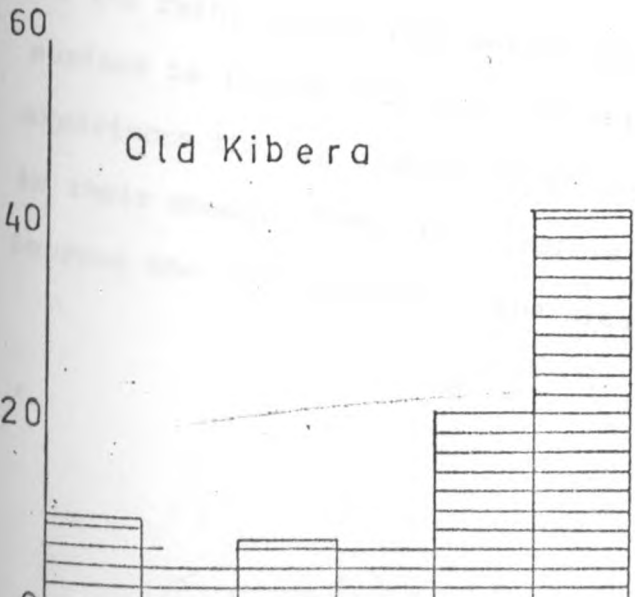


DIAGRAM 6

### 2.9.1 Transportation

The Kenya-Uganda railway traverses the area but it is of insignificant importance to Kibera residents since most passenger and goods train through Kibera station are express. In addition the railway has created communication barrier but to counteract this problem, two bridges were constructed to link the two parts. (Map 2 ) Motor vehicles can cross the railway by these bridges, pedestrians cross it at several unguarded points at their own risk.

Kibera Drive is the main access road to the area. The road is often congested and could be risky in case of a calamity. No other access roads exist in the area except the circulation roads in the new NHC housing estates. The Nubian Villages and the Squatter Area are dependent on an intensive system of tracks and footpaths. In the dry season, the dust causes considerable nuisance to the inhabitants, and many people complained about it.

In the rainy season they become impassable because the surface is turned into mud. At this time businessmen experience the big problem of transporting new stock of goods to their shops. There is therefore an urgent need to improve the road network in the area. (Maps 2 and 6)

The proposed Trans-Africa Highway passes to the south of the Study Area, and a proposed link road from the Highway to Ngong Road is likely to provide another access road to the area, and will also provide a direct vehicular access to the neighbouring estates to the south.

### 2.9.2 Water Supply.

The piped water system is present in all the new housing estates with most houses having inside private water taps. But piped water was only extended to the Nubian and Squatter areas in 1972 when there was Cholera outbreak in the country.

There are some 25 water kiosks unevenly distributed in the area, and residents buy water from communal standby water-taps. About 92% of Old Kibera residents get their water from communal taps 5% have private standby taps and 3% have none. The last group which includes mainly squatters, often draw water from running streams or the Nairobi Dam. (Map 7).

Water kiosks are rented from City Council by private individuals who sell water to residents by the debe at the average of 15 cents per debe. Table XII below shows the quantity of water consumed and the cost to the household.

Table XII - Quantity of Water Consumed per Day per Household

Quantity Consumed per Day (debes) <sup>a</sup>		% of the Households	Cost of water per month (Shs.)
Less than	1	9.3	0-4.50
	1-2	39.5	4.50-9.00
	2-4	20.9	9.00-18.00
	4-6	15.1	18.00-27.00
	6-10	12.8	27.00-45.00
More than	10	2.4	45.00+
Total	%	100	Average Cost
Total	No.	139	Per household Sh.

a= water cost on the average 15 cents per debe.

Water was important in the budget of many families. But during the rainy season expenditure on water was cut down by using free water either trapped from roof tops or drawn from seasonal streams.

The main problem with water is that certain families are far from the water kiosks while others experience



Most residents felt that it was inconveniencing to fetch water from a distances of more than ¼ Km. particularly after dusk as the area lacks security lights. Another disturbing problem was that sometimes long queues formed at the water kiosks causing untold delays to individuals. This indicates that some water-kiosks are crowded and more may be required in order to serve the people more efficiently.

### 2.9.3 Sewage Disposal.

A main trunk sewer serves Kibera and Otiende Ngei estates. The NHC housing estates are connected to the system; but other residents in the area use other methods of sewage disposal. 86% of Nubian Villages use pit latrines, 2% use septic tanks, and 12% have no organised method. In the Squatter settlement the respective percentages are 28% 0% 72%. In the Nubian Villages many landlords have 5 or more rooms rented to separate households who share one pit latrine. The sharing results in overcrowding and as the latrines are not properly cared for they become insanitary and unhealthy and quite often there is a dirty stream of water oozing along the gullied footpaths and the smell and appearance of such water is very offensive. The situation is even worse in the Squatter Settlements where there are fewer latrines and where human excreta is found deposited on the surface close to the compounds.

Refuse disposal in New Kibera is by City Council Cleansing staff. But in both the Nubian and Squatter areas nobody bothers about refuse after it leaves the houses. Most of the residents admitted they dump refuse nearby. The result of this chaotic state of handling refuse is that the area is filled with obnoxious odour. Therefore a major problem in the two areas is one of sanitation and this calls for proper sanitation planning that can satisfactorily meet minimum health standards.

#### 2.9.4 Power and Communications

Excepting the new housing estates and a few houses of wealthy Nubians along Kibera Drive and near the Mosque the rest of the area is not connected to electricity. Street lighting is confined to New Kibera. The survey revealed that only 3.3% of households in Nubian Villages used electricity while the rest used kerosene lamps as their source of light. The absence of public street lights in the two areas made the people feel unsafe at night. When the residents were asked about their wish to use electricity, 5.5% wanted it, and were willing to pay for it, the rest would like to have it provided it was supplied free of charge. But all agreed that street lighting was necessary for it would enhance security within the area.

There is no telephone - booth in the area, but there are a few private connections. Many residents expressed a strong wish to have public telephone booths.

## 2.10 COMMUNITY FACILITIES

In a small section of the city as Kibera it is unrealistic to discuss community facilities without taking note of what exists in surrounding areas. Community services may be absent in an area but their existence in a neighbouring area may meet their needs. For this reason it is rather difficult to assess the adequacy or inadequacy of some facilities of such a neighbourhood.

### 2.10.1 The Mosque and Kibera-Woodley Social Hall

The most important social building among the Kibera Muslims is the mosque, with adjacent Koranic School. The building has corrugated iron sheets for walls and a corrugated iron roof. Presently the mosque is being build in permanent materials. The Koranic School is a permanent building.

The Kibera-Woodley Scial Hall serves both areas although it has limited facilities. Though the City Council underfook to fence the stadium attached to this Hall, it is not fully utilized nor does it host important matches.

The Kibera Women's association (mainly Nubian women) have build a temporary building at the junction of Kibera Drive and Karanja Road where they display their handcrafts as well as provide hair dressing services.

#### 2.10.2 Nursery Schools

There are three Self-Help Harambee Nursery Schools in the area.(Map 2) The Schools are managed by the community while Council Staff advices, supervises and supplies them with free milk. The three schools had enrolled some two hundred children. Parents desiring better nursery care for their children took them elsewhere in the city.

#### 2.10.3 Primary Schools

There are two primary schools in Kibera, and six others in surrounding neighbourhoods. Kibera primary schools has 4 Streams from Class 1 to 7 and Toi Primary has two streams which go to class 3. The Council's standard of one school per 5,000 population requires the area to have not less than 8 such schools in 1979. The Capital Works Programme has proposed two-three stream schools by 1979 to serve the area and the surrounding neighbourhoods.

#### 2.10.4 Secondary Schools

There is no Secondary school in the study Area.

However, on its northern boarder is the Nairobi Girls Secondary School serving the whole republic. Many secondary school pupils from the area are absorbed in distant schools, particularly in the City Centre and the Eastlands.

The fact that most of these schools operate as Day Schools means that pupils from distant estates spent much money on fares. The Kibera residents therefore wished to have some secondary schools within a walking distance to minimize travelling expenses on the part of the pupils as well reduce pressure on buses in the morning. Further, the Kibera population is large enough to support at least one secondary school (Council Standard is 1 Secondary school for 20,000 population).

#### 2.10.5 Health Facilities.

With the Kenyatta National Hospital, the Ngong Road Dispensary, Langata Health Centre and Woodley Child Clinic within immediate reach, there is no urgent need for separate health clinics in Kibera. There is also a direct bus service to Pumwani Maternity Hospital which makes it possible for expecting mothers to be attended to. However, as the population in the area increases as a result of new housing schemes in the area, and also taking into account the fact that it costs money to travel to the health clinics it might be necessary to locate one Health Centre with a Maternity wing in the area.

#### 2.10.6 Market.

The Markina Market is used by nearly all the inhabitants of Kibera and the surrounding neighbourhoods as customers and sellers.

A great variety of small shops and kiosks are found in the area as well as the nearby shopping centre at Adams Arcade. The City Council has proposed to construct a proper open Air Market close to present site so that the residents can have permanent and sheltered stalls there. A shopping Centre has been completed in the new housing estates to serve the whole area. (Map 4)

#### 2.10.7 Open Spaces

Although there are many open spaces in the area these are never used for recreational activities because they are not kept tidy, and many are unlevelled. The Kibera-Woodley playing field is the most important organised area for recreational activities such as football matches, traditional dances and other sports. Smaller enclosed open spaces exist in the new estates but these are mainly playfields for small children. (Map 4)

#### 2.10.8 Other services

Other services that require consideration may be listed as police for security, library for recreation and information, and a hostel for single young men and women who may find such accommodation less involving and more convenient.

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## CHAPTER THREE

### 3.0

### HOUSING IN KIBERA

Several housetypes exist in Kibera. There are the Nubian houses which are common to all Nubian villages and have been built in the area since 1912. There are the squatters shanties built by Kikuyu and Kamba squatters. Lastly there are the modern conventional houses which have been built since the redevelopment programme commenced. These three categories of houses show that housing in the area is as varied as there are developers. This section examines in some detail the characteristics of these houses, particularly, those within the Nubian villages and the squatter area.

### 3.1

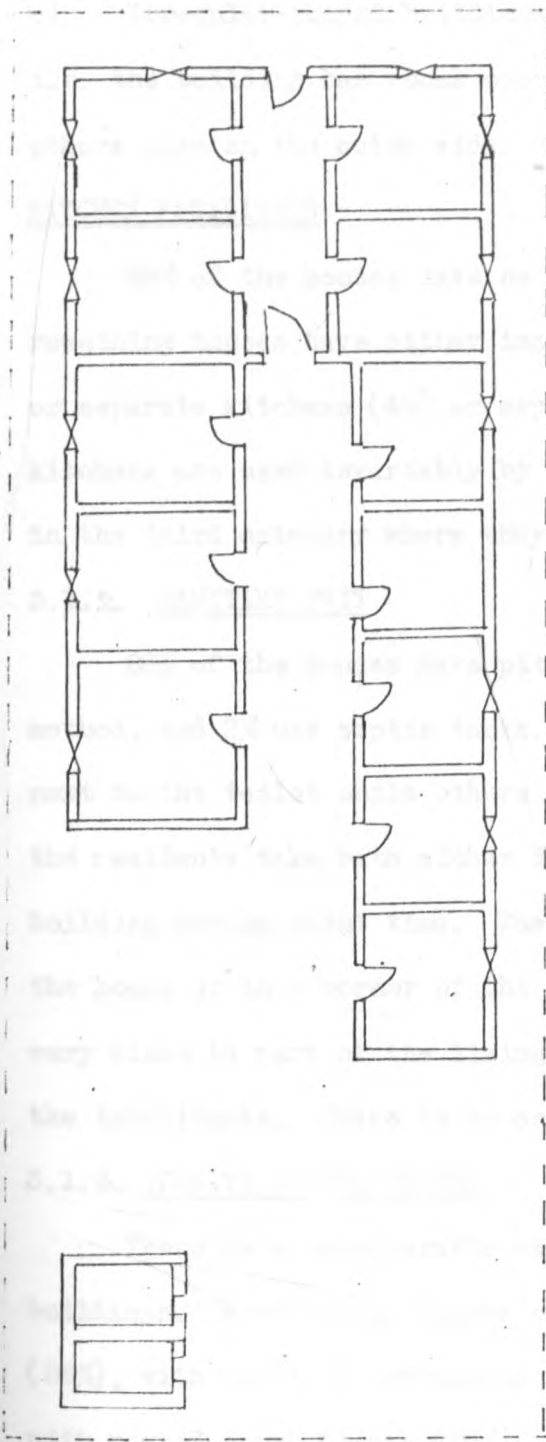
#### THE NUBIAN HOUSETYPES

The Nubian houses can be described as being the "Swahili" type Rectangular or L-shaped, detached, single storey buildings with more than four rooms along a wide corridor. The plan is an urban phenomenon stemming from the existence of a mobile tenant population and the extended moslem family pattern. (see diagram 7)

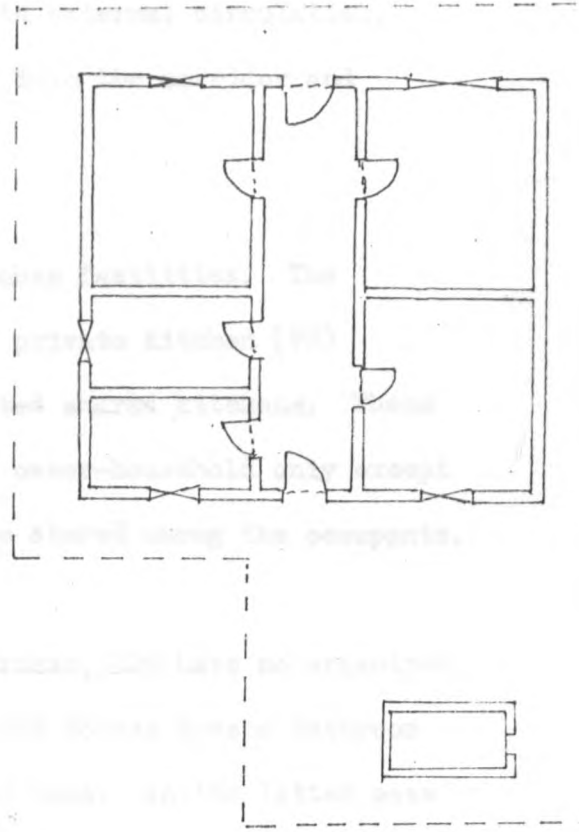
Two types of houses can be identified in terms of the access and circulation pattern.

a) Houses with a corridor and a courtyard circulation with access directly into the corridor serving usually four rooms and from there to a rear courtyard which provides a protected circulation area for the remaining rooms. The first four rooms are usually occupied by the owner household, while the rest are occupied by tenant households.

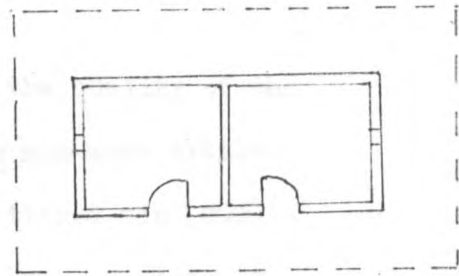
b) A number of houses have corridor circulation only. In such houses the owner household may occupy one side of the buildings or opposite rooms, and the others by tenant-household; or



1



2



3

## HOUSE TYPES

- 1- CORRIDOR/ COURTYARD CIRCULATION NUBIAN HOUSE
- 2- CORRIDOR CIRCULATION NUBIAN HOUSE
- 3- A SIMPLE TWO-ROOM SQUATTER HOUSE

c) Irregular-shaped buildings with external circulation, i.e. the building has rooms opening into the corridor and others open on the outer side.

### 3.1.1. KITCHEN FACILITIES

86% of the houses have no kitchen facilities. The remaining houses have either inside private kitchen (7%) or separate kitchens (4%) or separated shared kitchens. These kitchens are used invariably by the owner-household only except in the third category where they are shared among the occupants.

### 3.1.2. SANITARY UNIT

86% of the houses have pitlatrines, 12% have no organised method, and 2% use septic tanks. Some houses have a bathroom next to the toilet while others have none. In the latter case the residents take bath either in the toilet or outside the building during night time. The unit is usually located behind the house or in a corner of the compound. These units are often very close to part of the living quarters causing nuisance to the inhabitants. There is no organised way of refuse collection.

### 3.1.3. QUALITY OF THE HOUSES

There is a considerable variation in the quality of the buildings. Most Nubian houses are built in mud-and-wattle (88%), with roofs of corrugated iron or flattened tin (80%) with rammed earth floors (86%). But there are a variety of other materials used in the construction of houses.: these include concrete blocks, bricks and timber for walls; cardboard, grass and numerous unidentifiable materials for roofing; rough

.. and smooth concrete floors, are used in somehouses.

The criteria applied to the building in the Nubian Villages and the Squatter Area were based on the following points:

- (i) Sound mud and wattle buildings should be maintained;
- (ii) Buildings in a fair condition should be preserved for improvement in future;
- (iii) Unsound and dilapidated structures which would prove expensive to improve by ordinary repair should be replaced in future.<sup>+</sup>

It was also necessary to classify these three elements as satisfactory (ordinary maintenance sufficient), improvable (needing repair or gradual replacement), and not improvable.

In the sample for the Nubian Villages the buildings under each category are summarised in the first column of Table XIII

T A B L E XIII- ASSESSMENT OF BUILDINGS

B			
Building Assessment	Nubian Villages	Squatter Settlement	New Kibera
Satisfactory	17%	5%	87%
Improvable	44%	13%	13%
Not Improvable	39%	82%	-
&			
TOTAL %	100%	100	100
TOTAL NUMBER	71	21	61

### 3.1.4. PLOTS AND PLOTUSE.

The land on which Nubian houses stand is not physically sub-divided into plots. However, compounds are sometimes

separated by hedges which in a way serve as compound boundaries.

But not all buildings are in compounds. The main use of compounds is residential, although buildings are partly used for commercial activities. In building on the main tracks or important footpaths, front rooms are often used as a shop or workshop or hotel. Many 'fundis' work in courtyards or on the verandahs of their houses, and sometimes small - street - trades are conducted near the houses. In some compounds or area around a homestead, crops may be grown (e.g. vegetables, maize e.t.c)

### 3.1.5. LAY-OUT PATTERN

The Nubian Villages have no orderly lay-out plan for the houses are scattered randomly and this makes road system very irregular in size and even in pattern. The main tracks are circuitous and most buildings are inaccessible by motor-vehicles. (Map 5).

### 3.1.6. THE IMPORTANCE OF THE NUBIAN HOUSING

Although many of the houses described above are of poor quality compared to conventional houses recently built in the area and elsewhere, they fulfil one important function; provision of cheap shelter to many low-income communities working in the City. Together with other similar houses found in places like Mathare Valley, Kangemi, Kawangware and Kariobangi, they house a large number of people and their destruction would leave many city dwellers with no shelter. The houses are indispensable to some owners in that they provide them with shelter as well as being their only means of earning a living.

### 3.2. THE SQUATTER HOUSING IN KIBERA

Squatting is a feature that is common in many world cities. In Nairobi, the best known squatter settlement is Mathare Valley and has over half of the squatter population in the city. In Kibera

squatters are concentrated to the North of Nairobi Dam and along Mutuine River Valley. (Map 4). The main squatter house-owners are Kikuyu and Kamba tribesmen and their tenants are people from the same tribe plus a couple of other tribes (See. Table V)

### 3.2.1. SQUATTERS HOUSETYPES.

Squatter houses have no proper plan but there are no less than three "types" common to most squatter areas. The commonest in Kibera is a rectangular building with two or more rooms but many lack the corridor arrangement common to Nubian housing. The rooms are independent of one another and doors are usually external so that one family in one room does not interfere with the other in the next room. (See Diagram 7).

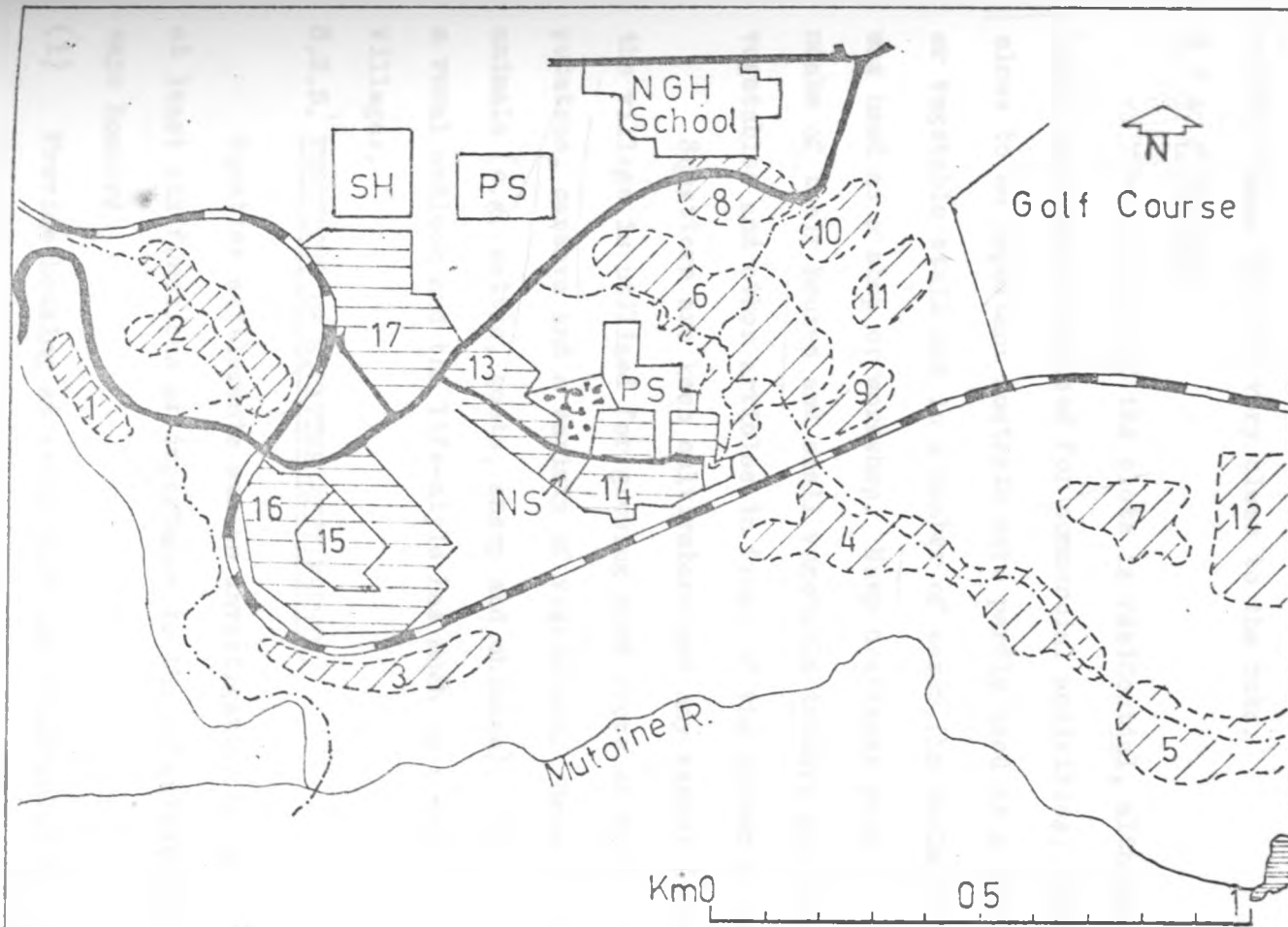
The Squatter houses are built of any material that is available to the developer. About 95% had mud and wattle walls, the remainder had walls of unclassifiable materials. The roofing was mainly in old rusted iron sheets and flattened tin, plastics, grass and a mixture of all these. The squatter settlement had some of the poorest structures and quite a number were unsatisfactory (Table XIII). The floors were either poorly rammed earth floors or only leveled using loose soil.

### 3.2.2. KITCHEN FACILITIES.

All the Squatter houses lacked kitchen facilities. This meant that cooking was done in the same room used as a living and bedroom. Over 90% had no windows and occasionally the room becomes very hot, especially when cooking is in progress.

### 3.2.3. SANITARY UNIT

The majority of the houses had no sanitary unit. (80%)  
The few that had pitlatrines had them constructed a few metres



### KIBERA VILLAGES

1. Kianda Village
  2. Lomle
  3. Gum Beredu
  4. Lindi
  5. Siranga
  6. Makina
  7. Lini Saba
  8. Kambi Lend
  9. Kambi Mura
  10. Kambi Alur
  11. Makongeni
  12. Squatter Settlement
  13. NHC. Phase 1 & 2
  14. NHC. " 3 & 4
  15. NHC. " 5
  16. NCC. " 1
  17. NHC & HFCK Phase 1
- SH Social Hall  
 C Cemetary  
 NS Nurery School  
 PS Primary School

KIBERA: Approximate Extent of Villages

MAP 4

from the main structure. These were shared between the house owners and the tenants if any, and were also illegally used by some other people who lacked them. Shower or bathroom were completely absent and bathing was done at night although those wishing to do so during daytime could do it inside the house or in the toilet. There is no organised system of collecting refuse which was found scattered everywhere, and in some areas rotting rubbish from the houses was most unwelcoming. It is not unusual to find human excreta very close to the huts.

#### 3.2.4. PLOT USE

The main use of the plots is residential, although a few buildings are partly used for commercial activities. The houses close to an important footpath were partly used as a retail shop or vegetable stall and in a number of cases the whole front room was used as a shop or workshop. Many craftsmen work in the verandahs of their houses and small vegetable traders sell their vegetables and other articles in front of the houses or under trees.

Squatters are keen cultivators and any vacant land within the village is utilized for growing such crops as maize, sweet potatoes, cassava and a variety of vegetables. Some of them keep animals (e.g. cattle, goats, sheep and chicken). The area exhibits a rural outlook and the life-style has much in common with rural villages.

#### 3.2.5. FUNCTIONS OF SQUATTER SETTLEMENTS.

Squatter settlements can on investigation be seen to perform at least six functions of importance to the urbanization process, says Rosser:

- (1) Provide housing at rents that can be afforded through variation in hut and room size, they provide a narrow but



important range of housing choices in relation both to varying income levels (and, therefore, rent-paying capacity) and to varying household compositions. Within limits they are a flexible response to housing need.

- (2) They act as "reception centres" in the urban areas for predominantly unskilled and illiterate villagers migrating from rural hinterland to the metropolitan district in search of employment, the social demographic and economic composition of individual bustees broadly reflects this migration pattern.
- (3) They provide, with the bustee, a wide variety of employment in family and cottage industries, particularly in the vast numbers of marginal small scale engineering enterprises which provide both the means of livelihood for large numbers of bustee dwellers but also the opportunities of acquiring productive and entrepreneurial skills - i.e. the bustee has an important function in the economic adjustment of the migrant villagers - to the changed economic environment of urban areas.
- (4) They provide the means to the bustee dwellers of a very considerable physical mobility within the urban areas in search of employment, and through their ubiquitous location, the opportunity of finding accommodation in close proximity to the work place; the high residential turnover in most bustees reflects the high mobility of workers in search of work.
- (5) Through a wide variety of strong social and communal organizations within the bustee, they provide the bustee-dwellers

with essential social support in employment and other occasions of difficulty and stress.

(6) Finally, and of particular importance to the problem of urban housing provision, they encourage and reward small-scale private entrepreneurship<sup>1p</sup> in the field of housing, in what their organisation is based fundamentally on the investment of the hut owner in the construction of his hut in such a way that rooms can be let for profit to individual tenants.....in Calcutta City alone, the 30,000 huts in the bustees are owned by 20,000 hut owners (the entrepreneurship and rooms in them are let to a tenant-population of over 700,000." <sup>1</sup>

Another student of Squatter settlements, John Turner, has reached similar conclusions in his studies of Peru. He has observed that:-

"Squatter and other forms of uncontrolled urban settlements are not 'social aberrations' but a perfectly natural and very often a surprisingly adequate response to the situation. The tragedy is not that settlements exist - which is inevitable - but that many are so much worse than they need have been".<sup>2</sup>

Therefore, though the search for structural and architectural advances in low-income housing must obviously continue, the fact remains that the cheapest form of shelter at minimum standards of acceptability has already been discovered i.e. the mud and wattle hut. The essential point to recognize is that public attention must be directed not to the quality of housing as such but at

improving the quality of the physical environment now characteristic of the spontaneous settlements; and equally to the social and communal facilities, the lack of programmes for technical training and economic development, and to the resultant widespread prevalence of apathy, hopelessness which saps the will to develop and to participate.

### 3.3. NEW KIPERA HOUSETYPES.

New Kibera housing projects are sponsored by Government through the National Housing Corporation. The redevelopment programme had as one of its objectives to provide low-cost tenant-purchase houses suitable to the lifestyle of the residents, and to provide services in the area. Three housing projects, each with one or more phases, have been completed and occupied.

#### 3.3.1. HOUSETYPES.

The conventional houses in Kibera are constructed to Grade I City Council by-laws and are provided with usual municipal services. They are rectangular, detached or semi-detached, single storey buildings with three or more rooms. Two main designs characterise the houses. One project (Kibera Aided Self-Help Scheme) has self-contained 3 to 5 room housing units. In another project (New Kibera Village) house design is basically courtyard houses of 4-6 rooms in clusters of 6 to 12 houses. The third project (the Salama Estate) has a combination of the two types. (Table XLV).

Except for courtyard houses, most of them have direct individual access which provide internal circulation. The courtyard houses have one access to the courtyard which provide a protected circulation area for the individual rooms.

TABLE XIV - HOUSING IN KIBERA

Year Built	Sponsor and Phase	No. of Units	Size of Plot (feet)	No. of Rooms	Cost/Unit of House (KSh)	Deposit paid (%)	Premium (sh. p.m.)	Period of Repayment (Years)
1961 - 64	NHC I - II	52	70 x 50	6	470	10 - 15	62	20
1968 - 68	NHC III	36	" "	6	1361	12	129	"
1969 - 70	NHC IV	37	" "	3	average		175	"
		36	" "	4	cost	12	185	"
		6	" "	5			229	"
		13	" "	6	1570		291	"
1970 - 71	NCC I	144	70 x 40	3	1100	7	170	"
		66	70 x 40	5	1400	7	270	"
1971 - 72	HFCK I	216	402 <sup>2</sup> / <sub>3</sub> x 402 <sup>2</sup> / <sub>3</sub>	4	1850	12.5	332	15
			" "	6	2470	12.5	442	15
		606			2745			

Note:

NHC - National Housing Corporation  
 NCC - Nairobi City Council  
 HFCK - Housing Finance Company of Kenya

### 3.3.2. KITCHEN FACILITIES.

93% of the houses have one or two modern kitchen facilities of which 48% are individual private kitchens while the remainder are shared, particularly in the courtyard type of houses. Apart from Phases I and II of NHC, which have a common water tap in the courtyard, the rest have inside water taps. These kitchens are used for food preparation although in a few cases they were also used as sleeping rooms for children.

### 3.3.3. SANITARY UNIT.

All houses have private sanitary units consisting of a separate bathroom, water borne toilets and the courtyard houses have a wash area within the courtyard for the inhabitants to share.

### 3.3.4. QUALITY OF THE HOUSES.

The quality of the houses is generally satisfactory. However, to keep construction costs low, some phases of Salama and Kibera Self-Help houses are not provided with a ceiling and the wall-finish is rough. In addition, most houses are not provided with direct vehicular access.

Some occupants of Kibera Self-Help Estate complained that the windows were too wide. In New Kibera Village, some rooms were blackouts, especially in the 6-room houses in which one room had no window. In the NHC, Phases I and II the windows are small and high up so that the rooms were insufficiently lit. (See Table XIII).

Though the New Kibera Village courtyard houses are suitable for subletting, the material used on the floor cannot withstand fire. Cooking using the popular charcoal stove is inconvenient as this will cause damage to the floor, hence all households have

to prepare food in the one or two kitchens which often become too crowded. Based on these findings certain of these houses are unsuitable for low-income people who cannot do without subletting and who may not all use the kitchen.

### 3.3.5. OTHER PROJECTS IN KIBERA

The NHC. Phase V Housing Scheme located within the Kibera Self-Help estate circumference (Map 4) is almost completed, and houses has 147<sup>1</sup> of 3 to 4 room maisonettes. Like the rest of NHC. Schemes the present scheme is more expensive (houses cost between £2200 and £3300) and it is most unlikely that low-income households will find accommodation in the houses. Further, the design of the houses does not accommodate the subletting element, which implies that only families which can afford higher rents will be accommodated.

The Kibera Experimental Self-Help Project planned at Lomle (Map 4 and 6) is basically a site and service with a core-house of a roofed area of 42 sq. metres equal to three habitable rooms.<sup>3</sup> 520 plots have been surveyed and will be allocated to successful applicants from among Kibera low-income households. The scheme is a move in the right direction, i.e, has the low-income communities in heart.

### 3.3.6. PLOTS AND PLOT USE

The size of the different surveyed plots vary considerably. (see Table XIV). Because the individual housing projects were

developed at different times the plot coverage varies between 40 and 75%.

Plots are essentially used for residential, but in two cases the buildings are used as clinics and there is a Shopping Centre with six shops in the NHC. Phase V. In some plots, especially in Salama and Kibera Self-Help estates, an attempt is made to grow vegetables and flowers where space allows.

#### 3.4. Existing Housing Patterns.

The uncontrolled development of land for building purposes and the shortage of low-cost housing in the city is the principle reason for bad housing in many urban centres. Fragmentation and over building of housing plots commonly found in low-grade residential

areas where planning control is not effective, leads to overcrowding, lack of space and air. Many settlements created during the past generations lack the orderly patterns of structure, and consequently of function and life, which are necessary for normal healthy conditions. Although order has been considered unnecessary by some people and go even far to suggest that "settlement can be left to develop in a disorderly manner, it can be shown that disorder in human settlement constitute a serious problem that can be equated to a disease". For instance, certain types of housing plans makes the house look attractive, while others would give it a shape that only has meaning to the architect, and in some cases the plan of the house or neighbourhood will very much contribute to its usability and serviceability. Therefore, good housing plan, whether for a single house or applying to a neighbourhood, is capable of improving the environmental quality of the locality.

Kibera house designs range from simple unplanned squatter huts and multiple room Nubian houses planned modern housing units in New Kibera. The building materials used vary from one area to another the lowest in quality being in the squatter area and the highest in New Kibera. Three major housing patterns are clearly distinguishable - the squatter, the Nubian and modern conventional houses. Within each major pattern other patterns based on size, shape, design are visible. Hence the pattern created is a matter of what one wants to emphasize.



### 3.5. EXISTING OCCUPANCY LEVELS .

A serious shortage of housing exists in Nairobi but the exact extent of this shortage is difficult to quantify. Occupancy rate is defined as the average number of persons sleeping in any and every habitable room being one which is normally used for living or sleeping. Beyond an occupancy rate of 2, overcrowding is considered to exist.

Occupancy rates in excess of two persons per habitable room prevail in many low and middle-income residential areas. In Kibera occupancy levels vary within the areas and also among the owners and tenants. (Table XV) These occupancy levels are comparable to those found in low-rent Council estates and other unplanned areas in the city. These areas therefore experience overcrowding.

Since 75% of both the Nubian Villages and the Squatter Area households are low-income, these occupancy levels point to the severity of the living conditions of the low-income communities in the area. These conditions are likely to worsen if the houses built to redistribute the households are costly and above the financial ability to afford the units. Most of the NHC housing schemes in Kibera have tended to be beyond the ability of low-income households to afford whether as purchasers or as renters. In this regard, the present redevelopment programme is inappropriate to such households.

TABLE xv - Occupancy Levels in Kibera

Household Size.

People (including children)  
per room

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Average persons per room

Average persons per household

Average rooms per household

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Resident owners and  
their adult relatives

Tenants and servants  
and their adult  
relatives and friends

---

Hubian Villages	Squatter Settle- ment	New Kibera	Nubian Villages	Squatter Settle- ment	New Kibera
2.8	2.4	1.8	3.6	1.8	2.5
6.6	6.2	5.8	3.7	3.3	4.1
2.3	1.2	3.5	1.0	1.0	2.0

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### 3.6. Problems Related to Housing.

Shelter is often classified together with food as a basic human need which can be quantified in terms of certain minimum standards below which one cannot exist, But on examination of the above statement there is found to be a difference from the acceptable truth, i.e. although housing is a basic human need its consumption is dependent on the family income. As a result the non-income earning families in urban areas are not catered for while low-income families are poorly housed and quite often they are tempted to sublet their allocated accommodation which result into overcrowding and poor environmental quality. Such Council estates as Bahati, Shauri Moyo, Kaloleni, Ofafa Kunguni, e.t.c. and other low-rent residential areas like Kangemi, Kariobangi, Gitathuru Company Housing and Mathare Valley houses, and Kibera Nubian and Squatter houses, e.t.c. suffer from this problem of overcrowding caused through excessive subletting.

#### 3.6.1. The Role of Housing Corporations.

In countries experiencing housing problems, especially the less developed ones, it has become the practice for them to establish a body that can deal with house planning and management. In Kenya for instance, there is the National Housing Corporation under the Ministry of Housing and Social Services. The NHC was established in 1967 to take over the functions of the

former Central Housing Board. which was created in 1953. However, the NHC was given wider powers to promote low-rent housing and assist housing research. The main function of the NHC is to provide loans to local authorities, to enable them to carry out housing schemes. and to assist these authorities, as and when required, with the preparation of plans, contract documents, and supervision of work in progress. It also undertakes direct construction as necessary, to stimulate the private sector or to overcome bottlenecks in particular local authority projects. Yet it is often claimed that such corporations have a tendency to strive for profit; and that this happens because first priority is given to the well-to-do families, and the in authority rationalize their action by arguing that those offered the houses are in a better position to pay an economic rent or even market rent for housing thus avoiding subsidies and even creating funds for the erection of new houses. 5

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claims

In some cases such/appear to be baseless and with flimsy support particularly when the activities of the corporations are critically examined. There are many reasons why a country may not achieve its target in housing despite the existance of a Housing Corporation. For example, in Kenya the estimated requirements of 50,000 urban units for 1970 to 1974 plan period could not be achieved and the reasons given were as follows:

- (i) the programme had a large low-cost component and a small component of high-cost housing.

The complex nature of low-cost housing raised problems, particularly of policy, organisation and finance, the solution to which have caused considerable delay,

(ii) a persistent shortage of skilled personnel restricted the planning of, and research into, housing in the lowest-cost category,

(iii) local authorities did not always initiate housing schemes, particularly in the lowest-cost brackets, as promptly as required mainly because of lack of funds and qualified staff,

(iv) a lack of capacity for planning, financing and implementing essential infrastructure services hampered housing construction,

(v) delays in land acquisition and carrying out necessary survey work slowed down the pace at which sites could be identified for planning and for the issue of title-deeds.

Consequently more high-cost housing units were therefore constructed at the expense of low-cost housing, with the result that fewer units than those

planned were built at a higher average cost. The housing shortfall has, therefore seriously increased in the low-cost brackets. This housing shortfall cannot be blamed on the activities of the NHC as a body striving for profit but rather on the overall inefficiency rampant in the organisation of housing development in the country.

Even though, it is more than obvious that the NHC has not lived up to its expectations of constructing truly low-cost houses, i.e. units costing below K& 1,200. Instead it has put up comparatively expensive houses that are taken by higher income groups who are not in fact in need of accommodation, but who promptly sublet to poorer families who in turn invite a friend with whom to share a room-space so as to afford the rent charged. This further contributes to high occupancy rates or overcrowding. But inspite the shortcomings of the National Housing Corporation, its efforts in the provision of housing cannot be underestimated since it is the main Government for housing development.

### 3.6.2. Attempts to Solve the Housing Problem in Nairobi.

Many policy decisions have been taken both by Government and Council in endeavour to solve the housing problem prevalent everywhere in

the city. The principal tool has been to provide rent-controlled Council financed houses. But this has not made headway to ease the problem as witnessed by the long waiting list of applicants for Council units. (Over 50,000 by mid 1974).<sup>6</sup> City Council, like other local authorities, is hampered by lack of funds and ability to engage in complex projects. Thus at one time Council felt the introduction of Site and Service Scheme would ease its financial constraints such scheme was designed for Kariobangi in which the Council would only provide the plots and basic municipal services while private individuals construct own dwelling units.

But the Kariobangi Scheme is disappointing in that although the plots were allocated socially deserving people, lack of income or development capital forced the majority to sell their plots to potential landlords while others built houses which they rented out and then sought accommodation in nearby Mathare Valley. Hence the Council feels that the project was a failure because the socially deserving people did not end up in better housing as had been intended. But though the scheme fell short of its objectives of housing the original allottees it expanded the stock of relatively low-cost dwelling units in Nairobi and so contributed to easing housing shortage.

In Kibera there has been a deliberate policy to redevelop the area and in the operation two groups of households are affected i.e. the Nubian and Squatter house owners and their respective tenants. The first group may be catered for if satisfactory compensation is accorded to them. The second group is difficult



to meet their housing demands because of the following reasons: Firstly, tenants in these villages are limited as to the amount of money they can spare for house-rent. Some 66% earn less than Shs.450/- and 94% earn less than Shs.750/- per month. (Table X). Secondly, most tenant-households live in single rooms and pay rent of between Shs.20/- to 60/- (89.2%) per month. Some households are circumstantially forced to share a single room to be able to meet their house-rent. Thirdly, house-rent in the new housing is well over Shs.100/- per room per month. Since most households pay rents of below Shs.60/- and some still find problems to pay this apparently low rent, is it possible they will afford current rents per room in New Kibera which range from over Shs.100/- to 400/- per month? Many residents in the two areas felt that they could not. Although a few expressed a willingness to pay higher rents for better accommodation, this willingness was only a reality only where a small percent above present rent was the case.

It is claimed that the propensity to consume housing is around 25% of monthly household income, but surveys show that this percentage varies from 45% or more in low-income groups to 10% or less in higher incomes.<sup>7</sup> This means that by spending a higher percentage of one's income on housing the low-income communities deny themselves other life necessities e.g. food and clothing. Under these circumstances it is felt that the tenant-population of Kibera will sacrifice much to afford rental housing. But if they are defeated to move to new housing as their present accommodation disappears through the policy of demolition, then the only other alternative is to move out of the area to find lettable space within their rent capability.

Table XVI below summarises the rents payable in Kibera by tenant-households. Note the marked

Table XVI - Rents paid by households in Kibera

Rent paid per month		Nubian Villages	Squatter Area	New Kibera	Whole Area
	Shs.	%	%	%	%
Less than	20	1.4	18.2	-	2.3
21 - 30	30	2.7	45.4	6.5	7.6
31 - 40	40	14.9	27.3	-	10.7
41 - 50	50	43.2	9.1	-	25.2
51 - 60	60	27.0	-	-	15.3
61 - 80	80	8.1	-	-	4.6
81 - 100	100	2.7	-	-	1.5
101 - 149	149	-	-	2.2	0.8
150 - 199	199	-	-	4.4	1.5
200 - 299	299	-	-	23.9	8.4
300 - 399	399	-	-	21.7	7.6
400 - 499	499	-	-	10.9	3.8
500 - 599	599	-	-	15.2	5.3
600 - 749	749	-	-	8.7	3.1
750 -and more	-and more	-	-	6.5	2.3
Total	%	100	100	100	100
Total	No.	74	11	46	131

difference in the rents paid in each of the three areas, and the large number whose rents hardly go above Shs.60/- p.m. in the Nubian Villages and the Squatter settlements.

The redevelopment projects are based on tenant-purchase housing schemes whereby one has to raise a 10% deposit of total house cost. Completed schemes have cost an average around £1550 per unit (also see Table XIV). Under present tenant-purchase terms it is very unlikely the poorer tenants will meet the requirements. It is therefore a truism that present housing projects in Kibera are helping in solving the city's housing problem for some income groups but it is at the same time depriving many others of their accommodation. Hence as the programme continues more new faces with better income will move in while the majority of low-income residents will be compelled to move out. Harris once observed that, "the owner of the house is a single person, after a widow, and that the rent which she derives from that house may be her sole means of subsistence".<sup>8</sup> This statement may be exaggerating the normal condition in a redevelopment project, but for Kibera it is valid especially when the Nubian house owners are considered.

### 3.7. EXISTING HOUSING POLICIES FOR KIBERA.

The failure to provide adequate and sanitary housing on a scale which even remotely approaches the need is visible in many parts of Nairobi. The housing picture is often one of deficit and deterioration; there is congestion, insanitation, inadequate water supply and extensive proliferation of squalid and cramped hutments. To throw light on the magnitude of the housing in the city we need to examine the present and past housing policies. The policies are based on the following assumptions.

- (i) "that all urban slums and squatter settlements must be cleared and their inhabitants rehoused in decent, safe and sanitary housing;
- (ii) "that the individual housing unit with its construction costs subsidised by Government to reduce its economic rent to the level of rent-paying capacity, is the basic variable in solving the low-cost housing problem;
- (iii) "that Government sponsored and Government subsidised programmes of low-cost construction are essential, because private enterprise will not participate because there is no profit in housing programmes for low-income groups".<sup>9</sup>

Although the above policies have been followed for sometime it has been realised that they stem from an almost total failure to grasp the scale, pace and character of the urbanisation process. There has therefore been a change of heart as revealed by the Nairobi Town Clerk, that, "a successful housing administration policy would emerge only when a large number of people are made to put up their own houses and when they will be given as much assistance as possible to do so".<sup>10</sup> This is the basis of a number of planned housing schemes in the city including the Dandora Community Development Project, Mathare Valley Site and Minimum Service Scheme, Kibera Experimental Self-Help Scheme. The idea of providing serviced plots is to try and harness the people's energies and competances through the Harambee Self-Help spirit and thus encourage them to put up houses of their choice through self-help. Furthermore, a housing policy which merely aims at providing what is considered good accommodation without taking into account the social and economic requirements of the people is being slowly

abandoned and instances of slum clearance are at the minimum. It is on these grounds that the redevelopment of Kibera based on conventional houses to replace the Old and less expensive ones, is viewed with great concern. For within limits of habitability no environment can be said to be good or bad in itself. The reality of the environment or habitat, by definition, is the relationship it bears to the inhabitant.



CHAPTER FOUR

4.0. HOUSING FOR LOW-INCOME COMMUNITIES IN KIBERA

4.1. Housing and Living Standards

The 1970-74 Housing Development Plan has expressed its policy regarding housing as a way of improving living standards. It states:

"The prime objective of Government policy in housing is to move towards a situation where every family in Kenya will live in a decent home, whether privately built or state-sponsored, which provides at least the basic standard of health, privacy and security."<sup>1</sup>

Depending on what is meant by 'decent' and 'basic standards' the objective of such a policy could well be subscribed to by any nation in the world. But when the implications of this policy are analysed and related to the nations' available resources, specifically for housing, it is clear that it will take many developing countries a long time before the majority of the people live in a decent house. As the Director of Physical Planning in Kenya pointed out in the 'Daily Nation':

"The economy cannot manage to maintain development at the previous high standards. We have to provide the housing and infrastructure that people can afford.

It is better to provide a little bit for many than a good environment for a few, and the masses live in squalor."<sup>2</sup>

Decent housing within the reach of each family has been recognised by Government as a major contribution to family and community health, and to the morale of the working population. The Director's statement stems from what government feels could help the people, and as finance is the key factor, then the houses provided should be within the reach of the people rather than costly projects that benefit only a few individuals. John Turner has observed that:

"Guided, very often, by erroneous notions of slum clearance and prohibition of any form of building which are not considered to be 'modern' enough for the city, official policies have frequently contributed directly to the worsening of housing conditions and to the precipitation of squatting and clandestine development as the only alternative for the masses."<sup>3</sup>

Kibera is among the many residential areas in Nairobi and has some of the housing characteristics that are of interest to the public in general and to the social worker and planner in particular.

#### 4.2. Environmental Conditions

In order to assess the quality of a residential area as a human settlement, data on the health condition of the population in relation to the living environment are very



important. Decisions on demolition of physically blighted areas are often based on the health hazard they may present to the inhabitants.

#### 4.2.1. Residential Densities

The densities presented in Table XVII, have been calculated according to the National Housing Corporation Standards. (Technical Circular 72.24.1).

Table XVII Residential Densities

Densities	Old Kibera	New Kibera
Net residential density (habitable rooms per Ha.)	150	200
Net Population density (persons per net residential Ha.)	345	450
Occupancy rate (persons per habitable room)	2.30	1.80
Net dwelling area/plot (total floor area of a dwelling in M <sup>2</sup> )	180M <sup>2</sup>	150M <sup>2</sup>

In Many Urban areas densities are usually high, yet still of an acceptable level. In these areas the problem is not with occupancy levels, but the high net population density is brought about by the fact that there are quite a large number of rooms per hectare.

#### 4.2.2. Residential Buildings:

In both the Nubian and squatter housing, each unit is multipurpose, i.e. serving as bedroom, living room and kitchen at the same time. Natural ventilation and lighting generally is inadequate for many have tiny windows and quite a number have none. Ventilation becomes an acute problem since nearly all households use a charcoal stove for their cooking (91% in Nubian Villages, 98% in squatter area). For lighting hurricane lamps (use paraffin) are used since only a few households in Nubian villages have electricity.

The quality of the walls and floors in both the areas is often rather poor. Over 92% and 86% of the Nubian houses were unplastered outside and inside respectively. In the squatter area no house was plastered either side. Mud walls that are not plastered are difficult to clean and they provide hiding places for some filthy vermin such as cockroaches and bedbugs. Many residents complain of vermin which had proved difficult to eradicate owing to poor condition of walls.

#### 4.2.3. Water Supply:

Both areas use piped water from City Council source. The water is fetched from water kiosks spread over the areas but distances to these water kiosks vary immensely. The use of the common water kiosks often lead to lower standards of personal hygiene, and this could increase the occurrence of such diseases as cholera, scabies and ringworm.

#### 4.2.4. Disposal of Human Waste and Solid Refuse

In both Nubian and Squatter Areas, human waste is disposed of in two ways. Majority of Nubian villagers use pitlatrines while only a few do so in the Squatter area. Those with no latrine either go to another compound or out into the bush. It was noted that most pitlatrines are shallow and fill up quickly because the population per each is large. This therefore makes them filthy and unattractive to use.

Solid refuse is the responsibility of households. In the Nubian villages, landlords exercise control not only inside the compounds but also in front of their houses. Thus each landlord tries to keep the compound free of refuse through collecting and either depositing it in a hole dug nearby or by burning it. But not many landlords are successful in this exercise and so you find a lot of litter scattered all over the compound. The high net population density per hectare will also influence the amount of garbage produced. The Squatter population does not seem to bother about litter, though a few individuals try to keep the area immediately around the house free of rotting litter.

#### 4.2.5. Drainage

In both areas there is a total lack of drainage. Storm water drains naturally according to the slope. Water from compounds is thrown on to the ground, where the solid waste is left scattered. Sometimes such water drains into channels formed during heavy rains but these are often blocked by solid refuse

thereby creating pools of dirty water which lead to environmental contamination as well being ideal for mosquito breeding.

#### 4.3. New Kibera Housing:

New Kibera housing schemes are built in phases and are supposed to absorb the present residents. Since 1961, four projects have been completed with a total of over 800 housing units of which only about 650 are occupied as of present. Unlike the Nubian and squatter areas, these estates are provided with usual municipal services.

##### 4.3.1. Building Costs:

The construction cost per unit has tended to vary with time as well as quality and quantity. On the whole, the construction cost per housing unit is lower in the earlier phases compared to the most recent phases. This may be justified by the fact that cost of building materials and labour have gone up. This has meant that the most recent buildings will cost more to rent or buy and will therefore go to people with better incomes. The survey revealed that 60% of the residents earn Shs.750/- and 43% earn above Shs.1000/- per month. This is clearly out of what most residents in the Nubian Villages and the Squatter area earn. (See Table XVII).

##### 4.3.2. Renters in the New Housing:

The Nubians formed 4.4% of the population in the new housing compared to 43.7% in the Nubian Villages. Most of these Nubians and tenants in new housing earning less than

Shs.450/- p.m. were concentrated in Phases I and II of the NHC. estates. These were the first houses of the redevelopment programme and rent per room is much less compared to a similar room in the more recent phases. In addition, old tenants were paying far less rent than new tenants for the same room space. Thus rents in Salama are relatively lower than in New Kibera Village, the oldest and the most recent estates respectively. Similarly, rents in Phases I and II of salama estate completed in 1963 are lower than in Phases III and IV completed in 1969.

It is concluded that new housing in Kibera is making very little progress to satisfy the housing demands of the low-income communities. The largest number of residents, both house owners and tenants are medium and high income households who have come to Kibera only recently to occupy the new houses. Further, the new housing estates have a high rate of absentee landlords (78%). This state of landlordism is contrary to the tenant purchase terms which requires that the houses be owner-occupied. The schemes have been turned into profit making enterprises rather than catering for the needy low-income communities in the area.

#### 4.4. Housing Needs for Low-income Communities

The concept of decent, basic standards is so tied up with a household's monthly income that any attempt to quantify the need for housing in terms of number of rooms and their sizes would be a very localized and temporary thing. Such an attempt would have only theoretical interest in that the capital and the capacity required would not be available and that the basic need would have changed long before the

initial requirements were fulfilled. In terms of quantity we should note that families expand and contract. For instance, a young couple may require fewer rooms compared to a mature couple with several children, while an ageing couple, with mature children living on their own, would require little space. Hence the need for space varies in time.

#### 4.4.1. The Quality of Space

The quality of the apartment occupied will vary with the social and economic status of the inhabitant. For those who cannot afford to commute, or who must spend every free hour looking for jobs, these must live very near their sources of employment, while those whose income depends on the upper-income status may be obliged to live in outlying suburbs. The low-income households therefore needs temporary accommodation at very low cost, within walking distance of his sources of livelihood. Thus the demand for accommodation is dependent on ones economic and social status..

But this is no excuse for planners and others concerned with housing not to forecast housing demand for the various economic and social groups. The view that as prices will always equate demand to supply, there is at any time no excess of either demand or supply in housing is out of question. Housing appears to be a bottomless pit, individual projects being too marginal to have any real impact and the costs of major programmes beyond the realm of possibility.<sup>4</sup> In most developing countries low-

cost housing tends inexorably to provide shelter for the medium rich rather than the more needy poor, and the trickle down of space freed by better-off inhabitants moving into new houses proves to be negligible. Although one may argue that when higher-income groups move into better housing they release their former housing to the lower-income groups, this in practice is not the case.

#### 4.4.2. The Need for Housing

The problem of need may be looked at in two ways. First, there is a need to know the capital presently needed to provide a dwelling unit to those families now demanding one and are willing to spend up to 25% of their monthly income to be housed. A housing policy to cover all groups will need to be formulated so that each group is treated according to its financial ability to pay for housing. For public housing the policy would specify which housing units should be provided and such decision would be based on cost per unit. It would even be necessary to specify the cost limit so that houses produced by the public sector benefit the needy people but who cannot afford expensive houses. Table XIX is an example of a House Development Plan in Kenya reflecting housing needs in each income group in the urban areas.

TABLE XVIII - AVERAGE COST PER HOUSE FOR KIMBA PROJECTS

Year Completed	Project and Phase	Number of Units	Average Cost per Unit (K£)	Plot Size (ft)	Development Cost per sq.ft. (shs)
1963/64	NHC Phase I and II	52	470	70 x 50	2.70
1967/68	Phase III	36	1361	70 x 50	7.80
1970	Phase IV	128	1570	70 x 50	9.00
1971	NCC Phase I	144	1100	70 x 40	7.85
		66	1400	70 x 40	10.00
1972	HPCK Phase I	122	1850	$(40^2/3)^2$	22.40
		94	2470	$(40^2/3)^2$	29.90
		- 642	1531		12.80



TABLE XIX - EFFECTIVE DEMAND FOR HOUSING IN URBAN AREAS IN 1968,  
(BY INCOME LEVEL, HOUSE COST AND MONTHLY RENTAL OR PAYMENT)

Annual Income (Head of Household) (K£)	Affordable House Cost (K£)	Affordable Rent or Payment (Sh. p.m.)	• EFFECTIVE DEMAND*		
			No. of Units	% of population	Per cent Cumulative
Upto 119	Upto 300	Upto 50	3,500	35	35
120-179	450	75	2,100	21	56
180-239	600	100	1,300	13	69
240-359	900	150	900	9	78
360-479	1200	200	500	5	83
480-599	1500*	241	400	4	87
600-899	2250*	375	600	6	93
900 and over	Over 2250*	Over 375	700	7	100
TOTALS			10,000	100	

Source: 1970-74 Development Plan, Table 19.1.

\* Note: Based on estimated number of new households in each income category.

\* Houses costing more than K£1200 not to be constructed by the public sector.

Table XIXb - Distribution of Available Funds for Urban Housing  
(1974 - 1978) into Cost Categories

Assumed Income Sh. per month.	Average Cost/Loan per Unit (K£)	Number of Units and Available Funds.	
		Units	Value (K£m)
(i)	(ii)	(iii)	(iv)
200	300	61,860	18.6
500	750	9,890	7.4
800	1200	6,570	7.9
1500	2250	13,840	31.1
3500	4500	3,460	15.6
TOTAL		95,620	80.6

Source. Kenya Government: 1974-78 Development Plan.

Column (i) is an approximation of the income which is taken as being required in order to meet the monthly loan repayments for the house cost shown in column (ii).

In column (ii) the average house cost/loan for K£300 and K£ 750 units includes approximately K£200 for estate services and land and the loan for purchase of materials or part-house construction. Housing costs are at constant prices at 1973.

The public sector in Kenya is supposed to finance houses costing up to K£1200 (1970). Since construction cost has increased rapidly as is evident from the building cost index, it is not uncommon to term housing costing upto £1600 per unit as low-cost housing. If the 1968 construction costs are applied the implication is that the public sector would provide houses for 83% of population whose earnings were below K£480 per annum, and the remainder would be provided for by the private sector. However, the public sector has not strictly observed this cost limit due partly to inflationary trends. (See Table XVIII). The lower-income brackets for whom it was intended to provide with housing have been the sufferer.

#### 4.4.3. Investment in Housing

Research in housing costs has shown that a relatively small proportion of expensive houses can sharply reduce the number of dwellings a given quantity of investment can finance. Assuming, for example, that K£50 million is available annually for housing in a country of ten million people, the following would be the situation under different assumptions, if a minimum standard house cost K£500, and a luxury house cost K£5000. (See Table XX).

Table XX indicates that the possibility of a country achieving her goals and targets in housing is dependent on the

TABLE xx - INVESTMENT IN HOUSING AT MINIMUM STANDARD AND LUXURY LEVELS

Minimum Standard houses	Luxury houses	Number of Minimum Standard houses	Number of Luxury houses	Total No. of houses that could be built	Average Cost per house	Rate per 100 population
(%)	(%)				(K£)	
100	0	100,000	0	100,000	500	10.0
95	5	65,500	3,500	69,000	725	6.9
90	10	47,700	5,300	53,000	950	5.3
80	20	28,800	7,200	36,000	1,400	3.6
50	50	9,000	9,000	18,000	2,750	1.8
0	100	0	10,000	10,000	5,000	1.0

Source: "Methods of Establishing Targets and Standards for Housing and Environmental Development"

- a Report of the United Nations Department of Economic and Social Affairs, 1968.

proportion of houses built at a cost higher than those required at minimum standards. This further explains why housing stock may not substantially increase since investing into high-cost housing means that only a few houses will be produced. And if the houses built are costly compared to the incomes earned in the country it means that only very few people will be catered for. It is for this reason we emphasise the fact that houses planned and constructed by the public sector should bear in mind the ability of the people to afford the houses. (See Table XIX). Emphasis must be laid on projects that result into housing that low-income groups can cope with. Politicians and Civic leaders must be made aware of this fact so that any genuine move towards the production of low-cost housing receive their support, both financially and morally. It is rather disturbing to observe that the cheapest houses built by Nairobi City Council in recent years cost £300 and rent at Sh. 125/- per month which means that it will take up to 50% of the low-income households' income to rent it.

#### 4.5. THE SOCIAL AND ECONOMIC FUNCTIONS OF HOUSING

##### 4.5.1. The Social Functions:

Housing has two main functions, - the social service and economic activity. There is no point to enumerate the obvious social advantages of housing, but rather to stress the importance of housing as possibly the most positive way of making the contribution of economic development tangible. As Turner said,

"The dwelling is an address-it gives the person and family a place in society and, therefore, an identity.

The individual 'of no fixed abode' is a vagabond and outcast."<sup>5</sup>

In this respect home ownership makes one committed to the improvement of his environment thereby promoting the areas aesthetics.

Planning for social development must include the necessary institutions to cater for people in the new housing area. In urban areas it is a policy question how and where new houses should be built, but the plan for employment centres would to a large extent determine in what area or region the biggest housing need exists. The policy tries to relate housing with major employment centres so that the distance between them is minimized as well as making it safe and convenient for both employer and employee to travel to and from work in order that increased production can be realized.

Social development also stems from the fact that if people own their own houses, as opposed to renting, they will eventually have paid-off any loan taken for construction, and would devote the money formerly spent on repayment to further their preferences in life. Some Nubian house-owners in Kibera already enjoy this privilege in their old mud and wattle houses, poor as they appear, yet fulfilling important social and economic functions.

#### 4.5.2. The Economic Functions

House construction can be a source of employment to many people who would otherwise remain unemployed. Unemployment

is a major problem in the developing countries of the third world. Socially, politically and morally, it is degrading for an able-bodied person to remain without work. Some of the worst crimes are known to be committed by individuals who lack employment and, therefore, a source of income.

The construction industry is a big employer of poor and unskilled people. Abrams estimates that, "employment in the construction industry usually equals about 20% to 30% of employment in all manufacturing industry in the more developed countries. Housing probably accounts for about half of direct and indirect construction employment."<sup>6</sup>

In Kenya in 1970 the total number of people directly employed in this industry was in the range of 70,000 to 80,000 many of whom worked as unskilled urban labour.<sup>7</sup> The 1970-74 Kenya Development Plan emphasizing the importance of housing said;

"In addition to being a major element in living standards and the general welfare, housing accounts for a significant share of capital formation, and thus contributes importantly to national output and employment."<sup>8</sup>

It is estimated that on average, each one million pounds spend on modern housing in Kenya means one year's full-time employment for 2,000 men, of whom some 500 are skilled workers and 1500 are unskilled workers many of whom work in the construction industry.

But there is a limit to the extent house construction can provide employment. As far as technical inputs are concerned it is true that the less is done the more employment is generated. For instance, if houses are prefabricated and erected on serviced plots, employment is restricted to those engaged in working on highly efficient machines in a prefabricating plant, plus very few in other related activities. But if individual families are given the opportunity to build their own dwelling units on a site, it is more likely than not, that paid labourers would be employed in addition to the family's own efforts. Through the latter method, many 'Wananchi' would find employment as skilled and unskilled labourers particularly rural migrants to the city who look to construction industry as one of their primary sources of livelihood as most would be unskilled.<sup>9</sup>

#### 4.5.3. Other Functions of Housing

Houses in many countries have other benefits.

Houses in less developed countries are often used as small production centres for the tailor, storekeeper, watch repairer, cobbler, etc. In the Nubian Villages and the squatter settlements of Kibera, it was noticed that small businessmen conduct their trade in part or on the verandah of their houses.

A good housing policy should avoid unnecessary imports of building materials which drain foreign exchange. For if available local building materials are utilized there would result a saving in foreign exchange which could be used to construct more houses. In addition, working on the production



of local materials such as stone quarrying and cutting, brick making, felling and sewing of timber for construction, and so on, would provide more employment. Hence any housing policy should aim at making savings which could be of direct benefit to the common man.

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CHAPTER FIVEATTITUDES TOWARDS PRESENT AND FUTURE AREAS  
OF RESIDENCE

As the success of planning a housing project for any area is dependent on the wishes and hopes of the inhabitants, it was necessary to find out some of these through the survey. These included the features which the inhabitants liked or disliked about the area, the number who wish to move out, and their attitude towards site and service schemes; the type of improvement they would like to be carried out in the area. Their opinion was sought concerning Harambee Self-Help Projects and whether they thought these could benefit them.

5.1. SATISFACTION WITH PRESENT LIVING AREAS5.1.1. HOUSE OWNERS.

Nearly all house-owners in the Nubian Villages (96%) and Squatter Settlements (98%) wanted to stay there permanently. Majority of Nubian house-owners mentioned the ownership of the houses as main reason, and also emphasised that they feel secure as a community. Squatter house-owners said they had no place to go to and also that they had lived there for a long time and regarded it their home.

Asked about the good features of the area many house-owners thought it was safe compared to similar areas like Mathare Valley, Kariobangi or Kigomba, where there were many cases of thieves, thugs,

drunkness and prostitution. A few mentioned that the area was good for business being close to Makina Local Market. Some squatters mentioned that they were not subject to frequent harrassment common to other squatter settlements such as Mathare Valley or Kigomba.

The main dislikes of houseowners concerned the lack of Municipal services, especially roads, sewage and security lights. Nubian houseowners stressed that they should be officially given title to the land for this would assure them of uninterrupted stay.

#### 5.1.2. TENANTS

The majority of tenants in the Nubian Villages felt happy to live there. Their main reasons for liking it was the low rents, close to both City Centre and Industrial Area, the main employment centres, safe and quiet. Over 75% were prepared to stay in the area even if rents were to increase because of improvement carried on the buildings. Some liked the area because they had established small businesses at Makina Market for their wives and were making good profits. Some said that their landlords were understanding and did not bother them. But in three cases tenants complaint about strained relationship, because of the landlords demands. The tenants in the squatter settlement expressed their satisfaction about the area and had no immediate plans to move out.

Though the majority of tenants would like to stay there a few wanted to move out, some because they disliked the area's environmental quality, but for others it was because they could not cope with their landlords. They also were concerned about the lack of public utilities and services and the bad state of houses which needed repair or improvement, and the lack of security lights. Some felt that drunken cases were becoming too common and blamed this on the illegal sale of 'Changaa' by some bad residents. But not many were willing to leave the area for any of these reasons except if offered a plot in a site-and-service scheme elsewhere.

#### 5.2.0. EXPECTATIONS FOR HOUSING

##### 5.2.1. HOUSEOWNERS

Ever since the first redevelopment project started in Kibera, Nubian houses have been demolished to create room for new housing. Some displaced houseowners were not absorbed into the new schemes and many either become tenants in remainder of Nubian housing or built another house there. Although the Nubian houseowners live under threat of demolition, it would appear that many prefer to maintain their present houses and gradually improve them if allowed by the Council.

Concerning the number of rooms required by the owner families for own use this depends on family-size. Most households wanted same number of rooms, but a few wished to occupy more rooms arguing that grand-children would join them in the near future.

But on investigation such claims were only used to enable them have more rooms for subletting. Thus apart from the changing needs of the family in its different redevelopment stages, the number of rooms each household would actually occupy would be determined by the economic needs of the family for subletting rooms. It was also revealed that after improvement many houseowners would charge higher rents compared to what tenants were presently paying.

#### 5.2.2. TENANTS IN NUBIAN VILLAGES.

As stated above, 75% of tenants are willing to continue staying in the area even if rents are increased because of improvement. Table XXI shows the present rents paid and the percentage<sup>ge</sup> willing to pay more than present rent provided the accommodation is improved. There is a clear relationship between the income and willingness to pay higher rent.

Table XXI - Present Rent and Rent Acceptable to Tenants  
After Improvement

Monthly Rent Paid		Present Rent (proportion paying)	Acceptable Rent after Improvement
Shs.		%	%
Under	20	1.4	100
	20 - 30	2.7	85
	31 - 40	14.9	70
	41 - 50	43.2	68
	51 - 60	27.0	60
	61 - 80	8.1	52
	81 - 100	2.7	45
	101 - 149	-	-
	150 - 299	-	-
	300 - 500	-	-
	Over 500	-	-
Total	%	100	.
Total	No.	74	

NB. The % shown in column 3 is the percentage of tenants in that cell who would be willing to pay higher rent for improved houses.



### 5.2.3. ATTITUDES TOWARDS SITE AND SERVICE SCHEMES.

A main objective was to investigate the alternatives of upgrading or demolition of Nubian Villages. In the case of upgrading some houses would be demolished to create sufficient space for infrastructural services. The houseowners and tenants in the demolished houses would probably have to be resettled partly on a site-and-service housing scheme in the area or elsewhere. In addition, because of the problem of squatters in the city, it was also felt that an organised way of resettling them would be in order, and a site-and-service scheme may be one way of fulfilling this. Hence an enquiry was made to this effect.

As many as 60% of the tenant household heads showed interest in ownership of a house. The reasons given were (a) the security and satisfaction of having their own house, (b) not having to pay rent, (c) making money out of the house by subletting, and (d) having much room and living there permanently. But we noticed that those keen to own a house were those in permanent employment and who had been renting houses for a couple of years or more. The income was another factor so that those earning the lowest income were in doubt as to whether they could raise the necessary deposit. All the same they were still keen on house ownership despite this disadvantage.

Asked the amount of money they want to or can spend on deposit or monthly repayments, many said they did not know and that this

would depend on the scheme. However, on repayment it was obvious that not many wanted to pay much more than what they would be willing to pay for improved housing in the Nubian Villages.

### 5.3.0. SITE AND SERVICE SCHEMES.

#### 5.3.1. THE BASIC CONCEPT OF SITE AND SERVICE.

The basic concept of such proposal is that:-

1. The local authority is responsible only for the layout, surveying of plots, design and construction of roads, the supply of water, laying sewerage system, and the provision of street lights.
2. The construction of the dwelling is the responsibility of the tenant of the site or plot.

#### 5.3.2. ADVANTAGES OF SITE AND SERVICE SCHEMES.

The theoretical advantages are:-

1. The total capital investment by the local authority is reduced.
2. Many more potential house plots would be provided per annum than if the local authority also had to construct the dwellings.
3. The 'Self-Help' efforts of the lower paid groups can be harnessed and encouraged to provide his own dwelling within a properly planned area within his own financial limitations. Further, it is hoped that an improvement of his finances will allow him to provide better, and more generous accommodation for his

family i.e. improvability as well as earn income through subletting.

### 5.3.3. SITE AND SERVICE SCHEMES AND LOCAL AUTHORITIES.

The concept of site and service is not a new one. Considerable discussion ensued on this subject at a Ministry of Housing sponsored Housing Conference held in Nairobi in March 1967. Though the idea was accepted in principle, some local authorities have been reluctant to embark on such schemes, because they think that development to such low standards should not be encouraged in towns. But on the other hand pressures are so great and facilities for tackling the housing problem so meagre in comparison that sub-standard housing will appear in the form of shanty towns whether the Council likes it or not. It is therefore better to bring such development under control.

Resistance to site and service schemes appear to stem from poor performance of earlier schemes. However, it would appear that to the inhabitants of such estates the social aspects are more important than the construction or appearance of the dwelling. For instance, the HRDU in its report of Site and Service Schemes shows in a summary table of main complaints made by residents of all the schemes surveyed that 60% of the complaints related to the condition of communal and community facilities and only 4% of all the complaints related to the internal dwelling.<sup>1</sup> The Kariobangi scheme has been referred to, however, specific complaints were voiced concerning the standard

of the houses relative to the rents they paid. It should, however, be emphasised that at Kariobangi 94% of the dwellings were owned by absentee landlords who did not care to maintain the houses.

#### 5.3.4. IMPROVEMENT ON IMPLEMENTATION OF THE SCHEMES.

Since the Kariobangi Scheme active steps have been taken to improve on the implementation of site and service schemes, e.g. at Thika and at Mathare Valley. At the Mathare Valley Site and Service Scheme, a number of variations of types of development have been tried ranging from precast total dwellings, the pre-construction of basic units (lavatory, kitchen, one room and roof) to the provision of a site with a serviced lavatory (Site and Minimum Service). In the latter case the City Council has provided the minimum of construction but has supplied guidance for the self-built (Co-operative built) house i.e. technical advice.

The most popular house type has been a detached unit of 8 rooms. Another house provides a 4 room family unit of approximately 36M<sup>2</sup> with 4 lettable rooms (each of 9M<sup>2</sup>) attached. The latter house-type is popular both with plotheolders and civic officials, and provides a potential for a better standard of accommodation for the plotheholder. Whilst mud and wattle has not gained popularity as a building material, some building material experiments have been undertaken with the use of murrum blocks composed of murrum with 5% cement as a binder.

The cost of such blocks is 20 cents each which compares favourable with concrete blocks at Sh.1/- each. The HRDU has recommended the use of these blocks in the proposed Kibera Experimental Self-Help Scheme East of Kibera Railway Station.<sup>2</sup>

#### 5.4. DEVELOPMENT NEEDS

In endeavour to discover the most urgent needs of the residents, both tenants and owners were asked to choose in order of priority which public and social facilities they considered should be improved or provided if the area were to be upgraded. Their responses are summarised in Table XXII.

It is clear from the table that the highest priorities were given to improvement or provision of public services, in particular the improvement of roads, provision of water in houses and installation of the sewerage system. In view of the importance given to these provisions and in view of the fact that

Table XXII. Improvement of Social and Public Facilities  
felt urgent by the Inhabitants of Nubian Villages

Facilities	Owner heads	Tenant heads
<u>Social Services</u>	%	%
1. Nursery	70	54
2. Primary school	28	36
3. Secondary School	4	40
4. Health Centre	48	32
5. Shopping Centre	80	58
6. Police Station	20	45
<u>Public Utilities</u>		
7. Improvement of roads	60	85
8. Water inside house	80	70
9. Electricity in house	15	20
10. Street Lights	70	50
11. Sewage Disposal	65	86
12. Drainage	22	4

water pipes and trunk sewers are already available in the area, and also taking into account that new housing estate already enjoy these facilities, the reasons why the houseowners have not made

connections must be sought in Council building by-laws which have denied residents these services.

- From the above analysis one could foresee that if these obstacles are removed in an eventual improvement scheme the owners will be more interested in making connections to water and sewerage mains as funds become available.

The spirit of self-help for community projects seem to be fairly well established in the study area. Long before the entire area was included in the city, the Nubians built their houses as a community, cleared the paths e.t.c. This has continued to present day whereby they have joint hands with tenants and built 4 - self-help nursery schools on Harambee basis. Other self-help groups have proved their worth by grouping themselves into religious groups and putting up churches in the shortest time possible so that within the last two years no less than 10 semi-permanent churches have been built and the Muslims are expanding and constructing their mosque into a permanent building. This demonstrates that the people are already filled with the President's call of 'Harambee' in an effort to help themselves and the area as a whole.

#### 5.5. CONCLUSIONS

The most important information applicable to future planning of the area is the positive attitude of both houseowners and tenant

population towards their present living area, despite the fact many are anxious to get better houses and improved sanitary and social facilities. It is shown that the only reason why tenants might at long last want to move was the impending opportunity of becoming a houseowner, whether in the same area or elsewhere in the city. Quite a number were attracted by the idea of site and service scheme and this had been clearly demonstrated in the number who went to be interviewed by the German Team in connection with Kibera Experimental Self-Help Scheme at Lomle. However, both owners and tenants favour the improvement of Nubian Village rather than demolition, for reasons of the satisfactory social environment it provides and the economic dependence on the area. In their study of Swahili Village, Masaku, the HRDU concluded in their chapter on 'Economic Structure' that:

"The predominance of the informal sector employment among both owners and tenants in Swahili Village implies that a large proportion of the inhabitants is dependent for their income on the economic possibilities offered by the area. This fact has to be taken into account in any further planning, be it improvement of the present village or a demolition with the consequent resettling of the population: sufficient economic opportunity should remain available to the inhabitants



in the new plans" 3.

Peter Marris expressed the same views in his study of

"Family and Social change in an African City".<sup>4</sup>

Enthusiasm to participate in self-help groups either for the construction or improvement of houses or for community projects is evident and should be exploited to the fullest.

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CHAPTER SIXTOWARDS A COMPREHENSIVE HOUSING POLICY  
FOR KIBERA6.1 General Policy for Kibera Study Area

The Proposed planning strategy for both Kibera Nubian Village and the Squatter Settlement is formulated against the background of the various aspects discussed in the previous chapter and along the guidelines stated in the introduction namely:

- (i) the housing needs of low - income communities in Kibera.
- (ii) the limited financial resources for house development suitable for low - income communities.
- (iii) the need for direct implementation.

The problems raised in the study relates to housing. For instance, if a well built estate has poor infrastructure the residents will lack essential community services; and if an expensive and well serviced estate is provided for people with very low - income the scheme becomes useless or monumental to them because their finances cannot enable them to acquire houses in such scheme. However, if the authorities adopt the policy of slum clearance without giving the people a suitable alternative the housing problem is likely to be aggravated. . The displaced people will lack accommodation

and will either opt to stay with relatives and/or friends thereby contributing to overcrowding or will venture to squat in another corner of the City. As Charles Abrame has observed,

"Because of economic and social problems arising from the clearance and rehousing schemes, most of the people often go back to the Old Slum or create new ones. The very expensive houses provided for them are transferred or sublet to higher income group." <sup>1</sup>

And speaking on housing standards Turner said, "the imposition of modern minimum standards on popular urban housing in a transitional economy is an <sup>S</sup> <sub>A</sub> result on the traditional function of housing as a source of social and economic security and mobility." <sup>2</sup>

In making policy recommendations for Kibera Study Area serious consideration was given to the contents expressed in the above quotations and two alternative house solutions are recommended for the area.

## 6.2 Demolition

In some cases, demolition of houses is inescapable because of the poor and unimprovable quality of the houses or lay - out pattern, or because of supposed health hazards

in the existing situations, or because they hinder proper and economic laying of infrastructural services in the area. In Kibera Nubian Village only about a quarter of the houses were either of such poor quality that the author considers eventual replacement necessary or stood on the site proposed for infrastructural services.

#### 6.2. 1 Economic Benefit

Sometimes there may be a good cause for demolition on economic or planning grounds. For instance, where a poor low - rent area is isolated in the centre of town, the optimal economic choice should be made i.e. to use the land in such a way as to make Maximum financial gain.<sup>3</sup> For example, the area could be surveyed into plots which can be leased to the highest bidders or, alternatively, facilities could be built on the plots that give the highest return. However, since this may mean displacing many house owners and their tenants with no better housing alternative, the Government and the City Council of Nairobi will need to thoroughly examine the matter before such action is taken.

#### 6.2. 2 Economic Costs.

If, however demolition continues, the costs are considerable. Quite a large amount of the scarce public funds would have to be spent on compensation and resettlement

of the population displaced and this would be required immediately. Moreover, only a small proportion of the Nubian house owners can afford tenant purchase terms in the National Housing Corporation housing scheme or are able to rent them. (Chapter 4) A further consideration pleading against demolition is that the economic opportunities offered by the area will be destroyed (see Chapter 5). Many of the residents employed in the informal sector depend on a small group of known clientele or on the proximity to Makina Market or nearby estates.

### 6.2.3 Social Costs

The social costs of destroying an existing community may not be easily estimated. Perhaps it is obvious that the population, in case of demolition gets dispersed and disorganised. It is doubtful that the Nubian house owners would resettle together in view of the large differences in income - levels, although for this ethnic group the strong existing community feeling is evident. The degree of integration between owners and tenants is difficult to establish.

Nonetheless, a certain degree of integration does exist, and such social ties are not created overnight in a new area as can be seen from the example of the NHC housing states where most people tend to be individualistic. The advantage for having well - integrated communities in the city should not be overlooked by the authorities. Comparing Kibera with other low - income areas in the City it is noted that crimes, especially the more serious ones, are not a serious problem. This is partly accounted for by the unity among Nubians who for long have tried to keep bad character out of the area through strict scrutiny of the movements of the new-comer tenants.

Further, by demolishing a very low-rent area, the stock of existing cheap rooms is reduced, while the demand will certainly rise. This will not only force rents up, but also densities in the remaining low-rent areas will increase considerably and consequently the pressure on existing facilities there. Alternatively, squatting in the City will become a bigger and insuperable problem. For instance Mathare Valley, Kariobangi North, Gitathuru Valley and parts of Kibera are the areas where squatting is already a real problem to both Council and Government officials. Therefore, incase of demolition of Nubian Village, (Espe-

cially Makina Nubian Village which has the highest concentration of Nubian housing) squatting and over-crowding of the existing structures. in these areas will be felt most severely thereby leading to the erection of more shanties.<sup>4</sup> The City Council of Nairobi is aware of the problem in these areas as demonstrated by their efforts to better conditions in the City.

### 6. 3. Improvement

#### 6.3.1 Consequences

The consequences of improvement or upgrading of existing Makina Nubian Village (the area chosen for improvement) will be that a low-rent area is kept near the City Centre, a situation not usually encouraged. However, improvements would bring several advantages, both for the inhabitants and the City.

- (i) no existing housing potential is demolished in a situation of housing shortage.
- (ii) a well integrated social structure is substained.
- (iii) the economic and social benefits which the area offers to the inhabitants are not eliminated.
- (iv) the use of public funds will be much less compared to the sum required for resettlement of present population, and use can be made



of the potential for self-help and investment of private capital, especially among the house owners. But it should be noted that the above advantages do not automatically follow with a decision on an improvement scheme. Very often improvement schemes suffer from some of the problems discussed under a demolition programme. For instance, if building standards are set too high many of the present houseowners will not be able to afford the cost of upgrading and will be forced to sell their property and tenure-rights. In addition, an improvement of the house to a very high standard can easily lead to such an increase in room-rents that a large proportion of the present tenants will have to look for cheaper accommodation elsewhere in the City.

Hence, unless proper guidance is given, even an improvement plan for Makina Village can have the unpleasant consequences discussed above in breaking up the existing social and economic structure of community, increased absentee landlordship (true of New Kibera estates and Kariobangi Site and Service Scheme), and increased pressure on existing low-rent accommodation.

### 6.3. 2 Improvement and Upgrading Proposals

The foregoing considerations have led to the following proposals: that the Makina Nubian Village at Kibera should be improved, and that redevelopment plans should be geared along the following guidelines:-

(i) The low-rent character prevalent in the area should be maintained. Probably the most effective way to ensure this is to preserve as many of the existing structures as possible. (see the plan - Maps 8, 11, 13.a and 13.b and 16). The standards applied should not be too high, so as to price this houses out of the affordable income brackets of the the present owners and their tenants. In order to prevent rents soaring up, because of too high monthly payments for the houseowners, the amount of total monthly payment on the house should not exceed the anticipated income from sub-letting.

(ii) The improvement should not result in the loss of rooms available for subletting.

In the plan designed by the author (Maps. 12, 13, 13.a, 13b., 14, and 15) more than half the number of rooms can be retained and it is anticipated that when all owners will have developed their plots to the maximum, more rooms will become available. It is proposed that the population density should be no more than 500 p.p. Ha.

But for owners whose houses are unimprovable or disappear so as to make way for infra-structural services they will be considered for building plot<sup>s</sup> in the Site and Service Schemes also proposed in this study.

Consequently provisions have been made for eventual overflow population especially for the tenants who wish to have own houses, as well as the squatters. It is also worthy noting that the proposed Site and Service Scheme occupy the area now occupied by squatters.

- (iii) Sanitary facilities must be planned to cater for a substantial subtenancy population so as to maintain the social and economic character of the area.

(iv) Investment of public funds should be kept as low as possible. Consequently the investment of private money and self-help efforts should be stimulated through constant and deliberate encouragement by the authority. This could be promoted by organising the improvement scheme on the lines of a site and service scheme (see paragraph 6.8) Since any allocation of public funds can be considered as a subsidy, each applicant should be considered according to his housing and financial needs for a public loans. Lastly, a gradual improvement programme should be followed in endeavour to make maximum use of people's own investments as well as harness the people's selfhelp efforts.

#### 6.4. FINANCING

One of the objectives stated in the 1974/78 Development Plan is to ensure that .....

Substandard Urban Housing is improved (page 473).<sup>5</sup>

However, for this plan period no funds are set aside specifically for the improvement of substandard urban housing as the one under consideration.

However, this financial crisis can be overcome if the Council and National Housing Corporation cooperate. The NHC is allocated funds for house development, particularly low-cost housing and is involved in many tenant-purchase schemes all over the country. The Nairobi City Council is the local authority responsible for providing services to the entire City. These two bodies could work in such a way that the Corporation provides loans for the improvement scheme while the Council provides the usual Municipal services to the area, and since Government owns land in this area the Ministry of Lands and Settlement should be charged with the responsibility of surveying the area into ratable plots. It is therefore recommended that public funds should be made available for:-

- (i) Surveying of the area.
- (ii) Loans for construction of Wet-core units with connection to public sewer.

- (iii) loans for installing water taps.
- (iv) Material loans for construction of habitable rooms on the basis of self-help.
- (v) Loans for the improvement of the roads and provision of street lighting.
- (vi) Material loans for improvement of fences around the compounds.

It is further recommended that a phased improvement programme should be under-taken whereby the different aspects made above could be considered as sequential phases of an improvement scheme. The survey showed that the area was in a serious sanitary state. . Therefore there is an urgent need for the provision of a fixed loan to all houseowners for construction of wetcore units and connection to public sewer only.

Public funds should only be provided for those structures to be improved or rebuilt according to the assessment of the individual structure. This means that for individual houseowners a different amount of loan should be fixed by the NHC in accordance with the improvement plans.

Among the many fears of financing institutions is a sure way of recovering their money from their debtors. In this regard it is recommended that loan money should be allocated on the basis of the financial security of the extended family units as a corporate loan, thus spreading the risk and taking into account the existing system of financial arrangements in those families. Alternatively, the organisation and execution of the scheme should be based on the 'Roof-Loan Scheme' of Ghana.<sup>6</sup> But unlike the Ghana case, Kibera house owners would need loans not only for a roof but in some cases for walls. Loan facilities in the form of building material should be advanced to those families which satisfy the requirements as stipulated by the loan and Housing Committees.

Thus for the loan system to function well, the residents should form co-operative societies or housing societies based on Housing organisation units (see Map. 13). A central agency (NHC) should make loans available to the Village Housing Society which would be responsible for repayment as well as make sure that each of the members complies with the rules. The Village Housing Society should in turn make smaller loans to individual borrowers

at interest rates sufficient to cover expenses and provide reserve for more loans. In addition the material required for the scheme should, if possible be supplied by an approved agent to make sure that it is available when needed and at controlled price.

Table XX111 below is a rough estimate of the financial requirements for the installation of public facilities to the area designed for improvement.

UPGRADING AND IMPROVEMENT SCHEME

<u>Table XX111 - Cost of Services</u>		Total Cost
		K£
1.	<u>Roads:-</u>	
	Murrum Road (11,275 m <sup>2</sup> ) @ Shs. 20 per Sq.m.	11,275
2.	<u>Surface Water Drainage</u>	
	I course (2050m) @ Shs. 85 per meter	9,018
3.	<u>Water:-</u>	
	Galvanised pipes of 1½" dia. (6000m.) @ Shs. 50/m	11,000
4.	<u>Sewer Lines:-</u>	
	9" Sewer pipes (1900m) @ Shs. 76 per m.	
	6" Sewer pipes (1800m) @ Shs. 52 per m.	3,420
5.	<u>Street Lighting:-</u>	
	I post (Steel) per 33m (2550m) @ Shs. 2500	1,670
	(78 posts)	
		<hr/>
		36,380
		<hr/>



## 6.5. Planning of the Area.

### 6.5. 1 Technical Planning of the Area.

Having the people we are planning for in mind, the building standards should not be too high as to interfere with the overall character of the area. But considering the continued high density the sanitary facilities should be of good quality. It is therefore recommended that Grade II by-laws should be applied to the area, and overall density up to 500 persons per hectare nett and 250 persons per hectare gross should be regarded as acceptable in a scheme of this nature. Connections with the trunk sewer-line and water mains should be made by each plotholder as final stage.

### 6.5. 2 Administrative Planning

It is important that surveying of the area be undertaken to fix boundaries with due respect to the position of existing/improvable structures. (See Proposal : Map 13.b, 12, and 16). Each plot allottee should be registered so that improvement could be made without fear of loss of tenure-rights.

As already stated in cases where structure<sup>s</sup> are suggested to be demolished and where no rebuilding on the same plot is allowed the owners should be offered a plot in the Site and Service Schemes or on undeveloped plot in the Makina Nubian Village. The scheme should be carried out under the responsibility of Nairobi City Council who would supervise construction work.

#### 6.6. Design of the Area.

##### 6.6. 1 Plot coverage and Layout.

Since Makina Nubian Village Improvement Area would be a comprehensively planned scheme, and a sewer system provided, the maximum plot coverage should be 50%, and approval of the City Council to this effect should be obtained.

Existing Swahili type of houses in the area allow subletting (Diagram 7). It is recommended that the present type-plans be continued i.e. the houses should be of the Corridor/Courtyard circulation, with separate access to each room, to ensure reasonable privacy in the case of subletting. Individual owners should develop and take care of plots as indicated on Map 13.b.

## 6.6. 2 Public Services

(a) Roads - The proposed Link Road from Trans-Africa Highway to Ngong Road will form the Eastern boundary of Makina Nubian Village while the Kibera Drive forms the Western and Northern boundary and the Railway line forms the Southern boundary. (Map. 7 and 14). A secondary road from Kibera Drive is proposed as the main access road to the Village. The road which mainly follows the existing tracks should be murrum. Some of the existing footpaths should be graded and proper open drainage for water should be provided so as to allow movement to almost every individual building. (Maps. 13.a, 13.b and 14).

In a new planning area a secondary road should have 20 metres reserve, but in an improvement area with high density of buildings minimum road reserve should be 12 metres. This width is necessary because we want to preserve as many houses as possible in an improvement area. Important footpaths should have drainage channels and be provided with security lights. A 6 metre reserve would do but in areas where the density of houses is high and unplanned the 6 metre reserve can be flexible. Public car parks are also provided (Map 14, 16)

(b) Water Supply - There are 15 public water kiosks and 5 private connections (Map 9) serving an existing population each about 400 people. The problem is not the number of Water kiosks but their distribution. The poor distribution causes some water kiosks to be overcrowded thereby resulting in long queues. It is proposed that as a temporary measure, 4 more public water kiosks should be provided in areas where there is none nearby (Maps 9 and 15). However, the long term proposal is that on each plot a water-tap should be installed with proper splash area and outlet arrangement under cover. This could be implemented any time plot holders have the necessary funds to enable them carry out the work.

(c) The Sanitary Unit - To begin with, each plot should have pitlatrines only as a temporary measure before connections to the main sewer are made. But the long term proposal is for each plot to have a sanitary unit with one or two toilets and a shower and connected to the public sewer. (See Map. 9 and 13.b).

(d) Community Facilities - The Makina Nubian Village lacks health facilities, proper market, recreational grounds and Nursery schools. The City Council has proposed to construct a new market close to the present one (See Map 16).

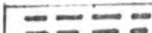


It is proposed that sites for two Nursery Schools, a playing field and open spaces should be provided (See Maps 10, 12, 13.2 and 16). A site for a Health Centre has been provided at Lomle (the site for Kibera Experimental Self-Help Scheme) and will serve the whole of Kibera. The proposed open spaces should be cleared up, levelled and some of them should be prepared to function as a social meeting place and play-ground. A number of Housing organisation units should gang themselves and construct Nursery Schools on a Self-help basis. Their ability for such projects has already been demonstrated through the construction of a permanent nursery school at Salama and two semi-permanent ones at Lindi and Kianda as well as the Koran School and the Mosque.

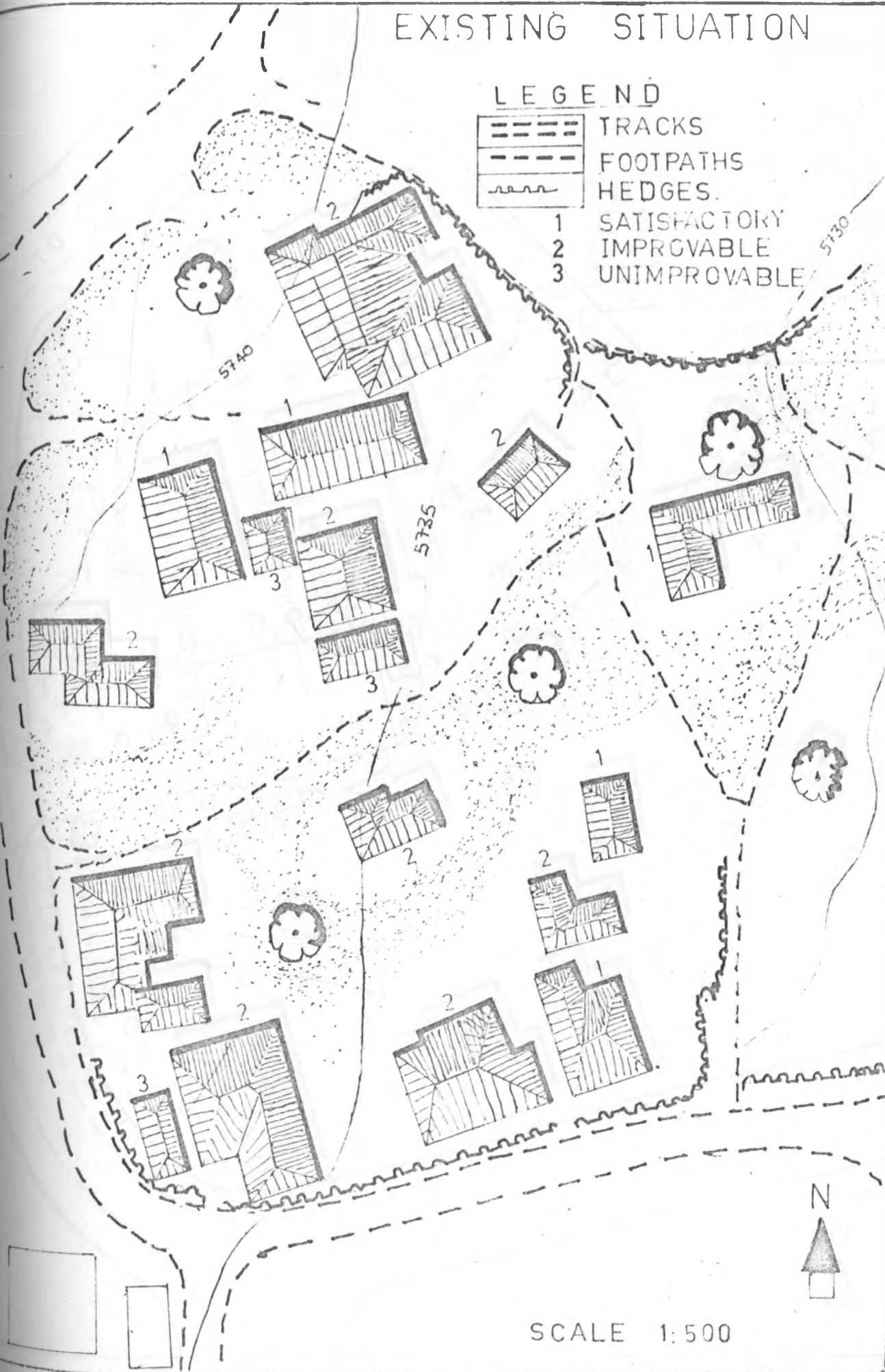
### 6.6. 3. Makina Nubian Village Pilot Scheme

Within the Makina Nubian Village one of the Housing Organisation units or blocks (Map. 13) has been selected to illustrate how basic amenities can be supplied. (See Map 13.1 and 13.b). The improvement proposed is designed to serve as a pilot project. An attempt has been made to outline what should be done in such an area as regards the provision of essential facilities.

# EXISTING SITUATION

## LEGEND

	TRACKS
	FOOTPATHS
	HEDGES
1	SATISFACTORY
2	IMPRCIVABLE
3	UNIMPROVABLE



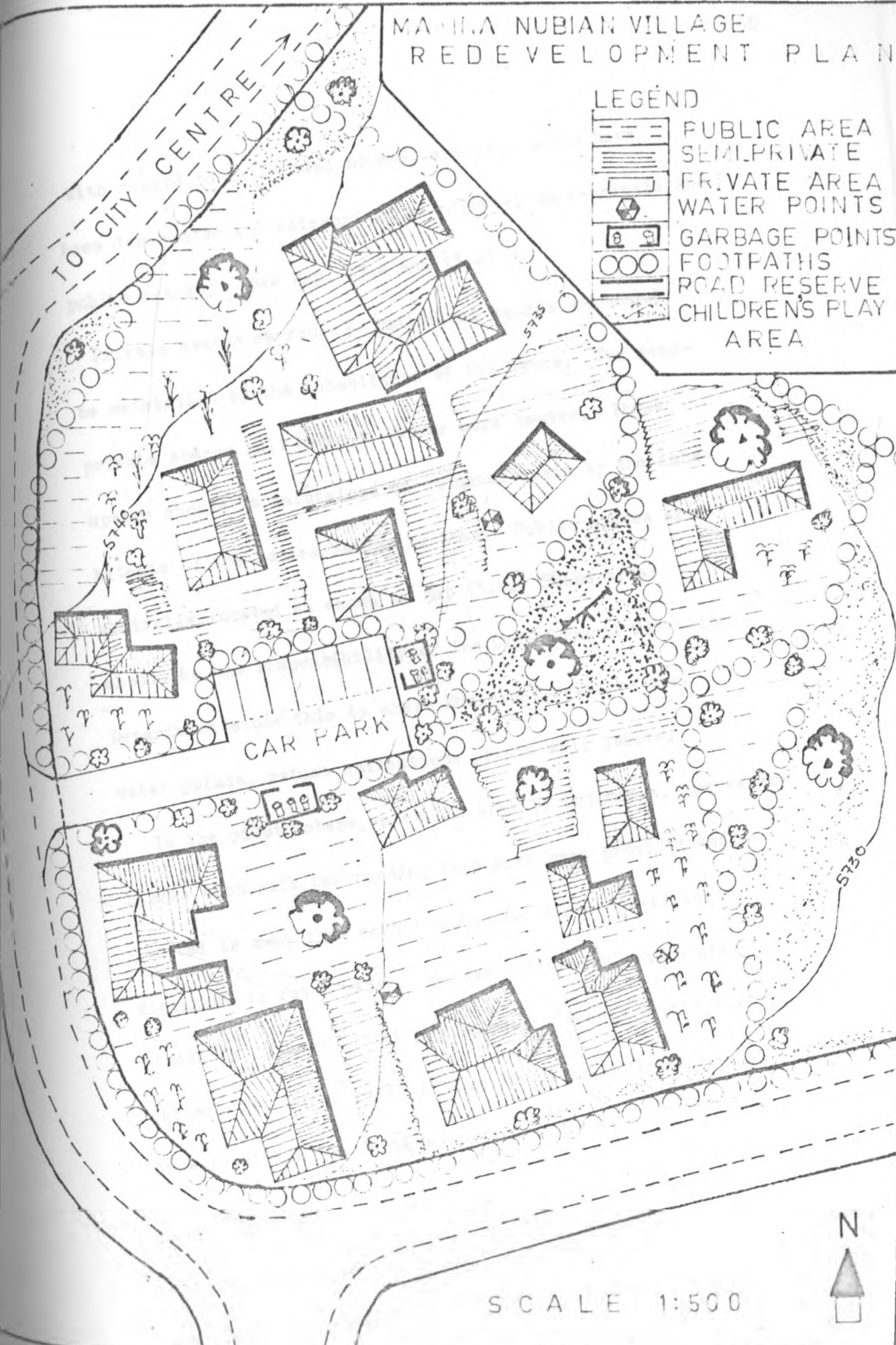
SCALE 1:500

MAP 13 a

# MANILA NUBIAN VILLAGE REDEVELOPMENT PLAN

## LEGEND

	PUBLIC AREA
	SEMI-PRIVATE
	PRIVATE AREA
	WATER POINTS
	GARBAGE POINTS
	FOOTPATHS
	ROAD RESERVE
	CHILDREN'S PLAY AREA



SCALE 1:500



MAP 13 b

With regard to individual houses, specific areas have been demarcated and categorised as private, semi-private and public spaces. (See Map. 13.a and 13.b)

Private spaces surround individual houses and should be maintained by the inhabitants of the house. The semi-private spaces fall between two or more houses. These spaces should be maintained on communal basis by the inhabitants of the houses bordering them. Public spaces are centrally located as shown on Map 13.b. These areas should be the responsibility of the City Council Cleansing Department since this is where Municipal services e.g. water points, refuse collections points will locate.

In the pilot scheme, which has some 14 buildings, two water-kiosks each with two-running taps have been provided and located in away that each family should not travel long distances to fetch water. Refuse collection points are similarly placed but at points where Council Trucks can collect the refuse easily. Each house is assigned to a dustbin within the Garbage collection areas.

As there are no access roads to the pilot scheme, one is proposed as indicated. The road leads to public open spaces where most basic Municipal facilities are to be located.



The road will make it possible for cleansing vehicles to collect garbage. A limited number of parking bays have been provided to cater for the needs of the residents and visitors in the area. This area can also serve as a cul - de - sac. Footpaths are proposed to provide free circulation in the area. (See Map 13.1 and 13.b). Streetlights are proposed along secondary roads and important footpaths passing through densely built areas. These will provide security to pedestrians as well as the entire population living in the Village.

## 6.7 POLICY RECOMMENDATION FOR THE AREA.

### 6.7.1 Policy Recommendation

This improvement scheme should be treated as an owner-built site and service scheme, whereby the plotholder is responsible for building or improving his house, either by himself or with assistance of hired labour. It is further recommended that some of the building activities and the production of building materials e.g. concrete and murrum blocks should be organised in self-help groups assisted by technical advisors from the City Engineers Department on the basis of Dandora Community Development Project or Mathare Valley site and Minimum Service scheme. The residents of the area should form a co-operative to enable them to do things communally as well as obtain loans from appropriate financial

institutions. By forming a co-operative, this will hasten the implementation of projects. Some of the work, e.g. excavation of trenches for laying of water pipes and sewer pipes should be done through self-help efforts when capital to pay labourers is not forthcoming. The Member for Langata Constituency which includes the study area is already organising such a co-operative for the area.

The Local authority should brief the population on the proposal for improvement, loan possibilities and conditions and terms under which loans will be given.

#### 6.7. 2. Implementation

Since money is the main hindrance in the implementation of many projects, it is suggested that many of the facilities and services for the area should be provided by the residents and themselves. The Harambee Self-Help spirit should be shown in such activities as digging trenches for pipe laying, improvement and construction of new houses, building of nursery schools. The local authority will be responsible for constructing roads, primary schools, market and main trunk sewer, and water kiosks. The approach is preferred in order to be in line with the country's policy of self-help through the spirit of Harambee.

The Government and/or Nairobi City Council have limited resources and cannot shoulder everything. This is why groups of people with a common bond are encouraged to try and do everything they can for themselves and government assists them with what is beyond their ability or only subsidises. Hence people should only depend on the authority for provision of material goods which they are totally unable to afford on their own.

### 6.7. 3 Future Planning of Similar areas in Nairobi

Makina Nubian Village improvement and upgrading project can be a very useful model for improving other unplanned areas in Nairobi e.g. Kawangware, Company Housing in Kariobangi and the Gitathuru Valley, Kangemi and Mathare Valley Housing. It is therefore recommended that instead of the present uncertainty about future plans and consequent bad maintenance of the houses, short-term development plans should be prepared and security of tenure should be provided to the occupants of the existing houses that are improvable and do not prevent a healthy development of the area. Such moves by the authority will create a better impression over their past ways of thinking whereby they were branded outlaws by the authority and residents of other areas.

If the Makina Nubian Village experience is followed in order to improve and upgrade other unplanned areas in Nairobi and Kenya in general, it is hoped that the outcome will be for the good of all. This will certainly minimize the worsening conditions for people living in unplanned areas in the urban centres and the living standards of the inhabitants will be much improved.

## 6.8. Site and Service Scheme

### 6.8.1 The Site Location and Characteristics.

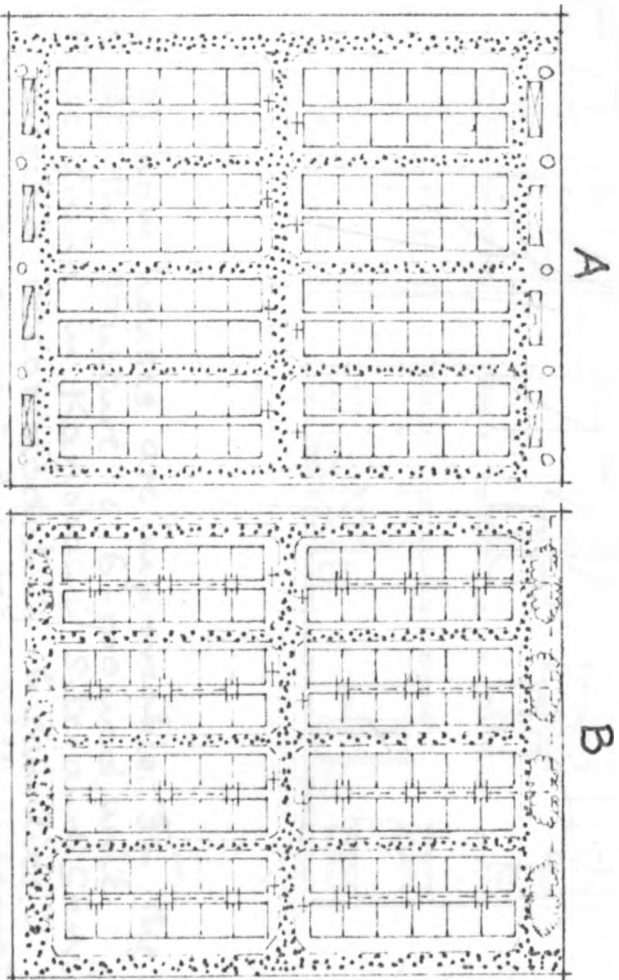
The site is located in Kibera; to the north and east it is boarded by the railway and to the south by the proposed National Sports Centre and West by the proposed link road from the proposed Trans-Africa Highway to Ngong Road. The land is owned by the Kenya Government.

The site has two streams running through but most of it is generally level. The site has an approximate area of 39 Ha. (See Maps, 5 and 6 and 17).







A number of squatter shanties on unsurveyed plots are found in clusters, especially north of the Nairobi Dam. The structures are mainly two-roomed and built of many types of materials including mud and wattle, timber, grass iron sheet and flattered tin. (Diagram 7).

### 6.8.2 The Planning of the Site.

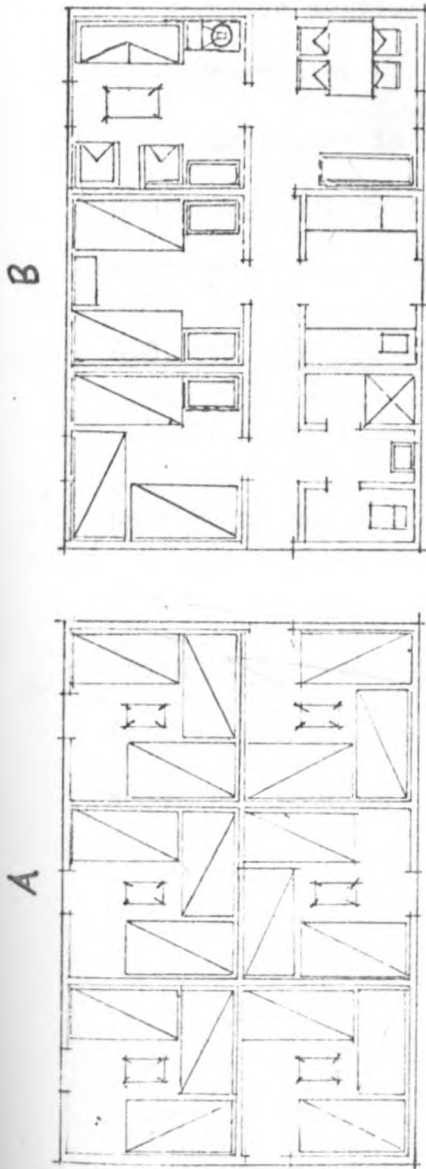
The aim of the scheme is to resettle people displaced in the Makina Village as well as the squatters in the area on surveyed plots. It is the aim of the scheme to keep the building costs at a minimum per unit by basing the planning on minimum but improvable standards for plots, road, services and houses. (See Diagram 8 and 9).



LEGEND

-  ROADS AND PATH
-  WATER AND SEWA
-  PIT LATRINES
-  REFUSE POINTS
-  WATER TAPS
-  TREES

An example of how plots are improvable. In the initial stage (A) plots are served by pit latrines and water kiosks. In the final stage (B)



An example of how houses are improvable. In the initial stage (A) the structure is 6-roomed unit similar to those found in Kariobangi Site and Service Scheme and possibly accommodating 6 families. Eventually it can be converted into a fully integrated family dwelling.

All kinds of intermediary steps are conceivable. It can be built in permanent or temporary material and in sections. A separate service-unit is possible. Subletting is still possible as each room opens into the corridor, the way most Nubian houses are arranged to accommodate subletting.

The construction of the scheme will be built in stages in accordance with availability of capital.

#### 6.8. 2.1. Land Use

Out of the 39 Ha. approximately 24Ha. are available for development due to railway and road reserves and open spaces along river courses (map. 17). These 24Ha. will roughly be used as shown below.

Residential	60%
Internal circulation	20%
Public services	15%
Recreation	5%

The scheme is designed to have a total of 500 plots measuring 16m. by 12m. each, and on each plot will be a six-roomed house (Diagram 9).

#### 6.8. 2.2 Commercial Activities

Commercial activities are located along the neighbourhood access roads. One main shopping centre with 7 shops and a bar is proposed. There are corner shops which will sell day to day house-hold items, particularly foodstuffs. A number of special purpose plots will be used according to need but mainly for social and institutional purposes.



It is proposed that one such plot at the junction of the two secondary roads should in future be developed as an open - air market to cater for the area.

#### 6.8.2.3. Public Facilities

A population of between 8,000 and 10,000 will be accommodated in the scheme. The City Council standard is one primary school for 5,000 population and one Nursery School for 2,500 population. A 3 Ha. site has been set aside for a three-stream school, and three sites of 0.4 Ha. each have been set aside for Nursery Schools. (Map 17). Before the Council has constructed the school it is hoped that children from the area will go to nearby schools like Mbagathi, Kibera, Langata East and Langata West all of which are within walking distance.

Land has been set aside for playing fields and playgrounds for recreational purposes and a site has been set aside for a social hall. The land along river courses will be used as open spaces and it is hoped that City Council Parks Department will develop these areas into public parks (Map. 17).

### 6.8.3. . Traffic and Roads

Circulation in the area is by footpaths.

A group of buildings are provided with a common car park placed centrally to cater for all residents.

This also acts as a service area where cleansing vehicles collect garbage. (See Map. 17.1 and 17.2)

Neighbourhood access roads with 18 metre reserve will be murrum. Road construction will be 5.5 metres carriageway and street corner lighting will be provided. Traffic separation will be established along the neighbourhood access roads.

Footpaths serve as access to almost all plots within each dwelling group. Furthermore footpaths can complete natural network of short cuts for the important pedestrian traffic to all parts of the scheme. Road reserve is 3metre walk-way and will be of murrum construction and properly drained.

### 6.8.4. Services

The servicing of the scheme is in two main phases. In the early years residents will use communal pitlatrines provided at one end of the dwelling group. (Map 17.1). This arrangement takes into account the financial problems of the people and the local authority.

But in the later years each house owner will be expected to have sanitation that is Waterborne.

This arrangement is in keeping with idea of improvability of plots, houses and services. (Map 17.2)

Containers for public garbage collection will be placed around the car park in each dwelling group where trucks can empty them. To avoid spreading litter all over, the container will be placed behind a screen. (Maps 17.1 and 17.2)

### 6.8.5 The Design of the Dwelling Unit.

bearing in mind this is a site and service scheme a number of ideas have been included in the design of the dwellings with the view:-

- (i) to minimize the initial building costs by a phased construction;
- (ii) to base the design on improvable minimum standards;
- (iii) to ensure environmental standards during the construction period;
- (iv) to arrange the circulation area so as to cater for the subletting element; and
- (v) to standardise structural component and room-sizes.

Some of the above ideas are presented graphically in Maps 17.1., and 17.2 and Diagrams 8 and 9. Further, the phasing allows each family to construct the number of rooms it is able to but ultimately each dwelling unit will have six rooms, and each plot will have water and a water-borne sanitary unit. It is the aim that owner developers gradually should up-grade the entire building and its surroundings to a specified standard within a period to be specified by the authorities.

This will in principle require that temporary materials should be replaced by permanent ones.

6.8.6. Cost of Services (See Table XXIV)

The following costs of services are calculated on the basis of 500 plots which will be allocated to successful applicants mainly from the present low-income residents in the area and who do not own another house within the City.

The choice and quality of service is a deliberate move to keep the development costs as low as possible but adhere to Grade II by-laws. The cited unit prices are contractor prices and thus include:-

- (i) overheads, (ii) labour, and (iii) materials.

A large open space exists in the area and this may not be immediately taken over by the Council. It is proposed that each plothead should contribute Shs. 2.50 per month towards the maintenance of these spaces. This is likely to create employment for two or three people in the area.

SITE AND SERVICE SCHEME

(Map 17)

TABLE XXIV COST OF SERVICES

1. <u>Roads</u>	Total cost in £
Murrum Roads (9350m <sup>2</sup> ) @ Shs. 20 per sq.m.	9,350
2. <u>Surface Water Drainage</u>	
2 courses (1750m) @ Shs. 125 per metre	10,900
3. <u>Water</u>	
Galvanised pipes 1½" dia. (5660m) @ Shs. 50 per metre.	14,150
4. <u>Sewer line</u>	
9" Sewer pipes. (1220m) @ Shs. 76/m	4,640
6" Sewer pipes (4300m) @ Shs. 52/m.	11,180
5. <u>Streetlighting</u>	
I post (steel) per 33m (1700m) @ Shs. 2500	7,500
	57,620

6. Land Rent : NHC schemes in Nairobi and other towns based on a serviced plot i.e. a plot to which roads, sewer and water have been provided, cost about £500. This amount is to pay the cost of the land and the social services to be provided. This is usually paid as a land rent. In many schemes it works down to a monthly fee of shs 40/- per plot.

### 6.8.7 Implementation of Site and Service Scheme.

#### 6.8.7.1 Selection and Allocation of Plot owners.

The success of the scheme will depend on the choice of plot owners. The selection should be restricted to the low-income people (earning between Shs. 0 and 700/- per month) presently resident in Kibera. It is important to point out that former house owners (both displaced Nubian house owners and squatters) should have preference over those who rent.

In allocating plots, need rather than amount of capital one has should guide the allocation. Further the allocation policy must ensure that the plot owner resides on the plot and therefore has a direct interest in the conditions of life on the plot, as well as its improvement. The problem of absentee landlordism at Kariobangi Site and Service scheme has already been cited and everything possible should be done to avoid it.

There is also the consideration that those who are self-employed within the community should have those plots where it is envisaged that commercial activities will be concentrated.. If any allocation fee has to be charged, it is essential that the fee is not prohibitive for any family which has been selected for a plot.

One to two years could well be allowed as a grace-period for such cases. The actual allocation should be done by the Ministry of Lands and Settlement.

#### 6.8.7. 2. Construction

The first problem after allocating plot is: Where do the allottees stay while the house is being built? The majority would prefer to live on the site, partly to save on time and money and partly to guard materials and completed work on the site. It is therefore recommended that any kind of shelter be permitted on the sites at the out-set. It is important that during the first two years nothing more than grade  $\bar{ii}$  by - laws are required. Some time should be granted to achieve this standard. The reason for the high rate of absentee landlords in for instance the Kariobangi and Thika site and service schemes was undoubtedly the high requirements as to standards and the shortness of the period in which to reach them. It is further suggested that type - plans of a variety of low - cost houses such as those supplied to Dagoretti people should be provided free of charge (with specifications and costs) and ideally some prototypes should be erected in the schme (ref. Mathare Valley Site and Minimum Service and Dandora Community Development Project).



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## CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.7.1 Summary.

The thesis deals with housing development in Kibera in general, but specifically addresses itself to the housing needs of the low-income communities living there. The objective of the research was to examine the housing problems of low-income people in Kibera and also to enquire into how present and future housing schemes in the area could be planned and organised in order to be more relevant and beneficial to the needs of low-income communities. The research hypothesis formulated for area stated thus:

- (i) unplanned housing areas lack basic infrastructure and community facilities;
- (ii) houses in squatter areas are of such poor quality that they ought to be demolished, although this may not be a solution to the housing problem of low-income communities;
- (iii) whereas uncontrolled housing areas possess qualities of offering investments to residents, also harbour and shelter undesirable characters;
- (iv) the demolition of uncontrolled squatter housing and the construction of expensive conventional housing leaves low-income people with no

proper accommodation; and

- (v) Finally, rural-urban exodus find a home in the uncontrolled settlements where the communities bear both rural and urban characteristics and therefore serve as areas of readjustment.

The research explains the reasons for the choice of the study area, the methodology used in the surveys and other aspects of the study are presented. This is mainly to demonstrate the importance of basing plan proposals for fast growing communities on socio-economic sample-surveys and physical scanning of the environment with the view of obtaining data and other relevant information in the shortest time possible.

The research has indicated that a large proportion of Nubian houseowners and tenants are low-income and that rents paid are comparatively low. But the area is inadequately provided with services so that the general environmental quality is low. On the other hand, the modern conventional housing schemes which are the out-come of the redevelopment programme have tended to be expensive and therefore out-of-reach for most low-income households. In any case the redevelopment projects are depriving some people of their accommodation without offering them better alternatives. The new housing in Kibera admittedly caters for higher income groups and has a high

absentee landlord ratio contrary to the tenant-purchase terms which require such houses to be owner-occupied. Thus while new housing schemes are increasing the housing stock in the city, they are also playing a negative role by depriving some people their cheap accommodation and others a home and the means of earning a living since they are erected in areas where Nubian houses have been demolished.

As a consequence of the study findings, proposals aimed at improving the living conditions of the low-income communities in the area are suggested. They comprise an Up-grading and Improvement Scheme in which the area will be provided with proper infrastructure services; and a Site and Service Scheme in which community facilities are provided and individuals put up own houses assisted by loans to buy building material and also benefit from technical advice offered by the authority.

## 7.2 Conclusions.

It is shown that Kibera still accommodates a large low-income population in both the Nubian Villages and the Squatter Settlements. That the mushrooming house development in the two areas is caused by the very high demand for low-rent housing units which are in short supply in the city and which City Council of

Nairobi is unable to supply in quantities and at the required rate so as to cope with the demand. Further, the by-laws controlling development in such areas in the city and other urban centres have to blame for insisting on high standards and the failure to provide them with proper infrastructure and services.

The study has concluded that the current redevelopment programme in Kibera is not the best solution to the housing problems of low-income communities. Since most low-income households lack development capital, the policy guiding house development in their area should be one that aims at producing reasonably cheap accommodation or one that aims at preserving existing housing with the view of improving them or gradually replacing them in the near future as funds become available. The study has also shown that low-income people are prepared to change and are willing to work towards the achievement of this goal and the authorities only need to assist them in matters which are beyond their control such as issuing them land title-deeds to confirm their rights of occupancy and being recognised as legal occupants of the area as it is the in planned areas.

Throughout the study a strong desire was shown for houseownership by both houseowners and renters. This desire was demonstrated by the response of the residents to a socio-economic survey carried out in connection with the Kibera Experimental Self-Help Scheme soon to be developed at Lomle. But the snag with many low-income families is the lack of capital with which to develop and acquire the property. Hence the possibility of obtaining a development loan from the financing institutions including the National Housing Corporation and the City Council is most welcome

### 7.3 Recommendations.

The following recommendations are based on the housing needs of the low-income people in the city in general, and those living at Kibera in particular:

1. As the redevelopment schemes have failed to cater for the housing needs of the low-income communities in Kibera it is recommended that the programme based on demolition of Nubian housing be suspended until the housing situation in the city improves.
2. Meanwhile there should be a deliberate effort to improve the environmental quality of the present Nubian Villages where the majority of low-income

people live. An Up-grading and Improvement Scheme whose aim is to provide services to the area while preserving as many of the existing structures as possible is recommended. This entails the physical improvement of the environment and quite a number of buildings.

3. Since some houses would be affected in the course of providing services to the area, and others that because they are uneconomic to improve, a Site and Service Scheme has been proposed to cater for them as well as the squatters found in the area.
4. In the proposed site and service scheme present houseowners should have priority over tenants. This is necessary because Nubian houseowners have no land elsewhere in the republic and for many house ownership is the sole means of earning a living through subletting part of their house.
5. The problem with most low-income households is lack of capital with which to effect development. It is recommended that loan facilities be made available to them. But since problems could arise in the management of loans, especially in the recovery of loan money, it is recommended that Village

H) Housing Societies should be formed so that loans from Government or any other body could be channelled through them to individual borrowers and the society would also be responsible for recovering monthly repayments from members. The society will also be responsible for organising its members to make sure that they comply with the conditions of the scheme.

6. Any member allocated a serviced plot but not able to build according to the minimum standard required should be allowed to construct one of their choice. However, such structures should be capable of improvability in future when funds become available to the family.

7. Squatters allocated serviced plots should be treated in the same way as the rest. But the Government should continue to settle them in resettlement schemes whenever there is such opportunity.

#### 7.4 Scope for Future Research in Kibera.

This study does not claim to be exhaustive. Kibera is definitely an area with development problems and information on most of these problems is scanty. For instance, the study made no attempt to obtain *information*



on transportation ,whether the present Bus Service in the area is adequate or inadequate; or the origin of present landlords and tenants in New Kibera and the reasons for moving to Kibera.These are some of the areas which future researchers could examine in detail.

There is also the possibility of research in the role played by the Makina Local Market.Most self-employed residents in one way or the <sup>other</sup> dependent for their livelihood on the Market,yet there was no attempt made to analyse the contribution of the market to the economy of the area.It would therefore be of interest if some research could be carried on in this field

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INDIVIDUAL QUESTIONNAIRE

Building Number .....

Household Number .....

AGE	Marital Status	Relation to head of Household	SEX	Level of Education	Occupation	Place of work	Distance to place of work in km.	Means of Transport	Income and/or School fees per month in Shs.	Tribe (or ethnic group)	Religion	Place of Birth
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												

AGE - Write the exact age in complete years.

MARITAL STATUS - 1. Single; 2. Married; 3. Widow/widower;  
4. Separated; 5. Divorced.

RELATION TO HEAD OF HOUSEHOLD

1. Head of household; 2. Wife; 3. Child  
of head 4. Relative; 5. Employee;  
6. Friend/Guest; 7. Parents/Parents-in-law.

SEX 1. Male; 2. Female.

LEVEL OF EDUCATION

1. None; Semi-literate; 2. Less than  
complete Primary; 3. Complete Primary;  
4. Less than Complete Secondary; 5. Complete  
Secondary (Form I-IV); 6. Higher Education  
(above Form IV).

OCCUPATION

1. Managerial; 2. Professional; 3. Technical  
4. Clerical/Administration/Secretarial;  
5. Manual/Domestic servant; 6. Self-  
employed; 7. Not employed but seeking a job.

PLACE OF WORK

1. City Centre, 2. Industrial Area; 3. Kibera  
and environs; 4. Rest of Nairobi; 5. Outside  
Nairobi (specify)

DISTANCE TO PLACE OF WORK IN KM.

1. Less than  $\frac{1}{2}$  km; 2.  $\frac{1}{2}$ -1km; 3. 1-3km;  
4. 3-5km; 5. 5-10km; 6. More than 10km.

MEANS OF TRANSPORT

1. Walk; 2. Cycle; 3. Bus; 4. Own Car;  
5. Car (not own); 6. Bus/Car; 7. Staff



transport.

INCOME AND OR SCHOOL FEES PER MONTH IN SHS.

1. Less than Sh. 250; 2. Shs. 250-449;
3. Shs. 450-749; 4. Shs. 750-999;
5. Shs. 1000-1500; 6. More than Shs. 1500;
7. No response; 8. Nil.

TRIBE (OR ETHNIC group).

1. Nubian; 2. Kikuyu; 3. Kamba; 4. Luo ;
5. Luyia; 6. Other tribes of Kenya; 7. Non-
- Kenyan peoples.

- RELIGION -
1. Muslim; 2. Protestant; 3. Roman Catholics;
  4. Traditional African Religion; 5. No religion.

PLACE OF BIRTH

1. Nairobi; 2. Central Province; 3. Eastern Province;
4. Rift Valley Province; 7. Nyanza Province;
8. North-Eastern Province; 9. Born outside Kenya; No response.
5. Coast Province; 6. Western Province

HOUSEHOLD QUESTIONNAIRE

1. Building Number .....
2. Household Number .....
3. Dwelling tenure .....
  1. Own; 2. Tenant; 3. Subtenant; 4. Relative to owner;
  5. Relative to tenant; 6. Servant to owner; 7. Servant to tenant.
4. If owner, how did you acquire the house .....
  1. Built; 2. Inherited; 3. Buying.
5. If tenant/buying, how much rent/premium do you pay per month ..... Shs. ....
  1. Less than 20/-; 2. 20-49; 3. 50-89; 4. 90-129;
  5. 130-199; 6. 200-349; 7. 350-500; 8. More than 500.
6. How old is the building in years .....
  1. Less than 1; 2. 1-2; 3. 2-5; 4. 5-10; 5. 10-20;
  6. More than 20.
7. What is the total cost of the building in Shs.....
8. If owner do you sublet any rooms? .....
  1. Yes;                    2. No
9. If 'Yes', how many rooms do you let?
  1. Nil; 2. 1; 3. 2; 4. 3-4; 5. 5-10; 6. More than 10.
10. How much rent do you collect every month? .....
11. How many rooms do you occupy? .....
 

(Same code as question 9).

12. Buildings with kitchens .....
- 0. None; 1. Separate but shared; 2. Separate but not shared  
3. Inside building but shared; 4. Inside building but private.
13. Do you conduct any business in any of the rooms? .....
1. Yes; 2. No.
14. If 'YES', what type of business is it? .....
1. Retail; 2. Wholesale/Retail; 3. Wholesale;  
4. Workshop; 5. Store/workshop.
15. Do you use electricity in the house? .....
1. Yes; 2. No.
16. If 'YES' what is your monthly electricity bill per month?
1. Part of rent; 2. Less than 10/- 3. 10-15; 4. 15-20;  
5. 20-40; 5. More than 40; No response.
17. Source of water .....
- 0. Stream; 1. Public standpipe; 2. Private standpipe;  
3. Own borehole; 4. Public borehole; 5. Piped within building.
18. Distance to water source .....km...
1. Less than  $\frac{1}{4}$ ; 2.  $\frac{1}{4}$ -1; 3.  $\frac{1}{2}$ - $\frac{3}{4}$ ; 4.  $\frac{3}{4}$ -1; 5. More than 1km.
19. How much water do you use per day ..... (No debes)...
1. Less than 1; 2. 1-2; 3. 2-4; 4. 4-6; 5. 6-10; 6. 10-15  
7. More than 15.
20. How much money do you pay for water per month? Shs. ....
1. Part of house rent; 2. Less than Shs. 10; 3. Shs. 10-15;  
4. Shs. 15-20; 5. Shs. 20-40; 6. More than Shs. 40;

7. No response.
21. How do you dispose refuse? .....
1. Dump nearby; 2. Dump at N.C.C. collection centre;
  3. N.C.C. door to door collection
22. Sewage collection and disposal .....
0. None; 1. Main Sewer; 2. Septic tank;
  3. Conserwancy tank; 4. Pit latrine; 5. Basket type.
23. Storm drain .....
0. Natural ; 1. Constructed but open; 2. Constructed but covered.
24. Cooking fuel .....
1. Firewood; 2. Charcoal; 3. Kerosene; 4. Kerosene/charcoal;
  5. Gas; 6. Gas/Kerosene; 7. Gas/charcoal;
  8. Electricity; 9. Electricity/Gas; 10. Electricity/charcoal.
25. Do you own land elsewhere? .....
1. Yes; 2. NO
26. If 'YES', where? (Code as place of Birth) .....
27. If 'YES', is it in the rural or urban area? .....
1. Rural; 2. Urban.
28. Do you own a house elsewhere? .....
1. Yes; 2. NO.
29. If 'YES', where? (Code as place of Birth) .....
30. If 'YES', is it in the rural or urban area?
1. Rural; 2. Urban.
31. If married and your wife/husband does not live with you here, where is she/he living? .....
- (code as place of Birth)

32. What is the reason for not living together? .....
1. takes care of children at home; 2. works on shamba;
  3. works elsewhere; 4. is a fulltime student;
  5. conducts business; 6. any other (specify).
33. How long have you lived in Kibera? ..... years.  
(Code as question 6).
34. Type of shops visited for buying stock .....
1. Local shopping area; 2. super market; 3. Local Market;
  4. Kiosk; 5. Open Air market.
35. Where else do you shop? .....
1. City centre; 2. Other parts of Nairobi; 3. Outside Nairobi.
36. How often do you go shopping? .....
1. Once a week; 2. More than twice a week; 3. Once a fortnight;
  4. Once a month; 5. Irregularly.
37. If the area you are staying in was to be developed, where would you like to live? .....
1. In the same area; 2. Go to other estates in Nairobi;
  3. Go back to the rural area; 5. Any other (specify).
38. How many rooms would you like to occupy? .....
1. One room; 2. Two rooms; 3. Three rooms; 4. Four rooms;
  5. More than 4 rooms; 6. No response.
39. How much rent would you be willing to pay for the accommodation? .....
- (Code as question 5).

40. If the following services were to be provided, which ones would you like to have? (list them in order of priority).

1. Nursery
2. Primary school
3. Secondary school
4. Health centre
5. Shopping centre
6. Police station.

41. If the following public utilities were to be provided, which ones would like to have? (list them in order of priority).

1. Improvement of roads
2. Water inside house
3. Electricity in house
4. Street - lights.
5. Sewage Disposal system
6. Drainage.

BUILDING AND LOCATION QUESTIONNAIRE

1. Building Number .....
2. Household Number .....
3. Type of building .....
  1. Single floor detached;
  2. Single floor semi-detached;
  3. Terraced;
  4. Courtyard type;
  5. Flats.
4. Number of dwelling units on the building .....
  1. 1; 2. 2; 3. 2-4; 4. 4-8; 5. 8-15; 6. Over 15.
5. Size of plot in square metres .....
6. Size of structure in square metres .....
7. Land tenure for building owners .....
8. 1. Owner; 2. Formal lease private land; 3. Formal lease public land; 4. Informal lease; 5. Squatter.
8. Type of roof .....
  1. Thatch; 2. Cardboard; 3. Flattened tin; 4. C.G.I.
  5. Asbestos; 6. Tiles; 7. Concrete; 8. Other (specify).
9. Type of wall .....
  1. Cardboard/flattened tin; 2. Mud and wattle;
  3. Concrete block; 4. Brick; 5. Masonary; 5. Timber;
  6. Other (Specify).
10. Type of floor .....
  1. Earth; 2. Rough concrete; 3. Smooth concrete;
  4. Wooden; 5. Tile Linol.

11. Wall finish .....
  1. Not plastered and unpainted; 2. Not plastered but painted; 3. Plastered but unpainted; 4. Plastered and painted.
12. Presence of ceiling .....
  1. None; 2. Fibre board; 3. Other.
13. Ventilation .....
  1. Adequate; 2. Small windows; 3. No windows.
14. State of Building .....
  1. Complete; 2. Not complete; 3. Habitable;
  4. Not Habitable; 5. Maintained; 6. Not maintained.
15. Assessment of the building .....
  1. Very good condition; 2. Good condition; 3. Fair condition; 4. Poor condition.
16. Nearest road to building .....
  1. Track/footpath; 2. Murrum; 3. Tarmac 4. Paved with concrete slaps.
17. Distance to nearest Bus stop in km. ....
  1. Less than  $\frac{1}{2}$  km; 2.  $\frac{1}{2}$ -1; 3. 1-2; 4. 2-5; 5. More than 5 km.
18. Distance to the nearest shop or kiosk ..... km
  1. Less than  $\frac{1}{2}$  km; 2.  $\frac{1}{2}$ -1; 3. 1-2; 4. 2-5; 5. More than 5 km.
19. Distance to usual market ..... km. ....
  1. Less than  $\frac{1}{2}$  km; 2.  $\frac{1}{2}$ -1; 3. 1-2; 4. 2-5; 5. More than 5 km.



20. Condition of the immediate environment .....

1. No open space;
2. Little open space uncared for;
3. Little open space, neat;
4. Extensive open space uncared for;
5. Extensive open space, neat.

Photograph 1: A Nubian mud and wattle house  
under construction.

Photograph 2: A partially completed mud and wattle  
Nubian House. Because of high demand  
these houses are occupied before they  
are properly completed.

Photograph 3: A 3-bedroom conventional house in  
New Kibera (NHC Phase IV- Salama  
Estate)

Photograph 4: A Squatter's house with a maize field  
in front and Ngong Road Forest at back

Photograph 5: Squatting in Ngong Road Forest

Photograph 6: Squatter children leave for school.

Photograph 7: NCC.Tenant-Purchase Scheme at Kibera.  
The scheme has detached and semi-detached  
3-5 room housing units.

Photograph 8: New Housing in Kibera. Notice the high  
small windows in Phase I & II of NHC  
houses(foreground) and the large windows  
in NCC Phase I (back)

Photograph 9: A Harambee Self-Help Nursery School at Lindi Nubian Village. The community tries to provide itself with some of the social before NCC is able to provide them.

Photograph 10: A typical scene outside a squatter Village in Kibera. (Lainishaba Village)

Photograph 11: Contrast between a Squatter and modern housing.

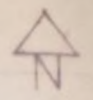
Photograph 12: A Multi-purpose building near Makina Market (has stores, retail and wholesale shops, and residential rooms for owner and tenants.

Photograph 13: Temporary stalls at Makina Market.  
Trade items are transported to the  
Market daily.

Photograph 14: One of the many craftsmen in his stall  
and the customers. He is a cobbler  
and to the left is a bicycle repair  
workshop.



# KIBERA : existing housing



## LEGEND

- |  |                 |  |                    |
|--|-----------------|--|--------------------|
|  | DWELLING HOUSE  |  | RAILWAY            |
|  | SCHOOL BUILDING |  | ROAD               |
|  | MUSLIM CEMETERY |  | TRACK AND FOOTPATH |
|  | LOCAL MARKET    |  | RIVER              |
|  | FOREST          |  |                    |
|  | QUARRY          |  |                    |

ong Road  
Forest



Social Centre

Tai Primary School

GOLF COURSE

PROPOSED EXTENSION TO NEW KIBERA VILLAGE

AREA FOR UPGRADING

KIBERA NEW VILLAGE

SALAMA ESTATE

Kibera Primary School

- PROPOSED KIBERA RAILWAY
- EXISTING RAILWAY
- PROPOSED RAILWAY
- PROPOSED ROAD
- PROPOSED UPGRADING

250

P.F.

S.S.

Playing Field P.F. & S.H.

NS

S

SP

P.S.

NS

S.S.

Proposed Railway Reserve

PROPOSED TRANS-AFRICA HIGHWAY

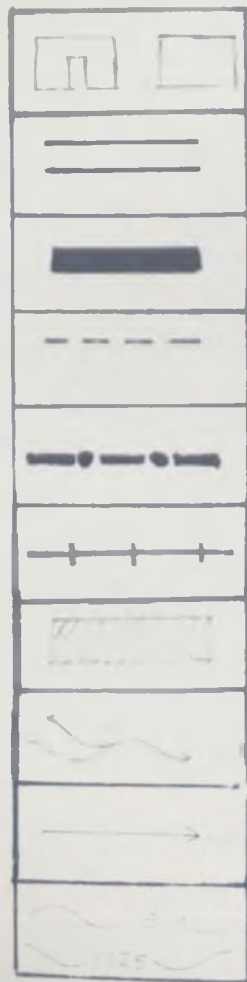
NATIONAL S.P.







LEGEND



EXISTING HOUSES

SECONDARY ROADS BITUM

TRACKS (PARTIALLY MOTOR

FOOTPATHS

IMPROVEMENT

RAILWAY

PARKING SPACE

SEASONAL STREAMS

CANALIZED STREAM

CONTOUR LINES (feet)

MAKINA NUBIAN VILLA

EXISTING SITUATION

SCALE 1:2500

TRACED BY AMUNGA, W.E.O.