

# HOUSING THE POOR

## A Case Study in Nairobi

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The City like a syphilitic whore  
hunting madly for a beast  
to share her pains  
paints her lips and nails  
and wears make up.  
So men and women boast  
sons and daughters  
of a famous mother  
but they all her slaves

The stones cry not  
when walls tumble  
but men and women shake  
like reeds in the wind  
and mourn like owls.<sup>1</sup>

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Conventional wisdom would have us believe that the housing problems of the Third World's urban poor can be solved through self-help schemes, given security of tenure for the owner-builder. The concept of autonomous housing, which maximises the constructional contribution of the participant and his degree of self-government while minimising the investment by the sponsor or government agency, is seductively simple, holding out, as it does, the possibility of solving one of the world's most intractable problems and at a minimal cost to the wealthy nations.<sup>2</sup> This case study in Korokocho, Nairobi aims to investigate the issues raised by this thesis in order to find out if the set of prescriptions under the general heading of self-build or autonomous housing do in fact hold out the prospect of a universal panacea for the housing ills of the Third World.

### *Social and Economic Conditions in Squatter Areas*

Nairobi, capital of Kenya, is one of Africa's most westernised cities with tall elegantly designed skyscrapers, modern shopping centres and spacious suburbs (Fig. 1). Behind this outward expression of modernity, out of sight of the tourist, is the rapidly growing 'city of the people'. Sixty to seventy per cent of Nairobi's population cannot afford the housing erected by the State or City Council; even the site and service schemes sponsored by the World Bank are beyond the meagre means of the poor in Nairobi whose numbers are constantly swollen by new immigrants from land hungry rural Kenya.<sup>3</sup>

The poor live in what is euphemistically called 'informal housing', a term which takes some

Fig. 1 (left) General view of Nairobi City Centre



Fig. 2 (below) General view of Mathare Valley



of the sting from the reality best described by the word slum. Informal housing is made from iron sheets, cardboard, scraps of rag or whatever material comes to hand: it rarely has water-borne sanitation and water supplies are precarious if not dangerous. The occupants of informal housing in Nairobi are usually squatters owning the meagre structure they occupy or, more often, renting it from the 'companies' who themselves have no title to the land but nevertheless build accommodation for renting (Fig. 2). For example, 7628 room-units were built by the companies in Mathare Valley in sixteen months during the late 1960s. The companies were originally planned as cooperatives, attempts being made to include the head of each household as shareholders in the squatter village. When this proved impossible the original objectives of the companies as cooperatives were abandoned and they developed as

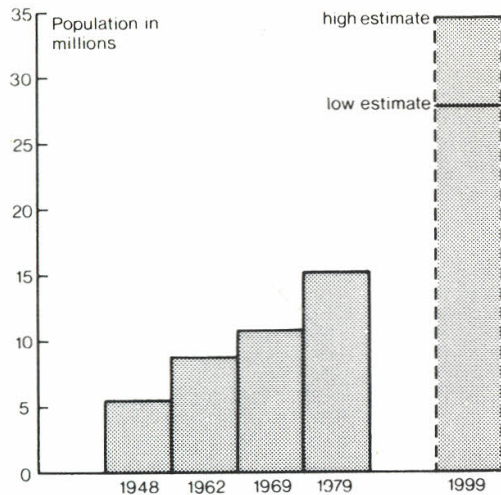
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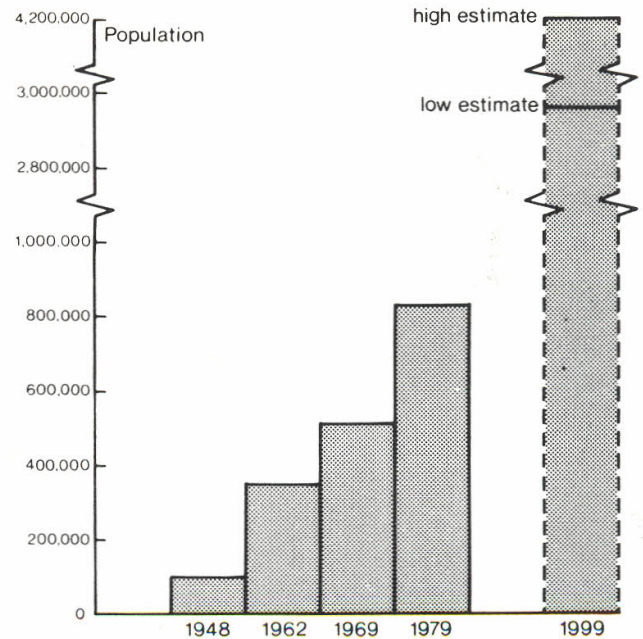
Fig. 3 Housing in Mathare Valley

organisations for speculation in housing.<sup>4</sup> There seems little if any tradition of owner occupation and self-build amongst the urban poor in Nairobi: such traditions may be common in the rural areas of Kenya from where the poor of Nairobi originate, but they seem to die with movement to an urban centre. Urban housing for the poor in Nairobi is now a commodity which is rented from others who have the capital and organisation to control housing provision in the informal sector of the land and building economy.

The squatter family often earns a living in the informal sector of the economy: family members may be petty traders, furniture makers, run or drive unregistered taxis (*matatus*), make illicit alcohol (<sup>Kansara</sup> *karara* or *chang'aa*) or engage in prostitution.<sup>5</sup> The condition of the poor is highlighted by an extremely unequal distribution of income and wealth, the bottom thirty per cent of the population receiving only thirteen per cent of the income and the top ten per cent receiving fifty-six per cent.<sup>6</sup> The ranks of the poor in Nairobi are made up of unemployed school leavers, 'relatives' visiting the capital from rural areas who remain with the vague hope of employment and, finally, an increasing number of the over-60s whose prospect of future employment in current conditions is non-existent. The majority of those families living in the squatter areas of Nairobi earn less than the minimum wage of 460 shillings (£24) per month. Housing the poor is a major problem in most cities of the developing world: it is not a problem which can be ignored or forgotten. The poor of Nairobi struggle manfully to provide housing for themselves and their families, but such informal activities alone are not sufficient to solve this problem for the quality of life in squatter areas such as Mathare, Kariobangi and Korokocho is by any standard low (Fig. 3). Teams of sanitary officials from the City Council can be seen constantly spraying and disinfecting Kariobangi—evidence of the recent cholera scare in Nairobi's slums. Such necessary public health activities, however, are no real substitute for a long term solution: only long term vigorous environmental upgrading can give security, not only to the poor but also to the more affluent members of society in nearby



**Fig. 4 Population growth in Kenya, 1948–1979** (sources: Republic of Kenya, Kenya's National Report to the UN (Conference) on the Human Environment, Nairobi, 1972; and Republic of Kenya, Kenya Population Census 1979, Vol. 1, Nairobi, Central Bureau of Statistics, 1979)



**Fig. 5 Population growth in Nairobi, 1948–1979** (sources: Hance, William A., Population, Migration and Urbanization in Africa, New York, Columbia University Press, 1970, p. 367; and Nairobi Metropolitan Growth Strategy, Vol. 2: Technical Appendices, Appendix 1, Tables L.1 and L.13, Nairobi, Nairobi City Council, 1973)

suburbs who themselves face the same outbreaks of disease. Public disorders, too, cannot be completely ruled out when so many live in such degradation.

### *The Scale of the Problem*

Figure 4 shows the growth of population in Kenya from nearly 5.5 millions in 1948 to 15.3 millions in 1979;<sup>7</sup> also shown are two estimates of population for the country in 1999: one of 28 million, assuming declining fertility, and another of 34 million, assuming constant fertility. There is therefore a strong possibility that by the end of the present century Kenya's population will have doubled its current size.

Figure 5 shows the growth of population in Nairobi between 1948 when it was in the order of 100 000 persons to 1979 when it was nearly 830 000 persons: the recorded number of households in 1979 was 200 474 as against 118 133 in 1969, almost a doubling of households in the decade. By the end of the century Nairobi's population could be in the order of three million and possibly more.<sup>8</sup>

Approximately forty seven per cent (57 539 units) of the estimated housing stock of 122 000 units in Nairobi are of permanent construction or Grade 1 housing: they are usually made of stone and concrete, having a water supply and sanitary facilities within or attached to the house. Twenty two per cent (22 848 units) are described as Grade 2 housing, stone/concrete or mud and timber housing with individual or communal water supply and sanitary facilities adjacent to the house but within the same plot area. Thirty one per cent of the housing stock (37 800 units) are Grade 3 housing built of mud with some timber, without sanitary facilities or water supply but with communal services some distance from the house. Of this total housing stock the City Council has approved 86 000 units while 36 000 are

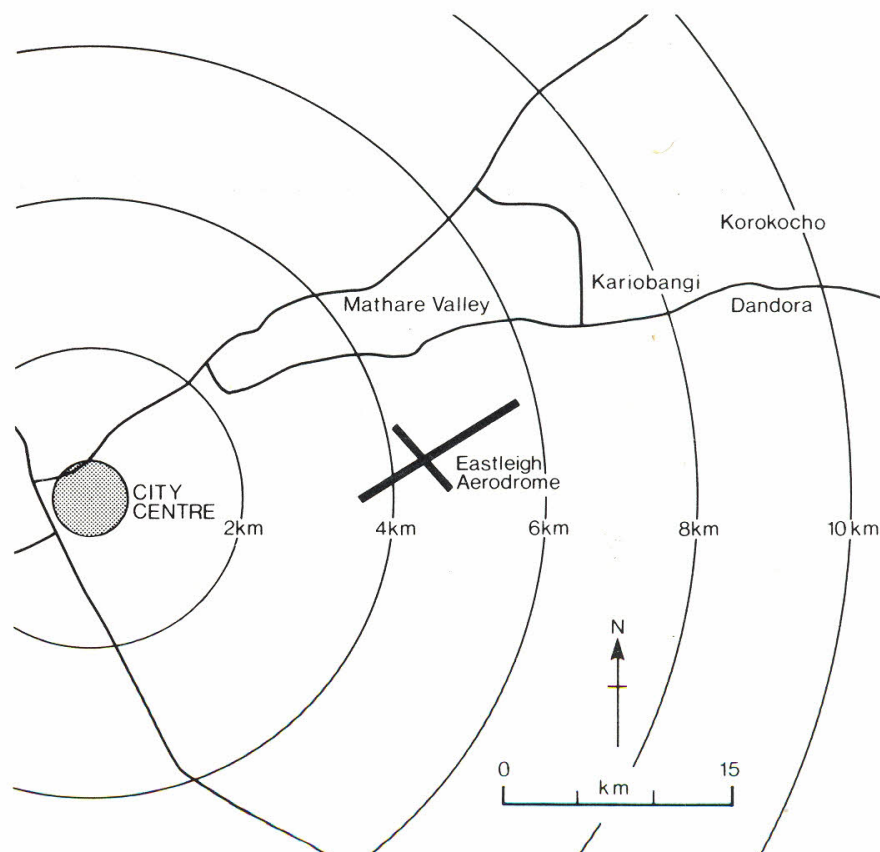


Fig. 6 Nairobi in relation to Mathare Valley, Kariobangi, Korokocho and Dandora

considered substandard and unapproved, having been built by private individuals and private building 'companies' below acceptable sanitary and environmental standards.<sup>9</sup> Most of this unapproved housing development (26 000 units) is in the Mathare Valley squatter settlements, a rapidly growing area of Nairobi. For example, from 1965 to 1979 the squatter population in Mathare Valley grew from 5000 people to 90 000 people. This wedge of informal and unplanned development is extending eastwards through Kariobangi, Ngomongo and Korokocho a situation likely to continue into the future (Fig. 6).

After taking into consideration only the approved housing stock, Rosenthal in 1972 estimated a shortage of 60 000 units for the then City population of 600 000, 48 000 units of which were required by the lowest income groups (those earning less than £200 a year (330 Kenyan shillings) and between £200 and £600 per year (330–1000 shillings). Since 1972 the annual establishment of households has been 9500 and the newly built 'approved' housing has only increased by about 1200 to 1300 units per year since 1962.<sup>10</sup> Even after taking the numbers of unapproved housing stock into consideration the total number of units (122 000) is well below the need, while the gap between the approved housing stock and the population needing shelter is growing at an alarming rate. To meet this need requires the building of 12 000 units per year, 60 per cent of those units being for low-income households earning below £300 a year (500 shillings per month).

### *Strategies for Solving Nairobi's Housing Problems*

Rural development is advocated as a policy to stem rural-urban migration and so reduce pressure upon urban infrastructure in developing countries such as Kenya. This is obviously a desirable policy to pursue, any reduction in the flow of migrants to Nairobi being beneficial.



Fig. 7 Modern flats in  
Nairobi *— Thuruma Flats.*

Nevertheless, current population trends in Kenya where the birth rate is one of the highest in the world, taken together with the scarcity of good agricultural land, will inevitably lead to a drift of population from rural areas. This migrating population will supplement the natural population increases of Nairobi. No doubt regional solutions to the population pressures on the capital will be pursued, such as the building of new or expanded towns. Policies such as these if adopted and rigorously applied will not, however, reduce the number of homes to be built before the end of the century. These homes will require land and urban services no matter where they are located.

The pre-independence period in Kenya saw the building by the colonial Government of complete housing estates. This traditional approach to the solution of the housing problem was continued after independence and throughout the 1960s and 1970s. The growing influx of population in Nairobi created a demand for housing and land which even multi-storey development could not satisfy. Housing costs rose far more rapidly than incomes. For example, in the late 1960s a house with two habitable rooms was costing 24 000 shillings, in the 1970s it was 40 000 shillings while now the same house costs 100 000 shillings. Such property, even if subsidised, is out of reach of the low income groups and is usually occupied by the middle classes (Fig. 7). Grimes calculated that even the cheapest form of multi-family housing with shared services costing US\$ 1496 (11 000 shillings) was beyond the means of 50 per cent of the population.<sup>11</sup>

Before Independence most of the low-income housing was basically one-room servants' quarters provided by employers: organisations such as the Kenya Railways, for example, built



Fig. 8 Railway housing in Nairobi

housing for their employees (Fig. 8). The low income groups, some of whom had been housed in this way, suffered a serious blow when the Federation of Kenya Employers brought to an end the scheme for the provision of workers' housing in 1970. Housing the low income groups is now partly the responsibility of the City Council, which adopted higher standards for its housing than its colonial predecessor, and the employers' association. All City Council housing has the following minimum standards: two or more rooms excluding kitchen and toilet; inside running water and inside toilet; and inside kitchen and/or kitchen facilities. The total number of units built by the City Council before 1961 with a rental of 100 shillings was 8189 compared with 1149 since independence, while the number of units it built before 1961 with a rental of more than 100 shillings was 2593 as against 6706 for this type of property after that date.<sup>12</sup> This illustrates, first, a low level of response to a problem of immense scale and, secondly, a growing emphasis on the provision of housing for the middle income groups. This is true also for both the National Housing Corporation and the Finance Company of Kenya: the majority of the housing built with funding from the National Housing Corporation costs more than K£1200 which is beyond the reach of the low income groups while the Housing Finance Company of Kenya provides mortgages for middle and upper income groups.

In an effort to spread the capital outlay so that more people would benefit from Government intervention in the housing market and in order to reduce the cost of each housing unit to within the reach of the low income population, a strategy of building 'core housing' was adopted for Nairobi. Core housing schemes include the basic infrastructure for the estate and other facilities on each plot: kitchen, toilet and in some cases a living room (Fig. 9). It was assumed that those allocated such core houses would be in a position to complete it to the standards required by the City Council. Low income occupiers, however, were unable to complete the property and 'sold' it to raise money: once again schemes designed to assist the low income ended up in the possession of middle and high income families.

Site and service schemes represent the minimum government or local authority intervention in housing. The theory of site and service schemes is that, since servicing a



Fig. 9 Core housing in Nairobi

housing estate involves high capital costs, requires complex administrative procedures and advanced design skills, it can only be achieved through the use of a government agency. In addition, since the expenditure per plot is lower than core housing the initial deposit for the unit should be lower and so closer to the means of those in the low income groups. Those allocated plots build homes using their own labour which in theory reduces total costs. The first post-independence site and services scheme, 'Kariobangi Site and Service Scheme' (Fig. 10), began in 1964–65: 723 plots of 167 square metres were allocated at a rental of 30 shillings. Though the plots were allocated to the low income groups the City Council insisted upon the occupiers complying with, for them, the relatively stringent building regulations: they were required to complete temporary structures on the site within six weeks, roofs had to be of non-combustible material; cardboard and the usual waste materials favoured by the low income group for building purposes could not be used. Many of the allottees either could not build to the standards required or in the time specified; others quite simply preferred the



Fig. 10 Kariobangi site and service scheme



cash so that they could build a squatter house closer to job opportunities. This process resulted in sites meant for the poor being finally occupied by the better off.

Dandora, the latest site and service scheme, is built partly with funding from the World Bank: it is a further effort to find a solution to the housing problems of the very poorest members of society. It too has been delayed by difficulties in trying to meet the requirements of the bye-laws while providing accommodation which the low income groups can afford. This project has been analysed elsewhere, but the contribution to the housing stock has been on a scale which cannot cater for the full process of urbanisation taking place in Kenya.<sup>13</sup> The standards adopted call for the skills of the builder rather than the do-it-yourself methods of low income groups: in all probability, too, speculation will once again deprive the low income groups from the full benefits of the scheme.

Despite the range of solutions adopted in Nairobi, which probably mirrors similar efforts in other developing countries, the poor still continue to live in substandard housing and the growth of squatter areas continues. In 1971 the Housing Research and Development Unit (HRDU) of the University of Nairobi recommended a policy of squatter upgrading.<sup>14</sup> In parts of Mathare Valley some of the recommendations of the HRDU report have been implemented by constructing an unsurfaced internal service road, ablution blocks and water points. There is, however, a view current in Government and local authority circles that squatter upgrading schemes will act as a positive encouragement to the further spread and development of this form of settlement. It is also feared that, since improvements to squatter settlements in effect increase the value of the property, any such improvements may accrue to the squatter landlords and corporations in the form of enhanced rents. Improved homes, through squatter upgrading schemes may become desirable residences for those who can afford the increased rents rather than the homes of the more disadvantaged groups for whom the programme is meant.

### *Case Study in Korokocho*

The housing policies followed and the projects completed have so far not met the needs of the poor in Nairobi. This aim of the Government's housing policies has been subverted because of sub-letting of properties, the sale of leases and the wholesale appropriation of plots by the unscrupulous for profit. With this sorry tale of an unsuccessful attempt to house the low income in Nairobi in mind, members of the Department of Urban and Regional Planning of the University of Nairobi undertook a planning study in Korokocho, a recent extension of the Mathare informal housing area (Fig. 11). The project examined the problems associated with housing the poor of Nairobi in order to determine the respective roles of the Government, City Council and the people (*Wananchi*) in this process. The aim of the project was to find ways of upgrading the environment of the low income groups currently living in the city or those likely to be attracted there over the next twenty years.

Although work on the project was affected by the attempted coup of 1 August 1982, enough was achieved to be able to present tentative conclusions. For the purpose of this study part of a typical squatter area in Korokocho, Kariobangi, was chosen. The project area on land owned by the City Council is 3.54 hectares consisting of 132 plots and 702 rooms: the population is estimated as 2800 persons. A public meeting (*baraza*) was held in the area by Chief Nelson Masio in order to introduce the idea of the project and members of the team

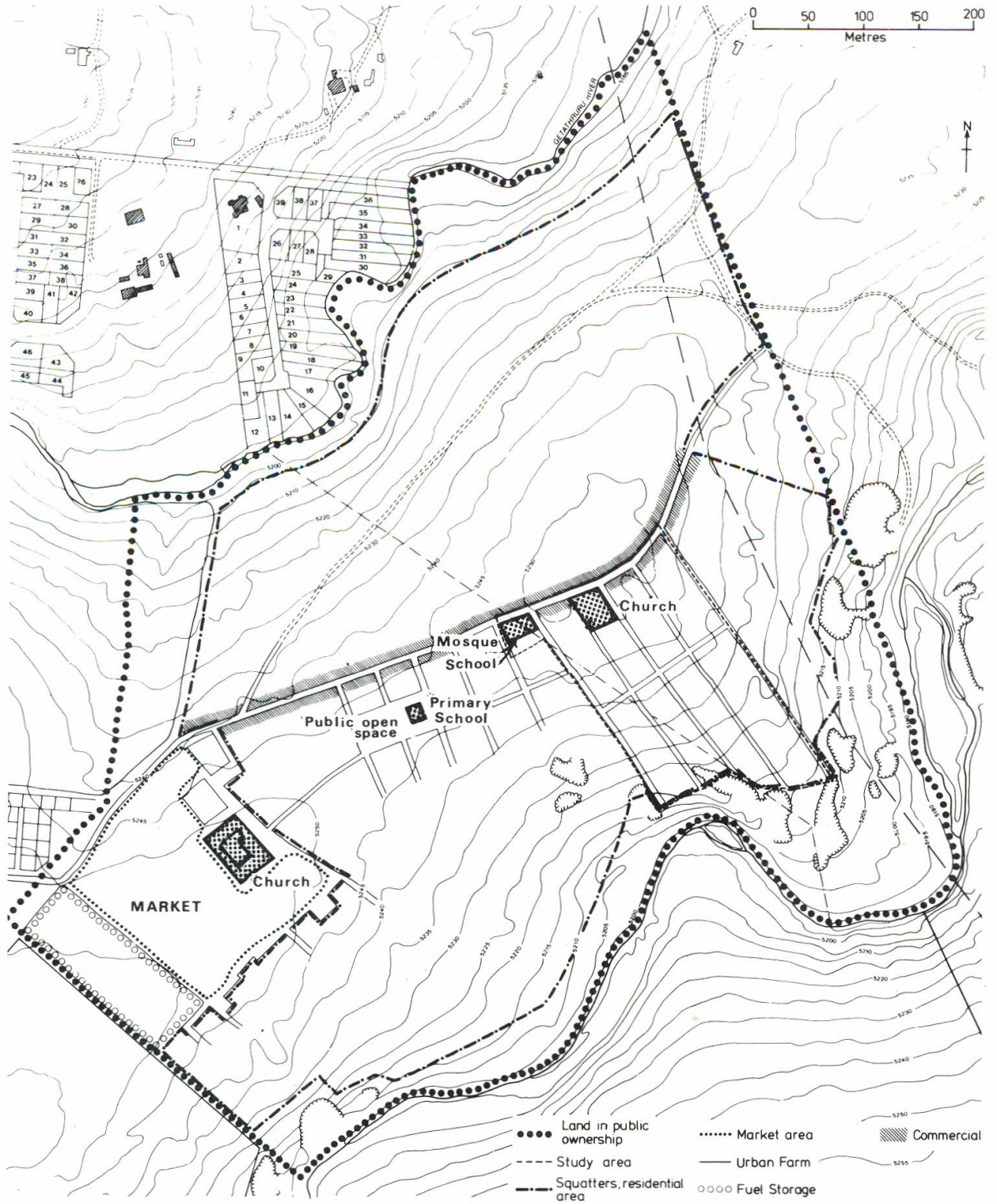
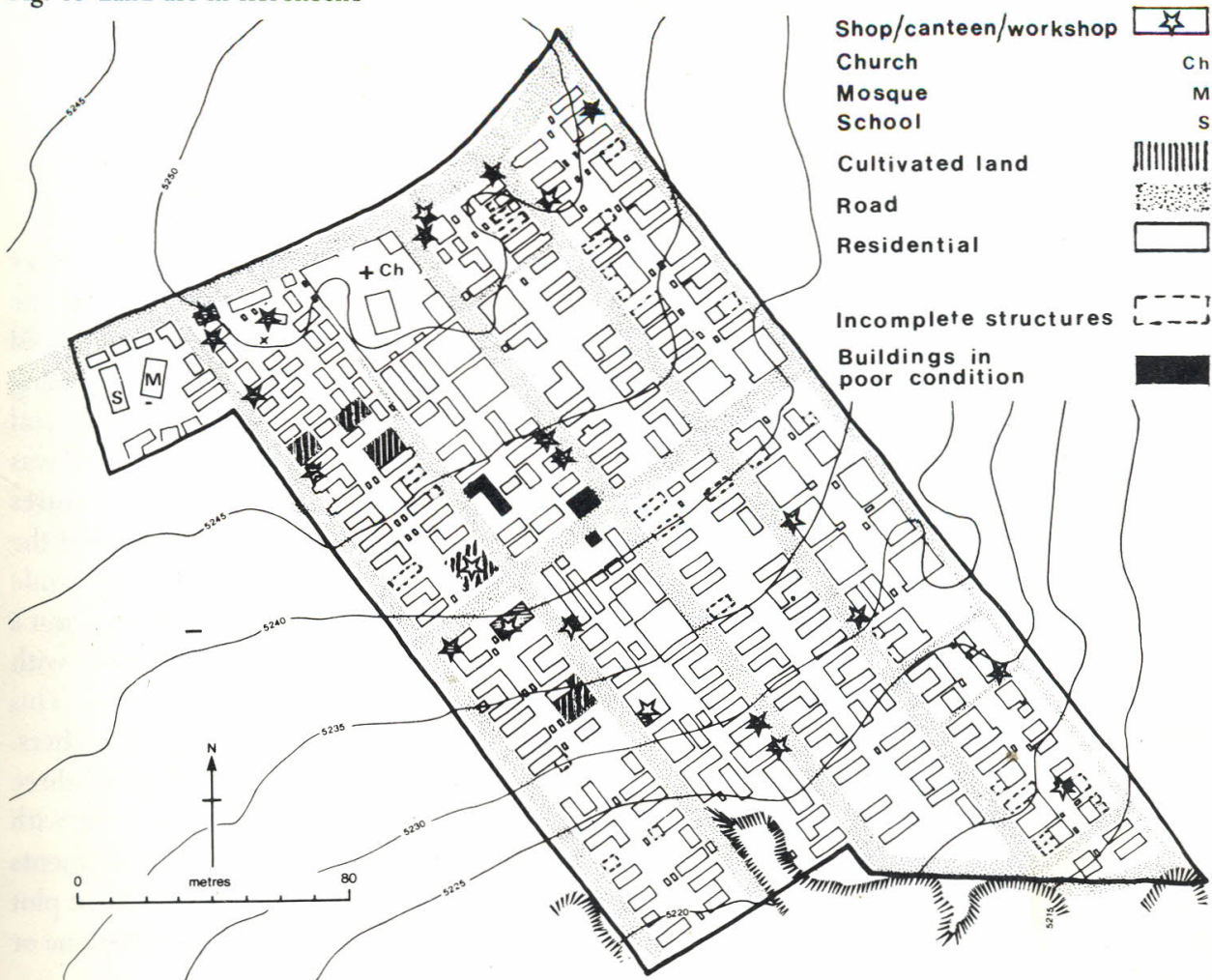


Fig. 11 Map of Korokocho



Fig. 12 The 'baraza'

Fig. 13 Land use in Korokocho



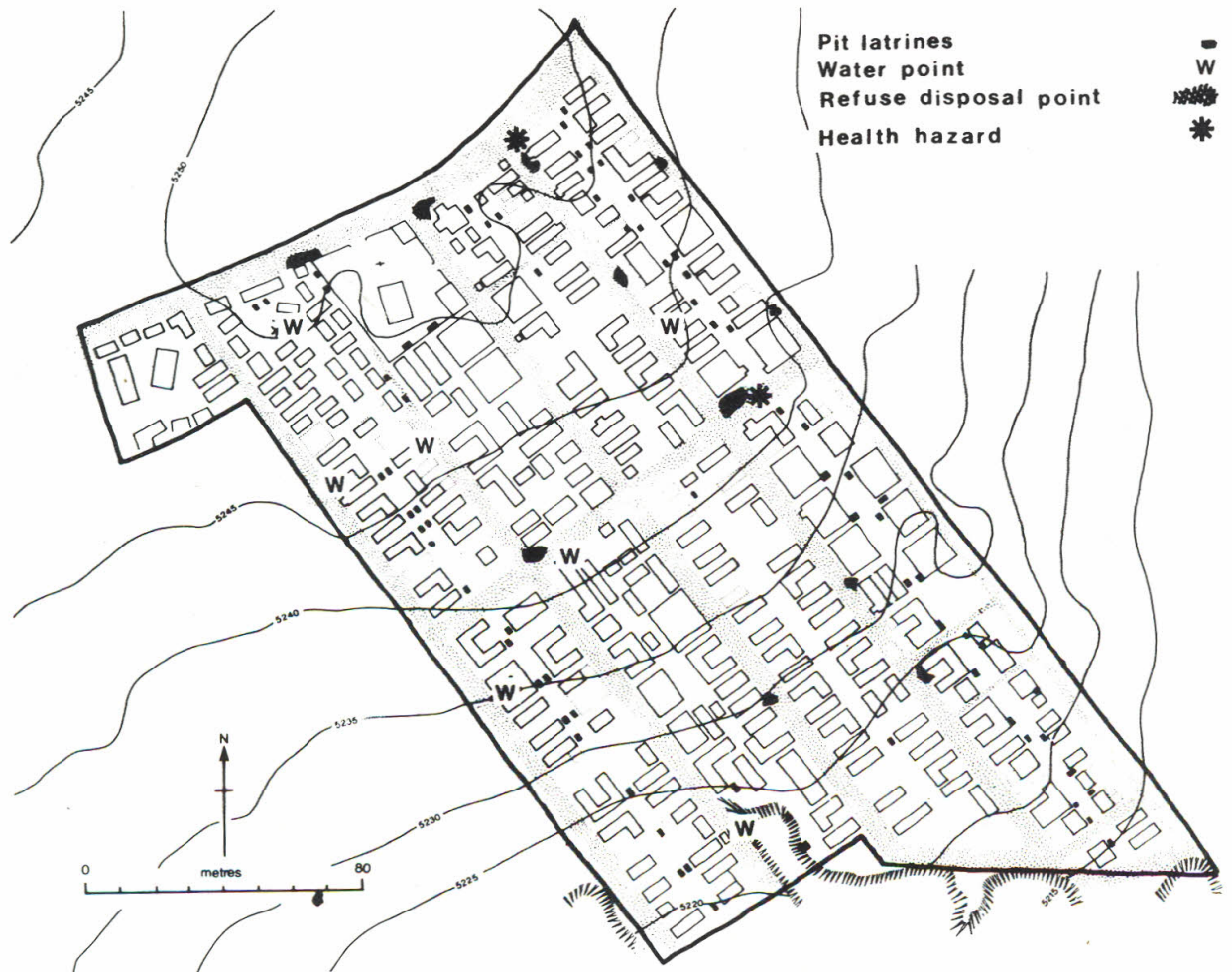
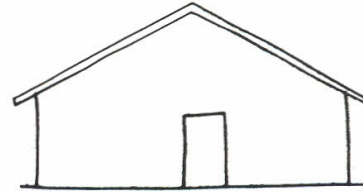
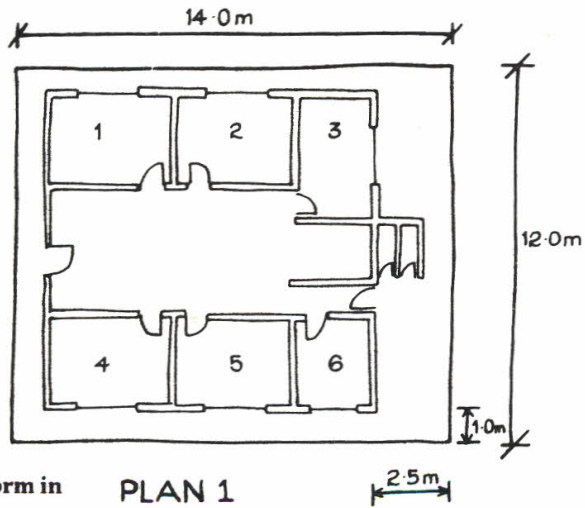


Fig. 14 Facilities in Korokocho

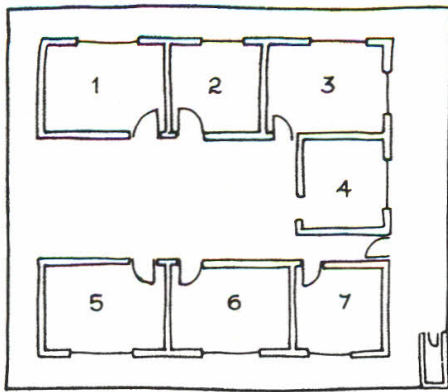
(Fig. 12). Elders of the strong Muslim community were also contacted for their views. After delimiting the study area a detailed physical survey was carried out which included the plotting of main structures, roads and land uses. This was followed by a limited household survey and a condition of building survey; Figs 13 and 14 illustrate the results, but completing such a survey on the fringe of a rapidly growing squatter area was no simple matter. Maps and aerial photographic cover are completely out of date. The first problem, therefore, was locating the site on a map: in this case compass bearings were taken from known features outside the site and by triangulation and pacing it was possible to locate the position of the main spine road shown on Fig. 11. The rest of the study area was surveyed in the same crude way to establish a ground plan showing positions of plots and buildings. Time did not permit a large household survey and in-depth structured interviews were therefore held with household heads representing the main interest groups and with community leaders. This material was compared with survey work already carried out in Nairobi by other researchers. The condition of housing in Korokocho is poor. Within this general classification three groups were distinguished: the best category have a corrugated iron roof, mud walls with timber frames and concrete floor; the least satisfactory are those homes made from oddments of corrugated iron, scraps of metal, polyurethane and cardboard with earth floors. Most plot development consists of rooms arranged around the courtyard, each family occupying one or



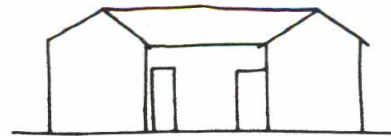
ELEVATION

Fig. 15 House form in Korokocho

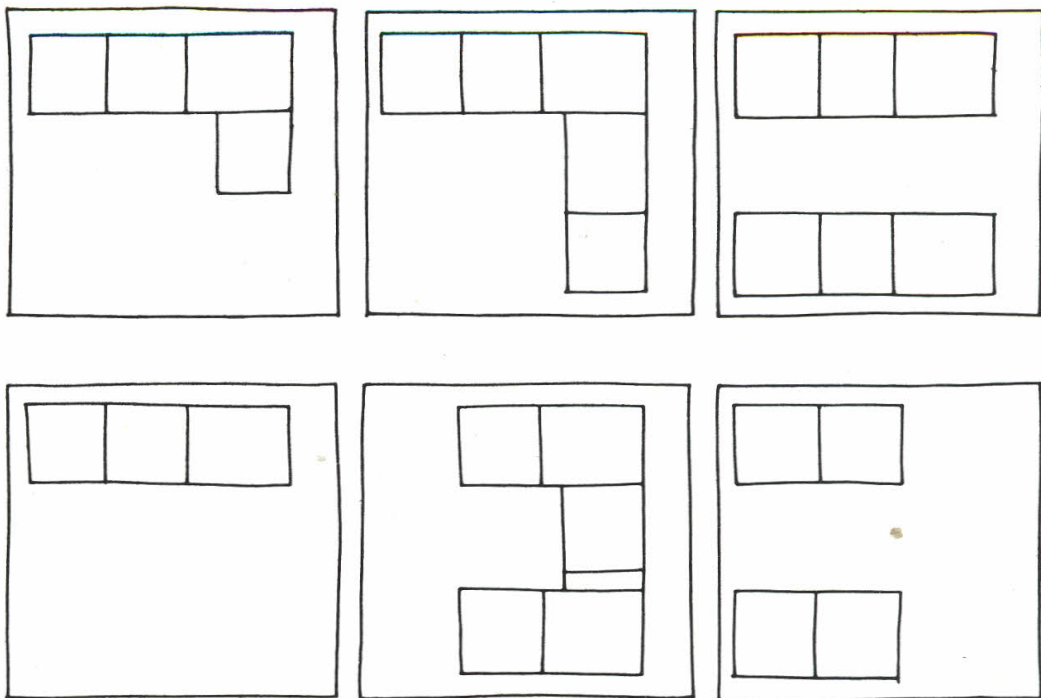
PLAN 1



PLAN 2



FRONT ELEVATION



ALTERNATIVE ROOM ARRANGEMENTS :

more rooms at densities varying from one to ten persons per room, but the more usual being four persons to a room. Most plots have a pit latrine shared by the four or five families living on the plot. There are cases of families from two or more plots sharing a communal pit latrine and one case of waste land used as the latrine for the plot. In some cases plots also have a bathroom, but it is more usual for bathing, eating, living and cooking to take place in the same three metres by three metres room. The site is served with a water main, several water points being available to the residents of Korokocho. These are owned by some landlords who sell water to neighbours: the distance from such a fresh water supply ranges from 10 to 100 metres. The plot is rarely developed as a single entity: the owner may build one or two rooms to begin with and establish his right to the rest of the plot by building a temporary fence around it. The remaining development may be added room by room until the unit is complete. Figure 15 illustrates the process of house development and house types in Korokocho. The maximum number of rooms on the sites in Korokocho is seven while at the moment the area averages about five rooms to the plot indicating that it is only partly developed and population could be expected to increase to something in the order of 3700 persons.

Roads in the area are narrow, unpaved, undrained and few in number. The area under study has one access road through the development along which service vehicles run. For most of its length this access road is only wide enough for one vehicle, though in places it widens out to permit vehicles to pass each other. Since this road is a cul-de-sac its width makes access to the area extremely difficult. Despite the tortuous nature of the road the community still finds it necessary to build sleeping policemen of stone and mud at intervals along its length. Along this main spine road is the commercial area consisting of shops, small industries and hotels (Fig. 16).<sup>15</sup> Off the spine road and roughly at right angles to it at 35



Fig. 16 The commercial area of Korokocho

metre centres is a series of access ways to the housing. The tortuous nature of the access road and the sleeping policemen have together ensured that this spine remains a pedestrian parade through the area. Judging by the regularity of the layout it seems that there has been some sort of semi-professional involvement in the site development. The access roads are wide enough for vehicular traffic, but surfaces and the slope 1 in 5 are such that most remain only pedestrian routes. Churches, mosques, a primary school, open space for the *baraza* and market space are located within the housing areas adding visual relief to an otherwise monotonous and dreary landscape.

Three main types of people are to be found in Korokocho, each group having its own particular problems, needs and aspirations. The resident landlord and his family are the relatively affluent members of this society. They are able to afford the initial sum of 10 to 20 000 shillings to erect accommodation both for their own use and also to rent, earning somewhere between 500 to 1000 shillings per month—enough to pay off the original outlay for the dwelling in two years. Those in the landlord group were satisfied with the accommodation, though they would like greater security of ownership: they seek improvements to local authority services such as refuse collection, street lighting and roads. The owner occupier seems to be in a minority. He owns one or two small rooms on a plot and in addition to the needs of the landlord is dissatisfied with the size of his accommodation, requiring more space. Tenants form the majority of the population and are from the lowest economic group earning less than the minimum wage; they express an interest in improved services, but although they are more critical of the quality of the accommodation than the other two groups, they do not have the ability to pay higher rents for better rooms. Rents are between 70 and 100 shillings per room depending on location, size and facilities which is all that the poor can afford. Many residents, no matter to which group they belong, were moved to Korokocho by the City Council from other squatter areas. Others arrived in Korokocho from rural areas seeking employment. As in other squatter areas in Nairobi, many Kenyan tribes are represented there. Although the landlord class tend to be Kikuyu, poverty does not discriminate ethnically.

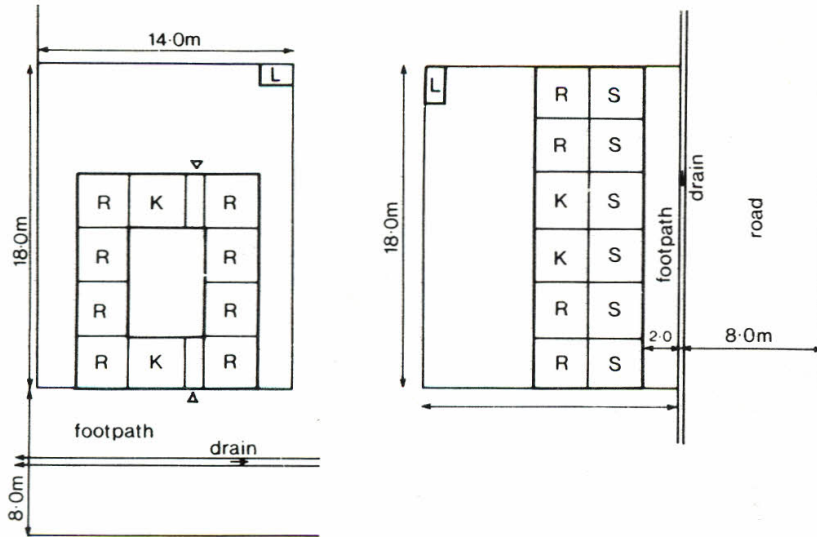
All in Korokocho is not bleak: activity abounds, from commerce to industry, farming to building and individual to group action.<sup>16</sup> The Muslim community is one such active group. It is organised by a religious/social worker and has built a mosque, installed piped water to it for public use and is busy building a school with funds from the Arab world. Christian groups are strongly in evidence making the area attractive to others of the same persuasion: one respondent to our questions gave the reason for moving to Korokocho as 'to be near his brothers in Christ'. Individuals, too, assist with community works and are members of community organisations, while the *baraza* held by the chief to launch our project was a well attended and lively event. With very little effort the community could be organised into a powerful instrument for local development.

#### PROBLEMS IN KOROKOCHO

In summary, the main problems in Korokocho and probably throughout the squatter areas of Nairobi are:

1. Lack of security of land tenure which means that individuals and groups can be moved at a moment's notice, their homes demolished and valuable building materials destroyed.<sup>17</sup> This

HOUSING THE POOR



MODEL RESIDENTIAL SITE (1)

MODEL COMMERCIAL SITE (1)

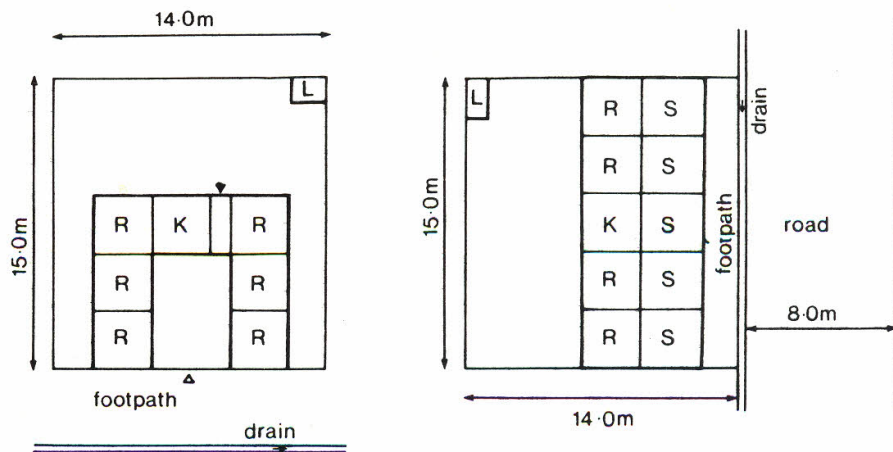
R=Living room  
 K=Kitchen  
 L=Latrine (earth closet)  
 S=Shop



MODEL SITE (1)  
 178m x 232m : 41,296m<sup>2</sup>: 4.129 Hectares  
 112 plots : 840 living rooms : maximum population 4200 persons  
 : maximum density 1017 p.p.H. (460 p.p.a.)  
 : design population 2520 persons  
 : design density 610 p.p.H. (277 p.p.a.)  
 Community land 16 plots : 5,000m<sup>2</sup>

Fig. 17 Model residential and commercial plot layouts, and site layout

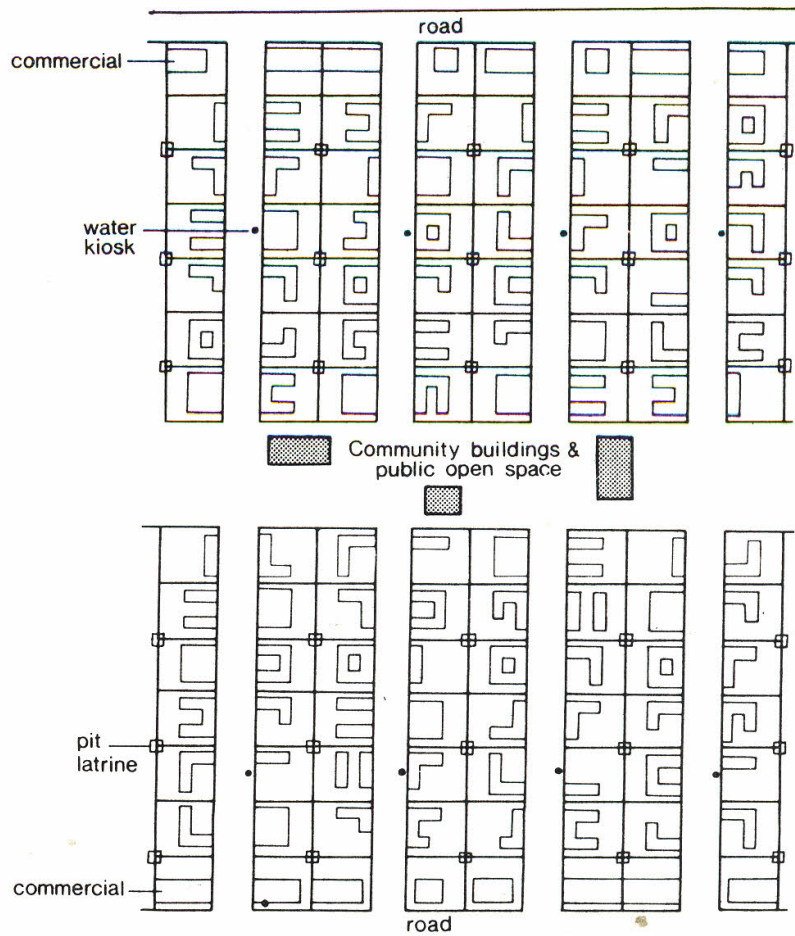




MODEL RESIDENTIAL SITE (2)

MODEL COMMERCIAL SITE (2)

R=Living room  
 K=Kitchen  
 L=Latrine (earth closet)  
 S=Shop



MODEL SITE (2)

152m x 232m : 35,264m<sup>2</sup> : 3.526 Hectares : 7.75 acres  
 112 plots : 646 living rooms : maximum population 3200 persons  
 : maximum density 907 p.p.H. (412 p.p.a.)  
 : design population 1920 persons  
 : design density 572 p.p.H. (247 p.p.a.)  
 Community land 16 plots : 4250m<sup>2</sup>

Fig. 18 Model residential and commercial plot layouts, and site layout

constant threat hanging over the squatters' heads like the sword of Damocles is a disincentive to improve housing and environmental conditions. The current value of the property in the study area, at 2000 shillings per room, is something in the order of 1.4 million shillings (UK£70 000). If this calculation is made for all squatter property in Nairobi it would equal a resource that a developing country cannot afford to lose. In addition to the loss of building property it is estimated that each family affected by demolition or fire loses an average 2200 shillings in personal effects.

2. Fire hazard is a constant risk in the squatter areas. For example, in November 1982 on one night alone 17 000 people were made homeless.<sup>18</sup> Vast areas of property are destroyed annually, the causes being overcrowded structures, no convenient road layout for fire fighting equipment, no water points for fire fighting and no nearby fire brigade. Finally, poverty itself contributes to the danger from fire: structures are poorly made from inflammable materials and the spaces used for kitchens on verandahs or in cramped conditions are conducive to the outbreak of fire.

3. In areas such as Korokocho the state of the physical environment is itself a constant health hazard made worse by the overcrowded conditions which encourage the spread of contagious disease, the most dangerous being cholera.

4. Since 90 per cent of the population are employed in the informal sector of the economy for low pay this is perhaps the most pressing problem for the people of Korokocho. The dependency ratios mean that those fortunate people in employment have large families and visiting relatives seeking employment who are also dependent on them. From the survey we learnt that as much as 70 shillings can be spent per month on travel costs to and from work and this is almost one third of some low pay and equal or nearly equal to the rent of a room. The use of public transport or taxis (*matatus*) to and from work is therefore not possible for most residents. Since there are no employment centres nearby this means a long trek to work sometimes in darkness since many jobs involve night work; we learnt that such journeys are dangerous with cases of rape, muggings and robbery being commonplace.

5. When asked about the facilities needed in the area residents consistently ranked the following in order of priority: 1. Dispensary; 2. Primary School; 3. Refuse Collections; 4. Street Lighting, 5. Public Transport; 6. Police Post; 7. Markets/Shops; 8. Recreational Facilities.

#### RECOMMENDATIONS

Poverty in Korokocho could be regarded as a reflection of the problems faced in national development in Kenya as a whole, but more specifically ensuing from the process of urbanisation. While some solutions to the problems faced by the people of Korokocho are suggested, it must be stressed that these are part of a wider set of problems connected with national processes and the growth of Nairobi, the primate city. Any solution to the local problems in East Nairobi must be viewed in the wider context and include methods of reducing rural-urban migration, dispersion of urban growth and national policies for employment creation.

While appreciating the national dimension to poverty in Nairobi, nevertheless it is possible to suggest steps which could be taken immediately to alleviate the worst conditions found amongst large sections of Nairobi's population.

By far the most important single reform which would have greatest effect on the housing of the poor would be to give the occupants of squatter areas security of tenure, possibly in the form of 99 year leaseholds. This reform would release the untapped energies of the squatters, giving them the incentive to improve their homes and so invest incrementally in property. It would, of course, also give the squatter landlord added incentive to invest in more permanent structures when or if the market is able to sustain the cost. With maladministration and corruption there is a danger that most of the leasehold property would find its way into the hand of speculators. If this were to happen, then, as in many past efforts at solving the housing problems of the poor, it would be the wealthy who would gain most. But this seems to be inevitable in Nairobi, and indeed in many parts of the developing world: the poor in Nairobi need the squatter landlord and informal sector developer to organise land assembly and the building industry. If the state cannot build enough houses at the right price, then perhaps the informal sector should be encouraged and assisted to perform this useful function. This is not to suggest that such speculators should be given *carte blanche*, but they should be controlled and supervised so that the result will be long term environmental improvement.

It may be possible to reduce housing costs by releasing sufficient land for the housing needs of a realistically projected population of Nairobi: such land would require to be located properly and serviced. This suggestion, if followed, would require a drastic review of urban land policy which in any country, and Kenya is no exception, is a delicate issue. Many planning shibboleths such as 'containment', 'urban sprawl', 'fine townscapes' would need to be eradicated from the vocabulary or their underlying concepts reappraised. In addition, the well-founded fears of accelerated drift from rural areas would have to be allayed by the adoption of a vigorous programme of rural development.

Current bye-law standards are too high for the vast majority of low cost self build schemes or rental housing for the very poor. The possibility of new bye-laws is currently being investigated in Nairobi.<sup>19</sup> It is suggested that the current informal practices in areas like Korokocho be adopted as the minimum standards acceptable so that such development could become legitimised. It is suggested that multi-tier bye-laws be developed and that the bottom rung of the developmental ladder should accept current structural systems for earthwalls, earthen floors, iron roofs, and that individual pit latrines be provided within each plot while water services be connected to kiosks serving groups of twelve plots. Figs. 17 (top) and 18 (top) illustrate model layouts for plots of 14m×18m and 14m×15m. The commercial plots follow the normal procedure for such development in Korokocho having a double bank of rooms, the front room being used for a shop or workshop. The residential plot is designed on the traditional courtyard plan consisting of either seven or ten rooms, in both cases the latrine being placed 5m from a living room grouped in blocks of 4. Figures 17 (bottom) and 18 (bottom) illustrate in model form how such plots could be organised on a grid layout. The area is served by two roads, while access to the residential plots is by footpath. The community buildings, all of which should be of permanent construction, and open space are combined to form a firebreak in the residential area. Additional firebreaks are provided by the roads and pedestrian routes all of which are 8m wide (minimum), reducing the residential blocks to 14 plots.

The larger plot requires a land-take of 4.13 hectares to accommodate a maximum population of 4200 persons (five persons per room) or a planned population of 2520 persons (three persons per room) giving densities of 1017 persons per hectare (460 persons per acre)

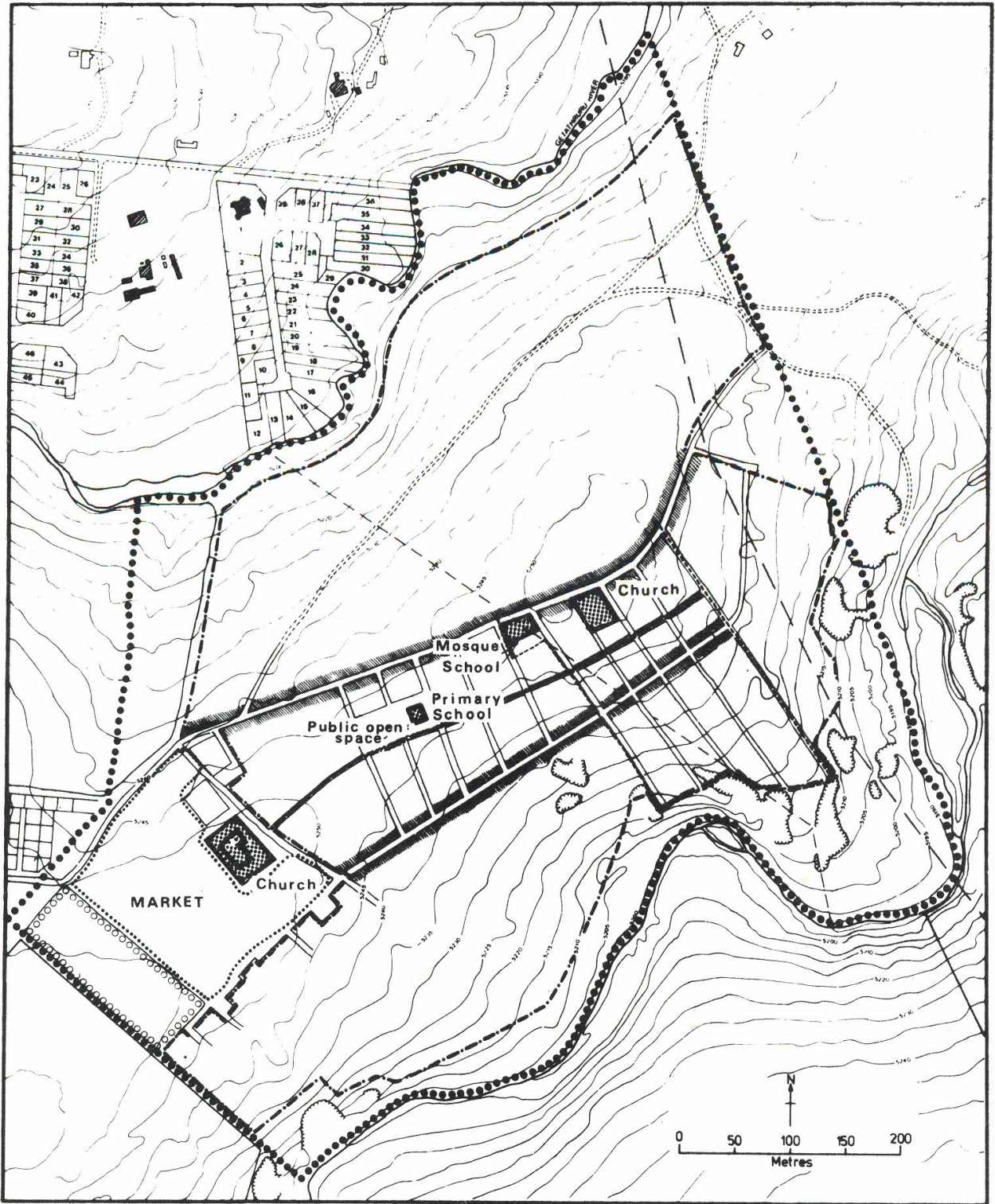


Fig. 19 Proposal for Korokocho (key as Fig. 11)

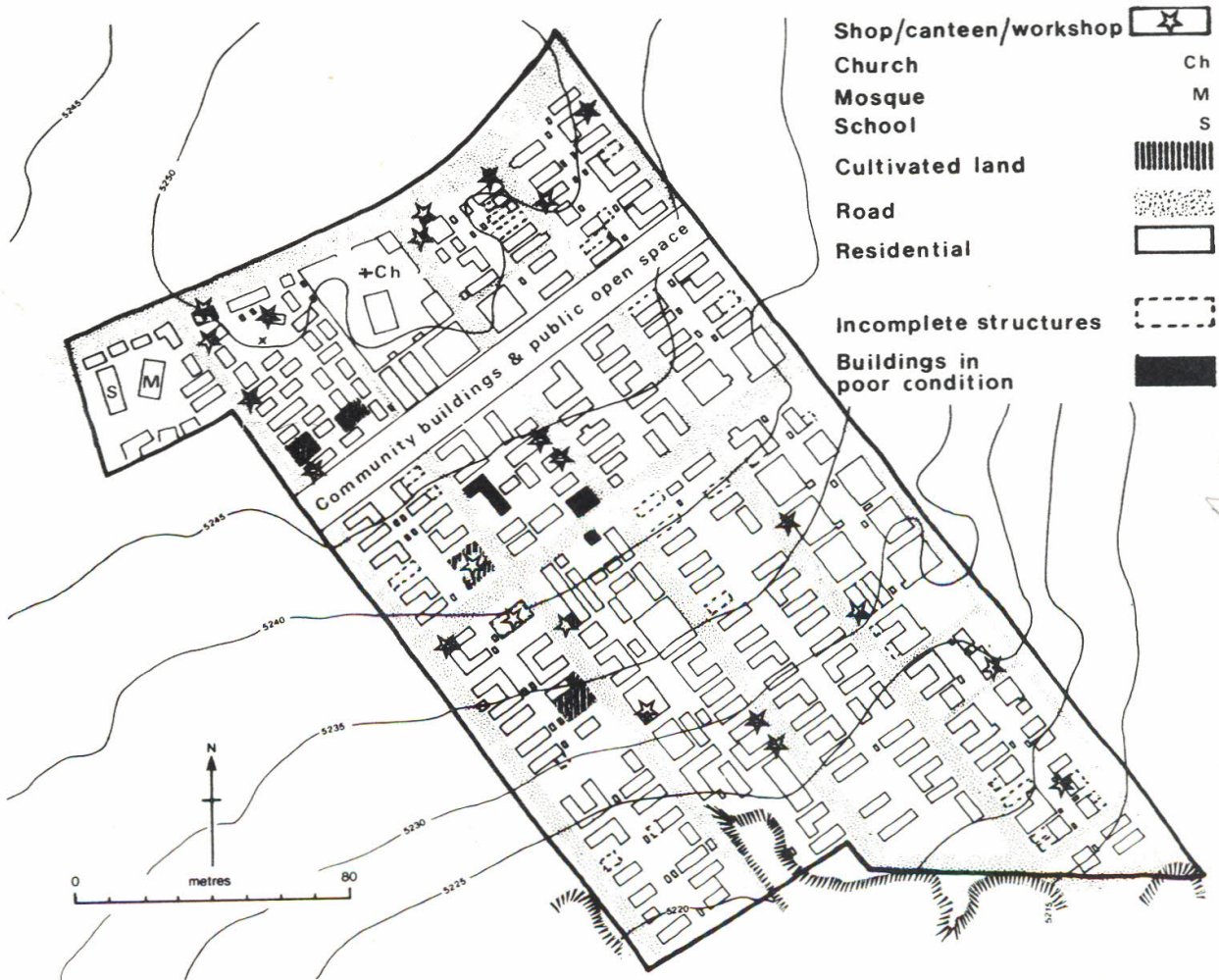


Fig. 20 Proposal for Korokocho

and 610 persons per hectare (277 persons per acre) respectively. A layout based upon the smaller plot size (14m × 15m) requires 3.526 hectares (7.75 acres) to accommodate a maximum population of 3200 persons (five persons per room) on a planned population of 19 200 persons (three persons per room) giving densities of 907 persons per hectare (412 persons per acre) and 572 persons per hectare (247 persons per acre).

Figures 20 and 21 illustrate the application of these ideas to the existing development in Korokocho. Vehicular access to the area is extremely difficult and in the proposed scheme has been improved by the completion of a loop road network. A pedestrian route is shown passing through the housing area connecting the main public buildings creating an additional fire break and sites for the public buildings requested by the community. These proposals mean the demolition of some existing properties and the rehousing of some families.<sup>20</sup> It is suggested that proposals of this nature should be achieved through consultation with the community.

While the Government and City Council should be involved in land allocation and its subdivision, basic infrastructural development and the administration of planning guidelines, individuals—whether owner occupiers or landlords—should be given the freedom and incentive to build their own homes or homes to let. Community development, however, is crucial for organising those aspects of life which neither the Government and its agents nor

the individual can provide. Community action is a common feature of Kenyan society and it should be exploited to the full. Minor environmental improvements together with social, educational and recreational facilities are vital to the ultimate achievement of a decent and humane lifestyle for the people of Korokocho and such is their aspiration: improvement and amenities such as those are best achieved through self-help community schemes of which the Kenyans have great experience.

#### NOTES AND REFERENCES

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- 10 Rosenthal, A. A., *Nairobi: Urban Study and the Housing Problem* (Nairobi Urban Study Group, Technical Paper H2), Nairobi, Nairobi City Council, 1972, p. 2
- 11 Grimes, O. F., *Housing for Low-Income Urban Families* (World Bank Research Publication), Washington DC, World Bank, 1976, Table 5.7, p. 76. This is based on a repayment period of 25 years, 10 per cent interest, no down payment, and 15 per cent of income devoted to housing (US \$2.80=K£1.00 at 1970 prices).
- 12 Amlani, op. cit., p. 149
- 13 Ibid.
- 14 Etherton, op. cit.
- 15 Hotels in this text mean rooming houses, which may or may not provide meals. The grandest in the study area is the Hiltoni, consisting of five or six 3m×3m rooms and a small verandah on which snacks are served
- 16 Farming in this context means urban garden farming normally carried out on a rental basis. The farmer pays the owner of the plot for a season of planting and harvesting. Crops are mainly maize, beans and vegetables; cash crops are not grown. This is illegal according to City Council bye-laws. Sometimes tiny plots around a house may be used for such gardening, while throughout the area there are many goats and chickens feeding on uncollected garbage
- 17 Irungu, Robert, '300 Market Stalls Razed', *The Nation* (Nairobi), 26 August 1982; also see 'Mayor Defends Council Demolition of Houses', *The Nairobi Times*, 26 July 1982
- 18 '4000 Homeless after Mathare Valley Fire Guts Shanties', *The Nairobi Times*, 23 August 1982; 'Mathare Fires', *The Nairobi Times*, 25 November 1982
- 19 'Let's Wait for New Building Bye-Laws', *Daily Nation* (Nairobi), 20 August 1982
- 20 In the study area eight plots would be demolished affecting about 130 people

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