

PLANNING FOR HOUSING THE ECONOMICALLY WEAK
SECTION OF THE URBAN POPULATION
A CASE STUDY OF SELECTED
SITE AND SERVICE SCHEMES
IN NAIROBI

By

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for the Degree of Master of Arts in *planning*
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**"THIS THESIS IS MY OWN ORIGINAL WORK AND
HAS NOT BEEN PRESENTED FOR A DEGREE IN
ANY OTHER UNIVERSITY"**

"This thesis has been submitted

for examination with



approval as University Supervisor"

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

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A B S T R A C T

The provision of housing for low-income people is one of the major problems facing the local authorities in this country. Site and Service Schemes approach is being applied as a means of alleviating the shortage of housing in the low income bracket.

Four problems concerning the administration of Site and Service Schemes policy are proposed by A.P. Van-Huyck. These are that, policy formulation and Program of the schemes follow an ad-hoc basis, that implementation of the program tends to proceed in an uncoordinated and inefficient manner, that there is a problem of basic orientation to providing a high standard of physical development regardless of the economic status of the people to be housed and that there is a high degree of central management and control. These problems have been looked at within the Kenyan context and have been found to be valid. However attempts are being made to reduce these problems.

Apart from using Site and Service Schemes for the guidance and control of urban growth through standardization of development procedures, the schemes, increase the accessibility of the residents to urban services. The schemes also serve as a big source of income for many plottolders.

In Kenya Site and Service Schemes have not reached the stage of orientating housing agencies towards becoming self-sustaining neither has the cooperation of community organization which exists in many squatter areas been enlisted by the administration.

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INTRODUCTIONURBANIZATION AS A BACKGROUND TO HOUSINGPROBLEMS IN NAIROBI

One of the basic forms of human settlement is the clustering of people into communities. This arises from man's need for cooperation in order to survive. Urbanization means more than just the process of population concentration. It involves a change in the system of production and the corresponding pattern of behaviour.

In 1970, 12% (13 million) of African population lived in cities. It is expected that by the year 2000, 23% (134 million) of the total population of the continent will have moved in cities.¹ Although the rapid growth may be attributed to natural increase over half of the city growth is a result of migration from the countryside.

In Kenya, the urban population accounts for over 10% of the country's total population. Nairobi and Mombasa alone have 70% of the total urban population, leaving only 30% to the other 46 urban centres in the country. Between 1962 and 1969 53% of the increase in urban population came to Nairobi. Population estimates show that by the year 2000, Nairobi alone will be having a population of between 3 and 4 million.

Before independence, the migratory pattern was mainly one of people moving from rural areas to other rural areas, i.e from home areas to the big farms which needed their

¹ C.E. Madavo, "Making The Cities Work"
African Report - Journal,
November 1971.

labour for the production of raw agricultural materials for export. Furthermore during this period migration control policies were highly operative.

With independence, restrictions on movement were removed. There was accelerated rate of social development, (some schools health centres, housing etc) and moves were made to restructure the economy. Nairobi being the capital city and the biggest city not only in Kenya but in East Africa, emerged as a centre where all these changes were emanating from. Rural population was thus attracted to Nairobi leading to an influx into the city which was inadequately prepared, the flow still continues. Nairobi is therefore finding itself faced with problems associated with urbanization such as:

- i) unemployment
- ii) housing shortage as manifested in unplanned areas, squatter settlements, overcrowding in both official and non-official lowcost housing and
- iii) the increasing pressure exerted on the infrastructure and community services.

One of the most obvious implications of urbanization is the massive investment required in housing, education, health services, infrastructure etc for a sound urban growth. Nairobi lacks a sound revenue base and therefore cannot provide all the necessary services. This means that a section of the urban population is made to do without some of essential facilities and services.

Unemployment and housing pose the greatest problems to the city administration. Squatter settlements, overcrowding and slum conditions are all symptoms of unsound urban growth. These

phenomena indicate that Nairobi is increasingly becoming over-urbanized i.e. much higher proportions of the population live in the city than could be justified by the level of national economic development. It is therefore possible for urban misery and rural poverty to exist side by side.

In an attempt to reduce the rate of migration to urban areas, and so reduce some of the problems facing local authorities, the Central Government has tried a number of the following solutions;

- a) Rural development: The idea behind the policy is that if rural areas are developed, they will stop "pushing" their population to urban areas; and also the benefits of development will spread to more people.
- b) Identification of areas of economic potential, for instance, the sugar belt in Western Kenya, the ranching areas and rice schemes.
- c) Dispersion of Industrial and Commercial development e.g the paper-mills at Webuye and textile mills at Eldoret and Nanyuki.
- d) It has become apparent that the present education system orientates people towards towns, there are attempts therefore to make it more responsive to the new problems facing the country.

The above measures are obviously long-term solutions or can absorb just a limited number of people. It becomes necessary for the city to find other ways of tackling the problems of immigration from within so that struggle to find solutions to the problems is from both sides.

The majority of the city population fall within the low income group. Most of the people in this group cannot afford to secure the type of accommodation offered by the local authorities and the private sector. It is this group of people which has been seen as a liability to the councils, yet, they can not be ignored.

1:2:0 NATIONAL HOUSING POLICY

Housing is a national problem and is manifested in both urban and rural areas. Since population concentrations are in larger urban areas, and so great health risks involved, the central government has given priority to urban housing.

The current National Development Plan, 1974 - 1978 has a more ambitious housing program than it has ever done in the past. K£34.46 million has been allocated to housing as compared with K£14.89 million of the previous years. This is a total increase of 230%. The Plan goes further to state that the larger part of low cost housing programme will consist of site and service Schemes. This policy clearly departs from the conventional way in which contracting firms, financial institutions and government agencies are involved in the provision of urban low-cost housing. Instead the venture is now between the central government and the local authorities and the individual plot owner.

1:2: THE AIM OF THE POLICY

The aim of the policy as stated in the Plan is to increase the total low cost housing stock for both ownership and rental purposes and also to enable the people of the low-income groups to become house owners. The other objective which is not stated but is implied is that, the policy aims more at guiding and controlling the type of urban growth in Kenyan towns. Serviced plots

offer a possible solution to the problem of illegal or uncontrolled settlements. It also gives the low-income earners a stake in the urban housing process and through this it is possible to gain control over their urban development process. Furthermore the approach of site and service schemes can be viewed as a means of making the low-income earners pay for urban development (since they are direct participants), therefore becoming assets to the local authorities.

1:3 PROBLEM AND ITS SIGNIFICANCE

The success of any project depends on the administration responsible for it. Site and Service Programs are no exceptions. From the observation of existing schemes the following basic problems are apparent:

- 1) The policy formulation and program of Site and Service Schemes follow an ad-hoc basis, i.e., there is little concern for working out a systematic approach to develop an on-going routine program. What happens is that each project is considered as a separate undertaking, for instance, acquisition of land is for a given project rather than an overall program to provide a steady flow of land ready for development to meet total requirement.
- 2) Program implementation has tended to proceed in an uncoordinated and inefficient manner, for instance an agency primarily responsible for a given project does not control all elements required for development.

- 3) There is the problem of basic orientation to providing a high standard of physical development regardless of the needs or economic limitations of the people being planned for.
- 4) There is a high degree of central management and control which leads to the reduction of local initiative.

The fourth problem is seen from the national level. This is where management and control of schemes in other towns other than Nairobi is carried out by the National Housing Corporation based in Nairobi. Great distances between the groups involved create elements of impersonality.

It is significant to study the above problems because at the moment Site and Service Programs are seen as the only feasible and effective means of tackling the low-income housing problem in the towns. Since as stated earlier that administration is one of the most important components of the program needing more attention and streamlining. It is also hoped that the study will help in the understanding the factors underlying the success and failure of such programs.

1:4 THE AIMS OF THE STUDY

Site and Service Schemes involve many different institutions in planning and implementation of the policy. The study therefore aims;

- a) to investigate and analyse how institutions involved function and how they respond to problems.
- b) to analyse what coordination exists between the institutions involved.

- c) to find the general impact of the schemes to the occupants.
- d) to recommend - if necessary changes in the institutional set-up so that agencies involved become self-sustaining. Furthermore the resulting information from the study could be used as tools to aid those involved in policy formulation and implementation of Site and Service Schemes.

1:4:1 SCOPE COVERED

The study hopes to cover aspects like what type of relationship exists between the participants in the implementation of the policy and the type of feedback. It is also necessary to find how much the administration enlists the cooperation of the community organization as a means of infusing capital into the schemes or mobilising the savings within the community to provide an alternative to official institutions which the low income people do not often make use of. Finally the study hopes to look at how different bodies involved appreciate the end product of their efforts and what flexibility exists within the operation of the schemes so that they can adjust to the changing situations which arise during implementation stage.

1:4:2 REASONS FOR CHOOSING NAIROBI AS STUDY AREA

Nairobi being the largest city in the country and also being the destination of the highest percentage of the migrants has a serious housing shortage. Nairobi has Site and Service Schemes at different stages i.e. finished schemes, schemes under-way and one still in the planning stage, these therefore provide a rich ground for study. Furthermore the largest scheme involving

the provision of 6,000 serviced plots is placed in Nairobi and and so in a way justifies the choice. Nearly all the bodies concerned with the planning and even implementation of the programs are found in Nairobi and so within easy reach for collection of information. It also has been found that all the institutions involved in the programs have their own schemes in Nairobi. This gives a chance to look at these schemes and compare them and so find out what lessons the institutions can learn from each other since their goal is one.

1:5 ASSUMPTIONS

To facilitate smooth conduct of the study, some basic assumptions have been made to be tested.

- a) Formal institutions having lost control of the low-income housing development are using Site and Service Scheme as a means of regaining the guidance and control of urban growth by regulating land use and land speculation. This is done through:
 - i) Giving standards on plot size plot coverage and usage.
 - ii) Standardizing types of house plans, number of rooms and room sizes.
 - iii) Separation of functions and what procedures to be followed and
 - iv) the legal conditions attached to land.
- b) Site and Service Schemes provide a way of improving the welfare of the low income people by increasing their access to urban services like public sanitation, medical services, potable water, and also to places of work.

- c) Site and Service Schemes should help in orientating housing agencies towards becoming more self-sustaining for instance the creation of viable organization to remain on the completion of international loans; and dependence on the national housing finances to continue to serve the low income household residential needs.
- d) The administration enlists the cooperation of the community organization so that the programs can succeed.

1:6 REVIEW OF RELATED LITERATURE

One of the major problems facing Nairobi is the serious shortage of housing, particularly for low-income persons. Although this shortage may be a result of many immigrants to the city, lack of employment and low incomes, the policy lines followed so far have contributed to this problem in that, "the principal tool for solving the problem has been the provision of city council - financed dwelling units" (Stren, 1970). These units have been rented well below the market price of similar structures offered by the private sector. Also due to allocation procedures followed these houses do not reach the target population; instead a higher income benefits. Implicitly, the council is giving a subsidy to people who then use what they would have spent on housing on luxury commodities. Therefore the Nairobi City Council is not making profits which it could invest in more construction. Limited funds and inability to execute complex projects act as a constraint to provision of houses.

The challenge facing Nairobi to organize itself to produce the housing needed by city's expanding population is great. The task is to find means of rapidly expanding the development of properly planned and serviced housing in step with the growth in population. This can be achieved by making use of the strengths and resources of public and private sectors. Therefore the Council should concentrate on provision of serviced plots and leave construction of dwellings to the private sector, individuals, cooperatives and companies. In this manner the Council makes use of available capital finance to benefit the greatest number of households and also draws on private resources - money and manpower for housing. Coopers and Heybrand (1976) deals with the policy and organizational changes required to enable the Council to act effectively in response to the problems it faces.

As far back as 1964, the United Nations mission indicated that Nairobi needed 3,400 additional units yearly between 1962 and 1970 whereas the whole nation needed 44,000 units per annum. The mission recommended Site and Service Schemes to be used. (Bloomberg and Abrams 1964). The National Development Plan 1974 - 1978 stresses the approach as the possible means of alleviating the housing problem. It is from this Plan that the National Housing Corporation gets the power through the Ministry of Housing and Social Services to implement the policy. In connection with this, the National Housing Corporation has conducted a survey and come up with a guideline for administrative procedures to be followed in the implementation (1976).

The Housing Research and Development Unit (HRDU) is another child of the Ministry of Housing and Social Services. In 1971 the HRDU carried out a survey and analysis of all existing Site

and Service Schemes in Kenya with an aim of coming up with some procedures of standardizing the schemes. Their recent booklet (1976) gives explanatory notes on the planning of low-cost housing Scheme in Nairobi - the aim being to "gain a background information on which to establish new basic but improvable standards to march the affordability of the urban low-income groups.

Abrams (1964) suggests Site and Service Schemes as the solution to housing problems. He also gives a suggestion of several ways of helping the plot allottee either materially or financially. In his book, "Planning Sites and Service Programs" - Van Huyck gives a summary of Sites and Services experiences in selected countries. He concludes that these programs have been considered as temporary measures to be used until such a time as it would be possible to provide a standard housing unit to each household. He suggests some of the major considerations to be noted in planning and implementation of the schemes and some of the assumptions tested in the present study are drawn from his book.

A number of studies undertaken by the Nairobi City Council have also tended to look at Site and Service Schemes as the solution to low-income housing problems. It is therefore of great interest to look at administration of these programs as an important factor in the success of the policy.

1:7 LIMITATIONS OF THE STUDY

The study focuses only on those areas where authority provides serviced plots and not where upgrading of unplanned settlements exists. Therefore it considers just one aspect of the whole realm of housing the low-income people. As a policy, Site and Service

started getting a positive backing from the authority in the current Development Plan and therefore it may be too early to evaluate the effectiveness of the policy. Also with a giant scheme underway (The Dandora Project) the study will leave out many lessons which may come up at the completion of the project. But despite these limitations, there are apparent problems which are manifested in the schemes and therefore justify the undertaking of the present study.

1:8 DEFINITIONS OF IMPORTANT TERMS

"Site and Service Schemes" or "Site and Service Programs" or "Site and Service Projects" are used interchangeably by the writer. The meaning of Site and Service Schemes is a housing scheme characterized by the provision of urbanized land upon which services provided range from water, sewers, roads and sometimes electricity to a ready made sanitary block. "The plot owner" is expected to construct his own house through self-help (here self-help ranges from self-labour to hired labour or sometimes through harambee efforts). He can get technical assistance from an officer of the Council.

'Economically weak' refers to the low income group whose monthly earnings range from Kshs 300/- to Kshs 1,200/-. (This is the definition of low income as given by the authority). It is this income bracket which theoretically should be allocated a serviced plot in the schemes. Priority is given to people with a permanent employment but those within the informal sector whose businesses can be assessed have a chance of being considered.

Although the official minimum salary scale is Shs.300/- per month, it is a well known factor that many people earn below this figure. It is this group which in most cases create squatter

settlements. Yet it is this group which is not considered in any of the housing program. This is a big short-coming on the part of the policy. But the government states clearly that it will help those who show the initiative since people cannot be given all things freely.

'Plot owner' is a person who has acquired legal rights to develop a plot in Site and Service Scheme. In the report, the word 'participants' is used mainly to refer to plot owner and tenants who reside in the schemes.

"Formal institutions" are those official agencies involved in the planning and implementation of projects. In case of Nairobi those involved are:

- i) the Ministry of Lands and Settlement -acquisition of land.
- ii) the Ministry of Housing and Social Services.
- iii) the Nairobi City Council,
- iv) the World Bank,
- v) the National Housing Corporation,
- vi) the National Christian Council of Kenya.

"Administration" is used to mean the management of the schemes in totality. This includes all stages through which the project undergoes - from problem identification to completion stage.

1:9 RESEARCH METHODOLOGY

There are four Schemes in Nairobi. Two of them, Kariobangi and Huruma are existing. The third scheme Dandora has the first phase of the project underconstruction and Kibera which is the fourth scheme is still seeking for tenders to construct the basic facilities.

Although the study considers all the schemes, interviews

have been carried out only in Kariobangi and Huruma since these two are occupied. The interviews were carried out on plot basis, thus one household per plot was interviewed.

Originally it was planned to interview a 15% sample (randomly selected) of the total plots in each scheme; but this was not fully achieved. In Kariobangi only 14.5% was achieved whereas in Huruma only 10% of the total number was interviewed. This was due to time shortage and the fact that most of the heads did not arrive home until after 6 p.m. The questionnaire used is at the back (Appendix A).

Another method used was personal interviews with some officials of the involved agencies. This helped to put in perspective the background and the objectives of the schemes. Personal observation of the schemes was also carried out and written reports provided a lot of information.

There are some limitations of the data collection. The sensitive issue of incomes, raises some doubts. This is because those interviewed were unwilling to give the correct figure of their income. The sincerity of the figures was counterchecked by the amount of rent paid: from the rents it was clear that the incomes must have been higher than what was stated. There was the problem of not finding people at home and that of limited time. But with all these shortcomings, the data collected has some interesting results, for instance the knowledge of the tenants and their attitudes about the coming-up schemes.

1:10 THE STUDY ORGANIZATION

Chapter one introduces the problem of housing with specific reference to Nairobi. It looks at the national housing policy, its aims, the problems to be investigated and their significance.

In the same chapter one we find the aims of the study, the scope covered and the reasons for choosing Nairobi as the study area. Assumptions to be tested and the methodology used are also stated.

Chapter two deals with the general background of Nairobi giving the development of residential areas and the factors leading to this pattern of development. It also introduces the concept of Site and Service Schemes and their application in other parts of the world.

Chapter 3 deals with the study areas. It looks at the physical aspects of the schemes in Nairobi and analyses the social and economic conditions found in the two existing schemes - Kariobangi and Huruma.

Chapter 4 looks at the different financial institutions which contribute to the production of housing in Kenya. It also deals with the organization aspects of those institutions directly involved in the provision of low-cost housing especially serviced plots.

Chapter 5 identifies the main problems facing Site and Service Schemes as indicated in the report. It also looks at the physical planning implications of Site and Service Schemes and gives some recommendations.

Chapter 6 consists of the summary and conclusions of the study.

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CHAPTER 2

2: 0

GENERAL BACKGROUND2:1 POPULATION CHARACTERISTICS

Nairobi, the primate city of Kenya had a population of 509,000 in 1969 census. The population has been increasing at a rate of 7% per year. Nairobi received the largest share of the rural-urban migration which accounts for the bulk of the population growth. Nairobi and Mombasa share among them approximately 70% of the urban population of Kenya.

In 1974 estimates revealed the population to be 730,000 and by 1976 it was approximating 800,000 people.¹ 1969 census show the sex ratio to be 1.1 (to every 1.1 men there is one woman). This is because migration rates tend to be higher among men than women. The Nairobi Urban Study Group indicated the household size to be 4.0 in 1972. This suggests that the dependency ration must be high for instance out of the total population of Nairobi of 509,286 in 1969, only 211,628 were male adults the rest, women and children could be assumed to be dependants.

The increasing population growth poses many problems to the city administration. One of them being housing shortage. In 1970 the housing stock was 123,000 falling short of the housing needs by 3,5000. Estimates for the year 2000 A.D. show that at the present rate of house production, there will be only 670,000 houses which will still fall short of the demand with an estimated population of 3 million. Yet as the housing problem gains momentum, it

¹ 2nd Year M.A. Planning Students
"Housing Needs in Nairobi" March 1976

becomes increasingly obvious that the present housing stock production is not directed to those needing housing most; and who form the majority of the urban population. (30% of Nairobi population live in squatter areas, Mathare Valley alone housing 80,000).

2:2 HISTORICAL BACKGROUND AND DEVELOPMENT OF NAIROBI

Nairobi is a well laid out and essentially a modern city. It is located 80 kilometres South of the Equator on the Athi Plains. It stands some 1,650 to 1,800 metres above sea level and enjoys a temperate climate in the heart of tropical Africa.

Nairobi had its pre-urban nucleus as a railway encampment at the close of the last century. Some of the advantages the site offered were adequate water supply, ample level land for railway requirements and an elevated area suitable for housing.

By 1900 residential areas had developed setting a precedent for a pattern of development which has dominated the settlement to this day.

From its original nucleus around the railway premises the settlement has expanded by a series of boundary changes to a total of 689 square kilometres (268 sq. miles). Prior to 1963 boundary extension, the planned area amounted to approximately 91 square kilometres. The table below shows the amount of land added to the city with each successive boundary extension and map 2 shows the area covered.

TABLE 2:1 AREA AND POPULATION OF NAIROBI
1900 - 1964

| Year | Area | | Population |
|------|-----------|---------------|------------|
| | Sq. miles | Sq.Kilometres | |
| 1901 | 7.0 | - | - |
| 1906 | - | - | 11,512 |
| 1919 | 9.8 | - | - |
| 1926 | - | - | 29,864 |
| 1936 | - | - | 49,600 |
| 1944 | - | - | 108,900 |
| 1948 | 32.4 | - | - |
| 1962 | 35.0 | 91 | 266,794 |
| 1963 | 268.0 | 689 | 342,764 |

Source: Morgan W.T.W. "Nairobi City and Region"
 pp 101

2:2:1 DEVELOPMENT OF RESIDENTIAL PATTERNS (ZONES)

At the turn of the century, residential areas were widely dispersed. Close to the railways were landhies housing coolies. To the west of the railway station was a large area used as a railway subordinate staff quarters. Up the hill (present Upper Hill) to the east of the railway, senior railway officers houses were built and to the west of this were government officers quarters. With time and development, there emerged a residential pattern which reflected economic and social status (often following racial lines) and manifested in the physical environment found in different residential zones.

To the north of the city centre and later (around 1950s)

southern side of the railway became the Asian zone. The extreme south and the north and the western section (what on the map is referred to as Upper Nairobi) became the European Zone. The east was the African zone and industrial activities were accommodated in the south-east. The Central Business District developed along similar lines with some high class streets exclusively to meet the European tastes.² This pattern of development still holds true up to now although there have been some major changes in the racial composition of zones with African elites infiltrating areas once meant for Whites and Asians. But to a Nairobi resident, the different residential areas are regions performing different functions and classifying the people who live in them in social classes, distinguishing their economic status, life style and the political power each zone wields.

Thus the provision of houses and supporting infrastructure assumed the above mentioned pattern of zones; the upper zone having the best and highest standard of housing followed by the Asian zone and at the bottom the African zone with lowest standard of housing and infrastructure. This three tier system was reflected not only in residential areas, but also in commerce, industry and social life. It is therefore no historical accident that poor housing conditions (shortages, overcrowding, lack of essential facilities and services) or what is normally called slum conditions

² All directions are given in relation to city centre.

are an 'African Zone' phenomena.

The table below simplified the situation and gives some indication why housing problem is felt most in the Eastlands. Comparing the net residential and the total population it becomes clear that a relatively small area (about 10% of the net residential area) accommodated almost 50% of the total population of Nairobi. This also implies that Eastlands is a very high density residential area with limited services. Whereas Parklands and Eastleigh came up with a higher figure of persons per dwelling, the degree of overcrowding was low because of the space standards applied in the area. Therefore the amount of space per person is a better indicator of shortages than the number of dwellings alone.

T A B L E 2:2

CITY OF NAIROBI ACCOMMODATION AND POPULATION DENSITIES
(1962 figures)

| | Upper Nairobi | Parklands & Eastleigh | Nairobi South | East- lands | TOTAL |
|--------------------------------|------------------|-----------------------------|------------------|----------------|---------|
| Net Residential Areas acres | 5,342.7 | 1,644.6 | 198.9 | 879.7 | 8066.1 |
| No of Dwellings | 6,150. | 7,354 | 1,683 | 22,873 | 38,061 |
| Net density dwelling P/acre | 1.15 | 4.47 | 8.46 | 26.0 | 4.7 |
| Total Population | 31,944 | 76,706 | 9,394 | 110,720 | 228,760 |
| Net density of Pop. p/acre | 6.0 | 46.6 | 47.2 | 125.9 | 28.4 |
| Approx. tenant Population | 19,463 | 69,890 | 7,900 | 110,720 | 207,973 |
| Persons per dwelling | 3.2 | 9.5 | 4.7 | 4.8 | 5.5 |

Source: Nairobi City Council.

Note: This table should be read together
with Map No. 3

THE SIX FUNCTIONAL DIVISIONS OF CITY OF NAI

ROBI



As 1962 boundary



2:2:2 SOME FACTORS CONTRIBUTING TO THE PATTERN OF DEVELOPMENT

a) Upper Nairobi

A number of factors led to the existing pattern of development. Upper Nairobi covers a large area. It consists of spurs of higher ground (about 1800 metres above sea level) separated by deeply cut wooded valleys. The area has deep red soils which afford better building and drainage conditions and also garden development. Amenity in the area therefore occurs naturally and does not have to be planned. It is therefore the best residential zone with low to medium densities. The population of the area is made up of heads of diplomatic missions and business firms, the big politicians and some other prosperous individuals. The lowest income group is made of domestic servants. Until recently septic tanks were used to keep residential development at very low densities but there is an increasing number of flats coming up and a lot of sub-division going on.

In the distant west and south-west the area is made of less attractive flat plateau land which has been developed as suburban estates with their fringes being devoted to development of uncontrolled or illegal settlements e.g. Kawangware, Kibera and Kangemi.

b) Parklands-Eastleigh and Nairobi South

These areas have housed and continue to house the majority of the Asian population. Nairobi South provided an outlet for the growing Asian population in Parklands and Eastleigh. Being part of the Embarkasi plains it has black cotton soil and is less attractive but it has a great advantage of being

near industrial area.

Physical and social conditions change as one moves from Parklands to Eastleigh. The better conditions being found in Parklands and so are the rich Asians and poorer conditions and people residing in Eastleigh.

c) The Eastlands

Until the 1963 boundary extension, Eastlands was the smallest residential area yet accommodating the highest percentage of the city population. This is a flat area mainly with black cotton soils. It is relatively hotter than the other residential areas because of its lower altitude and lack of vegetation cover. Amenity in the area has to be allowed to occur naturally.

It is an area of the working class people and so the densities are very high. Owing to the constant flow of immigrants overcrowding is common and the services and facilities provided are inadequate.

Apart from the physical forces determining the trend of residential development in Nairobi, there was the government policy which used control measures to restrict rural-urban movement into the towns. African migrants were considered as temporary and were therefore not included in the urban planned development except in cases where employers were to provide them with accommodation e.g. some of the early council estates. However those not employed had to fend for themselves by constructing temporary structures for shelter. Over the years these structures have acquired some permanence so that even if demolished to-day they emerge up the following day

in the same pattern and with the same social characteristics. A significant point is that, the early plans produced for Nairobi failed to take note of the African migrants as urban dwellers deserving serious consideration in requiring legal rights over land for residential purposes. Some of the housing problems facing the city have their roots in this failure to provide land for Africans. It is lack of legal rights over land that defines squatter settlements. The tendency to provide low standard of infrastructural facilities or none in African areas with the argument that investments in such estates was unnecessary or unprofitable was based on this idea of the temporary nature of the African migrant.

The economic system, a third factor, tended to be discriminatory. Unemployment was a feature of the African population. Low incomes meant that what could be afforded was minimal and employees were supposed to be content with whatever little the employer provided.

Finally there were cultural barriers which made both horizontal and vertical mobility very difficult. Until independence racial barriers played a big part in segregating residential areas in the city. The pattern of residential development is therefore influenced by physical characteristics, government policies, economic and social forces.

2:2:3 CHANGES BROUGHT BY INDEPENDENCE

With Independence the tight controls on movements were lifted. The result was vast migration movements especially from rural to urban areas with Nairobi receiving the largest share of migrants. Although Nairobi had some opportunities to offer, it was not prepared for the large number of immigrants who confronted the

city. The result was lack of employment opportunities for the migrants, limited accommodation, a big strain put on the limited available infrastructure and social services leading to the general lowering of environmental standards. The council's attempts to continue providing housing to the low-income groups found themselves providing for a much higher income group.

In giving an implicit subsidy by charging rents well below the market price, the council finds itself with inadequate funds to undertake any complex housing schemes. Any revenue surpluses realized from existing schemes have tended to go into housing maintenance fund and so the tendency for the council to rely heavily on finances drawn from international agencies for assistance with its housing schemes, for instance the Commonwealth Development Corporation, the World Bank or straight loans from overseas Banks. The council also gets aid from the National Housing Corporation.

The contribution of the internal private sector to low-income housing is minimal. Being a profit making body the tendency of the private sector is to provide for middle and upper income groups. The high standard requirements of the city's by-laws have also made most houses unattainable to the majority of the city's population.

So we find that, vast migrants into the city, lack of accommodation to absorb them, lack of early initiative to consider these problems seriously and orientation towards providing high standard of development have all played a part in the creation of squatters. These settlements are located on any vacant land near rivers and in close proximity with city centre of industrial area. Most people found in these settlements are mainly engaged in the informal sector or employed as casual labourers. There

are some who find jobs within the formal sector.

These areas lack many infrastructural facilities and social services but attempts are being made to upgrade them.

2:2:4 SEARCH FOR NEW WAYS OF ALLEVIATING THE PROBLEM

In Nairobi we have a structure which is physically, socially an economically highly compartmentalized. Imposed on the city are foreign standards and values which can be afforded by just a small section of the population. One side of the city is richly endowed so that its population has access to nearly all facilities whereas the other side has scarce resources which due to population pressure have been so strained that they are deteriorating faster.

It is the realization of the great challenge facing the city authority and Central Government at large that new methods of tackling the low-income housing problems are being sought. It is here that Site and Service Schemes are being viewed as one of the most possible approach to the problem.

2:3 CONCEPT OF SITE AND SERVICE SCHEMES

The idea of Site and Service Schemes is not new for the inputs in the concept originate from the ability of the urban poor to fend for themselves through self-help means. It is the application of the concept on a large scale which is a recent phenomena. As the problem of uncontrolled settlements assumes larger proportions the need for a realistic policy becomes more apparent. It is obvious that the way the residential needs of the lower-income families are met has an important bearing upon their economic and social being. Site and Service Projects offer a promising and flexible approach to public intervention in meeting the residential needs of these families.

The concept of Site and Service has been propounded by people like Abrams, Bloomberg and Turner and modified by scholars, Van-Huyck. Site and Service projects are a developing world phenomenon mainly of the 1960s. For Africa 1960s was a decade of great historical significance. It is during this period that many African countries gained their political Independence. It is of interest to note that Site and Service Schemes are found mainly in cities which were once colonial stronghold, e.g. Lusaka, Nairobi, Dakar, Dar es Salaam, Manila, New Delhi etc. In a way it reflects the pre-independence measures. The housing Problem or squatter settlement are therefore a legacy of ill will, left behind by the early city administrators.

2:4 NATURE OF SITE AND SERVICE PROJECTS

There are three physical components of Site and Service developments, namely, building plots, public utilities and community facilities. Dimension of plots are determined by the density of the project, their location in relation to employment, the value of land and other urban services. The basic public utilities are water supply and sanitation, but others like paved roads, sidewalks, public lighting and electricity may be included. Community facilities are those urban services which link the project to the larger array of public and private services, such as schools, clinics, markets, cultural centres, telephone and postal services.

2:5 TYPES OF SITE AND SERVICE DEVELOPMENT

There are some general types of Site and Service developments, which have been attempted by different governments; these include:

- 1) the subdivision of land into plots with a common tap

- serving a number of plots.
- 2) Subdivision of land and provision of basic public utilities to each plot,
 - 3) Plots serviced by water and sanitation with a small outbuilding containing the core facilities and provision of some community facilities to the whole area and,
 - 4) the installation of some combination of public utilities and community facilities in existing residential areas for instance Mathare and Kawangware.

"The generic term of Site and Service development is employed to describe both preparation of land to facilitate the construction of individual houses and the upgrading of residential areas which have already been settled;"³ (so as to increase the availability of public utilities and community facilities to the majority of the Urban population).

Site and Service projects to a greater or lesser extent provide less infrastructure than a completed low-cost housing project. The major cost savings are made on the houses and to a lesser extent on the infrastructure.

2:6 INTERNATIONAL EXPERIENCE OF SITE AND SERVICE PROJECTS

The developing countries in all continents are finding themselves faced with problems arising as pressure of population on the cities build up faster than the total growth of population in these countries. The nature and scale of housing problem is increasingly getting more attention as it becomes apparent that the challenge can be met by adopting realistic and appropriate methods rather than utopian aspirations that cannot be met in the pertaining conditions.

³"Journal of Human Settlement" Vol.2 No.4, October 1972

Site and Service projects have been developed in many countries of the developing world. In most cases the early development of these housing projects were seen as emergency measures and temporary expedients to resettle people. In India (the reluctant pioneer of Site and Service project) the government's attitude was that Site and Service Schemes are not in the best interest of urban development, yet it was a necessary evil which had to be undertaken. In Zambia, and other countries the underlying reason for the projects was primarily a negative reaction to the impossibility of controlling unauthorized settlements with their health hazard, poverty and unemployment. The result was to think of Site and Service projects not as a positive programme, but rather as a temporary measure to be used until such a time as it would be possible to provide a standard housing for each individual household.

In many of the Schemes the attitude of the authority is reflected in the location of most of them. For instance in Lusaka the people were moved from 2 miles of the city centre to over 8 miles. In Manila the Sapany Palacy resettlement project was located 20 miles away from the original homes of the people to be resettled. In some countries e.g. India, police have been used to force families to the schemes. In most cases there has been provision for employment opportunities so that the people moved have to travel great distances to places of work and so making the schemes less attractive. And finally the administration and maintenance of the schemes was very lax.

We therefore find that earlier projects failed because of lack of positive support from governments. Today there is a

gradual realization that site and service schemes approach to housing problem is one of the positive answers. More facilities and utilities are now being provided and some form of financial assistance is given to plot holders. More important many countries have taken note of Site and Service Schemes in their National Development Plans.

2:7 APPLICATION OF SITE AND SERVICE IN NAIROBI

Site and Service projects are found in nearly all the towns of the country. In this study the idea of Site and Service is used to mean those areas of provision of serviced plots is carried out and plot allottee are expected to erect the buildings. It is therefore important to note that the upgrading of existing squatter is given very little attention.

Until recently, Site and Service Schmes were viewed as areas of resettling the residents of squatter areas. This was based on the assumption that squatter areas house the poor and these people lack the essential services like water and sanitary facilities. The areas are therefore health risks, for instance, the Cholera outbreak in ^{NAIROBI. not Mathare.} Mathare Valley of 1971. The argument is that if these people have access to ^{There were only 2 cases of cholera from Kisumu!} essential utilities the risk is minimised.

In the upcoming schemes consideration is given to all low-income earners regardless to where they live within the city. This is because overcrowding is not only in squatter areas but also in all legal low-cost housing. To save further deterioration of the existing low-cost housing stock it calls for attention on the amount of overcrowding and this is partly what Dandora project has taken in consideration.

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- 10) 2ND YEAR M.A. PLANNING STUDENTS
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- 11) J.P. MBOGUA
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CHAPTER 3

3:0 THE STUDY AREAS EXISTING CONDITIONS

3:1:0 THE PHYSICAL ASPECTS

Four schemes are considered in this study - Kariobangi, Huruma, Kibera and Dandora. All schemes are located between 7 kilometers to 10 kilometres from the city centre and Industrial area. All sites are found on the fringes of the main built up area of the city and built on land which became available to the city after 1963 boundary extension. All schemes are located in the Eastern region of the city except Kibera. (See Map 1). Distance from places of work is one of the major characteristics of the schemes.

With exception of Dandora, the other three schemes were squatter areas before the official planning of the schemes. Most schemes are located on relatively flat land with black cotton soil.

To avoid gross generalization, brief summary of each scheme is given below.

3:1:1 KARIOBANGI SCHEME

The earliest examples of Site and Service Scheme in Nairobi is the Majengo area. But this falls in the category where upgrading is carried out. The first official scheme is Kariobangi. The scheme dates from 1965 and is a result of the United Nations Mission to Kenya which recommended Site and Service approach as one of the methods of tackling the low-cost housing problem.

Originally, Kariobangi was conceived as a squatter resettlement scheme and 723 plots were laid out each being provided with a sanitation compartment. Land was given as a free grant from the government on a 99 year lease with

effect from 1964 April. The total capital cost was Shs.1,862/- and repayment was to be at Shs.30/- per month.

Kariobangi is 9 kilometres from the City Centre and Industrial area. Initially this distance was a problem to the new residents and may partly explain why many plot-holders moved back to squatter areas. But to-day Kariobangi is one of the estates with the best bus service linking it to the City Centre.

The incomes considered for the project ranged from Shs.300/- to Shs.400/- per month. With original allocation the target population was reached (allottees were mainly within the income bracket and came from Mathare Valley). But later plots changed hands. The tendency has been to blame the plot allottees for failing to make use of the chance given to them freely. Yet a certain amount of the blame should also go to the administration which failed to realize that the people not only needed serviced plots but also some amount of financial help (either in material form or cash) to be able to put up the houses. It is therefore no wonder that there is a high incidence of absent landlordism.

3:1:2 HURUMA SCHEME

Is the second oldest and started around 1972 - 73. It lies on the West of Kariobangi and so about 9 kilometres from the city centre. Like Kariobangi it was designed to resettle the squatters. Whereas the City Authority has provided serviced plots, it has not again made any direct provision of financial aid to these people. But Huruma plot holders unlike Kariobangi have access to loans offered by the National Christian Council of Kenya through building co-operatives to which plotholders

are expected to belong.

If the type of houses constructed or being constructed is an indication of what type of population got plots, then one could say that the target population has not been reached. Most of the houses are made of stone and are completed structures. This implies that these are people with a higher income and not the poor who will improve their houses as their income increases. Therefore one of the basic ideas of Site and Services concept - improvability - (i.e improved financial position leads to provision of better and more generous accommodation can hardly be said to apply.

5:1:3 KIBERA EXPERIMENTAL SELF-HELP SCHEME

The whole of Kibera area is Government land. Kibera is about 7 kilometres south-west of Nairobi City Centre. It is a per-urban area which still possesses semi rural features in some parts. The site for the scheme is located in the Western side of Kibera area. The site has surveyed plots upon which are about 40 structures of the swahili type.

The aim of the scheme is to develop "prototypical" dwellings for the lowest income groups. The findings of these schemes is hoped, can form a basis when setting up strategies for implementation of the policy in other schemes.

The Housing Research and Development Unit at the request of the Ministry of Housing and Social Services is responsible for the sketch design and coordination of the planning. But the working of drawings, supervision, financing and overall administration is the responsibility of the National Housing Corporation.

Kibera Scheme is an example of a scheme which has faced many problems during its planning stage that it has taken almost 4 years to decide on what standards should be used. This is an indication of delays which may be caused in implementation of any scheme due to conflicting ideas among the agencies involved. This delay affects the implementation of other schemes in that (being an experimental scheme whose findings are to be applied to others) the information gained from it is not available and therefore possibility of making mistakes which could be avoided (the delay in Kibera Scheme, has not prevented the planning and implementation of other Sites and Service Schemes in the country). Also delays in decision may affect the target population. For instance the increased construction costs which then demand people with a slightly higher income than those who would have been considered for years ago.

Kibera like the other two schemes is aimed at resettling people displaced in the Makina Village as well as the squatters in the surveyed plots. It is with effect from Tuesday the 15th March, 1977¹ that one can say that efforts are now being made in the direction of effective implementation with the advertisement for tenders to construct the basic infrastructure.

¹The Daily Nation - Tuesday 15th March 1977.

KIBERA SCHEME PLOT-LAY OUT



500

- 1 SOCIAL AMENITIES
- 2 SCHOOL GROUND
- 3 SHOPS
- 4 MOSQUE
- RAILWAY

MAP No 6

5:1:4 THE DANDORA COMMUNITY DEVELOPMENT PROJECT

Dandora is about 10 kilometres from the city centre and the Industrial area. The area for the housing project is adjacent to the new industrial area of Dandora and is about 2 kilometres from Ruaraka.

Dandora project is a public housing scheme for low-income group whose objective is to provide "serviced plots to Kenyan heads of families at a cost which they can afford."² The target population considered is the group with income between Shs. 280/- to Shs.650/- per month. The project aims at providing 6,000 serviced plots (40 plots per hectare) over a period of 5 years (scheme has been divided into phases) to settle some 30,000 people. Unlike other schemes Dandora does not aim at resettling only squatter population but considers all other low-income people living in Nairobi. The City Council also will give loans to purchase enough materials to construct two rooms.

Whereas other Schemes have mainly been a national or local responsibility, the Dandora project has attracted both national and international financial support - the Kenya government has provided a loan of K£ 4.8 million and the World Bank is charging the Government 6½% interest for 25 years. The Government loan is at 6½% interest rate.

²"Implementation of Housing Projects with particular Reference to Dandora Site and Service Scheme" pp.1, by I.G. Wanjohi.

Dandora project is also looked upon as "a pilot scheme to test two aspects, namely,

- a) the acceptability by the Wananchi of the Scheme (noting its main features of high density and very low cost structures) and
- b) the suitability and/or place of the scheme in a large urban area with other important but conflicting interests on land usage, social and political considerations."³

The question of acceptability raises the problem of standards. If the objective of reaching the low income groups who at the moment are living in worse conditions than what is offered in Sites and Service Schemes is considered, then the question of acceptability loses its weight. But if the acceptability refers to people with higher values, then the desires and affordability of the target population is not being catered for and so the project loses its meaning. The question of suitability and place of Site and Service Schemes in urban areas still reflect standards and the zoning regulations and it is therefore no wonder that the existing schemes are placed mainly towards the periphery of the city.

3:1:5 PHYSICAL CHARACTERISTIC - DEVELOPMENTAL OPPORTUNITIES AND CONSTRAINTS

Kibera is situated in a relatively richer region than the other three areas. The soils are fertile offering better condition for vegetation growth and good base for building foundation. Substantial areas of Eastern region have black

³"Implementation of Housing Projects with Particular Reference to Dandora Site and Service Scheme" pp.3, by I.G. Wanjohi

with rocky outcrops in certain areas. Black cotton soil is a poor base for foundations and rocky outcrops increase the cost of excavation. The quarries pollute the surrounding areas with noise and dust. They also are a threat to small children who can easily fall into these deep open areas. During wet seasons, they become breeding grounds for mosquitoes.

A number of rivers cut across these schemes but they have all been polluted to an extent that they are more of a health hazard. The water cannot be put to much use because it will be more costly to convert it back to a more useful state.

One of the greatest assets of these areas is their relative flatness which reduces the costs of surveying and facilitates the construction of sewers. Land is publicly owned and therefore the authorities find themselves in a better situation to demarcate the uses of land in these areas.

3:1:6 LAND TENURE

The land in the study areas is acquired by the Central Government of City Council and leased out to plot allottees on an initial period of 33 years which may be extended according to the degree of development the plotholder has been able to do on the plot. Public ownership of land controls land speculation and use of this land for Site and Service developments, checks illegal settlement as well as controlling the type of urban development. Since the leases expire at the same time for all residents, it is possible to either extend the period or change the usage of land if the necessity arises. Furthermore government land leased at a low rateable value is in itself an incentive to the people with small incomes to improve themselves.

AREA AND POPULATION OF STUDY AREAS

| | AREA | NO OF PLOTS | POPULATION | AREA (ha) | PLOT SIZES |
|---|------------|-------------|------------|-----------|-------------------------|
| 1 | KARIOBANGI | 732 | 25,000* | 27 | 168 - 324m ² |
| 2 | HURUMA | 456 | 9,000* | 15 | 100 - 160m ² |
| 3 | KIBERA | 520 | - | 17.5 | 110 - 160m ² |
| 4 | DANDORA | 6,000 | 30,000 | 250 | 60 - 200m ² |

TABLE 3:1

3:1:7 THE LAND USE PATTERNS

The areas under study are basically residential areas. The housing developments are planned and attempts are made to provide public utilities and community facilities to the population. With time and availability of money, more services are added since original plans reserve land for these services. For instance Kariobangi, the oldest scheme has most of the essential services a secondary school and a police station. In existing schemes overcrowding is a common feature. Plots are small and so hardly any cultivation is done around the buildings. But some small shambas exist along river valleys where vegetables are grown.

Other uses of land include the Sewage Treatment Works (Kariobangi) roads and railway line (Dandora and Kibera) and the industrial zone in Dandora. Mowlem depot and the Electricity Receiving Station (at Dandora) also lay claim on land. Quarries and small industries e.g. brick making also make use of land.

★ 3:1:8 H O U S I N G

Housing is one of those items which cuts across the physical, social and economic boundaries. Housing form part of the landscape, it may be a source of income and more important it forms a basis for the organization of family life. In the two areas where surveys were carried out there were a whole range of housing types. There were those with mud walls and cardboard roofs, stone walled, plastered and painted with corrugated iron sheets and there were some made of timber walls with iron sheet roofing. Most buildings have 6 to 8 rooms which comply very much

with the official plans or designs.

The majority of households interviewed in the two survey areas were tenants. For instance (see table 3:12) 90.48% of the households interviewed in Kariobangi were tenants whereas Huruma had 87.23%. Whereas most of tenants said their income was below Kshs.900/- all house owners indicated that their income was beyond this figure and since only two out of sixteen had another source of income, it goes to show that house ownership is a very profitable asset (see table 3:2).

TABLE 3:2

INCOME AS RELATED TO OWNERSHIP OF HOUSES

| TOTAL INCOME P.M | A R E A S | | | | | | | |
|---------------------|-------------|-------|--------|------|---------------------|-------|--------|------|
| | H U R U M A | | | | K A R I O B A N G I | | | |
| | TENANTS | | OWNERS | | TENANTS | | OWNERS | |
| KSHS | NO | % | NO | % | NO | % | NO | % |
| 0-200 | 2 | 4.26 | - | - | 1 | 0.95 | - | - |
| 201-400 | 8 | 17.02 | - | - | 12 | 11.43 | - | - |
| 401-600 | 10 | 21.28 | - | - | 20 | 19.05 | - | - |
| 601-900 | 13 | 27.66 | - | - | 39 | 37.14 | - | - |
| 901-1200 | 8 | 17.02 | 3 | 6.38 | 19 | 18.10 | 2 | 1.90 |
| 1201 + | - | - | 3 | 6.38 | 4 | 3.81 | 8 | 7.62 |

Whereas there were signs of real improvement in some houses, others especially in Kariobangi are still in the same conditions as when constructed ten years ago. These houses are rented and so the landlords get some income out of them. But since maintenance is poor, the idea of improvability becomes questionable. Here are people who are making profits out of the plot but do not

SERVICED PLOTS
WITH WET CORES
CONSTRUCTED



TEMPORARY
WOODEN STRUCTURE
ON THE LEFT



WET CORE AND
ONE ROOM
PROVIDED



CONSTRUCTION
OF OTHER ROOMS



COMPLETED
HOUSES



KIOSKS



DANDORA PROJECT
OFFICES



MATERIAL SHADE
AT HURUMA



**MINIMUM
SITE & SERVICE**



H I R E D L A B O U R F O R T H E C O N S T R U C T I O N
O F H O U S E S



A C O M P L E T E D H O U S E

want to improve. This implies that it is not necessarily true that improved incomes will automatically lead to improved standards in Site and Service Schemes.

Huruma on the other hand has most of its houses built in stone which also raised the question of who actually got the plots. Are they in fact a higher income group than what was the original population target? Or is it the accessibility these plotheolders have to loans which the Kariobangi Scheme did not have? These are questions which can only be answered after further investigations:

a) RENT

Most households rent only one room. The cost of a room is rarely below Shs.75/- per month. The poorly maintained houses are rented for between Kshs. 75/- and Shs.90/-, whereas the well maintained and the new ones are rented for between Shs.200/- and Shs.400/- per room. People paying more than Kshs.400/- for two rooms were found in Kariobangi, which being a longer established area tends to have a rent structure that is closer to that found in the established parts of the city: most people in the schemes rent one room. When rents in the schemes are compared with those of the City Council Estates it becomes obvious that the tenants in these schemes are heavily exploited. For instance a man in Jericho pays less than Shs.200/- for a 3 roomed house with private kitchen and toilet and shower whereas a man in Site Service Schemes pays the same amount or more for just one small room and has no access to a kitchen, leave alone a private toilet.

With these high rents it means that the very poor people (earning a maximum of Shs.300/-) cannot afford to stay in these Schemes and therefore the problem of squatting will still continue. What appears more likely in both schemes is that the level of income tends to affect the number of rooms rented although the size of the families seems to have a minimal effect.

When asked about future expectations or preferences regards the amount of domestic space the households would like to occupy and amount of money they would like to pay (see table 3:3) two and three rooms seemed to be popular and there were people willing to pay as much as Shs.600/- for two rooms. At present one room or two rooms are most affordable. In Huruma 65.96% of interviewed households and 49.52% of Kariobangi occupy one room whereas two rooms are occupied by 34.04% and 42.86% of the respective areas. It is of interest to note that there is very little difference between tenants and landlords when considering the two classes of households.(see table 3.4). It also implies that most landlords are more interested in letting out more rooms than occupying adequate room. So whereas the main aim of increasing the total low-cost housing stock is achieved. It is questionable whether overcrowding is reduced. Table 3:12 shows the household sizes of the two classes and is obvious that the houseowners have as many members in the family as tenants. So it is surprising that with a chance to occupy more room they prefer to use the real minimum and rent the rest.

DOMESTIC SPACE: PRESENT OCCUPATION AND FUTURE PREFERENCES AS RELATES TO RENTS

TABLE 3:3

| TIME | A R E A S | | | | | | | | | | | | | | | |
|-------------|-------------|----|---|---|--------|----|----|---|---------------------|----|---|---|--------|----|----|---|
| | H U R U M A | | | | | | | | K A R I O B A N G I | | | | | | | |
| | PRESENT | | | | FUTURE | | | | PRESENT | | | | FUTURE | | | |
| NO OF ROOMS | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| 50-99 | 2 | - | - | - | - | - | - | - | 2 | - | - | - | - | - | - | - |
| 100-149 | | | | | 6 | | | | 11 | | | | 2 | | | |
| 150-199 | 17 | 1 | | | 3 | 4 | | | 20 | 2 | | | | | | |
| 200-249 | 9 | | | | 2 | 1 | | | 16 | 3 | | | 3 | 3 | | |
| 250-299 | | 1 | | | | 1 | | | 3 | 4 | | | | 5 | 2 | |
| 300-349 | | 2 | | | | 4 | 1 | | 2 | 4 | | | | 11 | 3 | |
| 350-399 | | 2 | | | | | | | 2 | 8 | 2 | | | 4 | 4 | |
| 400-449 | 1 | 3 | | | | 6 | 3 | 1 | | 10 | | | | 6 | 4 | |
| 450-499 | | 4 | | | | | 1 | 1 | | 4 | 3 | | | 5 | 9 | |
| 500-549 | | | | | | | | | | 3 | | | | 4 | 5 | |
| 550-599 | | | | | | | 3 | | | 1 | | | | 2 | 1 | |
| 600-649 | | | | | | | 3 | 1 | | | 2 | 1 | | 3 | 9 | 3 |
| 650-699 | | | | | | | | | | 1 | 1 | | | | 3 | 4 |
| 700-800 | | | | | | | 1 | | | | | | | | | 1 |
| TOTAL | 34 | 13 | 0 | 0 | 11 | 16 | 12 | 3 | 56 | 40 | 8 | 1 | 5 | 43 | 40 | 8 |

COMMENTS

AREA A - Future preference. Add up to 42 households.
This is because 5 landlords said that they prefer to buy houses.

AREA B - 9 landlords preferred to buy houses mainly in
City Council Estates

TABLE 3:4

SPACE OCCUPIED BY TENANTS AND LANDLORDS

| NO OF ROOMS | A R E A S | | | | | | | |
|----------------|-------------|--------|-----------|--------|---------------------|--------|-----------|--------|
| | H U R U M A | | | | K A R I O B A N G I | | | |
| | TENANTS | OWNERS | T O T A L | | TENANTS | OWNERS | T O T A L | |
| | | | NO. | % | | | NO. | % |
| 1 | 28 | 3 | 31 | 65.96 | 47 | 5 | 52 | 49.52 |
| 2 | 13 | 3 | 16 | 34.04 | 40 | 5 | 45 | 42.86 |
| 3 | - | - | - | - | 7 | - | 7 | 6.67 |
| TOTALS | 41 | 6 | 47 | 100.00 | 95 | 10 | 105 | 100.00 |

b) COST OF HOUSES

It is difficult to know how accurate or comparable the answers given to this question are, as building took place over time and material costs have increased considerably of late. However from the information given by the few landlords who were interviewed there seemed to be a common general range of between Kshs. 5,000/- and Kshs.20,000. All the houses whose cost is given as lying between Kshs. 10,000/- and Kshs.20,000/- are either quite well or fairly well maintained. On the other hand, houses costing Kshs. 5,000/- to Kshs.9,999/- are of low grade material and very poorly maintained. The table below shows the costs of houses as given by the available landlords.

TABLE 3:5
COST OF HOUSES

| COST OF HOUSES KSHS | A R E A S | | |
|------------------------|-----------|------------|-------------|
| | HURUMA | KARIOBANGI | TOTAL |
| Less than 5000 | - | - | 0 |
| 5000-9999 | 3 | - | 3 18.75% |
| 10000-14999 | 1 | 4 | 5 31.25% |
| 15000-1999 | - | 5 | 5 31.25% |
| 20000- + | 2 | 1 | 3 18.75% |

The assumption that the proportion of higher priced houses was such because the area was newer and so presumably built later and at a higher price can be tested by examining prices against the ages of the building. Table 3:6 shows that the relationship between cost of house and age is not all that strong. This disparity may suggest a bias in the sample because nearly all landlords interviewed in Kariobangi had their buildings fairly well maintained and houses can be considered finished, whereas in Huruma most houses are still under construction, so that at completion the cost is bound to be high.

A common feature of Sites and Service Schemes is just as much overcrowding as that found in public low-cost rental houses. The amount of pressure put on the existing facilities and services is therefore very strong and the tendency is for these services to deteriorate very fast. Added to this is the fact that the number of absentee landlords is high and maintenance of many structures is very poor. The result is that

TABLE 3.6

| AGE (YEARS) | A R E A S | | | | | | T O T A L | |
|---------------|-----------|------|-------|------------|------|-------|-----------|-------|
| | HURUMA | | | KARIOBANGI | | | NO. | % |
| | 1-5 | 6-10 | 11-15 | 1-5 | 6-10 | 11-16 | | |
| Cost of House | | | | | | | | |
| 0 -4999 | - | - | - | - | - | - | 0 | 0.00 |
| 5000-9999 | 2 | 1 | - | - | - | - | 3 | 18.75 |
| 10000-14999 | - | 1 | - | - | 3 | 1 | 5 | 31.25 |
| 15000-19999 | - | - | - | - | 2 | 3 | 5 | 31.25 |
| 20000 + | 2 | - | - | - | 1 | - | 3 | 18.75 |

the whole environment in the area is affected, and is therefore no wonder that many authorities have tended to be less committed to the progress of the schemes.

d) EXPECTATIONS AND PREFERENCE

The desire to move - Huruma had 65.96% of those interviewed wanting to remain in the same area whereas Kariobangi had only 29.52%. Huruma has this high percentage partly because of the relative newness of the area - i.e. the houses are still in good shape and partly because of the relative low rents as compared to Kariobangi. The general feeling of the tenants is that they are getting a fairer deal for their money than the Kariobangi tenants (see table 3:3). Other parts which were given high preferences were Rest of Eastlands with estates near the city centre and Industrial Area being frequently mentioned.

It was surprising to note the little interest shown in the coming up schemes especially Dandora. Only about 4% of all

interviewed indicated their desire to go to Dandora. This may reflect a bias in the sample interviewed; it also may indicate the negative impact the previous schemes may have on their residents so that there is little incentive to join the new ones coming up. It is interesting to note also that the landlords or their houseowners in the areas preferred to buy already built houses than build one for themselves.

TABLE 3:7

PLACE LIVED BY HOUSEHOLD BEFORE
HURUMA AND KARIOBANGI

(a)

| | HURUMA | | KARIOBANGI | |
|---------------------|--------|--------|------------|--------|
| | NO | % | NO | % |
| Same Area | 11 | 23.40 | 6 | 5.71 |
| Dandora | - | - | - | - |
| Rest of Eastlands | 12 | 25.53 | 34 | 32.38 |
| Parklands/Eastleigh | 3 | 6.38 | 5 | 4.76 |
| Nairobi South | 4 | 8.51 | 10 | 9.52 |
| Upper Nairobi | 4 | 8.51 | 11 | 10.48 |
| Outside Nairobi | 2 | 4.26 | 4 | 3.81 |
| Squatter Areas | 11 | 23.40 | 35 | 33.33 |
| Not Stated | - | - | - | - |
| | 47 | 100.00 | 105 | 100.00 |

(b)

AREAS OF FUTURE PREFERENCE

| | HURUMA | | KARI OBANGI | |
|---------------------|-----------|---------------|-------------|-------------|
| | NO | % | NO | % |
| Same Area | 31 | 66.0 | 31 | 29.5 |
| DDandora | 2 | 4.5 | 4 | 3.8 |
| Rest of Eastlands | 11 | 23.4 | 52 | 49.5 |
| Parklands/Eastleigh | 1 | 2.1 | - | - |
| Nairobi South | 1 | 2.1 | 14 | 13.3 |
| Upper Nairobi | 1 | 2.1 | 2 | 1.9 |
| Outside Nairobi | 1 | 2.1 | - | - |
| Squatter Areas | - | - | - | - |
| Not Stated | - | - | 2 | 1.9 |
| T O T A L S | 47 | 100.00 | 105 | 99.9 |

5:1:9:0 AMENITIES3:1:9:1 EDUCATION

The City Council of Nairobi is charged with the responsibility of providing nursery and primary schools to its residents and so in all planned estates the Council tries to provide space for these services. Kariobangi has a full primary school in operation and 2 nursery schools. One run by the council the other by the Church and a third one is coming up under Harambee efforts. The other schemes have land reserved for these items although they do not exist at the moment.

From the survey, it appears that the older the head of the household, the more important schools appeared to be relative to other amenities. Likewise, the larger the household the more important schools appeared to become. These two factors are

related for the older the head of household, the greater his household would tend to be. It seems likely that this correlation exists because the children of school going age there are in a household, the more aware of the need for schools the head of the household is. The low priority given to Secondary schools, indicates that the residents are satisfied with those available in other parts of the town. Furthermore at secondary school age, children are capable of taking good care of themselves than they are at nursery and primary levels.

3:1:9:2 HEALTH FACILITIES

Kariobangi alone has one Health Centre and one private Clinic. Health facilities are given the highest priority because every one may require medical services at anytime. It is interesting to note that more than half of those interviewed in Kariobangi gave health facilities the first priority. Yet there is a health centre within close proximity whereas Huruma which lacks any form of health facility did not give it high priority as given to shops. The assumption made regarding facilities had been that, the more lacking the facility, the higher the priority (or the need) of the facility would be. Two possible reasons for Huruma residents not giving health facilities highest priority are, the close proximity of Kariobangi to Huruma, facilitates the Huruma residents to make use of those services Kariobangi offers, Also the need for essential daily food is greater.

3:1:9:3 SHOPS. KIOSKS AND MARKETS

Kiosks are found in both schemes, whereas shops are only in Kariobangi. Lack of shops in Huruma explains why shops

were given the first priority. In Kariobangi shops and Kiosks are not given as much priority because they are numerous in the area and so taken for granted.

Kariobangi Market at the moment serves a very large area, (Kariobangi, Huruma, Dandora, Buru Buru, Kariobangi South, Uhuru etc.). But in both areas markets were given lower priority. This is partly because some of the essential foods sold in the markets can be found in kiosks and shops. But generally markets offer a wide variety of goods and perform bigger functions.

5:1:9:4 POLICE STATIONS

These were quite clearly the lowest priority for most of the people. The houseowners tended to give them some high priority whereas the tenants tended to think that these were most unnecessary. This challenges the idea of insecurity in these schemes as thought by non-residents of the schemes. Also women heads of households tended to give this item a slightly higher priority than men. The general feeling was that more street lighting would be more preferred than a police station nearby.

From the analysis of provided amenities it is clear that people of the schemes put much weight to the availability of health services and nursery schools. This is because of the important functions these institutions perform. The analysis also points out the more urgent services which a scheme of this type needs first. For if what people desire most is known then it is easier and more profitable (to both the residents of the scheme and those implementing) when providing community facilities to consider the priorities.

TABLE 3:8

CHOICE OF AMENITIES

| ORDER OF PRIORITY | NURSERY | | PRIMARY SCHOOL | | SEC. SCHOOL | | HEALTH SERVICES | | SHOPS | | KIOSKS | | MARKETS | | POLICE STATION | |
|-------------------|---------|-------|----------------|-------|-------------|-------|-----------------|-------|-------|-------|--------|-------|---------|-------|----------------|-------|
| | NO | ₹ | NO | ₹ | NO | ₹ | NO | ₹ | NO | ₹ | NO | ₹ | NO | ₹ | NO | ₹ |
| 1 | 13 | 27.66 | 2 | 4.26 | 1 | 2.13 | 10 | 21.28 | 13 | 27.66 | 2 | 4.26 | 2 | 4.26 | 3 | 6.38 |
| 2 | 10 | 21.28 | 11 | 23.40 | 3 | 6.38 | 6 | 12.77 | 6 | 12.77 | 6 | 12.77 | 2 | 4.26 | 1 | 2.13 |
| 3 | 6 | 12.77 | 12 | 25.53 | 6 | 12.77 | 8 | 17.02 | - | - | 6 | 12.77 | 4 | 8.51 | 4 | 8.51 |
| 4 | 7 | 14.89 | 8 | 17.02 | 11 | 23.40 | 3 | 6.38 | 5 | 10.64 | 5 | 10.64 | 5 | 10.64 | 3 | 6.38 |
| 5 | - | - | 8 | 17.02 | 5 | 10.64 | 6 | 12.77 | 8 | 17.02 | 4 | 8.51 | 9 | 19.15 | 5 | 10.64 |
| 6 | 5 | 10.64 | - | - | 7 | 14.89 | 4 | 8.51 | 7 | 14.89 | 13 | 27.66 | 7 | 14.89 | 6 | 12.77 |
| 7 | 3 | 6.38 | 4 | 8.51 | 4 | 8.51 | 6 | 12.77 | 5 | 10.64 | 9 | 19.15 | 12 | 25.53 | 9 | 19.15 |
| 8 | 3 | 6.38 | 2 | 4.26 | 10 | 21.28 | 4 | 8.51 | 3 | 6.38 | 4 | 8.51 | 6 | 12.77 | 16 | 34.04 |
| | | | | | | | | | | | | | | | | |
| 1 | 29 | 27.62 | 2 | 1.90 | - | - | 59 | 56.19 | 3 | 2.86 | 3 | 2.86 | - | - | 10 | 9.52 |
| 2 | 27 | 25.71 | 19 | 18.10 | 3 | 2.86 | 22 | 20.95 | 15 | 14.29 | 6 | 5.71 | 5 | 4.76 | 7 | 6.67 |
| 3 | 25 | 23.81 | 23 | 22.86 | 4 | 3.81 | 12 | 11.43 | 18 | 17.14 | 10 | 9.52 | 9 | 8.57 | 7 | 6.67 |
| 4 | 7 | 6.67 | 16 | 15.24 | 7 | 6.67 | 5 | 4.76 | 17 | 16.19 | 25 | 23.81 | 10 | 9.52 | 21 | 20.00 |
| 5 | 7 | 6.67 | 14 | 13.33 | 10 | 9.52 | 4 | 3.81 | 15 | 14.29 | 16 | 15.24 | 32 | 30.48 | 10 | 9.52 |
| 6 | 6 | 5.71 | 19 | 18.10 | 7 | 6.67 | 3 | 2.86 | 11 | 10.48 | 21 | 20.00 | 29 | 27.62 | 4 | 4.76 |
| 7 | 2 | 1.90 | 9 | 8.57 | 19 | 18.10 | - | - | 15 | 14.29 | 18 | 17.14 | 10 | 9.52 | 25 | 23.81 |
| 8 | 2 | 1.90 | 3 | 2.86 | 55 | 52.38 | - | - | 11 | 10.48 | 6 | 5.71 | 10 | 9.52 | 19 | 18.10 |

HUMMA

KAPORANGI

3:1:10:0 PUBLIC UTILITIES

One of the major provisions of Site and Service Schemes is infrastructure. This varies from the very minimum - water and sanitary facilities, to the maximum where one or two rooms may be built for the plotholder. In fact from the administrators and planners point of view infrastructure is the most costly item of housing and if this is provided then low-income groups should be able to build their own houses. The survey tried to find out the priority the residents of the schemes accord various utilities.

3:1:10:1 R O A D S

In both schemes roads were given 3rd priority. This is because all the major roads (bus-routes) are all-weather-roads and access roads are good murrum roads. The only problem was movement between individual plots, this is because black cotton soil when soaked with rain makes foot movement difficult. Apart from a few public parking spaces, plots hardly provide any space for individual parking. It is usually argued that the residents are people who cannot afford private cars. But in reality some of these people have cars and some have richer relatives who come to visit during weekends and so will need a place to park.

3:1:10:2 WATER INSIDE ROOMS

In all schemes water is provided to each plot and therefore 6 to 10 households (depending on the number of rented rooms per plot) may share one tap. Considering that in other settlements e.g. squatter areas, water supply may not be available or where the council is carrying out upgrading one tap may serve as many as even 100 households. Provision of water on a plot is a big

step forward. Yet water was among the items given higher priority in the survey. Many households wanted to have taps in each room. The reason for this is partly because some households use more water than others but since there is only one meter serving a plot it means that expenses incurred are to be shared equally. Some tenants resent this.

3:1:10:3 ELECTRICITY

In providing public utilities to Site and Service Schemes, electricity is not usually considered as one of the basic items. But it is interesting to note that both Huruma and Kariobangi gave electricity 2nd choice on the priority list. This may be because in both schemes electricity is not provided in houses and therefore the residents desire to have it. Also most residents thought that for lighting purposes electricity will turn up cheaper than paraffin. Furthermore, they argued that City Council estates have electricity and from information of the people who live in these estates, electricity is not that expensive and therefore the Council should pressure on landlords to provide electricity to their tenants.

3:1:10:4 STREET LIGHTING

In both schemes, there is some amount of street lighting but the general feeling was that more lighting should be provided especially along access roads. This is because street lighting is mainly along the major roads but not along small roads leading to plots. This causes insecure conditions especially during end of the month. In both schemes, street lighting was therefore given 4th priority.

3:1:10:5 SEWERAGE

In both schemes sewerage disposal was the lowest priority. This is because all residents have got access to a toilet which is located on each plot. The major problem with this facility was who should clean the toilet since it is shared among a number of households? On most plots households take turns but there are many times when some people do not clean and so causing friction among the residents of the particular plot.

3:1:10:6 DRAINAGE AND GARBAGE COLLECTION

There are quite a number of open drains which tend to collect alot of rubbish - most of the times unattended to for a long time. This in itself is a health hazard. Drainage also got lower priority. This is because open drains serve the purpose and people have taken them for granted. Furthermore underground drains will be of little use since all households do not have access to a kitchen with sink and so waste in liquid form gets its way into the open drains.

Garbage collection is done by the City Council. The collectors are only interested in the solid waste which is put well in a container and so when they collect the waste, any overspill is left lying on the ground forming a good breeding ground for flies etc. The problem here is that a container is given to a plot. The garbage is not collected daily and six to ten households sharing one container is a big problem which calls for attention from the authority.

As far as utilities are concerned, the residents of Site and Service Schemes have access to facilities which many people in squatter settlements and Company houses do not have. Also if considered that each plot has its own water and toilet

then Site and Service Schemes are relatively better than some of the older Council low-income estates which have public water standpipes and public toilets. Overcrowding is a common feature of all low income housing, this puts a lot of pressure on provided utilities leading to a lot of blockages. Table 3:9 shows the priority list of what has been discussed above.

3:2:0 SOCIAL CONDITIONS

From the data it would appear that, Site and Service Schemes share very similar characteristics with urban areas in general. In 1972 estimates by Nairobi Urban Study Group indicated household sizes to be 4.0 whereas Huruma has a somewhat lower (3.5) figure than this, Kariobangi comes out with a higher one, 6.2. The density of living is fairly high with families either having a large number of children or single people sharing rooms.

3:2:1 POPULATION DISTRIBUTION

These areas are planned to accommodate high densities (35-45) plots per hectare) and therefore are very compact. In 1972, Kariobangi had an average density of 445 per hectare. From the survey it is possible that this has increased since the household size seems to have increased too. It was not easy to find the density of Huruma since many plots are still undergoing construction and the people are less settled.

3:2:2 POPULATION COMPOSITION

Site and Service Schemes have a majority aim of resettling heads of households. In other words, they are geared towards accommodating families. Therefore the majority of heads of households are married men. But there are some women with children although not married.

CHOICE OF PUBLIC UTILITIES

| | ORDER OF PRIORITY | ROADS | | WATER | | ELECTRICITY | | STREET LIGHTING | | DRAINAGE | | SEWERAGE DISPOSAL | |
|------------|-------------------|-------|-------|-------|-------|-------------|-------|-----------------|-------|----------|-------|-------------------|-------|
| | | NO | % | NO | % | NO | % | NO | % | NO | % | NO | % |
| HURUMA | 1 | 5 | 10.64 | 19 | 40.43 | 13 | 27.66 | 6 | 12.77 | 2 | 4.26 | 2 | 4.26 |
| | 2 | 2 | 4.26 | 19 | 40.43 | 19 | 40.43 | 3 | 6.38 | 3 | 6.38 | 2 | 4.26 |
| | 3 | 33 | 70.21 | 2 | 4.26 | 5 | 10.64 | 2 | 4.26 | 2 | 4.26 | 3 | 6.38 |
| | 4 | - | - | 4 | 8.51 | 7 | 14.89 | 31 | 65.96 | 4 | 8.51 | 1 | 2.13 |
| | 5 | 3 | 6.38 | 2 | 4.26 | 2 | 4.26 | 4 | 8.51 | 29 | 61.70 | 6 | 12.77 |
| | 6 | 4 | 8.51 | 1 | 2.13 | 1 | 2.13 | 1 | 2.13 | 7 | 14.89 | 33 | 70.21 |
| KARIOBANGI | 1 | 17 | 16.19 | 44 | 41.90 | 18 | 17.14 | 9 | 8.57 | 10 | 9.52 | 18 | 17.14 |
| | 2 | 4 | 3.81 | 22 | 20.95 | 36 | 34.29 | 6 | 5.71 | 21 | 20.00 | 15 | 14.29 |
| | 3 | 46 | 43.81 | 12 | 11.43 | 7 | 6.67 | 19 | 18.10 | 7 | 6.67 | 11 | 10.48 |
| | 4 | 9 | 8.57 | 7 | 6.67 | 22 | 20.95 | 43 | 40.95 | 12 | 11.43 | 10 | 9.52 |
| | 5 | 7 | 6.67 | 15 | 14.29 | 11 | 10.48 | 16 | 15.24 | 46 | 43.81 | 6 | 5.71 |
| | 6 | 22 | 20.95 | 5 | 4.76 | 11 | 10.48 | 12 | 11.43 | 9 | 8.57 | 45 | 42.86 |

TABLE 3.9

TABLE 3:10
MARITAL STATUS OF HEADS OF HOUSEHOLDS

| S E X | H U R U M A | | | | K A R I O B A N G I | | | |
|---------------|-------------|------|-------------|------|---------------------|-------|-------------|-------|
| | M A L E | | F E M A L E | | M A L E | | F E M A L E | |
| | NO | % | NO | % | NO | % | NO | % |
| S I N G L E | 7 | 14.9 | 12 | 25.5 | 23 | 20.95 | 26 | 24.76 |
| M A R R I E D | 21 | 44.7 | 7 | 14.5 | 46 | 43.81 | 11 | 10.48 |

The table shows that there are more single women in both schemes than single men.

The ages of the heads of households lies between 20 years and 54 years in Huruma whereas in Kariobangi is between 20 years and 64 years. This reflects the age of these schemes. Kariobangi being the oldest will definitely have people of an older age. It is interesting to note that the oldest people were landlords which reflects their interest in the area (ownership of property). Tenants are more mobile and therefore tend to move more often as they get information of better and cheaper housing in other parts of the city. Furthermore after retiring tenants will tend to go back to rural areas whereas, landlords can stay and have the house as the only source of income.

The ages of the residents are mainly within the most productive bracket of 20 and 49 which indicates that the main reason for being here is in search of employment.

TABLE 3:11

AGE STRUCTURE OF HEADS OF HOUSEHOLDS

| A G E | H U R U M A | | | | K A R I O B A N G I | | | |
|---------|-------------|-------|-------------|-------|---------------------|-------|-------------|-------|
| | M A L E | | F E M A L E | | M A L E | | F E M A L E | |
| | N O | % | N O | % | N O | % | N O | % |
| 20 - 24 | - | - | 1 | 2.13 | - | - | 1 | 0.95 |
| 25 - 29 | 7 | 14.89 | 5 | 10.64 | 10 | 9.52 | 14 | 13.33 |
| 30 - 34 | 3 | 6.38 | 5 | 10.64 | 14 | 13.33 | 11 | 10.48 |
| 35 - 39 | 13 | 27.66 | 6 | 12.77 | 25 | 23.81 | 7 | 6.67 |
| 40 - 44 | 4 | 8.51 | 2 | 4.26 | 12 | 11.43 | | |
| 45 - 49 | | | | | 4 | 3.81 | | |
| 50 - 54 | 1 | 2.13 | | | 3 | 2.86 | | |
| 55 - 59 | | | | | 3 | 2.86 | | |
| 60 - 64 | | | | | 1 | 0.95 | | |
| 65 + | | | | | | | | |

3:2:3 THE HOUSEHOLD

a) The average number of households per plot or building was 7.

Most buildings have 6 to 10 rooms and there are incidences where absentee landlords rent all the rooms so that it is not uncommon to find ten households per house. If an average of 4 people per household is taken, then one house may accommodate between 24 and 40 people, which of course is very high densities. From the data (see table below) there seems little difference between the household size of tenants and owners.

TABLE 3:12

HOUSEHOLD SIZES

| HOUSEHOLD SIZES | HURUMA | | | | KARIOBANGI | | | |
|--------------------|-----------|--------------|----------|--------------|------------|--------------|-----------|-------------|
| | TENANTS | | OWNERS | | TENANTS | | OWNERS | |
| | NO | % | NO | % | NO | % | NO | % |
| 1 - 2 | 17 | 36.17 | - | - | 7 | 6.67 | - | - |
| 3 - 4 | 23 | 48.94 | 3 | 6.38 | 32 | 30.48 | 3 | 2.86 |
| 5 - 7 | 1 | 2.13 | 3 | 6.38 | 39 | 37.14 | 4 | 3.81 |
| 8 -10 | - | - | - | - | 16 | 15.24 | 3 | 2.86 |
| 11 + | - | - | - | - | 1 | 0.95 | - | - |
| T O T A L S | 41 | 87.23 | 6 | 12.77 | 95 | 90.48 | 10 | 9.52 |

Since there are 723 Site and Service plots in Kariobangi and since the average number of rooms per plot is 7 we can get some estimates of the population by taking the average household size to be 5. In that case Kariobangi population may be 25,000 people where as Huruma may be about 9,000 people.

b) MIGRATION

Almost all heads of households had come to the areas from another part of the city. This suggests that these are not receiving areas for in-migrants since it is unlikely that many urban in-migrants can afford to buy or build their own home when they arrive in the town. From Table 3:7a it is obvious that the two areas supplying the schemes with residents are the squatter areas and the Rest of Eastlands. The people interviewed

indicated that they had stayed with relatives as friends on their first arrival in the city. It is only after getting a job and more information on housing that they moved in these areas. This raises some doubts about squatter areas being reception areas of in-migrants. People move in them because they are cheaper places where they feel that they can afford to settle. The function therefore tends to be more economic than social. The same could be said about Site and Service Schemes. Since most people cannot get access to the cheap City Council Schemes because of the relative cheap rents and so making the schemes more economic than social. Also the fact that more people especially in Kariobangi prefer to move out if they got a chance reflects the economic nature of the schemes (see table 3:7b).

Nearly all heads of families gave the reason for moving to Nairobi as 'looking for employment.' Both areas showed signs of having unstable societies about 80% of Huruma's and 75% of Kariobangi's heads of households had lived in the area for less than 5 years. In case of Huruma we would say that it is a new estate and so the residents have not had time to settle but Kariobangi has existed for more than ten years yet it does not seem to keep its residents for long. This supports the point made earlier that these areas may be functioning as purely economic areas and once people get better areas for the same amount of money they are paying for rent they tend to move elsewhere.

TABLE 3:13

LENGTH OF RESIDENCE

| LENGTH OF STAY (YEARS) | HURUMA | | KARIOBANGI | |
|---------------------------|--------|-------|------------|-------|
| | NO | % | NO | % |
| Less than 1 | 1 | 2.13 | 1 | 0.95 |
| 1 - 5 | 38 | 80.85 | 79 | 75.24 |
| 6 - 10 | 4 | 8.51 | 15 | 14.29 |
| 11 - 15 | 2 | 4.26 | 3 | 2.86 |
| 16 + | 2 | 4.26 | 7 | 6.67 |

3:3:0 ECONOMIC CONDITIONS3:3:1 EMPLOYMENT

Economic factors are an important part of Housing. People look for houses to rent when they have some sort of income. From the data it appears that the majority of heads of households are working. Huruma has got a higher percentage of self-employed 14.9%. In Huruma only 4.20% and 0.95% in Kariobangi were unemployed. But if the whole population is considered, we find that many people over 14 years old had no employment and only a small number were still continuing with Education. The largest portion of unemployed are wives of heads of households. Formal employment rates amongst women generally appears much lower than for men. And although women do many forms of economic activities e.g. selling of cakes, vegetables outside their rooms or home tailored garments, they tend to exclude these as activities which produce some economic benefits to the household.

3:3:2 SOURCE OF EMPLOYMENT

The largest single source of employment for household heads of both areas is the private sector, which employs about 55% of all interviewed. This is followed by the public sector providing for about 30% of these interviewed with employment.

TABLE 3:14SOURCE OF EMPLOYMENT

| A R E A S | PUBLIC SECTOR | | PRIVATE SECTOR | | SELF EMPLOYED | | UNEMPLOYED | |
|-------------|---------------|-------|----------------|-------|---------------|-------|------------|------|
| | NO | % | NO | % | NO | % | NO | % |
| HURUMA | 13 | 27.66 | 25 | 53.19 | 7 | 14.89 | 2 | 4.26 |
| KARIOBANGI | 54 | 32.38 | 60 | 57.14 | 10 | 9.52 | 1 | 0.95 |
| T O T A L S | 43 | 30.0 | 85 | 55.2 | 17 | 12.2 | 3 | 2.6 |

Most of the people interviewed seemed to be employed in clerical supervisory or technical jobs. This was reflected in the type and amount of property found in the house. There were a few involved in manual work. The majority of the households were in full time employment and therefore earning above Kshs. 400/-.

It was quite clear that a high number of people were hiding their real incomes as counter checked by the amount of rent paid. For instance there were instances where house rent was more than 50% of the income given. But landlords tended to be more sincere since it was possible to counter check their income and what they collect from rents.

TABLE 3:15
INCOMES OF HEADS OF HOUSEHOLDS

| INCOME PER MONTH KSHS | HURUMA | | KARIOBANGI | |
|--------------------------|-----------|---------------|------------|---------------|
| | NO | % | NO | % |
| 0 - 200 | 2 | 4.26 | 1 | 0.95 |
| 201 - 400 | 8 | 17.02 | 12 | 11.43 |
| 401 - 600 | 10 | 21.28 | 20 | 19.05 |
| 601 - 900 | 15 | 27.66 | 39 | 37.14 |
| 901 - 1200 | 11 | 23.40 | 21 | 20.00 |
| 1201 + | 5 | 6.38 | 12 | 11.43 |
| T O T A L S | 47 | 100.00 | 105 | 100.00 |

3:3:3 TOTAL INCOME AND EXPENDITURE

In addition to collecting information about income, the survey also aimed at finding out on what the highest proportion of income is spent. In both schemes food ranked highest with as much as 50% of the income being devoted to this. Next in the rank was rent. Transport did not rank so high with some of the people. This because fares are supplemented by sometimes these people walking to work - especially those working in the Industrial Area.

3:3:4 PLACES OF WORK

The two areas where survey was carried out are about 9 to 10 kilometres from 2 major places of work. This means that apart from spending more time in travelling, the people also pay high fares. The City Centre is the place of work for about 54% of all interviewed followed by Industrial area and Ruaraka

TABLE 3:16

PLACES OF WORK

| A R E A S | H U R U M A | | K A R I O B A N G I | |
|---------------------|-------------|--------|---------------------|-------|
| | NO | % | NO | % |
| CITY CENTRE | 28 | 59.57 | 52 | 49.52 |
| INDUSTRIAL AREA | 2 | 4.26 | 36 | 34.29 |
| SAME AREA | 6 | 12.77 | 10 | 9.52 |
| HUARAKA | 11 | 23.46 | 2 | 1.90 |
| DANDORA | - | - | - | - |
| OTHER PARTS OF CITY | - | - | 5 | 4.76 |
| T O T A L | 47 | 100.00 | 105 | 99.99 |

Most of the people working in Industrial area are engaged mainly in manual, or technical work whereas those in City Centre are mainly clerical. All people who answered that the place of work was the Same Area as residence were landlords. This is because these people are involved in business within the same area i.e. owning a kiosk on the building or a stall in the market.

3:3:5 MODE OF TRANSPORT

The most common modes of transport in the areas are buses and Matatus. In fact these are among the best served areas in the city (apart from Kenyatta Hospital and Eastleigh). This may be one of the reasons why car ownership in the areas is very low. It may also be one of the reasons which attract people to these distant areas. The few people who walk daily to places of

work are those who work either within the area or at Ruaraka which is quite close to Kariobangi. Occasionally some people walk as far as Industrial Area but this depends very much upon the weather and the time of the month.

TABLE 3:17

MODES OF TRANSPORT

| MEANS OF TRAVEL | HURUMA | | KARIOBANGI | |
|-----------------|--------|--------|------------|--------|
| | NO | % | NO | % |
| BUSES/MATATU | 39 | 82.98 | 92 | 87.62 |
| PRIVATE CARE | - | - | - | - |
| BICYCLE | 1 | 2.13 | - | - |
| FOOT | 7 | 14.89 | 13 | 12.38 |
| TOTAL | 47 | 100.00 | 105 | 100.00 |

3:3:6 OTHER ECONOMIC ACTIVITIES

The most common economic activity in the area is small scale trade. In both areas there are quite a number of kiosks which bring in a substantial amount of income to those involved. The most common commodities include sugar, soap, milk etc., i.e, the items needed daily by households. There are also quite a number of kiosks dealing in green vegetables. Kariobangi has an established shopping centre which also provides some form of employment to the people involved.

The presence of Kariobangi market also affords quite a variety of economic activities. There are some small scale industries, like making of jikos, furniture, shoes and repairs of

things like radios. Also there are clothes sold either new or second hand.

Construction work also provides some form of employment to small builders especially in Huruma. The quarries and block making is also another source of income.

Finally the small shambas along the river valleys when worked upon provide greens which can be sold or supplement the household food.

In general the two areas offer very limited opportunities for employment type which can support the whole household comfortably. And therefore most people engaged in petty trades are wives of the men who work in other places in the city. Huruma and Kariobangi are therefore mainly residential areas. Site and Service Schemes are areas which house people with at least permanent employment.

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CHAPTER 4

4.0 FINANCIAL AND ORGANIZATIONAL ASPECTS
OF SITE AND SERVICE SCHEMESSECTION A4:1:0 SOURCES OF FINANCE FOR HOUSING

There have been two approaches to the provision of housing in Kenya. One has been the building of houses by families themselves using indigenous materials and depending partly on the help of friends and neighbours as a source of labour to supplement their own effort. This has been predominant in the rural areas, but as people change the values, different building materials are adapted and the indigenous ones tend to disappear. The second approach is where money is used at one stage or another during the housing production process. This has been a predominant feature in urban areas but is also increasingly being used in the rural areas.

In Urban areas, minimum standards have been set by the Building By-Laws below which it is considered a community risk. These standards have been set in terms of health and safety with very little consideration in terms of cost. Yet even the very minimum standards require financing. The production of housing require close coordination with water supply, sewerage transport network and community services. This means that substantial financial resources are required for construction. Financially housing is of necessity longterm and the amount involved is enormous compared with the incomes of the borrowers. It also entails dealing with many people of different socio-economic conditions.

In Kenya both, the public and private sectors take part in the development of housing. It is therefore important to look at the institutions within these two sectors which make money available to housing.

4:2:0 THE PRIVATE SECTOR

The private sector is an important contributor to the housing stock in the city and the country at large. It provides the bulk of housing investment for high and middle income earners. But private funds are rarely earmarked for large housing schemes. In Kenya there are a number of private financing institutions.

4:2:1 THE HOUSING FINANCE COMPANY KENYA (HFCK)

This is a joint venture between the Kenya Government and the Commonwealth Development Corporation and each holds an equity capital of 50%. This institution finances units costing above K£1800. The main purpose of HFCK is to make loan finance available to promote homeownership in urban areas and indirectly encourage mortgage lending in Kenya. The Ministry of Housing and Social Services has made available provision of K£5.8 million as loans to H.F.C.K. in 1974 - 78 Development Plan (see Table 4:1).

4:2:2 SAVINGS AND LOANS KENYA, THE EAST AFRICAN BUILDING SOCIETY

These two financing institutions attract public deposits therefore offering investment facilities. These are then given out as loans.

4:2:3 THE COMMERCIAL BANKS

Generally Commercial Banks do not make their resources available for long term lending. But they play a significant role in providing bridging finances to contractors during construction periods. This means that only big and well established contractors can get this service.

4:2:4 EMPLOYERS HOUSING

There are certain firms which give loans to their staff to buy houses or they provide houses themselves. But firms doing so these days are very few and preference is given to the senior officers.

4:2:5 HOUSING CO-OPERATIVE SOCIETIES

These societies are made up of a number of shareholders. Generally it involves a group of people who collect money which is used in buying a piece of land or a number of plots. The societies may then build upon that land houses (usually structures with wooden walls and corrugated iron sheets) which are then allocated to the members or rented out. Very often what has happened is, a few influential individuals may buy off the small shareholders and rent the houses or rooms very expensively.

These societies have played an important role of increasing the housing stock (although most of these company houses lack some of the very essential facilities like water supply and sanitation) for the low income groups but they have been also big exploiters, through high rents which they charge per room.

4:2:6 THE NATIONAL CHRISTIAN COUNCIL OF KENYA

This is a voluntary body which participates actively in many developmental projects. It trains manpower in different fields and also supports small scale industries. The NCCCK is increasingly getting involved in the field of housing especially in urban areas. It is now providing loans to quite a number of low-income earners who have plots to develop in Site and Service Scheme. The NCCCK prefers people who are members of a housing Co-operative so as to facilitate the giving out and collection of loans. The NCCCK therefore provides an accessible source of loans for low income groups.

TABLE 4:1

PLANNED ALLOCATION OF DEVELOPMENT FUNDS
BY PUBLIC AND PRIVATE SECTORS IN HOUSING
(TOTALS 1974/78)

| | | I N S T I T U T I O N S | KE '000 |
|----------------------------|--|--|---|
| MINISTRY OF HOUSING | N.H.C | Rural Housing | 1,150 |
| | | Urban Housing | 24,110 |
| | | Housing Research and Experimental Projects | 180 |
| | | Central Government Staff Housing | Pool Housing Mortgage Housing(staff) |
| | | HFCK (Loans for medium and high-cost Housing) | 5,770 |
| | | T O T A L | 34,460 |
| | | I N S T I T U T I O N A L H O U S I N G | 8,800 |
| | | TOTAL CENTRAL GOVERNMENT | 43,260 |
| OTHER PUBLIC SECTORS | East African Community | | 1,130 |
| | Local Authorities (From own income, other local sources & foreign aid) | | 4,810 |
| | | TOTAL PUBLIC SECTOR | 49,200 |
| | | PRIVATE SECTOR | 33,000 |
| | | GRAND TOTAL | 82,200 |

Source: Development Plan 1974 - 1978

4:3:0 THE PUBLIC SECTOR

The public sector plays a big role in the provision of housing in this country. Large housing schemes are financed through public sponsored institutions and overseas aid is also being used.

4:3:1 GOVERNMENT DIRECT PARTICIPATION

The government directly participates in the provision of houses in several ways. This is because the government knows that the state of housing affects the output of the workers. Furthermore housing problem can be a source of political chaos. Economic development and political stability should go hand in hand with improved standards of living for the majority of a country's citizens.

4:3:2 INSTITUTIONAL HOUSING

The Central Government finances, develops and manages through the Ministry of Works, institutional rental housing Estates for civil servants working in such institutions as police, army, hospitals schools etc.

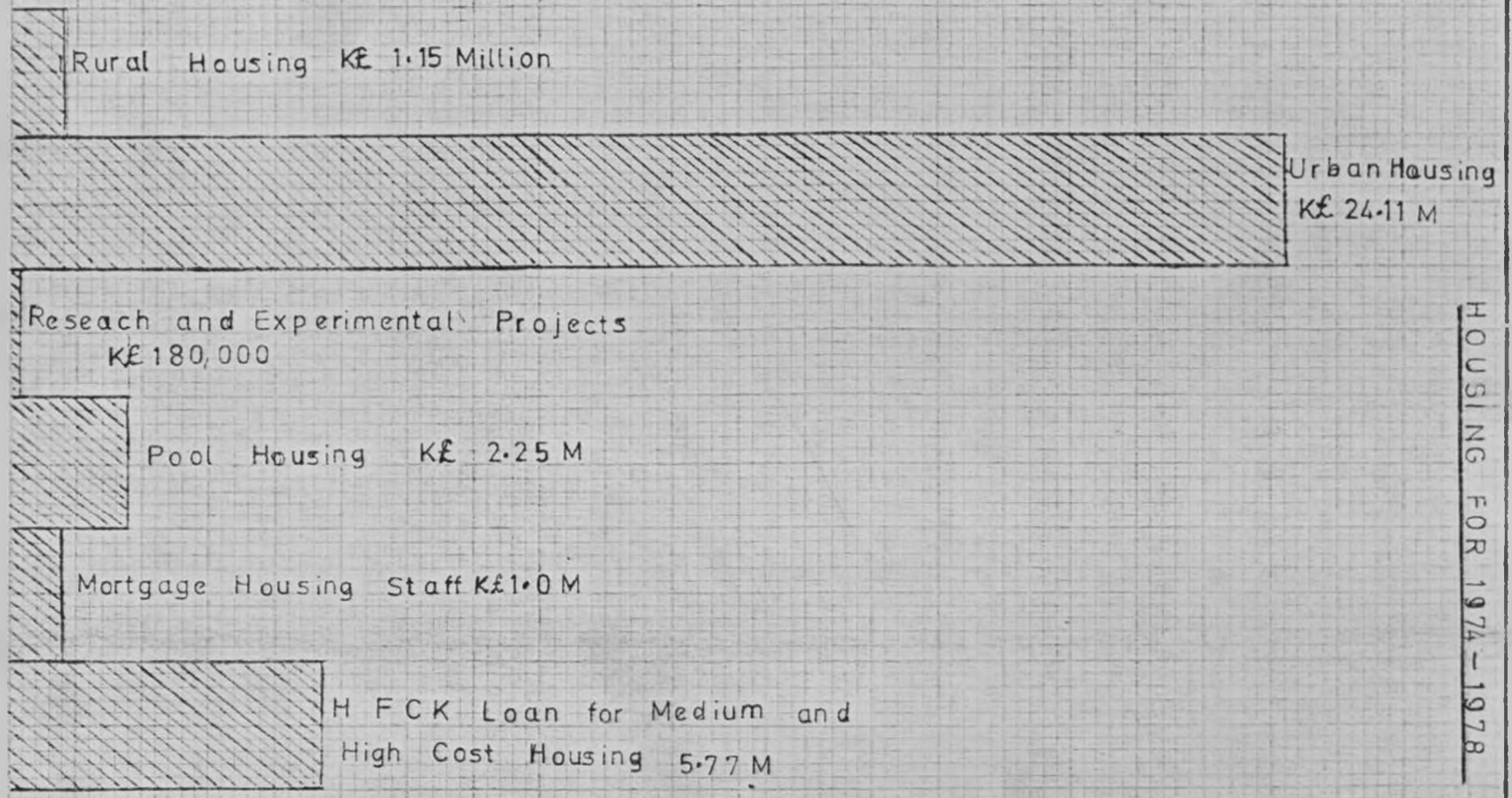
4:3:3 POOL HOUSING

The Kenya Government also finances, develops and manages through the Ministry of Works and the Ministry of Housing and Social Services Pool rental housing estates for civil servants not included in the above category, especially those in remote areas.

4:3:4 GOVERNMENT SPONSORED HOMEOWNERSHIP

The government goes further than just providing rental housing. It makes available facilities for senior civil

HOUSING FOR 1974-1978



servants who want to buy houses of their own.

4:3:5 THE EAST AFRICAN COMMUNITY

This is a public sponsored institution and for many years it has provided finances for staff rental housing or it has even assisted staff by providing deposits for house purchase. The present problems facing the Community affects the housing sector in that many of the community's workers are being rendered jobless and will therefore tend to look for low rent housing which are already in short supply. The implications are therefore increased demand which may tend to increase rents.

4:4:0 GOVERNMENT INDIRECT PARTICIPATION

In its endeavour to provide housing for the people, the Kenya Government has not been only satisfied with direct provision of houses but also participates indirectly. This is through the National Housing Corporation, Local Authorities, Industrial Housing and use of foreign aid.

4:4:1 THE NATIONAL HOUSING CORPORATION (NHC)

Countries with housing problems always find a need to have a body which can deal with house planning and management. The National Housing Corporation is the main government agent and it performs the following:

- a) it has power to promote low-cost housing and assist housing research.
- b) it is through the N.H.C. that the government channels funds for low-cost housing to local authorities.
- c) the N.H.C. should also provide technical assistance needed by any local Authority.
- d) the National Housing Corporation undertakes direct construction of houses so as to stimulate the private sector or to overcome bottlenecks.
- e) in liaison with the Housing Finance Company Kenya it provides finances for tenant purchase housing (mortgage).

The N.H.C was set up to provide housing units costing less than K£ 1,200 (1970). But with increased construction costs it is not uncommon to see a house costing K£ 1,800 being termed as low-cost. It has been proved that in the past the N.H.C. has concentrated funds on the upper bracket of the low-cost housing i.e. constructing houses with an average of K£1,200 per unit, and so paying little attention to units costing less than K£1,200.

In the present Development Plan 1974-78 the Government requested the National Housing Corporation to provide 56% of the total planned units at a cost equivalent to not more than K£ 750 per unit. This was an attempt to make the N.H.C. to provide more units for the lowest income groups and therefore shift to providing more Site and Service Schemes. The challenge to pursue this method has not been taken up vigorously. And for almost two first years of the Current Develop-

ment Plan the city (National Housing Corporation and the Nairobi City Council) has been underspending on housing relative to approved funds (see Chapter 5 for reasons of underspending). The underspending on low-cost housing has meant that the N.H.C. has experienced excess finances which is compounded by its revolving fund. This excess finance is used as bridging finance for medium and high cost mortgage housing. Managing in this manner enables N.H.C. to earn higher returns - therefore making N.H.C. a profit making body. Fig. 4:2 indicates how the N.H.C. has been spending its finances on different housing projects.

4:4:2 LOCAL AUTHORITIES

Local authorities are expected to provide some amount of housing within their areas of jurisdiction. Apart from the City Council of Nairobi which may negotiate loans for housing from outside the country, all others get their finances from the Central Government through the National Housing Corporation. Because of the limited financial base, the local authorities can not employ their own technical personnel and therefore the tendency to rely heavily on the N.H.C. for all technical assistance.

4:4:3 INDUSTRIAL HOUSING

In its attempts to divert in-migration to major towns of the country, the government encourages the location of industries in less developed areas. To act as an incentive, the government gives loans to industries locating in less industrialised areas) for housing purposes for instance Webuye. This helps in increasing the housing stock and can act as an attraction to these new areas.

SITE AND SERVICE PLOTS AND HOUSING UNITS COMPLETED DIRECTLY OR INDIRECTLY BY N.H.C.

| SITE AND SERVICE | | | | RENTAL TENANT PURCHASE AND PILOT SCHEMES | | | MORTGAGE | | | TOTAL N.H.C. | | |
|--------------------|----------------|---------------------|------|---|--------------------|------|----------------|--------------------|------|------------------|--------------------|-------|
| | NO OF PLOTS | TOTAL COST K£ | % | NO OF UNITS | TOTAL COST (K£) | % | NO OF UNITS | TOTAL COST (K£) | % | NO OF PLOTS & | TOTAL COST (K£) | % |
| 1970 | 169 | 38,640 | 1.5 | 2,146 | 2,348,300 | 94.7 | 25 | 93,350 | 3.8 | 2,340 | 2,480,690 | 100.0 |
| 1971 | 1,465 | 312,725 | 14.1 | 1,737 | 1,901,408 | 85.9 | - | - | - | 3,202 | 2,212,133 | 100.0 |
| 1972 | 2,100 | 280,610 | 6.4 | 2,116 | 2,894,990 | 65.9 | 382 | 1,214,688 | 27.7 | 4,598 | 4,590,288 | 100.0 |
| 1973 | 96 | 15,552 | 0.7 | 944 | 1,755,548 | 81.3 | 150 | 389,502 | 18.0 | 1,190 | 2,160,602 | 100.0 |
| 1974 | - | - | - | 1,268 | 1,664,521 | 67.9 | 173 | 788,300 | 32.1 | 1,441 | 2,452,821 | 100.0 |
| 1975 | 449 | 186,170 | 6.0 | 1,240 | 1,363,854 | 44.3 | 392 | 1,530,451 | 49.7 | 2,081 | 3,080,495 | 100.0 |
| 1970-1975 TOTAL | 4,279 | 833,697 | 5.0 | 9,451 | 11,928,621 | 71.1 | 1,122 | 4,016,691 | 23.9 | 14,852 | 16,779,029 | 100.0 |

TABLE 4:2

SOURCE: Ministry of Housing and Social Services

4:4:4 FOREIGN AID

Lately the Government has been involved in negotiations for loans for housing from international bodies. And as a result a number of international bodies are now participating in provision of housing.

a) THE WORLD BANK

The World Bank has provided a loan of K£5.7 million to prepare 6,000 serviced plots over a period of 5 years to settle 30,000 people with a monthly income of between sh. 280 and sh. 650.

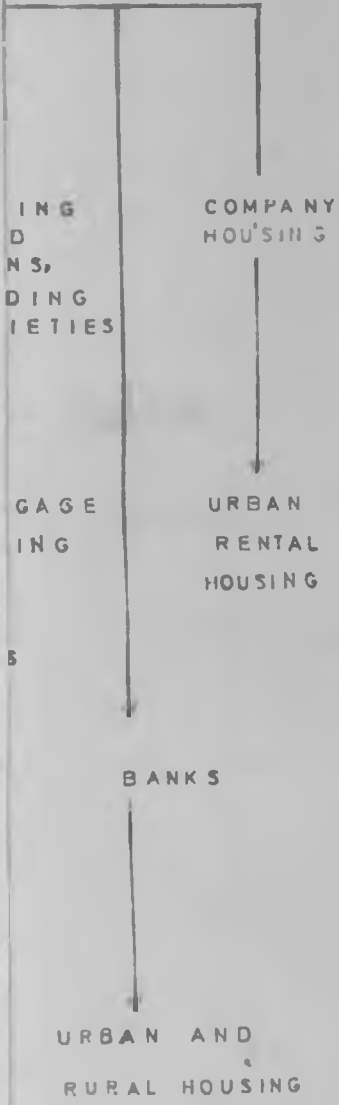
The World Bank is charging a 6 $\frac{1}{2}$ % interest to the Government which then on-lends to the City Council of Nairobi at an interest rate of 8 $\frac{1}{2}$ % for 25 years. It is hoped that materials loans will be provided to plot owners. The entire cost will be recovered through monthly payment over a period of between 20 and 30 years.

b) THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

This body has provided a loan of 10 million dollars to Nairobi City Council and another 5 million dollars to other municipalities through the N.H.C. at an annual interest rate of 8.7% for a period of 26 years starting from July 1st 1979. The money is supposed to be used for a low-cost tenant purchase scheme costing between K£ 1,200 to K£ 1,600 per unit. The target is to provide 2,800 housing units in Nairobi and 1,400 units in other municipalities.

c) COMMONWEALTH DEVELOPMENT CORPORATION

The Commonwealth Development Corporation participates in financing large scale housing schemes for middle income earners. It has offered a loan of K£ 1.2. million to the City Council of



Nairobi and the National Housing Corporation for the construction of housing units in Buru Buru. The loan is repayable in 15 years at an interest rate of 8%. Two types of housing units are being built, tenant purchase and rental. The Housing Finance Company Kenya provides mortgage to the former at 9 $\frac{1}{2}$ % rate of interest for 15 years.

4:5 MAIN FEATURE IN THE HOUSING FIELD

From the foregoing analysis of the financial institutions in Kenya, it is obvious that lack of finance is not the problem but rather a need to channel more of the money to the true low-cost schemes. More commitment and less of lip-service is required if any effective effort is to be made at tackling the problem of housing.

SECTION B

4:6:0 ORGANIZATIONAL ASPECTS OF HOUSING SCHEMES

In the financial section, we dealt with financial sources of all types of legally reorganised housing scheme. The following section deals only with some organizational aspects of Site and Service Schemes in Nairobi.

Quite a number of institutions are involved in Site and Service Schemes. How these institutions carry out their individual work and how they coordinate it with other involved institutions contributes very much to the success of these schemes. It is important that we look at some of these institutions.

4:6:1 DIRECT GOVERNMENT INVOLVEMENT

The Ministry of Lands and Settlement through the Commissioner of Lands has the responsibility of looking after government's land. The Commissioner of Lands may also acquire land on behalf of the government for public development. Land forms the basis

of all development and therefore makes the Ministry of Lands and Settlements a very instrumental agent in acquisition of land for Site and Service Schemes. The Ministry of Lands will work effectively if only the Ministry of Housing and Social Services and the Local Authorities have got a clear plan of how much land is needed for development. It also requires an insight in what trend of development is envisaged for the future. This means that from early stages of policy formulation, steps should be made to coordinate the related functions. For instance if the housing policy is committed to Site and Service Schemes, then land is needed and the Ministry of Lands should be alerted early enough to start acquisition. Site and Service Schemes by their nature acquire a lot of land. In acquiring land for these schemes other considerations like space requirements of other housing projects should be taken into account. This ensures a steady flow of land ready for development to meet total requirements. This may also avoid certain delays caused due to lack of available land and therefore help beat the construction costs which are ever on the increase.

On the other hand government land is very susceptible to squatter settlements. Once these settlements have been established it becomes difficult to remove them. It therefore can be argued that acquisition of land for a given project (ad hoc) rather than part of an overall program to provide a steady flow of land ready for development, has an advantage of checking squatting, since private land rarely suffers from this phenomenon.

It was due to the long procedures involved in decision making that the World Bank insisted on setting up a department - the Dandora Community Project, which was strong enough and given enough powers to make decisions regarding Dandora project on behalf of the city council. This would therefore assist in the fast running of project if the objectives were to be met within the set time.

4:6:5 THE NATIONAL CHRISTIAN COUNCIL OF KENYA

The National Christian Council of Kenya takes interest in many aspects of low-cost housing. Apart from giving loans the N.C.C.K. tries also to develop small scale industries. In case of Dandora it hopes to be involved in the management of the first multi-purpose community centre.

As a source for small loans to plotholders the N.C.C.K. works through informal housing cooperatives to reach the people. But it also depends on the City Council to communicate certain information regarding the plot holders to them. It also expects the City Council to pass the information about the available loans of the N.C.C.K. to the plotholders. But sometimes the Nairobi City Council fails to pass the necessary information to plotholders. The N.C.C.K. has also complained of the constant turnover of officers in the City Council concerned with some important aspects of the schemes. This affects the coordination work either because it takes some time before the new officer can contribute effectively or he may be less committed.

4:6:4 INTERNATIONAL INSTITUTIONS

Apart from providing funds the foreign institutions also like to provide some aid in form of manpower. These so called experts

give advice and see to the proper management of the money. These people may be an asset through injecting new working procedures but can also contribute to the failure of the projects by insisting on standards which may be unaffordable by the people the project is meant to serve. This is because no matter what skills an expert has acquired, his background - the value system - is very much part of him and this tends to be reflected in his appreciation and assessment of the schemes.

4:6:5 THE NATIONAL HOUSING CORPORATION

The National Housing Corporation is involved in many aspects of Site and Service Schemes. Apart from financing the National Housing Corporation has the power to administer. Kibera is directly under the management of N.H.C. Considering that the N.H.C. serves the whole country, it needs quite a large number of staff to deal with different towns. The centralized position of N.H.C. means that it is far from its areas of operation. The bureaucratic framework of the corporation coupled with distance causes delays in dealings with schemes located away from Nairobi.

As noted earlier the N.H.C. is involved in providing units of different grades, it therefore finds it easier both administratively and technically to stick on conventional ways of providing houses than acquiring unorthodox and imaginative approach required by Site and Service Schemes. What is obvious is that the N.H.C. is still oriented towards providing high standards of physical development. It therefore lacks the commitment which Site and Service Schemes require.

4:6:2 THE NAIROBI CITY COUNCIL

Nairobi City Council has been involved in a number of Site and Service Schemes. At the moment it is participating in one of the largest schemes in the world (Dandora Project).

The City Council has a rigid organizational framework which although specifies the division of labour among its departments, cannot easily or efficiently carry out certain projects which require urgency. This is because each department is assigned duties which other departments should not interfere with and before anything is approved a lot of time is taken through committee discussions.

A field like housing which requires many inputs from different departments requires a lot of coordination. There are times when coordination of work between departments has been lacking and so hampering the progress of certain projects.

The City Council of Nairobi, until recently has only provided basic infrastructure to plots and no material or financial help to plotowners. This has sometimes involved National Christian Council of Kenya stepping in to try and give loans to plotowners. Since trying to use the Council for collection of loan repayment proved inefficient, the voluntary bodies have tended to design their own procedures for collection. This reduces the control of the council over the projects since it does not provide the financial aid needed by the plotowners. (But some of the new schemes have access to financial aid and technical assistance from the local authority). The implementation of the program therefore tends to proceed in uncoordinated and inefficient manner since different elements of the project or scheme are being controlled by different agencies.

The setting up of a Site and Services department as one of N.H.C. departments is a positive step towards the right path. The department can therefore assist local authorities and participants. Its field officers can coordinate with municipalities and towns on administrative matters.

The department also hopes to engage site supervisors who will assist the participants in house construction. In a recent booklet by the National Housing Corporation¹ the administrative procedure has been set out - this shows regulations and conditions which should govern Site and Service Schemes.

4:6:6 SELF-HELP CONTRIBUTION

Previously self-help was taken to mean the personal labour input put in the construction of houses. But it has been found that whereas this operates quite well in rural and squatter areas, it cannot be applied in its original form in planned urban areas. This is because of the nature people hold their present residential areas which may be far from the location of the project and the social organisation of the urban areas. Self-help may therefore involve hiring of contractors supplemented by some family labour in house building. Harambee efforts are very successful when it comes to raising money for community projects but it usually receives very little backing when it is done for an individual.

¹ "Site and Service Schemes, Guidelines for and administrative procedure".
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The Housing Cooperative societies are sort of informal self-help groups which have helped in construction of houses for their members, These societies tend to limit the number of members and so making the management of the societies possible. Due to their informal nature these societies can control the behaviour of their members more effectively than a body like N.H.C. Since the societies can achieve their set goals within a short time, the societies are threatened with breaking up.

4:6:7 MAINTENANCE OF SCHEMES

The organisation of maintenance of the schemes is a shared responsibility of the local authority or the National Housing Corporation (to look after the infrastructure and services) and plotowners (to maintain the buildings and facilities on their plots in proper conditions). Very often the landlords have been very laxed in performing their part of the deal and therefore many houses in the schemes leave much to be desired. Also in so doing the landlords have given little incentive to local authorities in maintaining the services. It is therefore not surprising to see a small thing taking a long time to be repaired.

The man who is a victim to poor maintenance is neither a local authority official nor the landlord but rather the tenant.

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CHAPTER 5

5:0 PROBLEMS AND PROSPECTS OF SITE AND SERVICE SCHEMES5:1:0 PROBLEMS IDENTIFIED - FACTORS EXPLAINING OR INFLUENCING THEM

Having discussed the objectives, policies, implementation methods and the financing of Site and Service Schemes a number of problems have been identified. These problems cover a wide spectrum of development in general. It has been found that the physical features of the city have partly determined the pattern of residential development in Nairobi. Acting together with the historical factors, administrative policies, planning controls and economic forces which have been in operation since the beginning of the settlement, have forced the Site and Service Schemes to a peripheral location. This locates the low income group quite a distance from the work places.

5:1:1 H O U S I N G

Many low-cost housing schemes put up by the City Council have received a lot of criticism over the allocation of houses. This same criticism has also been levelled at the council with regard to allocation of plots in Site and Service Schemes. Serviced plots have tended to end in the hands of a much higher income group than originally planned for. This is partly due to malpractices or cases of corruption within the council and partly also due to the fact that Nairobi City Council has never been able to keep up with the growing demands and needs for housing.

Allocation of plots to the wrong people leads to high incidences of absentee landlordism. This in turn leads to the problem of poor maintenance of houses and general lack of

improvement. Furthermore the allocation of plots to a higher income group renders the Site and Service Policy ineffective since it ends up catering for a wrong group.

House plans provided for Site and Service Scheme have incorporated a one room phenomenon found in earlier plans of low-cost housing. This phenomenon has received a lot of criticism from politicians when attacking early housing policies, yet it is being repeated in the new schemes. Site and Service Schemes are intended to house family households and therefore amount of room required is a very important feature which needs more consideration. Whereas the present plans are ideal for sub-letting, they pose a number of problems to the tenant who uses the rooms. All rooms are constructed in such a way that all doors lead to outside. There are no internal doors to allow communication between two rooms which may be rented by a family. This makes movement within difficult. Most of the rooms are also small so that although the number of housing stock is increased, overcrowding still exists.

In comparison with other official low-cost housing, especially those under the Council's management, the tenants in the schemes pay a higher rent for the type of facilities provided. Rents range between Shs.75/- per month to about Shs.400/- per month for a single room. It is clear that a man with a minimum wage of Shs.300/- per month cannot afford to live in these schemes.

An average plot houses six households and therefore a certain amount of pressure is exerted on the facilities provided, which in most cases are of minimal standards. The policy of Site and Service Schemes aims partly at enabling the low-income earners

to become homeowners. This implies that being a homeowner it is possible for one to occupy adequate room for his family. From the survey it was obvious that the interviewed landlords were occupying just about the minimum accommodation requirement so that more rooms are left for letting. This reflects the priorities and preferences of the people. Site and Service Schemes therefore tend to play a more economic role and less of the social role which they were originally meant to perform.

5:1:2 STANDARDS

The government wishes to provide the people with the highest possible standards of social services so as to upset a system whereby certain areas of the city had few services which were below the standards of those enjoyed elsewhere. In trying to provide high quality facilities and services, public and private resources end up catering for a few people.

In setting up housing standards health and safety factors have tended to be put first. The basic factor of affordable monthly payment has been given little consideration. This leads to squatting, for what is sound in health terms implies higher standards and higher payments

The existing housing standards delay possible developments and make building too expensive. The standards therefore miss the flexibility of meeting rapidly changing demands of the population.

5:1:3 IMPLEMENTATION

Implementation of Site and Service Schemes, nationally, has lacked full commitment on the part of local authorities and politicians. Some officials have viewed them as future slums and others have insisted that site and service schemes should

provide as high standards as those found in other middle and high cost housing schemes. Politically therefore, there exists a gulf between what is considered fit and proper to aspire to and what is possible to provide for the masses of the low-income earners.

5:1:4 AMENITIES AND UTILITIES

Like other residential areas infrastructure which serves the whole of the city (sewers, main roads) is accorded first priority in the schemes. This puts social services either second or even lower on the priority list. Money for the provision of these services is expected to come from council's own internal finances. It is well known that many local Authorities have many financial problems partly because they have very limited financial resources. Implementation of social services therefore tends to be delayed for several years and this acts as a barrier to people wanting to move to the schemes. For instance, families with children of school-going age want to be in an area where children have access to schools.

The maintenance of utilities poses some problems partly because the residents show little interest in keeping shared facilities clean and partly because the absentee landlords neglect the proper management of the plot. This relaxed attitude is reflected in the type of environment found in the schemes.

One garbage container per plot is not enough for the number of households found on each plot. Garbage collection

by Council trucks is done two to three times a week. It is also common to see garbage collectors emptying only what is inside the container and leaving all overflows lying on the ground. The garbage left lying about rots and provides good breeding ground for disease carriers like flies, which then become a health risk.

5:1:5 FINANCIAL SOURCES

Finance is an important aspect of Site and Service Schemes. As seen in chapter 4, residential developments are financed by a number of sources. In Kenya very few financial institutions are interested in the financing of Site and Service Schemes. For several years now, the National Housing Corporation has been entrusted with financing low-cost houses. But in the past the corporation has concentrated on funding the upper bracket of low-cost housing, so that instead of K£1200 being the maximum cost per unit has in fact become the average. The 1974 - 78 Development Plan requested the N.H.C. to provide 56% of total planned units at a cost equivalent to not more than £750 per unit. Implementation of this was not taken up vigorously because:

- 1) administrative and technical capacities required to carry out the policy were not readily available in both the National Housing Corporation and the Nairobi City Council. The implementation of the schemes also required an unorthodox and imaginative approach which was lacking.

And so for sometime (first two years of the plan) the funds earmarked for Site and Service Schemes could not be used. But it is worthwhile to note that since 1976 the N.H.C. has been planning several Site and Service Schemes in more than 50 municipalities or towns in the country.

ii) There has been lack of commitment on the part of the Corporation to provide such schemes and this has led to underspending. Because the N.H.C. has been less committed to the idea, it has been slow in accepting it as a measure to relieve shortages.

iii) Another important problem has been that the procurement of loan from the United States Agency for International Development has meant that the N.H.C. has concentrated more on providing housing units costing between £1200 and £1600 at the expense of preparing and implementing Site and Service Schemes. This is partly because the USAID funded scheme is easier to administer and partly because N.H.C. has to pay a commitment fee of 0.5% per annum on borrowed loan - so the need to implement the scheme rapidly.

An important point which comes up is that costly finance (e.g. USAID funds at an interest rate of 8.7%) are used by local authorities through the N.H.C. while relatively cheap funds (government funds at an interest rate of 6½) are allowed to remain idle.

The excess finance which is experienced by the N.H.C. is used as bridging finance for medium and high cost mortgage

housing. Managing funds this way indicates that priorities as set down are not carried out and so the problem of housing shortage among the low-income earners continues.

Many local authorities have a limited financial base and so find it difficult to undertake housing projects. There is a tendency to rely heavily on the National Housing Corporation for financing, planning and implementation of their housing schemes.

There are a number of informal Housing Cooperative societies but they lack more incentives from the authorities e.g. their plans are never approved and their areas of operation lack the essential facilities. Although these societies are able to mobilise the limited resources of the residents their goals are short-term and so lack continuation.

5:1:6 ORGANISATIONAL AND ADMINISTRATIVE PROBLEMS

A number of institutions are involved in carrying out Site and Service Schemes. Problems of conflicting ideas on how the policy should be carried out arise. This in most cases leads to the delay of the projects. Since the schemes cut across a number of ministries or agencies there is the problem of communication of information across the agencies and also the frequency of discussing problems related to the schemes tends to be limited. This is because the officials involved have other duties to perform and there is the problem of finding time which suits all officials.

The problem of coordination of work is another problem. This is because the present pattern of administration

is organized along old-fashioned models established to meet problems of quite a different nature; this is reflected in the division of responsibilities between different departments of the local authorities. This organisation in a way defeats the attempts to tackle the new comprehensive problems. Rivalries, friction and personal conflicts between departments tend to be reflected in many housing projects and so cause delays.

Finally many institutions are faced with the problem of shortages of qualified personnel who can carry out the stated policy. The tendency has been to rely on expatriates and consultants who are expensive to maintain and who in many cases tend to apply western oriented solutions to a situation which requires quite an imaginative and unconventional approach.

5:2 PLANNING IMPLICATIONS

By definition Site and Service Schemes imply the use of detached single story houses on their own plots. This is because the building techniques available to a single household building of a house are limited. The tendency is therefore for the schemes to be large if full economic use of administrative and technical personnel is to be achieved. The schemes may therefore add to urban sprawl and its associated problems.

In allocation of plots the administration indicate the income bracket to be considered. In an attempt to house the low-income earners in special areas the govern-

ment continues to group people in social classes along economic status resulting in one-class nature of the schemes. In its present form the housing policy encourages separate development through deliberate divisions in the types of housing scheme. In this way the policy does not attempt to avoid polarization in the community but rather reinforces it making any type of integration difficult to achieve.

If cities of the developed countries are considered we find that the tendency has been for the low income group to be clustered near the city centre or places of work. Studies in these countries have also shown that as income rises the people tend to move from the city proper to suburbs where densities are slightly lower.

But if Nairobi is considered one finds out an interesting pattern. It is the people with low incomes who are found at the periphery of the city. Densities are very high and the distances to cover everyday to places of work are great. For instance peripheral places like Kibera, Kawangware, Kangemi and Kariobangi which house the majority of the low-income earners. This is because these places offer accommodation which quite a number of people in the group can afford.

Site and Service Schemes approach has been adopted at a time when land near employment areas has already been developed. In Nairobi, the only land available for these schemes is some distance away from the major employment centres. It follows that the poorer lot of the community are being pushed further from centres of work. They are

faced with direct high costs of transportation and indirect ones like long journeys to work in terms of inconveniences and frustration (leave home early and arrive late, crowded buses and sometimes buses do not come on time) and consequently less efficiency. The implication of the schemes means that social mobility is going to be that where vertical mobility (increase in income) reflects the horizontal mobility (new residential location) towards the city centre.

This in itself is quite different from developed countries where increase in incomes has generally meant movement away from the city centre to suburbs.

Site and Service Schemes' policy in trying to make use of cheap land on the periphery of the built up area advocates expansion outwards; instead of vertical development. As this policy continues to be implemented the city expands leading to increase in the cost of roads and other infrastructural facilities. Costs related to the upkeeping of the environment must be met and more personnel or manpower is required to carry out the maintenance of the facilities provided.

The use of schemes by the city for its growth outwards creates a certain amount of monotony due to the considerable extent of low-cost housing areas. A mixture of development could help in checking this monotony.

5.:3 PROPOSALS AND FUTURE POLICY RECOMMENDATIONS

On the two foregoing sections of this chapter, a number of problems in many instances lead to the failure of many housing schemes. But the problems also have a positive role to play, they act as indicators of what change or modification is needed to inject new vitality into the schemes.

5:3:1

It was noted that the allocation of plots to the right people is an important aspect of any housing scheme. Failure to do so usually mars the image of the authority concerned. Great scrutiny in identifying the target population is required. The present system of getting information to the people needs modification. It will therefore be more helpful if information centres were set up within residential estates where information about housing could be passed to the people. These centres being in close touch with the people, would be in a position to identify the genuine needy and recommend them to the Allocation Committee. A lot of impartiality is also necessary on the part of the allocation committee and the councillors who put a lot of pressure on those allocating plots should be restrained. In fact it may require an independent body with no interests in the scheme to do the allocation.

General lack of improvement of the structures was noted, despite the increased incomes to landlords. This implies that improvement of structures depends on more factors than just increased incomes. It is important therefore to investigate the priorities of plot allottees during allocation.

In designing house plans more attention should be given to the people who are going to use them. This means that plans should be designed from the users' point of view. A mixture of single rooms with one door leading outside and other rooms with a communicating door between two rooms will satisfy both the landlord and the tenant (see Appendix 3)

With demand being more than supply it is not easy to control

rents. It was found that the rents charged in the schemes are quite high. Considering that the ploholders have been given land at a very low price by the government, they should not exploit tenants through high rents. It is necessary for the local authorities to set up a fixed charge per room so as to protect the tenant.

5:3:2

It is encouraging to note that gradually the government is realizing that high standards are unattainable by the majority of the population. That is why Site and Service Schemes are being stressed as a means of making some of the facilities and services accessible to more people. Realistic standards therefore depend on what people can afford. New standards are needed. These new standards should be based as much as possible on the performance requirement rather than specifications. For instance standards should consider peoples income, availability of building materials, and what substitutes can be used, the cost of the houses and services and also peoples' values and what attachment they put to different houses. Standards therefore should never be final, but should be reviewed from time to time in keeping with changes in socio-economic and technological conditions i.e. standards should be flexible to meet the rapidly changing demands of the population.

5:3:3

The success of a project depends very much on the commitment of agencies to the project. A more positive approach to Site and Service Schemes is called for. There is a need for an acceptable standard of housing politically. This would represent a great improvement for those provided with it, yet

still remain within their range of affordability. There is no need for our politicians aspiring for what they know is impossible for many. A general orientation towards providing what is within the reach of many is a more effective approach of tackling problems facing the towns of the country, than the conventional approach of providing a high standard of physical development.

5:3:4

Site and Service Schemes being designed for people with families require to have social services ready for the people when they move into them. It is necessary therefore to provide schools, clinics and shops simultaneously with infrastructure. This will act as a great incentive to many households who hesitate to move because they cannot find schools near enough for children. It is recommended that local authorities should try to get the agencies financing infrastructure to finance services as well and then pay back later.

As far as maintenance of utilities on the plot is concerned, what is needed is a more effective housing management on the side of both landlords and the tenant. To improve the health standards of the environment more garbage containers should be allocated to each plot and the Council should increase the number of days garbage is collected.

More street lighting is needed especially along access roads and landlords should make an attempt to install electricity for lighting purposes in the houses for the tenants feel that it is cheaper to use electricity than Kerosene and the fact that electricity can be paid for on monthly basis.

5:3:6

From the analysis of financial institutions available in Kenya, it is clear that lack of finance is not the problem but rather a great need to channel more of the money to the true low-cost schemes. More commitment and less of lip-service is required. It is recommended that since there are quite a number of financial institutions catering for middle and high cost housing, more should be put on the National Housing Corporation (a government agency) to concentrate on provision of low-cost housing.

The informal Housing Cooperative Societies should be encouraged to continue and aided through giving lessons on proper management of funds and methods of attracting more people.

Also new ways of making local authorities self-sustaining are necessary.

5:3:6

With a number of institutions involved in the implementation of the policy a lot of coordination of their work is called for. This will mean that each institution knows exactly what is happening in other institutions and where its contribution is most needed. This would help in the smooth running of the project and will also reduce the amount of friction between departments as has been experienced in many housing schemes. Also a great amount of objectivity is called for on the part of the officials involved, for personal interests and objections to the projects always lead to delays and eventually to the failure of the schemes.

In tackling the new complex problems, a comprehensive approach to solutions is necessary. This is because of the interrelated nature of many present problems. This means that there is a need for the reorganisation of the pattern of administration. What is required is the creation of a department which will deal housing development in its totality. This may involve the merging together of a number of departments for instance in case of Nairobi it could involve the city engineers department, city treasury, and the department of Housing and Social Services. This creation will mean that the housing problem can now be tackled under one department and the usual rivalry, friction and vetoing the expenditure on certain items can be minimized.

In setting out policies and strategies more insight is needed. It is discouraging to find that the programming stage has been reached but there is no personnel to implement the projects. More investigation is therefore needed in the trend of our urbanisation so that as new policies are formulated, it should be possible also to identify or start training the personnel to implement the policy.

5:3:7

Some of the problems associated with location of the schemes e.g. distance, can be easily tackled by an efficient administrative organization. An efficient bus service from the Site to the City Centre or any place of work reduces the distance in terms of amount of time spent in travelling for instance although Kariobangi is about 10 kilometres from the City Centre, it is one of the best served areas of the city by municipal buses.

This in a way may act as an attraction to the area. Accessibility by public transport to Site and Service Schemes is therefore a very important aspect.

It is necessary at this point in time for planners and all those interested in the development of the city to do more investigation in the type of urban growth we want to see in Nairobi. If it is proper to continue expanding outwards from the city centre then the policy of site and service schemes should be intensified. But if the cost of providing infrastructure to these expanding schemes is going to be too dear and their maintenance very poor then it is necessary to start rethinking whether growing vertically is better in the long run; for mistakes made now may be too costly to rectify in the future.

It is also recommended that whenever a low-cost housing scheme is put up some sort of high cost housing schemes should also be encouraged parallel to the low-cost ones. This encourages people of different economic status to develop alongside each other and avoids the deliberate division in types of housing schemes. Mixing different types of dwellings within a residential area, increases densities, can also save on costs and it manages to produce a more interesting and less monotonous development.

Apart from the social benefits realized in mixed residential areas, opportunities are given to planners to realize the planning and design advantages of mixed development.

Urban sprawl can be checked by building multi-storey buildings and so save on the cost of installing services and utilities.

Urbanisation in Kenya and Africa as a whole is not along the old European lines. It is evident that migrations into towns will continue. To try and deflect these movements to big cities the process of decentralising industries needs to be intensified. This may require offering more incentives to industrialists as well as workers in the new centres of growth and re-orientation of the education system so that the products of the system are people who can deal with problems facing the country.

Finally, a good housing administration is one which conceives housing in its totality. The administration is helped to do so if there is an integrated housing policy which attempts to solve housing problems by combining a variety of policies, so as to use the positive aspects of each to the greatest advantage. The policy should also take into consideration the great rural-urban migration which brings huge influx into the city to swell the numbers of unemployed and cause overcrowding in houses which are already functioning beyond their capacity.

CHAPTER 6

CONCLUSION

6:1

Among the many problems related to urbanization facing the city of Nairobi is housing shortage especially for the low-income earners. The policy of providing serviced plots aims at increasing the total low-cost housing stock for both ownership and rental purposes. The success of the policy depends very much on how it is administered.

Some of the basic problems leading to the undertaking of the study are related to the lack of a systematic approach to develop an on-going routine program, the uncoordinated and inefficient manner the implementation of Site and Service Schemes has tended to take and the tendency to want to provide high standards of physical developments regardless of the economic status of the people being planned for.

The study shows the development of Nairobi and its residential areas as a background to some of the present problems facing the city. It indicates how physical characteristics of the city, early government policies on housing and migration, the economic system and cultural barriers have all contributed to. The official housing policies which tied housing to regular employment encouraged the development of squatter settlements. This is because increased immigration renders the official policy less prepared to meet the demand for accommodation which is brought about by the rapid growth of the urban

population. The policy failed to take the new migrant into consideration and the same is happening with the post independence housing policy. The implications of this is, squatter settlements will continue to grow as long as more people come into the city which accommodation wise is less prepared to absorb all of them.

It is not until recently that new approaches to urban problems have been seriously considered. Gradually it has been realized that Site and Service Schemes as an approach to housing is more than an emergency or temporary measure and at the moment, the approach is seen as one of the answers to low-cost housing problems. It is interesting to note that in other countries of the world this approach has had very limited success partly due to lack of commitment by those in authority. It is hoped that with the modifications injected in the procedures of carrying out the policy, the Kenyan case (at the present Kenya is the only country with a large number of towns implementing Site and Service Schemes and having the largest scheme in size - Dandora - underway) will produce some very successful results.

A number of problems relating to allocation procedures, house plans, rents, housing standards, maintenance of shared facilities, political pressure, financial sources, organizational framework and the planning implications have been identified and possible proposals of solutions have also been suggested.

Some conclusions relating to the basic problems we started off with have been drawn. As regards the ad-hoc basis of policy formulation and program of the schemes, it has been found out for instance that whereas a steady flow of land ready for development to meet total requirements is necessary to avoid delays, it also can be very susceptible to squatter settlement before the government decides what to put in a particular place. Once the squatters have settled it becomes socially and politically expensive to remove them. It also has been indicated that coordination of work is possible if more commitment and objectivity on the part of those involved is practiced and less rivalry between departments. Finally flexible standards which can meet the rapidly changing demands of the population are urgently needed.

Until recently the implementation of official schemes has not been on a large enough scale to keep pace with demand. But with the Dandora project, theoretical the number of housing stock for low-income has been increased. It waits to be seen whether the occupants will be real low-income earners. From the existing schemes it is obvious that the schemes are functioning purely as economic assets to may plot holders (most of them who are absentee landlords) because of the high rents they charge.

The study concludes that what is needed is an integrated housing policy which conceives housing in its totality. The policy should be able to combine a variety of policies so as to make use of the positive aspects of each to the

greatest advantage.

6:2 FUTURE RESEARCH PROSPECTS

In the course of the study a number of problems have been identified which require further investigation. More consideration of the implications of urban sprawl should be able to indicate what density of development is desirable, what urban structure is being developed and how the public transport system can function more efficiently in the urban system which is being created.

More work on the planning principles guiding the policy is required so that variety, interest and identity into planned low-cost housing can be introduced.

It is also necessary to investigate the general area of implementation, to find out why the schemes tend to have more problems than other low-cost housing schemes, delays in construction and the attitudes of potential residents. A comparison of Site and Service Schemes and other low-cost housing schemes is necessary to indicate how effective the approach is.

More work is needed in the formulation of an integrated housing policy and how the implementing agencies can cooperate to maximize their success in implementation. Also ways of reorganizing local authorities in departments which can tackle the new comprehensive problems more effectively should be sought since this should be very useful in promotion of the general production of housing.

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APPENDIX A

12. G. BREESE

"The City In Newly Developing Countries"

materials which may be permitted by Law No. 19 of the Local Authorities (Green II Building) Act, 1962
 (All use of materials which must not be used for external walls.)

MATERIALS WHICH MAY BE USED

The Common Permanent Materials,
 Mud and Wattle.
 Soft Cement Blocks.
 Clay Bricks.
 Weather Boarding,
 Sawn Timber, including off cuts,
 Hardboard, painted
 Chipboard, painted
 Plywood and Block Board, painted
 Plastic Laminates,
 Flat Asbestos-Cement Sheets,
 Plaster on Metal Lathing,
 Tile Hanging,
 Bamboo.
 (Materials may be either new or used)

MATERIALS WHICH MUST NOT BE USED FOR EXTERNAL WALLS

Flattened out cans,
 Fibreboard (i.e. soft board)
 Cardboard,
 Building paper and other paper,
 Glasswool Felt,
 Glasswool Matting,
 Flexible Sheeting,
 Aluminium and PVC Sheeting,
 Expanded Polystyrene,
 Foamed Rubber or Plastic,
 Foss and Quilts,
 Seakings, and other fabrics,
 Papyrus and similar matting,
 Grass.
 Scrap pieces of rigid sheet building materials
 (Full size sheets, or half sheets may be used)

APPENDIX A

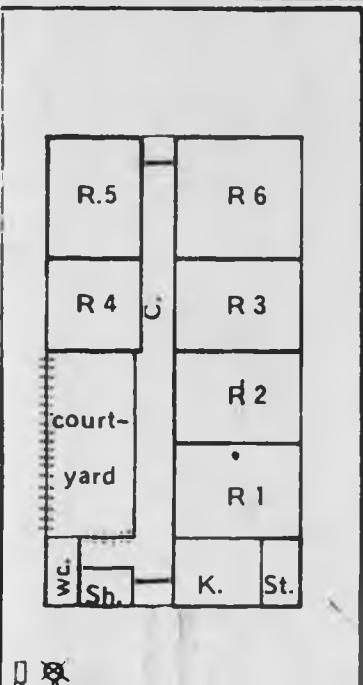
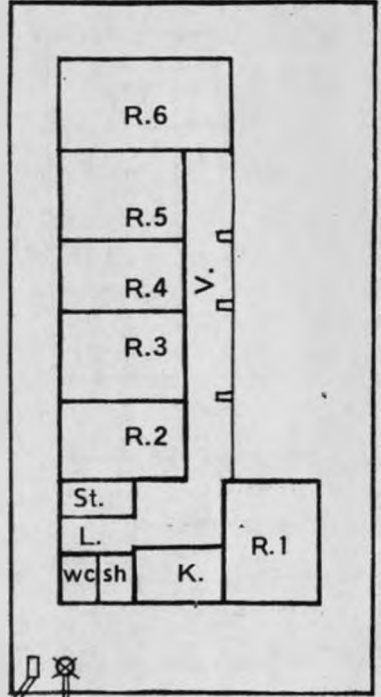
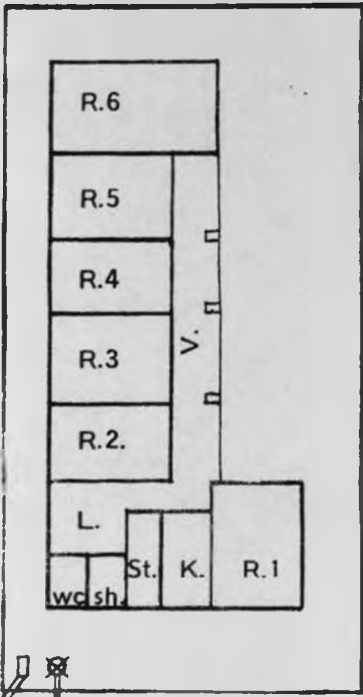
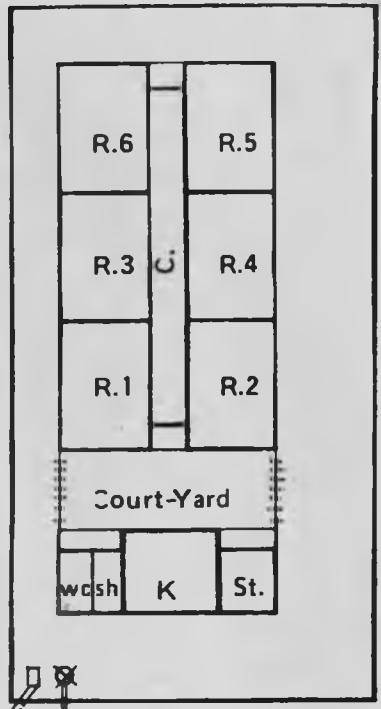
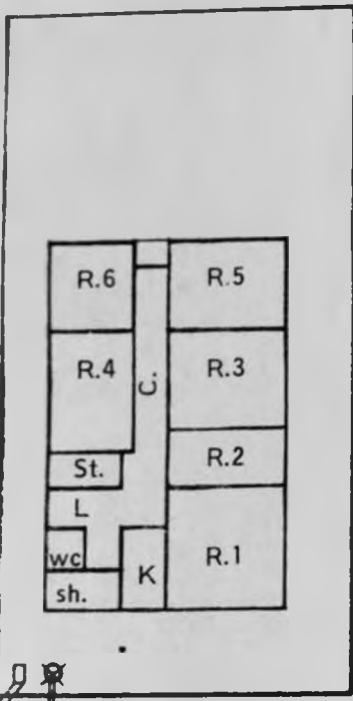
List of materials which may be specified by the Council for use in walls under the proviso to By-Law No. 19 of the Local Government (Grade II Building) By - laws, 1968 and the list of materials which must not be used for external walls.

MATERIALS WHICH MAY BE USED

The common Permanent Materials,
Mud and Wattle,
Soil Cement Blocks,
Clay Bricks,
Weather Boarding,
Sawn Timber, including off cuts,
Hardboard, painted
Chipboard, painted
Plywood and Block Board, painted
Plastic Laminates,
Flat Asbestos-Cement Sheets,
Plaster on Metal Lathing,
Tile Hanging,
Bamboo,
(materials may be either new or used).

MATERIALS WHICH MUST NOT BE USED FOR EXTERNAL WALLS

Flattened out cans,
Fibreboard (i.e. soft board)
Cardboard,
Building paper and other paper,
Bituminous Felt,
Rubber Sheeting,
Polythene Sheeting,
Linoleum and PVC Sheeting,
Expanded Polystyrene,
Foamed Rubber or Plastic,
Foils and Quilts,
Sacking, and other fabrics,
Papyrus and similar matting,
Grass,
Scrap pieces of rigid sheet building materials
(full size sheets, or half sheets may be used).



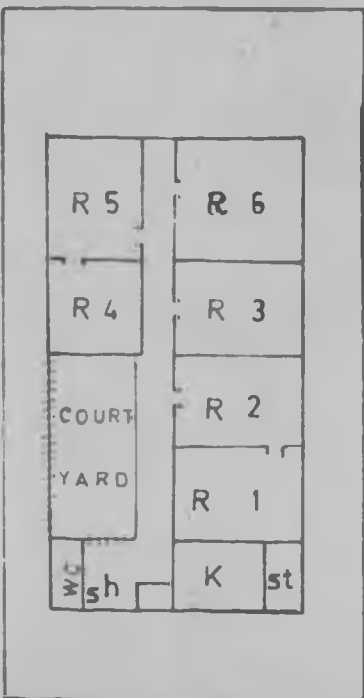
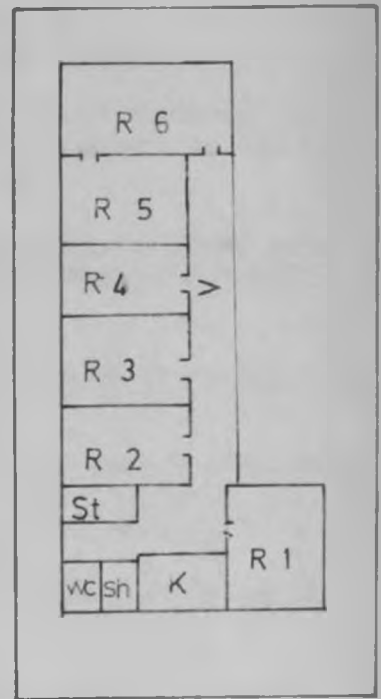
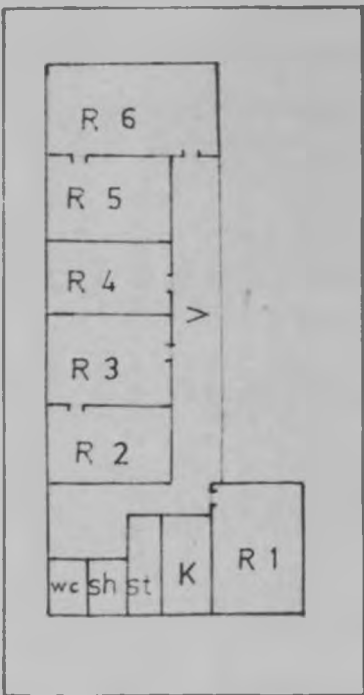
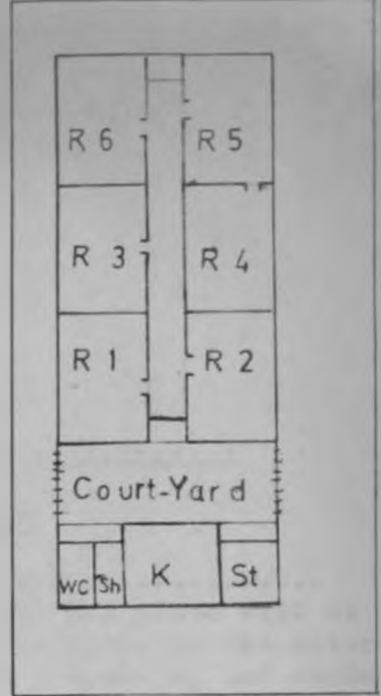
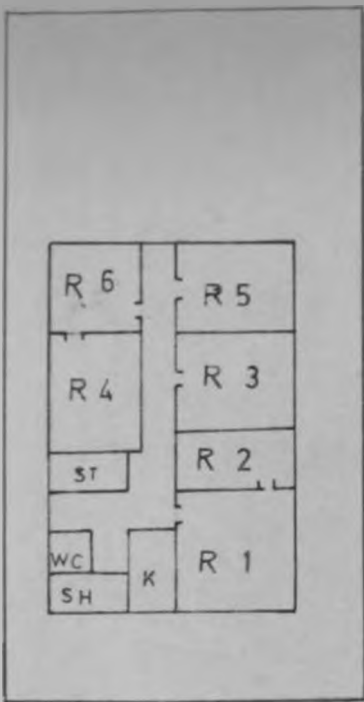
NATIONAL HOUSING CORPORATION KENYA

Type Plans for Site and Service Schemes

With Water and Sanitation

With Lodgers

Scale: 1:250



Proposed Type Plans for Site and Service Schemes

Showing inter-room Communication as seen from Tenants' Point of View.

NATIONAL
HOUSING
CORPORATION

SITE AND SERVICE SCHEME NO.....

AT.....

Applications are invited for plots in this Site and Service Scheme. All the plots will be provided with a communicating pipe from the mains to the meter position, a branch to the main sewer with a manhole, and roads access.

All applicants must meet the following conditions:-

- (a) working in the town for not less than 6 months. Self employed persons and persons employed in the informal sector will be considered.
- (b) not already owning a house; or a business plot; or a residential plot in town; or not renting a Council house.
- (c) having a stable family income of between KShs.300/= and KShs.1,200/= per month;
- (d) can pay a minimum deposit of 5% (i.e. about KShs.700/=) plus deposit to water undertaker KShs..... and certain other charges approximately KShs.....
- (e) Undertake to reside on the plot and not transfer it without Council's permission;
- (f) be not more than 50 years of age;
- (g) have dependants who will live in the same house.

ANYONE NOT MEETING THE FOREGOING CONDITIONS WILL NOT BE
CONSIDERED AND NEED NOT APPLY

Further particulars and application forms can be obtained from the Town Clerk,; the General Manager, National Housing Corporation, P.O. Box 30257, Nairobi; or the 10th floor NHC House, Aga Khan Walk, Harambee Avenue, Nairobi.

Application forms must be returned before..... together with an application fee of KShs..... to the Town Clerk.

HOUSEHOLD SURVEY QUESTIONNAIRE

- A. 1. Area _____
 a) Huruma Estate _____
 Kariobangi _____
2. Number of interviewees _____
 a) Sex _____
 b) Age _____
 c) Marital Status _____
- B. 3. Type of dwelling: _____
 a) Single floor detached _____
 b) Row House _____
 c) Courtyard type _____
4. Number of dwellings units on the building _____
5. Building materials used: _____
 a) Type of wall _____
 1) Concrete blocks _____
 2) Wattle and Mudd _____
 3) Sand and Cement _____
 4) Stones _____
 5) Bricks _____
 6) Timber _____
 7) Others (specify) _____
 b) Type of roof: _____
 1) Asbestos _____
 2) Corrugated Iron Sheets _____
 3) Tiles _____
 4) Concrete _____

5) Wooden _____

d) Wall finish:

1) Not plastered and unpainted _____

2) Not plastered but painted _____

3) Plastered but unpainted _____

4) Plastered and painted _____

6) Maintenance:

1) Good _____

2) Fair _____

3) Poor _____

C. 7. Household Size

1-2 _____

3 - 4 _____

5 - 7 _____

8 -10 _____

11 + _____

8. How long have you been staying here?

9. Where were you living before moving to Kariobangi/Huruma? _____

D. 10. Tenancy type:

a) 1) Owner occupied _____

2) Private tenant _____

3) Subtenant _____

4) Relative to owner _____

5) Relative to tenant _____

6) Servant to owner _____

7) Servant to tenant _____

b) Preferred Tenancy _____

E. 11. If owner, how did you acquire the House/plot? _____

1) From the City Council of Nairobi (i.e. built the house) _____

2) From some other person (i.e. bought the plot/house) _____

3) Inherited it _____

12. How old is the building in years? _____

13. What is the total cost of the house? _____

14. Do you sublet any of the rooms? Yes _____ No _____

15. If Yes, how many? _____

16. What is the rent per room? _____

17. How many rooms do you occupy? _____

F. 18. If tenant, how much rent do you pay per month? _____

19. How many rooms do you occupy? _____

20. Do you have access to a kitchen? _____

G. 21. a) Is any business conducted in any of the rooms? _____

Yes _____ No _____

b) What type of business? _____

c) Do you own a house/land elsewhere? (If yes, where?) _____

H. 22. Who is your employer? _____

1) Government, Parastatal _____

2) Private Company _____

3) Self Employed _____

4) Unemployed _____

4. Retiree _____

5. Other _____

6. Other (specify) _____

23. What other type of job can you do? _____

- e.g. 1) Carpentry _____
- 2) Plumbing _____
- 3) Masonry _____
- 4) Electrician _____
- 5) Others (specify) _____

24. Income distribution (per month) _____

- K.shs. 0 -200 _____
- 201 - 400 _____
- 601 - 900 _____
- 901 - 1200 _____
- 1201 ++ _____

25. Do not know _____

25. Do you have any other source of income? _____

- Yes _____ No _____

26. On what do you spend the highest percentage of your

money? _____

- 1) Food _____
- 2) Rent _____
- 3) Transport _____
- 4) Clothing _____
- 5) Others (specify) _____

27. Where is your place of work? _____

28. Mode of Transport to work: _____

- 1. Foot _____ 4. Matatur _____
- 2. Bicycle _____ 5. Buses _____
- 3. Private _____ 6. Others(specify) _____

29. Of the following services which ones do you give priority? (List in order of importance)

- a) 1) Nursery School _____ 5) Shops _____
 2) Primary School _____ 6) Kiosks _____
 3) Secondary School _____ 7) Market _____
 4) Health Centre _____ 8) Police Station _____

b) Which ones exist?

30. Of the following Public Utilities which ones would you like to have? (List in order of importance).

- 1) Improvement of roads _____
 2) Water inside House _____
 3) Electricity in the House _____
 4) Street Lights _____
 5) Drainage _____
 6) Sewage disposal system _____
 7) Others (specify) _____

31. If given a choice, where would you like to live within Nairobi City?

- 1) In the same area _____
 2) Go to another estate (specify) _____
 3) Go back to the rural area _____
 4) Any other (specify) _____

32. How many rooms would you like to occupy? _____

33. How much would you be willing to pay for the accommodation per month? _____