PROBLEMS OF HOUSING FINANCE FOR THE URBAN LOW-INCOME GROUP: A CASE STUDY OF THE DANDORA SITE AND SERVICES PROJECT IN NAIROBI

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D E C L A R A T I O N

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TO MY PARENTS

ABSTRACT

This study examined the problem of finance for the urban low-income housing through a case study of the Dandora Project, Phase I. The main objective of the study was to identify affordability bottlenecks in the Government's main low-income housing projects, the site and services, and to recommend measures for alleviating them.

Using a questionnaire, and taking a random sample of 10%, representing both Types A and B plots, a physical survey of the sites and buildings of the Dandora Project was undertaken. To supplement the survey, further information was obtained from the files and reports of the Dandora Project and other Government publications. Following are the main findings and recommendations arising from the study.

The amount of materials loans provided to the plot allottees was grossly inadequate, and its manner of disbursement rendered the loan scheme ineffective. The level of 'self-help' was extremely low, and accounted for only about 5.5% of the total construction cost. The initial deposit the allottees were required to pay was too high and some of them could not raise it within the time limit. Lack of accommodation on the site for the builder allottees of Type A plots severely cut down their affordability. Finally one of the objectives of

the project, which was to enhance the affordability of the allottees by allowing subletting was not achieved as there were no loans provided to build the extra rooms.

In view of these factors a number of recommendatio were made to alleviate affordability bottlenecks in futur site and services projects It was recommended that the loans provided should aim at meeting the costs of both materials and labour and its disbursement be improved. The effect of inflation on loan during the period of construction and differences in site conditions would need to be taken into consideration.

In order to enhance the financial capabilities of the plot allottees and to get out of the classical dilemma of trying to reduce the cost of housing to make it affordable, it was recommended that, flexible loan repayment systems should be introduced, and subletting be encouraged and facilitated by providing loans for constructing the extra rooms.

It was also recommended that in order to increase the opportunities of the low-income groups to obtain credi for housing, all government sponsored housing finance institutions should be required to reduce their lendings to the high-income groups by reducing the maximum amount o loan an individual can obtain, and by the introduction of progressive interest rates. Further it was recommended that the Government should encourage the utilization of private funds in site and services schemes through guarantee

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LIST OF ABBREVIATIONS

1.	C.D.C.	Commonwealth Development Corporation.
2.	D.C.D.D.	Dandora Community Development Department.
3.	D.C.D.P.	Dandora Community Development Project.
4.	E.A.B.S.	East African Building Society.
5.	E.D.F.	European Development Fund.
6	E.E.C.	European Economic Community.
7.	H.F.C.K.	Housing Finance Company of Kenya.
8.	H.R.D.U.	Housing Research and Development Unit.
9.	I.B.R.D.	International Bank for Reconstruction and Development.
10.	I.D.A.	International Development Agency.
11.	I.U.L.A.	International Union of Local Authorities.
12.	M.O.W.H.	Ministry of Works and Housing.
13.	N.C.C.	Nairobi City Council.
14.	N.H.C.	National Housing Corporation.
15.	N.U.S.G.	Nairobi Urban Study Group.
16.	S & L.	Savings and Loans Kenya Limited.
17.	U.N.D.P.	United Nations Development Programme.
18.	U.N.G.A.	United Nations General Assembly.
19.	U.N.H.H.S.F.	United Nations Habitat for Human Settlement Fund.
20.	U.S.A.I.D.	United States Agency for International Development.

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CHAPTER ONE

1. PROBLEMS OF HOUSING FINANCE FOR THE URBAN LOW-INCOME GROUP - A CASE STUDY OF THE DANDORA SITE AND SERVICES PROJECT IN NAIROBI

1.1. INTRODUCTION.

Finance is a prerequisite for the development of urban housing. Unlike the traditional rural house where the use of non monetized resources in labour and materials is extensive, the development of an urban house, whether low-cost or high cost involves a large financial outlay in the acquisation of land, labour and materials.

In Kenya, the cost of constructing a two-roomed urban housing unit of a minimum standard (excluding ceilings, electrical and hot water installations, and internal and external plastering) has been estimated at Kshs. 44,000/- (1978 prices).[1] Most families in urban areas cannot raise this amount of money except by borrowing from financial institutions.

Unfortunately the families in the "low-income group"[2] do not qualify for mortgage loans from the private financial institutions due to lack of "proper" security. The public sector has not been able to cope with their problems either; the main reason and the most often quoted one by authorities being "shortage of funds".

Thus the 1970-74 Kenya Development Plan placed finance as "the most serious constraint preventing the housing programme expanding as fast as Government would wish." This problem continued to feature prominently in the subsequent Development Plans, though expressed differently.[2]

In its attempt to find a solution to this problem of finance the Government officially declared the "site and services" strategy as one of its principle approaches to urban low-income housing in the 1970-74 Development Plan. Over that plan period one third of the National Housing Corporation's urban housing programme was placed under site and services schemes. This strategy was adopted in the subsequent Development Plans as the Government's main approach to low income housing in urban areas. Thus in the 1974-78 Development Plan, 75% of the total planned output of urban housing was under site and services schemes (Table 1.1). The current 1979-83 Development Plan has 45% of its total planned output under site and services schemes (Table 1.2).

TABLE 1.1 DISTRIBUTION OF AVAILABLE FUNDS FOR URBAN HOUSING (1974-1978) INTO COST CATEGORIES

ASSUMED INCOME (SHS. PER MONTH) (i)	AVERAGE COST/LOAN PER UNIT (K£) (ii)	NO. OF UNITS AND AVAILABLE FUND		
		UNITS (iii)	VALUE (K£M) (iv)	
200	300	61,860 75%	18.6	Site of service plots
500	750	9,890	7.4	
800	1,200	6,570	7.9	
1,500	2,250	13,840	31.1	
3,500	4,500	3,460	15.6	
TOTAL		95,620	80.6.	

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

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

Source: National Development Plan 1974-78.

TABLE 1.2 PLANNED PHYSICAL OUTPUT OF HOUSING DURING 1979-83 PLAN PERIOD

		SERVICED PLOTS	RENTAL HOUSES	UPGRADING	MORTAGES AND TENANTS	TOTAL
N.H.C.	Urban Housing	11,532	5,800	-	4,000	21,332
	Rural Housing	-	-	-	6,800	6,800
Central Government	Second Urban Project	16,000	-	10,000	-	26,000
	Provincial Pool Housing	-	530	-	-	530
	Nairobi Staff Housing	-	1,130	-	843	1,973
	Institutional Housing	-	2,600	-	-	2,600
	Local Authority Housing	500	2,968	-	-	3,468
	TOTAL PUBLIC SECTOR					
Private Sector	Private Sector Activities	-	4,843	-	7,264	12,107
	GRAND TOTALS	28,032	17,371	10,000	18,907	74,810

Note: These figures do not include the informal sector house-building activities.

Source: National Development Plan 1979-83.

The priority given to site and services in the case of Nairobi is indicated in Table 1.3, which present the National Housing Corporation's involvement in low-income housing development in Nairobi during the period 1970-80. The Table shows that there were five types of housing schemes - site and services, tenant purchase, mortgage, rental and upgrading. The total number of housing units produced was 7,926 of which about 60% was under site and service schemes.

TABLE 1.3 N.H.C.'S OUTPUT OF LOW INCOME HOUSING UNITS BY TYPE OF SCHEME IN NAIROBI, 1970-78

TYPE OF SCHEME	NO. OF UNITS	% OF TOTAL
Site and Service	4,747	60.0
Tenant Purchase	805	10.0
Mortgage	217	3.0
Rental	1,844	23.0
Upgrading	315	4.0
TOTAL	7,926	100.0

Source: National Housing Corporation, Annual Reports 1969-80.

The statistics presented show that the site and services is the most important single housing programme for the urban low income group in Kenya.

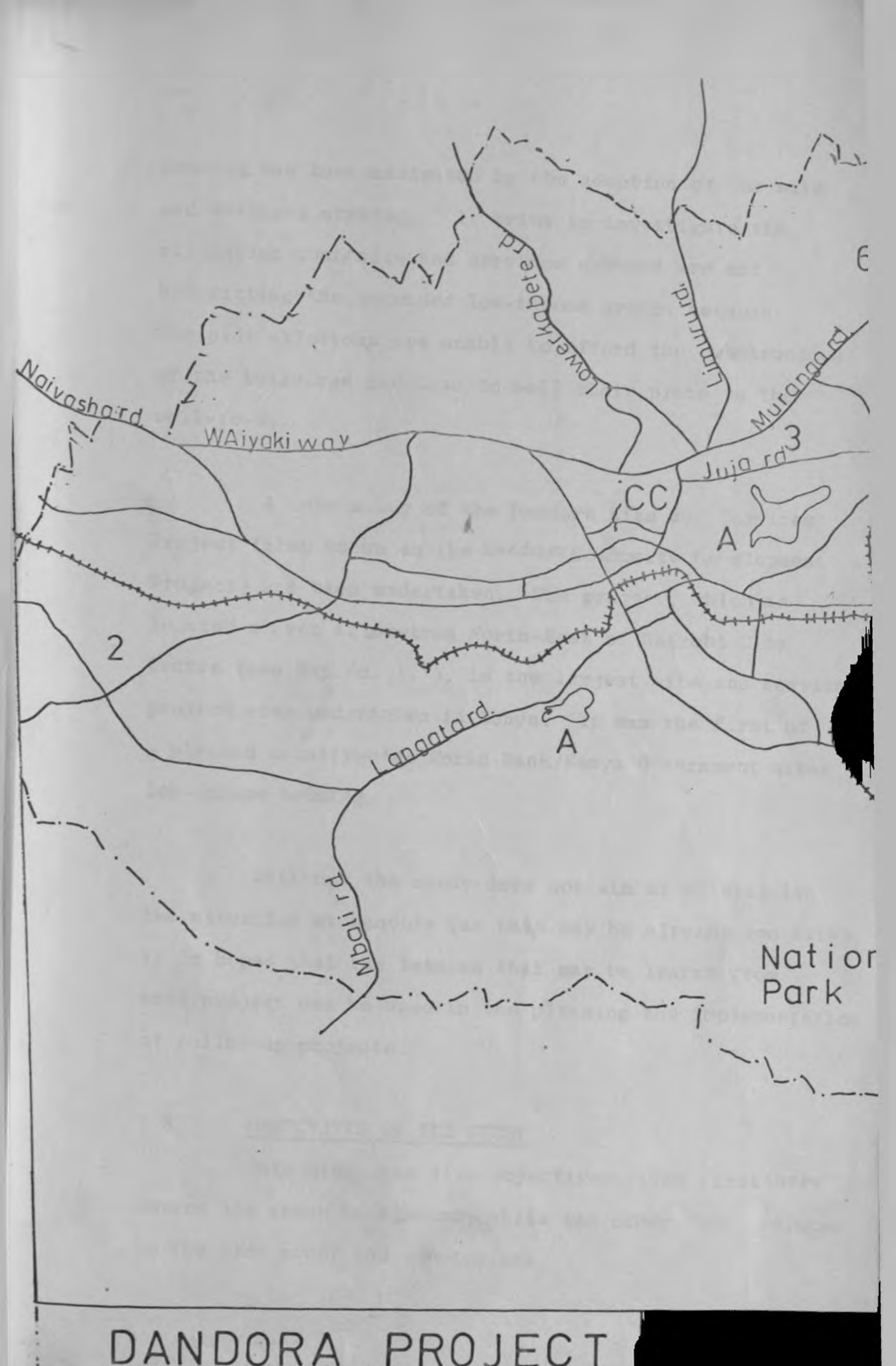
1.2 STATEMENT OF THE PROBLEM AND SIGNIFICANCE OF THE STUDY:

It has been shown that the 'site and services' is the Government's main strategy through which it hopes to reach the urban low-income majority. This being the case, it is important that factors that may be presently hindering its effectiveness be identified and appropriate measures taken. The reasons for adopting the site and services strategy are reflected in the various development plans. The two main ---- are:

a. That because public funds are limited, they should be confined to the acquisition and development of land, and provision of basic services, so as to reach more people in the low-income groups.

b. That because the conventional type of housing unit is too expensive to be afforded by the majority of the low income people, site and services schemes provide the necessary opportunity to the low income people to obtain homes.

From the above reasons it is clear that the adoption of the site and services strategy was supposed to counteract the financial constraintof the low-come groups. This study attempts to assess the extent to which the financial constraint of the urban low-income



DANDORA PROJECT

housing has been mitigated by the adoption of the site and services strategy. It tries to investigate the allegation that site and services schemes are not benefitting the intended low-income groups because the plot allottees are unable to afford the construction of the buildings and have to sell their plots to the well-to-do.

A case study of the Dandora Site and Services Project (also known as the Dandora Community Development Project) has been undertaken. The project, which is located eleven kilometres North-East of Nairobi City Centre (see Map No. 1.), is the largest site and services project ever undertaken in Kenya. It was the first of a planned country-wide World Bank/Kenya Government urban low-income housing.

Although the study does not aim at alleviating the situation at Dandora (as this may be already too late), it is hoped that the lessons that may be learnt from this project can be used in the planning and implementation of follow-up projects.

1.3 OBJECTIVES OF THE STUDY

This study has five objectives. The first three covers the study background, while the other two relates to the case study and conclusions.

a. To examine the past housing policies and programmes with a view to high-lighting the major dimensions of the housing problems and efforts that have been made to solve them.

b. To examine the operations of the major housing finance institutions in Kenya with a view to:

(i) determining their contribution in the development of urban low-income housing.

(ii) identifying factors hindering their effectiveness, and

(iii) suggesting measures for enhancing their operations.

c. To examine the priority given to "site and services" as a strategy for meeting the housing needs of the urban poor.

d. To determine the relevancy of the "self-help" concept in the development of urban low-income housing.

e. To study the Dandora Site and Services Project, Phase I, with a view to:

(i) describing its main physical, social and economic components;

(ii) determining its beneficiaries;

(iii) identifying affordability problems of plots allottees and their causes: and

(iv) recommending options for alleviating affordability problems in future sites and services projects.

1.4 ASSUMPTIONS:

This study is based on two basic assumptions:

a. Finance is a critical factor in urban housing development.

b. The success of "Site and Services" as a strategy for urban low-income housing will depend on whether or not plot allottees have the finance to construct the buildings.

1.5 SCOPE AND ORGANISATION OF THE STUDY

There are many aspects to the problem of low-income housing and it would be difficult to deal with all of them in one study. This study stresses the problem of finance as a constraint to the implementation of the Government's main low-income urban housing programme, the

site and services, through a case study of the Dandora Project Phase I.

The study is organised in six chapters. Chapter one introduces the study. It presents the statement of the problem and significance of the study, Objectives of the study, assumptions, research methodology, limitations, scope and organisation of the study, and a review of related literature.

Chapter two presents a historical account of the overall national housing policies and programmes with a view to highlighting the major dimensions of the urban low-income housing policies and programmes. It also examines urbanization trends in the World and Kenya in particular and their effect on the housing sector.

Chapter three examines the operations of the housing finance institutions in Kenya. Chapter four provides the background information of the case study while Chapter five assesses the affordability of the Dandora Project by the allottees.

Chapter six is the conclusion, presenting the findings arising from the study and recommendations.

1.6 RESEARCH METHODOLOGY

The Dandora Project Phase I, consists of three plot types: Type A, 690 plots; Type B, 264 plots; and Type C, 54 plots. Type C plots were sold in the open

market for the purpose of cross-subsidizing Types A and B plots. This means that only 954 plots were meant for the low income people, and only these will be considered in the analysis. For the purpose of a detailed study a random sample of 96 plots (69 in Type A, and 27 in Type B), representing 10% of the total number of plots of Types A and B, were selected by taking every tenth plot in the numerical order. The plots selected are shaded in map No.4.

A household questionnaire was used to obtain such information as plot sales, types of occupancy, sources of finance for building construction etc. (see the questionnaire in appendix one).

From the files and reports of the Pandora Community Development Project Department (DCDPD) information on the various social, economic and physical components, and the general progress of the project was obtained. This was supplemented by informal interviews and discussions with the officials of the various departments of the Nairobi City Council, particularly those of the Housing Department.

To get a better grasp of the various housing issues the existing literature in books, reports, journals etc. was reviewed. A further source of information was some informal interviews and discussions

with the various housing finance institutions such as the National Housing Corporation and the Housing Finance Company of Kenya. These institutions provided information on their operations, and their lending terms and conditions.

One of the major objectives of the study is to assess the affordability of the Dandora Project to the plot allottees. The term 'affordability' is normally used to refer to the amount of monthly income an individual household is willing and is able to pay for shelter-related expenditures. In this particular study the term will also be used to refer to the financial capability of plot allottees to construct their own houses. Two methods of assessing affordability are identified.. One involves the determination of the values of the demand and supply parameters of the affordability equation as presented in Chapter 5 section 2; The second method, and the one used in this study, traces certain indicators of affordability problems such as slow rate of housing consolidation and high rate of population turnover in the project area. Lack of adequate and reliable information, as explained in Section 1.8, made it difficult to use the first method, which would have been more direct.

1.7 STUDY LIMITATIONS

This study touches on certain issues that individual members of the society consider "private and confidential". This include matters relating to incomes, savings, expenditures, and property ownership. The question of property ownership is especially very sensitive in this country.

People are reluctant to discuss issues related to their properties in fear that they might lose them. The fear is partly the result of frequent threats from the authorities concerned that people who may have obtained their properties flaudulently would lose them if discovered. It is also partly founded on suspicion arising from ignorance on the part of property owners regarding their property rights. This fear is particularly rife in site and services schemes where the applicants have a tendency of giving false information in order to qualify for plot allocation.

In a situation like this, the researcher is bound to collect false information which when analysed, would lead to false conclusions. In order to minimize this problem the researcher is forced to use a rather lengthy questionnaire to avoid direct questions that the respondents would otherwise be unwilling to answer. The use of a lenghthy questionnaire,

however, leads to a further problem. The respondent sometimes become impatient and may answer questions hurriedly without giving them enough though. This is a problem one cannot easily eliminate if direct questions are to be avoided.

There is another problem related to the above two. Even if the respondents would be willing to give the correct information there is the problem of lack of records to which they can refer. Families do not normally keep records of say, expenditure. This problem together with that of the unwillingness of property owners to give information complicates the study. In assessing the affordability of plot allottees, the author is forced to use a less direct method whereby instead of dealing with the supply and demand equation, certain indicators of affordability problems are used (see 5.1 and 5.2).

Another constraint to this study has been the frequent changes of supervisors. I have had three different supervisors at direct times.

Each change of Supervisors inevitably resulted into some disruption and loss of continuity.

1.8 REVIEW OF RELATED LITERATURE

The importance of finance in the development of housing cannot be over-emphasized. Abrams,[4] writing in 1964, made it clear that without a proper financing

system a country's housing programme would be small or non-existent. He reckoned that in a situation whereby the gap between shelter cost and income exists, the only way to acquire a home was by going into debt. Putting it more bluntly, Abrams says that even "in the developed countries with high incomes per capita, the middle-income earner needed twice as much to afford a modest house and that even then he may be dead by the time he accumulates enough money to meet the whole cost!".

The reason why this is so is that whether a house is a low-cost or a high cost one, its development involves large amounts of capital finance (For Kenya, a minimum standard housing unit in an urban area costed, on average, Shs. 44,000 to construct in 1978).[5] Hence, it follows that the existence of credit facilities is of paramount significance in the development of housing in any country.

Traditionally housing finance is highly institutionalised because of what Jorgensen[6] calls "long term nature of the committment and large sums involved". Although these institutions, which may be either government or privately sponsored organisations, are to be found in many of the developing countries, Kenya included, these institutions have been said to"have such intricate and complex conditions and formalities that they only help a few rich people and the low income

groups of people are deprived of this benefit of external sources of credit and finance".[7]

In a recent study[8] of housing finance agencies in Nairobi, it was found that the terms and conditions of these institutions tend to eliminate the majority of the urban population which is poor. It was noted that the rigidity of conventional finance institutions in requiring title deeds to registered property has had a negative effect on the availability of funds for the low income groups, the majority of whom have no proper security. Further, it was found that the terms and regulations laid down are not suitable for the low income groups and that the terms are suitable to serve the middle and high income groups.

1.8.1 INTERNATIONAL CONCERN IN HOUSING FINANCE

Until recently international financing organisations have been reluctant to provide credit for housing development. The argument has been, according to Christian James,[9] that housing is a social investment or consumption good rather than a capital good. This view has been said to have relegated housing investment to second or third priority in economic development strategies. It was thought that by investing in basic industries and utilities, economies would be built which would in turn generate enough growth for housing to thrive as an industry. To Abrams this order of thinking would relegate housing problems to provident and prayer.[10]

Thus until 1961, when the Housing Guaranty Programme was established, the United States Agency for International Development (USAID), now one of the major financiers of low-cost housing in Kenya) was directed to agricultural sector.[11] In the case of the World Bank its committment to housing in Africa started in 1972 when it made a credit of $8.3 million to Senegal.[12] By 1976 the World Bank had increased its investment in housing to $121.3 million in nine different countries. In Kenya, it has financed the First Urban Project (the case study) and it is to finance the Second and the Third Urban Projects which will be spread to all main towns. Other external sources of housing finance for Kenya include Commonwealth Development Corporation (CDC); European Economic Community (EEC) and the International Development Agency (IDA).[13]

Important as they may be, the use of external funds has its own disadvantages: the accumulation of outflow of interest and capital payments could eventually impose serious burdens on the balance of payments; foreign aid is usually accompanied by foreign technology which is not always consonant with local needs. For these reasons it is strongly advised that, as far as possible, finance for housing be raised locally from private savings. This necessates the establishment of of appropriate avenues of savings such as building societies and saving and loans associations.

The great deal of attention now being directed to the improvement of low-income housing both at the international level and in many Third World Countries arises from three interrelated considerations:[14]

a. First, housing is one of those "minimum needs" which must be met to eliminate the worst manifestations of poverty.[15]

b. The Second, consideration is that housing involves not only shelter, but also access to jobs, sanitation facilities, security and education. Thus public decisions which affect the standard, location, and cost of low-income housing have crucial ramifications for the whole opportunity structure of the poor. These considerations have led to a shift in the economic evaluation of housing: housing is now seen by many economists as a relatively productive area for investment.

c. The Third consideration is the sheer magnitude of the housing problem in Third World Cities. Despite growing official concern, housing conditions for the low-income majority in most Third World Cities are getting worse. This deterioration is reflected in the growth of large slums and squatter populations. Figures for 1960's and

early 1970's for sixty-six major cities in forty three Third World Countries showed that in 58% of the cities more than a third of their inhabitants were slum and squatter populations; in 30% of the sixty-six cities more than ½ of their people were living in slums or squatter areas.[16] The growth of these settlements is not only recent but the situation is getting worse as the following statistics indicate. In Lusaka, Zambia the squatter population grew from 20% of the total population in 1967 to 46% in 1972 and rose up to 66% in 1976. In Manila, Phillipines, the slum and squatter population constituted 20% of the city population in 1966 but shot up to 38% in 1968 in only two years. In Ankara, Turkey, the slum and squatter population was 47% in 1965 but by 1976 the percentage had increased to 65%.[17] No precise figures are available for Nairobi but a study[18] of uncontrolled settlements in Nairobi undertaken in 1970 indicates a growing list of such settlements despite the government's efforts to discourage them. As at 1979, 35%[19] of the Nairobi Population was living in uncontrolled settlements.

From past experiences by both developed and developing countries such poor living conditions are known to be a threat to social, economic and political

stability of countries, hence, the international concern.

A concerted effort by the nations of the world to mobilize resources for human settlements development is seen in the resolution 3327 (XXIV) of the United Nations General Assembly (UNGA) of 18th December 1974, which states 'inter alia' that "the primary operative objective of the Human Settlements Foundation (UNHHSF) will be to assist in strengthening national environmental programmes relating to human settlements, particularly in the developing countries, through the provision of seed capital and the extension of the necessary technical and financial assistance to permit effective mobilization of domestic resources for human settlement."[20]

In a regional meeting for Africa on Human Settlements Finance and Management organised by UNHHSF in collaboration with USAID, UNDP and the International Union of Local Authorities (IULA), and held in Nairobi in October 1978, several recommendations with regard to mobilization of resources for human settlements development were made. Among these were.

a. That Governments should urge housing finance institutions to make credit facilities more easily accessible to borrowers with emphasis to low-income groups, and the Foundation should provide technical assistance to achieve this goal.

b. Statutory bodies such as development banks, social security schemes and insurance companies should be encouraged to invest a proportion of their funds in human settlements projects, either through housing finance institutions or through local authorities.[21]

Despite what can be regarded as an increasing effort by international organisations to mobilize resources for housing as analysed above, finance for low-income housing is still in short supply as indicated by the worsening housing situation in developing countries.

In attempt to counteract further this financial constraint to low-income housing the idea of "self-help" as assumed to apply in "Site and Services" schemes has emerged. The proponents of this concept have popularised it world wide and it has become the main approach of the major international financial organisations, such as the World Bank and USAID, to low income housing in the Third World.

1.8.2. "SITES AND SERVICES":

The term "Site and Services" is used to describe various technical standards and degrees of government financing from a pegged-out site to a fully serviced extendable house. The terms used to define different grades of provision in various countries are set-out as below.[22]

Lot and Serviced or equipped lot:

The smallest unit of land intended for use by one or more households. The minimum grade of site and service is staked-out lot, but usually footpath or road access, shared stand-pipes and some form of sanitary facilities are provided.

Core Unit.

The sanitary core provided on a serviced lot which usually include toilet and sink and may also include a shower unit and kitchenette as well.

Core Unit and Shelter:

The serviced lot and core together with a small roofed space which may or may not be walled.

Shell Dwellings:

A serviced lot and core incorporated in a small roofed and walled dwelling which is large enough to subdivide and is designed for this as well as for extension.

Expandable Dwelling:

A fully finished and serviced small dwelling designed for extension.

The most commonly used initial stages of serviced plot development in Kenya include:

a. Site with only a manhole connection.

b. Site with toilet and shower wet-core.

c. Site with toilet, shower and kitchen; and

d. Site with toilet shower kitchen and one room.[23]

In all these cases the occupant does not get a complete unit, the idea being that the remaining work can be completed through 'self-help'. To quote the defination adopted by the Ministry of Housing.

> "Site and services are projects in which residential plots of land are provided with basic services ... and allocated to eligible applicants so that they can, through 'self-help' construct permanent houses ---- This type of housing will be allocated to those households within the income range of Kshs. 300 to 1200 per month."[24]

The section that follows discusses the concept of 'self-help' with a view to evaluating its applicability in low-income urban housing.

1.8.3 'SELF-HELP' HOUSING

The concept of self-help emphasizes the importance of the general utilization in appropriate projects of the greatest resource, people. With regard to its applicability in housing there are two schools of thought.

The first school of thought is that since labour constitutes a major claim by a contractor, the use of local residents (human resources) could significantly reduce the cost of providing houses.[25] Jorgensen is in support of this view when he says that the low-income groups have "the desire and the skill to build houses" and as such all that is necessary is to organize them in self-help groups.[26]

The other school of thought holds that the application of self-help in housing is handicapped due to to the amount of planning and organisation required to achieve common objectives. Further it holds that even where an organised group reflects the feelings of the people, group participation would greatly depend on whether or not it has the resources and the skills to deal with the project.[27]

Summarizing the limitations of self-help projects in urban communities Abrams had the following to say:

> "Reliance on industrial workers to learn building crafts and to find time and energy for building will generally prove disappointing: reliance on self-help is misplaced when it is offered as the solution for the housing problem of cities. It may consume time and money that could have been spent usefully elsewhere."[28]

According to this school of thought, those who claim that there are savings of 20 to 25% in the use of

self-help, do not take into consideration possible offsets in terms of losses of time and efficiency from the main job, loss of supplementary earnings, supervisory and administrative costs, deficiency in the product etc.[29]

From the foregoing analysis we can identify two approaches to self help in housing.[30]

a. maximum contribution

b. minimum contribution of labour, effort and money by the family to produce the building materials, and to construct the house.

a. Maximum Contribution:

There are two forms of maximum contribution. The simplest and most familiar form of this in the world is the traditional "one family approach", best exemplified by the Eskimos Igloo, the Nomands tent, the African's, Asian's and Latin Americans pole, earth and thatch hut. The family gathers its own materials, shapes and fits them, and builds the house to completion. Money is not used or needed. Outside skilled labour is not required. This is the traditional house and the building techniques are passed down from father to son. Usually land and materials are plentiful.

The second form of maximum contribution is "group building approach" which is associated with villages or farm settlements. Neighbours and friends help to build the house in return for reciprocal aid when they build theirs, for example, help each other in gathering materials which might have been depleted within vicinity. Money is still not used but human interractions and transport are added to the process.

b. Minimum Contribution

An approach beyond the above two examples that still constitutes maximum contribution would perhaps become arbitrary; for a variety of reasons a situation arises whereby:

a. Traditional materials become depleted;

b. Traditional materials become unsatisfactory to the family either for sanitation, maintenance, durability, cost of transport or even for status reasons.

c. A family migrates or transfers to a new village or urban complex where it cannot readily rely on the aid of friends and neighbours; its new neighbour may not know how to build its kind of house or may not know that they can expect reciproca help or even may not like the new family enough to help it and/or.

d. Certain higher standards in the employment of materials, in land-use and in construction, all unknown to the family are insisted upon by the government.

Under the above conditions the family contributes minimumly in the construction of its house. It is often forced to rely on paid workers for the production of materials and their transport and for the layout and construction of the house. If the means either in cash or trade are available the family obtains its house.

For the families without the means, a house becomes difficult to obtain. These families constitute a large percentage of the population especially in the developing, urbanizing countries. Self-help becomes even more difficult due to confusion about standards and new building materials used in the urban areas, which are different from their traditional ones.

ASSUMPTIONS IN SELF-HELP HOUSING THEORY

There are two assumptions in self-help housing theory especially in the maximum contribution approach.[31]

a. The large numbers of needy families are able to build foundations, walls, roofs, windows, lay floors, water lines roads etc. that meet the required technical standards.

b. That self-help is as efficient a system of house-building in economic and technical terms as it is in social terms.

Factors that inihibit the application of self-help as discussed above invalidate these assumptions in the case of an urban community. Abrams[32] investigations in Bogota Colombia, disclosed skilled hired workers laying floors, building exteriors and doing other work for the occupant on contract. He found that where the occupant was specially skilled himself, he contributed his own labour but that in general the worker found it better to earn his pay at his job and hire the necessary craftsmen for most of or all the the work. This means it may not be self-help at all.

1.8.4 SUMMARY:

The literature that has been reviewed indicates that finance is a very crucial factor in the implementatio of urban housing programmes. It has been shown that whether a house is a low-cost or a high-cost one, large amounts of finance is involved and therefore the only way to own a decent home for most people in urban areas is through borrowing.

It has been made clear, however, that the existing private financing institutions are not designed for and cannot reach the low-income groups. The government has

not helped the situation either, not only because of shortage of funds, but also because what funds are available are disproportionately distributed in favour of the middle- and high-income groups. This leaves the low-income groups without any source of finance to develop their houses.

Having failed to make finance available for the low-income housing, governments of the developing countries, Kenya included, have conceived and adopted the "self-help" concept as the means by which they hope to reach the poor. The concept has been discussed in detail, and it has been shown that its application has serious limitations in urban areas because, among other reasons, the residents lack the skills and experience in the use of modern materials and building techniques.

Footnotes

1. Republic of Kenya; Development Plan 1979-83 Government Printer 1979, p. 172.

2. The term 'low-income group' is difficult to define in a changing economic situation. Site and Services plots are meant for the people in this group. The current (1979-83) defines the target population for site and services programme as that urban population whose incomes range between Shs 300- Shs. 1200 per month. This defination of target population has been criticised as being unrealistic in view of the changing income patterns as a result of increases in wages and inflation. A more realistic method of defining an income group is to use percentile brackets whereby, each bracket is defined according to affordability. For instance, Merill R.N. in his Report on the National Site and Services Programme" (Nairobi, 1975) put the target population for site and Services programme between the 32 - 84th percentile. It is anticipated that about 75% of the Urban Population fall within the low income group.

3. Republic of Kenya, Development Plans 1974 - 78 and 1979 - 83.

4. Abrams, C.; Housing in the Modern World: Man's Struggle for Shelter in an Urbanizing World, 1964, p.223.

5. Op cit 1

6. Jorgensen, N.O.; Finance for Low-Income Groups, General Printers, Nairobi, 1977. p.48.

7. Dakhil and Ural (Eds.), Housing Problems in Developing Countries, V.2 1978 p.

8. Malombe, J. Housing Finance Agencies in Nairobi, M.A. Thesis, University of Nairobi, 1981 p.11.

9. Agevi, E.C.A. Site and Services Schemes in Kitale, Department of Urban and Regional Planning, University of Nairobi, 1981, p. 13.

10. Op cit 4

11. Kimm, P. "The Developing Concesus on Low Cost Shelter Strategies in Africa" Fifth Conference on Housing in Africa,' Liberia, 1978, p.8.

12. Op cit 9 para 1.01

13. Ministry of Co-operative Development, Housing for Low-Income Workers, A report on a Workshop organised by the Ministry of Co-operative Development and COTU (K), Kisumu, 1978.

14. Stren, R.E., Housing the Urban Poor in Africa, Institute of International Studies, University of California, 1979 p.2.

15. The theme of the Current (1979-83) Development Plan is "Alleviation of Poverty". Food, housing, education and health facilities have been identified as the basic human needs that are necessary to alleviate poverty.

16. Op cit 14 p.2.

17. Njau, I.S., Housing the Urban Population in the Lowest Income Group in Developing Countries, Unpublished Term Paper, Department of Urban and Regional Planning, University of Nairobi, 1980 p.8.

18. Housing Research and Development Unit, Mathare Valley - A Case Study of Uncontrolled Settlements in Nairobi, p.81.

19. Op cit 1 p. 170.

20. United Nations Habitat and Human Settlement Foundation (UNHHSF)., A Report on the Regional Meeting for Africa on Human Settlements Finance and Management, Nairobi 1978 p.1.

21. Ibid

22. Building Research Establishment, Third World Urban Housing, 1977 p. 12.

23. Chana, T.S., "Sanitary Shelter : Site and Services Assessed"
Build V.4, No.44, 1979 p.5

24. Housing Research and Development Unit, Evaluation of Site and Services Programme, 1979 p.39.

25. Uddoh, F.O., "Mobilizing Human Resources" Fifth Conference on Housing in Africa, Liberia, 1978 p.45.

26. Jorgensen N O. Housing Finance for Low Income Groups. 1977 p.38.

27. Op cit 25

28. Op cit 5 p. 172.

29. Ibid.

30. United Nations Organization (U.N.O.) Manual on Self-Help Housing in Africa, 1964 p.8.

31. Ibid p.10

32. Op cit 28.

CHAPTER II

2. URBAN HOUSING POLICY IN KENYA - A HISTORICAL PERSPECTIVE

The struggle for shelter in an urbanizing world has thrown up a multiplicity of problems and has generated a variety of policy responses among governments in the developing countries. To this generalization Kenya is no exception despite its apparently low level of urbanization.

To have a full appreciation of urban housing problems one would need to examine the overall perspective of urbanization and the kinds of economic, social and physical planning alternatives which have come up in the past. Thus, in tracing the history of housing policy in Kenya an attempt will also be made to relate housing problems to the broader problem of urbanization.

2.1 URBANIZATION

Urbanization is a world-wide phenomenon but it constitutes a particular force in developing countries. The complex interrelationship between rapid population growth ; poverty stricken and static rural life and of rapid urban growth has led Barbara Ward to conclude that "urban growth in the developing world today is not

so much a measure of healthy, inevitable processes of modernization as a pathological acceleration of urban cell creation which could put whole societies into terminal crisis of social and economic disintegration."[1]

A clear distinction exists between urbanization in developing countries and that which was experienced in the 19th Century in Europe and North America. Most of the developed World Cities grew in response to the new forces of industrialism. As the factory system grew and railways grew in its wake, large concentrations of people and services for production and distribution proved economically irresistable. They provided ever larger economies of scale, ever wider varieties of employment, and as the whole society became more sophisticated a far greater range of tertiary services. It was in this that cities came to be seen as the essential and successful creators and transmission belts of the new technological system.

This model is hardly applicable to developing countries and the position is frequently reversed. In contrast to the 19th Century experience of Europe and North America, the cities exist ahead of the industrial system and hence lack the solid base of manufacturing jobs which gave cities a solid base of economic life. The rate of population growth in developing countries is considerably higher compared

with the case of new developed countries at an equivalent stage in their economic growth. An even faster rate of growth is recorded for the urban population, and faster still has been the rate of increase recorded for the largest cities.

2.2 URBANIZATION IN KENYA

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Urbanization in Kenya, like in most African Countries is relatively new, which began almost entirely with the advent of colonial administration. Except along the coastal areas there was virtually no urban settlement before the construction of the Kenya-Uganda Railway. The railways opened-up the country for commerce, missionary activities and colonial administration, which led either to the complete transformation of existing centres or to their being soon over-shadowed by new towns.

While Kenya can still be regarded as rural, its urban population has been growing rapidly as the figures for the last three census indicate. In 1962, a year before Kenya achieved Independence, the population of the country's thirty-four towns with over 2,000 inhabitants was equal to 7.8% of the total population. By 1969 this urban population had grown to 9.9%, and had reached 12% by 1979. The urban population growth between 1962 and 1969 took place solely among the

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indegenous African population, with Asians, Europeans and Arabs declining in numbers. The African population of the two largest cities in Kenya, Nairobi and Mombasa, grew at average rates of 6.5% and 5.1% respectively between 1948 and 1962, but between 1962 and 1969 these growth rates had risen to 11.1% and 7.3% respectively. The current overall growth rate is about 7% for Nairobi and 6.8% for Mombasa. (see Table 2.1)

Taken by themselves, these population statistics are not cause for alarm, but the statistics of urban population growth translate into problems because services housing being the most important one, are nowhere adequate.

2.3 THE ESTABLISHMENT AND GROWTH OF NAIROBI

Nairobi is a relatively new city. Its origin can be dated to the year 1899, when the Kenya-Uganda Railways reached the present site of Nairobi. The railway authorities found the site suitable (good climate, fresh water and flat land) as a resting place before starting work on the most difficult part, the escarpment, which posed a lot of construction problems.

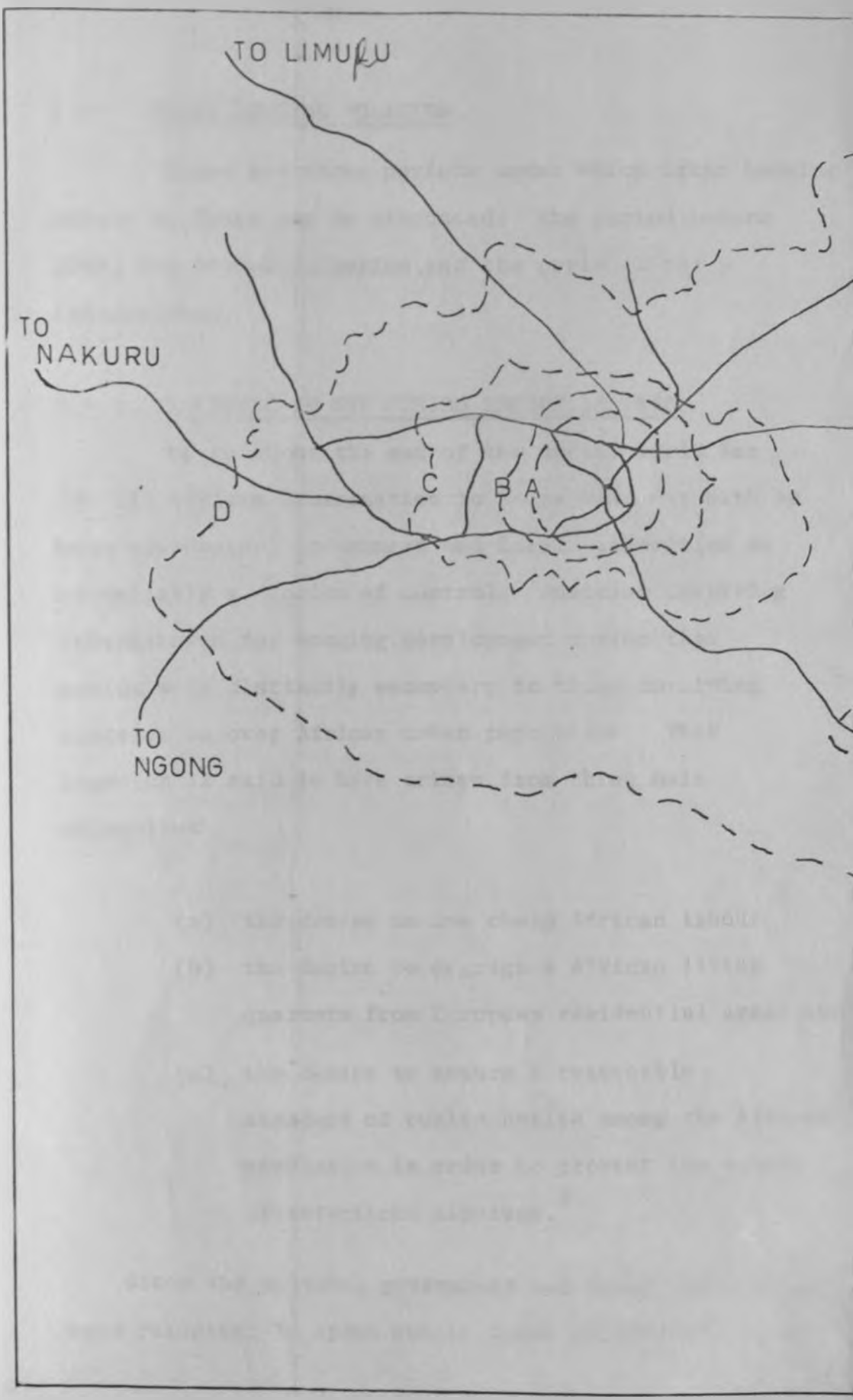
The growth of Nairobi began, first, with the establishment of a railway depot and workshops. Then later in the same year, the railway authorities moved their railway headquarters from Mombasa to Nairobi, the latter place being centrally located. A short while later, the Government moved its Provincial headquarters from Machakos to Nairobi, which became the official Capital of Kenya Protectorate in 1908. From there on Nairobi grew quickly as an administrative, commercial and transport centre. Table 2.1 presents population figures for Nairobi from 1906 to 1979 while Map No. 2 presents its spatial expansion.

The figures presented in the table are a clear evindence of the high rate at which Nairobi population has been growing especially between 1962 and 1979. These rapid population growth rates have not been marched with housing provision. To deal with the problem a variety of policy responses have been generated.

Table 2.1 Nairobi Growth 1906 - 1979

YEAR	EUROPEANS	ASIAN	AFRICANS	TOTAL
1906	553	3,582	7,371	11,51
	(4.8%)	(31.1%)	(64.1%)	(100%
1926	2,665	9,199	18,000	29,86
	(9.0%)	(30.8%)	(60.3%)	(100%
1936	5,000	16,000	28,000	49,00
	(11.3%)	(31.5%)	(56.5%)	(100%
1944	10,400	34,300	54,200	102,90
	(9.6%)	(31.5%)	(54.1%)	(100%
1948	10,830	43,749	64,397	118,97
	(9.1%)	(32.4%)	(54.1%)	(100%
1962	21,476	86,454	158,865	266,79
	(8.0%)	(32.4%)	(59.5%)	(99.9%
1969	19,185	67,189	422,912	509,28
	(3.8%)	(13.2%)	(83.0%)	(100%
1979				850.00

Source: Kenya Population Census-Central Bureau of Statistics. & Temple F "Planning and Housing in Nairobi" Massechusetts Institute of Technology, Ph.D. Thesis, 1972.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2.4 URBAN HOUSING POLICIES

There are three periods under which urban housing policy in Kenya may be discussed: the period before 1945, the 1945-1963 period, and the period after independence.

2.4.1 POLICIES IN THE PERIOD ENDING IN 1945

Up to about the end of the Second World War (WW II) African Urbanization in Kenya was dealt with by both the Central Government and Local authorities as essentially a problem of control. Policies involving expenditures for housing development during this period were distinctly secondary to those involving restriction over African urban population. This approach is said to have arisen from three main objectives

(a) the desire to use cheap African labour

(b) the desire to segregate African living quarters from European residential areas and

(c) the desire to ensure a reasonable standard of public health among the African population in order to prevent the spread of infections diseases.[2]

Since the colonial government and local authorities were reluctant to spend public funds on African

Welfare in towns, the policies adopted to achieve these objectives involved contradictions.

The official attitude towards the Urban Africans at the time was that they were a shifting and temporary population. In 1927, and in consonance with this attitude, the Feetham Commission recommended the introduction of "pass-law"[3] in Kenya. This law was intended to keep out of town unemployed Africans and to keep them away from areas designed for Europeans. The law was also used to regulate labour supply so as to keep down African wages.

The pass-law, the low wages and the bed-space type of accommodation provided by employers to Africans made family life in towns very difficult. Despite these difficulties and in total defiance of the pass-law the African urban population in Nairobi in increased rapidly in number over the succeeding years, rising from 18,000 in 1926 to 28,000 in 1936, and to 64,200 in 1944. (see table 2.1). As a result of this rapid population growth, unauthorized settlements sprang in the peripheries of the town such as Pangani, Mombasa, Masikini, Kaburini and Kilelesbwa. But neither the Central Government nor the Local Authority would tolerate the development of

these villages, and they had all been demolished by 1938. The residents of the demolished settlements were expected to move to Pumwani and Shauri Moyo, the two areas that had now been designated as "official" African Locations.

Pumwani, a 36 acre site was Nairobi's first site and service scheme which was declared in 1923, "open as the Official African Location to accommodate all who might be expected to migrate to Nairobi in the foreseeable future."[4] It consisted of 275 plots of 1,500 ft.^{2} allocated at shs. 3/- per annum. Plot ratio was 50% while minimum structure erected was 100 ft.^{2} Sanitary facilities were to be communal.

Shauri Moyo was the Nairobi's first public housing estate established in 1938 to accommodate the residents of the demolished Pangani Village (the largest African Village then). It consisted of 174 houses of 4 to 6 rooms rented on room basis.

The demolition of Pangani and other African Villages, where most of the African Workers had lived created tremendous problems in Nairobi. The Official African Locations, Pumwani and Shauri Moyo, could not absorb all the population that had been displaced from these villages.

Although there was no logical and systematic method used to assess the magnitude of the problem it was clear that in all houses where Africans lived there was overcrowding. For instance, in 1939, in Pumwani, a night police raid found 492 Africans in eleven houses which were meant to accommodate not more than 163 persons.[5] In the Municipal Compound of Quarry Road Housing Estate the overcrowding was estimated at between 60 and 100 in the same year.[6] Wives and children would be found sleeping on the floor. Attempts were made to evict these wives and children with the result that employees refused to go to work. To contain the situation the least line of resistance had to be taken. The Superintendent of Native Locations recommended the erection of additional cubicles within the compounds and a relaxation of the pass law to allow employees who had served for longer periods, say, 9 months and over, to have their wives in the compound.

One notes that had African workers themselves not forcefully objected to these conditions, it seems unlikely that changes to ease the situation would even hav been contemplated. It is also noted that the contradictions of urban policy in Nairobi were now becoming clear to observers.

The weakest point in the policy structure was the administration of pass-laws introduced in 1927.

There was a reciprocal relationship between responsibility for housing Africans and control of their entry in towns as had been pointed out by the Feetham Commission as early as 1927. For effective application of the law, it was necessary that all African employees and their dependents be housed.

Difficulties of controlling the Nairobi African population came out sharply in the following analysis by the Native Affairs Officer in 1938.

> "There is a very large number of natives in Nairobi; some employed, some visitors, some looking for work and some undesirable loafers---- The housing available for the employed natives is totally inadequate and much of what exists is iniquitous-------
> By-laws 557/2a and 557d are framed largely to control the unemployed native. Under 557/2a, 12,000 natives were convicted in the past five years------- At least 70% of these are legitimate visitors who come to see their friends. No accommodation for these is available, hence they sleep where they are visiting ----- The laws have become a farce"

With wages low, little African built houses permitted and only a token public housing programme undertaken by the Nairobi Municipal Council, the stage was set for a major confrontation between the African Urban Population and the Colonial Government.

Beginning from 19th July 1939, Kenya experienced its first major industrial unrest with a sitdown strike

of workers in the public works department, followed by strikes in the Municipality, other large concerns and finally on the docks. This was a big threat to the colonial economy, especially at a time when Britain was about to enter the World War II. The government was forced to review its housing policy Studies of social and economic conditions prevailing among Africans in Nairobi and Mombasa were conducted. The findings and conclusions of these studies formed the basis for a more progressive African Urban policy after the war.

The studies revealed a situation of completely inadequate urban African housing and of the wage levels of the majority of the Africans lying below the minimum cost of living. Following these presentations the government worked out a new housing policy and arrived to the conclusions that the ultimate solution was the provision of adequate and suitable housing at rents properly related to native income.

The six years that followed was a period of war and little was done towards the achievement of the new policy except the beginning of Ziwani Housing Estate and the Construction of a temporary village of 1,170 [8] housing units in 1945.

2.4.2. HOUSING POLICY - 1945-1963:

The colonial government's urban policy in the pre-WW II period which was characterised by control had resulted to contradictions (on the one hand, the government seemed determined to keep wages low; on the other hand, it had for a long time been trying to keep building standards high, to segregate urban Africans, to ensure high productivity, to control dissent, and to spend as little as possible on African amenities, the most important one being housing) and had hence failed to formulate meaningful housing policy guidelines for the rapidly growing population of Africans in urban areas. Towards the end of 1930's the need for a new policy was felt. The new policy focused on a great deal more public rental housing for Africans. The implementation of this policy was delayed until the end of WW II, in 1945.

Using mainly a grant of £150,000 provided by the Colonial Development and Welfare Fund, the Municipal Council of Nairobi was able to provide a accommodation for 12,000[3] Africans between 1945 and and 1952 . This figure, although impressive, was hardly sufficient as the increase of African population over the same period was about 94,000. With this money drying up in the late 1940's and the movement of labour to towns increasing, the government was forced to

reassess the financing basis for providing new housing estates.

In 1950, Alderman Earnest Vasey[9] was appointed to make a study of the problem. He recommended that the government should encourage African-owned housing rather than rental schemes. His argument was that African-owned housing would open the door to a stable urban policy.

In the years following Vasey's report little was done except the beginning of a pilot scheme of 2,200[10] housing units at Thika.

While progress in housing construction for urban Africans was moving slowly, discontent among the Africans everywhere was rapidly picking-up momentum, Culminating into the declaration of a state of emergency on 20th October 1952.

In the urban areas low wages coupled with poor and inadequate housing were the major grievances. The officials talked of "the concrete forest" of Nairobi, implying that the African housing areas were as important in the organisation of "subversive" activities as were the Aberdares Mountains where fighting was taking place.[11]

Table 2.2 The Output of Rental Units By N.C.C. Since 1929 By Year, Estates, Units, Percentage of Total, Cumulative % and Mean

YEAR	ESTATES COMPLETED	NO. OF UNITS	% OF TOTAL	MEAN
1929 - 40	Landlies Rd., Shauri Moyo	734	4.15	73
1941 - 50	Ziwani, Kaloleni, Bondeni, Barchelor's Quarters, Old Ngara	1,399	7.92	140
1951 - 60	Joseph Kangethe, Gorafani, Bahati, Kotela, Pangani, Ofafa Kunguni, Jevanjee, Maringo New Ngara, Embasai, Senior Staff Quarters, Ngong Rd. Jerusalem, Caledonian Road	7,750	43.87	775
1961 - 70	Jericho, Mariakani, Fariokor, Juja Rd. Jamhuri, Uhuru, New Pumwani, Kariobangi, Outer Ring Road	5,406	30.60	540
1971 - 80	Harambee, Dagoretti, Huruma, Madaraka, Kariobangi South	2,379	13.46	238
Total		17,668	100	

Source: Nairobi City Council.

By 1956 another report on African housing by the East African Royal Commission[12] was ready. It recommended the lowering of building standards, the encouragement of employee - built, as well as African owned housing for rental, individual freehold title to plots, more attention in town planning and the framing of an overall policy for urban development. Although the recommendations of this commission were again not implemented, due to the unwillingness of both the Central Government and Local authoritys to provide adequate land and finance for African housing, many of the elements of a national urban housing policy that would persist after independence had been established. In the meantime the main approach to African housing continued to be rental. (see Table 2.2)

2.4.3 HOUSING POLICY AFTER INDEPENDENCE (1963+)

The government's housing policies after independence are reflected in the various development plans and other official documents.

2.4.3.1. DEVELOPMENT PLAN 1964 - 70

At the time of preparation of the 1964-70 Development Plan Kenya's housing problem had not been so exhaustively examined as was later to become the Case. The plan, however, appreciated the growing magnitude of the problem and stated that there were two

ways in which adequate programme could be provided. Firstly, that the cost of housing would need to be reduced substantially, by for instance, local authorities setting aside areas where houses could be built of local temporary materials albeit under strict control to ensure acceptable standards of health and privacy. In other words the adoption of a site and services approach. The second method was to introduce self-help housing.

The second method was recommended as a means of inducing capital from the private sector to match government expenditure. It was also thought that one method of channelling private savings into housing would be the advent of the housing co-operatives societies.

The original 1964-70 Development Plan was superceded by a new one for the years 1966-70, in which the Government's policy on housing was set out in more detail. This plan was writeen after the report by Bloomberg and Abrams of United Nations had become available and the plan took their findings into account.

2.4.3.2. BLOOMBERG/ABRAMS REPORT, 1965

As has already been indicated the new government inherited a big urban housing shortage. As the first response to the problem the government invited two U.N. Consultants, Bloomberg and Abrams, to conduct a study of short-and long-term housing needs and to make recommendations on housing policies within the framework of social and economic development. The report was published in May 1965 and formed the basis of a more dynamic approach to housing.

The Mission found that the country was experiencing a serious housing problem particularly in its cities. An estimate of the urban housing requirements in the period 1962-70 was placed at 7,600 housing units per year, merely to keep-up with the expected increase of urban population. The Mission noted that approximately 57% of the population of Nairobi and Mombasa could not afford rents higher than 59/- per month, a rent which was too low even for the newly built public housing estates.

The most important recommendation, perhpas, was the establishment of a national housing authority with more powers and financial resources than the then Central Housing Board.

2.4.3.3. SESSIONAL PAPER NO. 5 OF 1966

Following the publication of the Bloomberg-Abrams Report, a more extensive statement of housing policy was provided in Sessional Paper No. 5 of 1966. The paper discussed, interalia, the issue of aided self-help schemes, which were seen as the parnacea for the housing problems facing the urban workers. The paper endorsed a recommendation to the effect that a national housing authority be established to co-ordinate housing programmes particularly relating to local authorities. At the same time the Ministry of Housing was established, a move which indicated the government's determination to deal with the housing problems.

2.4.3.4. THE NATIONAL HOUSING CORPORATION (NHC)

In 1967, as a result of the U.N. Study recommendations, the National Housing Corporation was founded to succeed the defunct Central Housing Board. Besides administering the Government generated Fund, the newly established corporation was empowered to initiate its own fund raising activities to supplement Government Loans. Whereas the Ministry of Housing was charged with the responsibility of formulating major housing policies, the National Housing Corporation had to operate as the overall executive agency of Government policies and programmes.

In 1975 the Government engaged Dr. Robert Merrill, an International Housing Consultant, to recommend an organizational and administrative machinery which would enable the NHC to carry out its sites and service responsibility as spelt out in the Development Plans. Dr. Merill submitted a report on which the present NHC reference booklet entitled "Site and Service Schemes: Guidelines for an Administrative Procedure, is based.

2.4.3.5 HOUSING RESEARCH AND DEVELOPMENT UNIT (H.R.D.U.)

The unit, established in 1969, through a tripartite agreement between the Ministry of Housing, the National Housing Corporation and the University of Nairobi, researches into socio-economic and technical aspects of housing and Community Development in order to establish appropriate standards. The Unit receives its funding from the Ministry of Housing.

2.4.3.6 DEVELOPMENT PLAN 1966/1970

This plan was based on the recommendations of Bloomberg/Abrams's Report and those of Sessional Paper No. 5, 1966. The plan reiterated the government's commitment to the policy of providing adequate housing, and then went further to show how this policy was to be accomplished. If categorised the main aspects of the problem among which were rural-urban migration and the inability of a large proportion of the urban

population to afford to buy or rent a satisfactory family house. It was appreciated therefore that there must be a considerable gap between housing needs and housing demand.

Having stated the problem and the constraints the plan went on to outline the strategic approach which would be adopted to solve some of them. It accepted the recommendation of the Bloemberg/Abram's Report that a national housing authority be established.

For the first time the government outlined its policy towards the different categories of housing. These included:

(a) Low-income rural housing in settlment schemes, Land Consolidation and irrigation schemes, where it undertook to give support and encouragement to this category of housing, through technical assistance and direction of the people in raising their housing standards.

(b) Rural low-income housing, where it acknowledged that there was little that it could do directly. The rural community would need to continue to erect their houses by their own efforts, mainly with local materials. However

it hoped that cooperatives and similar institutions would play a bigger part in financing improved rural housing, and proposed that demonstration in building techniques and materials and the provision of block-making and other equipment would be extended to all rural areas.

(c) Another category i.e. low-income urban housing and slum clearance was to be tackled by providing rental and home ownership schemes, with emphasis on the latter to achieve a high proportion of owner-occupied houses in the towns. It precluded the possibility of any form of subsidy, although admitting that the cost of even the minimal two-room house was beyond the affordability of the low-income earners.

It stated that, in these circumstances site and services projects must form a significant part of the housing programme in urban areas, and proposed that sites would be provided with roads, piped water and sewerage and thereupon let to tenants to build their own houses under close control and supervision.

2.4.3.7. DEVELOPMENT PLAN 1970-74

The plan set-out the Government's views on housing in much greater detail than the previous ones. It was the first plan to impose a ceiling on the cost of housing financed from the Development Funds, viz: a figure of Kf1300, and detailed four different cost-brackets of housing, the two lowest of which were to specifically site and service schemes. (see table 2.3).

Again, it acknowledged that very little could be done by direct financing to assist the rural areas and that any assistance could only be in the form of advice and technical assistance. A provision was made, however, from the small amount of about £300,000 per year to advance loans to individuals to construct conventional houses in the rural areas.

2.4.3.8 DEVELOPMENT PLAN 1974-78

This plan pursued the same objectives as elaborated in the previous plans. The amount of finance that was projected was, however, increased from £14 million to £33m., as the Government appreciated that the housing situation in Kenya was deteriorating rapidly, due to the considerable back-log in providing housing in the necessary numbers, combined with an alarming increase in rural-urban migration.

Table 2.3 Illustrative Distibution of NHC Financing of Urban Housing up to K£1200/Unit by Locale and Cost Brakets - Year 1970/71 Costs in K£

AVERAGE COST	NAIROBI		MOMBASA		NAKURU		KISUMU		ELDORET		KITALE		THIKA		URBAN TOWNS		TOTALS	
HOUSE*			NO	COST	NO	COST	NO	COST	NO	COST	NO	COST	NO	COST	NO	COST	NO	COST
200**	1,163	232,600	395	79,000	124	24,800	77	15,400	83	16,600	12	2,400	96	19,200	70	14,000	2,020	404,000
450	1,115	504,800	377	169,600	120	54,000	75	33,800	80	36,000	11	4,900	94	42,300	68	30,600	1,940	873,000
750	286	214,000	98	74,000	31	23,200	20	15,000	20	15,000	3	2,200	24	18,000	18	13,500	500	375,000
1,050	154	1,110,100	53	55,600	17	17,800	11	11,800	11	11,600	2	2,100	13	13,600	9	9,400	270	283,500
Totals	2, 718	1, 110, 100	923	378, 200	292	119, 800	183	75, 800	194	79, 200	28	11, 600	227	93, 100	165	67, 500	4, 730	1, 935, 500

* Cost Blackets are: K£ 0 - 249, 250-599, 600 - 899, 900 - 1200.

** Site and Service Schemes.

Source: 1970-74 Development Plan, Government Printer, Kenya, 1970.

In an effort to provide the cheapest housing to the greatest number, the Government insisted on adhering to a cost ceiling of £1200 per unit, despite the fact that at the time the plan was being drawn up, the oil crisis and general world inflation was making it impossible to build any form of complete conventional house for this figure.

2.4.3.9 DEVELOPMENT PLAN 1979-83

The 1979-83 Development Plan does not offer any new policies or programmes. It merely underlines the policies and programmes of the previous plan, notably those aspects regarding squatter upgrading, promotion of the sites and services strategy, and the advancement of the housing interests of the disadvantaged urban worker.

2.5 SUMMARY:

This chapter has traced the history of urban housing policy in Kenya since the early years of urbanization. It has been shown how the contradictions of the early urban housing policy resulted to the failure either to control the African urban population or to provide adequate urban housing. These contradictions became clear towards the end of WW II and new policy changes were introduced that focused on more public rental schemes.

It was not easy, however, to satisfy the enormous housing need existing at the time through public rental housing schemes, though we reckon a great deal of effort between 1945 to 1963. In 1950, Vasey recommended African-owned housing as a means to create a stable African urban population. It was seen as a means to fasten the production of housing since individual savings would be attracted. This policy was, however, not implemented until after independence since neither the Central Government nor the Local Authorities were willing to set aside adequate land and finance for this purpose.

By the time of independence there was a big housing shortage existing in all the main towns of Kenya. The first response of the government was to invite two United Nations Housing Consultants, Bloomberg and Abrams, to carry out a study of the social and economic aspects of the housing problem and to advice on appropriate national housing policy. Their report, which became available by the end of 1965, recommended the setting-up of a national housing authority with more powers than the then Central Housing Board. The new authority was expected to give priority to the low-income housing since this had been neglected by the private institutions.

At the same time it was recommended that the site and services should form one of the main urban housing programmes. In the subsequent Development Plan the site and services programme has been given more and more priority. Other housing approaches adopted include rental, tenant purchase, upgrading schemes and mortgage schemes.

Footnotes:

1. Ward, B., The Economist (December 1969) p. 56 - 62.

2. Stren, R.E., Housing the Urban Poor in Africa, University of California, Berkely 1978, p. 186.

3. The principle of 'Pass law' was embodied in the Native (Urban Areas) Act (1923) of the Union of South Africa and was advocated for Kenya by the Feetham Commission in 1927.

4. Op. cit. 2 p. 189

5. Ibid p. 188

6. Ibid

7. Ibid p. 191

8. Ibid

9. Vasey, E., Report on Housing of Africans in Townships and Trading Centres, 1950.

10. Op. cit. 2 p. 204.

11. Sunday Post, 15 February 1953.

12. East African Royal Commission 1953-1955 Report (London, H.M.S.O. 1956).

CHAPTER 3

3. HOUSING FINANCE INSTITUTIONS IN KENYA

Housing Finance institutions in Kenya are of two categories; those which are publicly owned and those which are private (Figure 3). This Chapter describes the operations of these institutions.

3.1 PUBLIC HOUSING FINANCE INSTITUTIONS

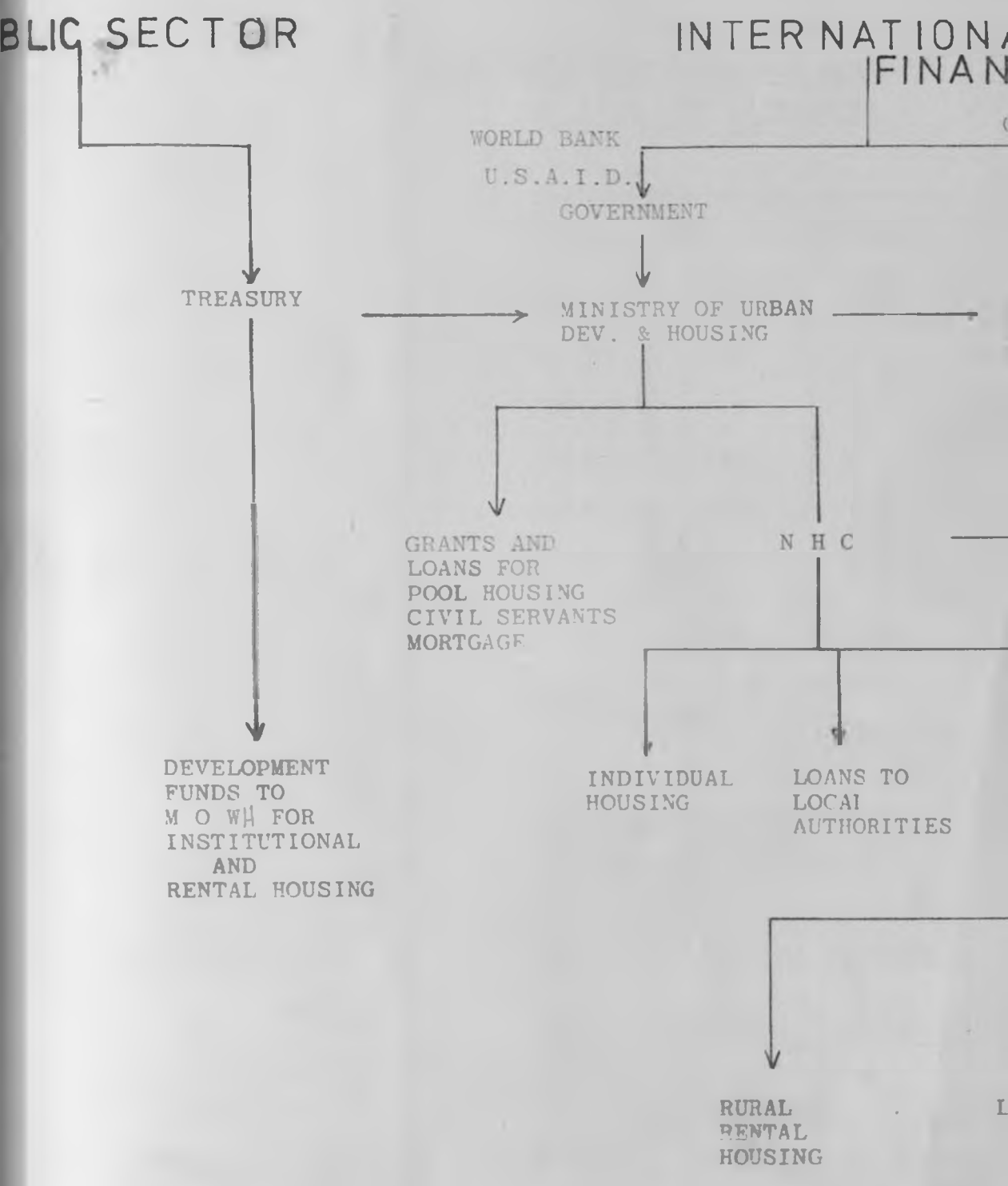
The public sector's involvement in the housing field is substantial and growing. Its relevance for the private mortgage finance institutions is equally important in that the government is directly supporting Housing Finance Company of Kenya (HFCK) and Savings and Loans Kenya Limited (S & L) which funds for medium and high-cost housing.

3.1.1 MINISTRY OF WORKS AND HOUSING (MOWH)

This is the Ministry responsible for the formulation of the overall national housing policy. It is also charged with the vital function of collecting data on such variables as income, construction costs, rent levels etc. and translating these into housing programmes. These programmes in turn spell out the need for new construction by house types and geographical location and estimate the capital requirements for each five- year plan period.

It would be expected that the Government's housing finance would be concentrated on the low income housing since this is where the greatest shortage is to be

INTER-NATIONAL AND LOCAL FINANC



found unfortunately, as tables 3.1 and 3.2 indicate, this is not so.

TABLE 3.1 PLANNED DISTRIBUTION OF FUNDS FOR URBAN HOUSING (1974-78) INTO COST CATEGORIES

COST CATEGORY SHS/UNIT	UNITS PLANNED		FINANCE REQUIRED	
	NO. OF UNITS	% OF TOTAL	MILLION SHS.	% OF TOTAL
6,000	61,330	64.7	372	2.3
15,000	9,890	10.3	148	9.2
24,000	6,570	6.9	158	9.8
45,000	13,840	14.5	622	38.6
90,000	3,460	3.6	312	19.4
TOTAL	95,620	100	1612	100

Source: Development Plan 1974/78

TABLE 3.2 PLANNED DISTRIBUTION OF FUNDS FOR URBAN HOUSING (1979/83) INTO COST CATEGORIES

COST CATEGORY (SHS)/PLOT	UNITS PLANNED		FINANCE REQUIRED	
	NO. OF UNITS	% OF TOTAL	MILLION SHS.	% OF TOTAL
Average 23,000	47,326	69.6	31	24.8
Average over 23,000	20,684	30.4	94	75.2
TOTAL	68,010	100	125	100

Source: Development Plan 1979/83

Expressing the Government's housing policy in numbers of units shows concentration on the low-cost sector. The picture changes, however, radically when the programme is expressed in terms of housing finance. When assuming low-income housing to mean housing costing Kshs. 15,000 or less, Table 3.1 shows that in numbers these houses form 75% of the 1974-78 planned total, but only 32% of the total finance is allocated for this type of housing. When the cost limit is pushed up higher and all houses costing up to Kshs. 24,000 are regarded as houses for low-income people, then 81% of the total number fall in this category, but again only 42%, i.e. less than half of the finance is made available for this category of houses.

Detailed figures for 1979/83 are not available but as Table 3.2 shows about 70% of the total planned number of units are in the low-cost but less than one quarter of the available funds are allocated for these houses.

The statistics presented from the two Development Plans exhibit a disproportionate distribution of available funds between housing for low-income population and that of the high-income.

The MOWH's involvement in financing of housing can be direct or indirect. Direct participation by the Ministry consists of institutional housing, pool

housing and Government Sponsored home-ownership. The Ministry developes, and manages institutional housing estates for Civil Servants working in institutions such as Police, the Army, Hospitals, Schools etc. It also finances, developes and manages pool rental housing estates for Civil Servants not housed in institutional housing mentioned above, and particularly those in remote areas where other alternative types of accommodation is not available. The Government also provides through the MOWH bridging finance for the construction of mortgage houses for Civil Servants while loan facilities are provided by the Housing Finance Company of Kenya and other Financial Institutions. The objective is to reduce to a minimum the responsibility of providing pool housing for Civil Servants while at the same time encouraging home-ownership.

Planned expenditures for Institutional housing, pool housing and Government Sponsored home-ownership, for the period 1978/83 are, K£12,520,000, K£2,300,000 and K£2,450,010, consecutively.[1]

Most of the funds allocated to the MOWH are spent through the NHC and Local Authorites, and this constitutes the indirect participation of the Ministry.

3.1.2 THE NATIONAL HOUSING CORPORATION (NHC)

The National Housing Corporation is the Government's main executing agency of housing policies and programmes. The following are the functions of the NHC: as outlined in the 1970-74 Development Plan.

a. Acts as an agency for transmitting loans from MOWH to Local Authorities for the development of low cost housing in towns and individuals in the rural areas for the development of housing on their farms and in their home areas.

b. Provides Technical Assistance in the form of designing, tendering, and supervising construction for those Local Authorities inadequately staffed with the necessary Technical Personnel.

c. Developes and manages housing estates either in order to supplement the capacities of the Local Authorities concerned or meet the demand for houses in areas where Local Authorities are not able to initiate and/or manage housing estates themselves.

d. Supports and encourages the development of housing research through the Housing Research and Development Unit (HRDU) at the University of Nairobi.

e. Undertakes to stimulate greater participation by the Private Sector by developing mortgage housing estates with mortgage loans being provided by H.F.C.K. In this way it acts as an estate developer for mortgage housing schemes which are designed to meet the demand for housing in the middle income groups of the population.

This latter part of NHC's activity has turned into high income schemes (e.g. Kyuna Estate) which should and can be catered for by the Private Sector.

In carrying out the stated functions the NHC has had the following problems.

a. When a Local Authority applies for a loan and submits plans for a housing scheme, the finance, though available, and recommended by NHC, may not be sanctioned by the Ministry of Local Government if the particular authority is in arrears with other loans unrelated to housing. Thus a situation arises where on the one hand the money cannot be spent and the houses, planned and needed, cannot be built. At the same time the Local Authority cannot get the source from which it could generate revenue to repay its other committments which then tends to perpetuate the situation.

b. Loan sanction may be given by the Ministry of Local Government but the NHC cannot approve a loan because the plans or the accounts of the Council are not in order. This is said to be the more typical case. NHC may decide to go ahead on its own and make the new scheme a direct NHC responsibility under the auspices of the Provincial Administration. However this is an approach that the NHC is reluctant to take because it makes its administrative tasks complicated.

An effective system to cope with these situations has not yet been found and it causes large amounts of public funds to lie dormant for long periods.

The terms on which NHC finances housing for Local Authorities represent a subsidy. Firstly, advance for development funds are made at a rate lower than the market rate. Secondly, land for site and services schemes, although being charged with annual rent, is allocated free of 'stand premium'. Loans are normally provided at 6.5% interest repayable over 20 years for tenant-purchase, and 40 years for rental.

In light of the considerable profits allottees of public housing reap it is no surprise that Local Autorities take advantage of this situation and charge

more than what they themselves are charged by NHC. If subsidies are given intentionally for the benefit of low income groups, the purpose is defeated if Local Authorities absorb those benefits themselves. Furthermore, the Government's policy is not to subsidize housing, but to use all funds allocated for this purpose to build as many units as possible.

3.1.3 LOCAL AUTHORITIES:

The main source of finance for housing development by most Local Authorities is the NHC. Only a few of them, namely, Nairobi and Mombasa, are able to substantially supplement the NHC funds from their own resources. Local Authorities develop rental, tenant purchase, staff housing and site and service schemes.

3.1.4 INTERNATIONAL HOUSING FINANCE AGENCIES

The International Housing Finance Agencies operating in Kenya include the United States Agency for International Development (U.S.A.I.D.), through the Housing Guaranty Programme, the World Bank, through the International Bank for Reconstruction and Development (I.B.R.D.), and the International Development Association (I.D.A.). The World Bank has provided part of the finance for the First, Second and Third Urban Projects, covering all the major towns in Kenya. The Dandora Project was the first of this Countrywide, low-income housing programme, by the World Bank and the

Kenya Government. The programme consists of site and services and upgrading schemes.

Other International Organisations operating in Kenya include the Commonwealth Development Corporation (CDC), the Netherlands Government and the European Development Fund (E.D.F.) of the European Economic Community (E.E.C.).

Finances from these organisations are channelled through the Ministry of Finance to the Ministry of Housing. The Ministry of Housing then channels the funds to the Local Authorities through the NHC.

3.2 PRIVATE HOUSING FINANCE INSTITUTIONS

Funds for housing in the Private Sector come from three sources:

a. Financial Institutions
b. Employers, and
c. Private individuals who, in some cases form themselves into Companies or Cooperatives.

The Financial Institutions engaged in mortgage lending are either registered under the Banking Act, the Companies Act or the Building Society Act. Whereas Commercial Banks do a very limited business in housing finance (provide bridging finance) some institutions

registered under the Company Act lend solely for housing. Only two institutions, the East African Building Society (EABS) and the Pioneer Bulding Society (PBS) are registered under the Building Society Act, and are by defination non-profit institutions. Again others combine housing finance with other types of finance. Under this latter category are the Insurance Companies. Characteristic for all these Institutions is that they have been doing well over the last one and a half decades and appear to be continuing with their success. Following is a description of the major private housing finance institutions.

3.2.1. HOUSING FINANCE COMPANY OF KENYA(HFCK)

The Company was incorporated in Kenya in 1965 as a partnership between the Government and Commonwealth Development Corporation (C.D.C.) which took over the assets of the First Permanent (E.A.) Limited and Kenya Building Society Limited. First Permanent (E.A.) entered the Kenya Scene in 1950 and Kenya Building Society in 1949. Both Institutions lent mainly to expatriates and landed in severe difficulties when, after the Lancaster House Conference in February 1960, it became clear that Kenya was on its way to independence. This caused a "run" on deposits and property prices tumbled to the extent that many good loans turned bad. Both institutions borrowed heavily from the C.D.C. to weather the storm so much so that they were eventually absorbed by it.

HFCK has shown its capability to successfully place large amounts of funds in new housing development. In terms of total amount of mortgage loans outstanding (Kshs. 387 million in 1978),[2] H.F.C.K. is the largest institution of its kind, with its funds mainly from C.D.C. and the Kenyan Government.

The largest project financed by H.F.C.K. is the Buruburu Housing Estate, consisting of 3,000 housing units. H.F.C.K. offers loans of up to 90% of the cost of the house (see terms of lending in Table 3.3). It is represented in Mombasa and Nakuru.

3.2.2. SAVINGS AND LOANS KENYA LIMITED (S & L)

This is one of the oldest housing finance institutions in Kenya and its history is characterized by ups and downs. Before independence, it was doing very well, but during the slump in 1960 - 1964 it was taken over by Pearl Insurance Company which decided to get its invested money out of the Company. Although it was at that time, the largest of its kind, it virtually stopped lending and deliberately scaled down its operations.

In 1976 S & L was taken over by Kenya Commercial Bank which revived it as its mortgage outlet, but as a separate Company. A total of Shs. 32.8 million was used for granting 140 new mortgages in 1978 of which 33 were for new and 52 for existing properties.[3] S & L

TABLE 3.3 TERMS OF LENDING OF PRIVATE HOUSING FINANCE INSTITUTIONS

	Deposit Interest Rates				Mortgage Loan Interest Rates			Advance in % of Price		Max Loan (Shs 000)	Maturity			Charges in Min. Lease	% of Loan Years
EABS	Demand 6%	1 mo. 8%	1 yr 8.5%	2 yrs Negotiable	New 10	Old 10	Invest 12	New 70	Existing 60	500	New 15	Existing 10	Invest 15	ca 1%	40
					8.5 Kenyans										
FCK	5%	7%	8%	"	10.5	10.5	12	90	90	400	20	20	15	ca 1%	30
S. & L	6%	-	8%	2 8%	11	11	12			500	15	15	15	1%	25
CO-OP BANK	5%	5/8%	57/8%	57/8%	8%	9%	10%	80	75	?	5	5	5		

Source: Jorgenson N.O. "Kenya Shelter Study", 1980.

prefers to lend to private developers for medium cost housing and is only represented in Nairobi. The largest single housing project financed by the S & L is the Doonholm Housing Estate Phase I, Consisting of 368 housing units.[4]

3.2.3 EAST AFRICAN BUILDING SOCIETY (E.A.B.S.)

The E.A.B.S. was the first institution to be registered under the Building Society Act (BSA). It is required to be a non-profit institution and to make revenue and expenditure items public in much greater detail than is required of the Finance Companies. On the other hand it is compelled to keep substantial reserves and not to be a property developer.

E.A.B.S. is unique in that it survived the pre-independence slump through support from its members and by a permission by the Registrar General to suspend with the regulations regarding reserves and dividends for an year until it was back to its feet.

E.A.B.S. has had a remarkable rate of growth with assets totalling more than Kshs. 300 million in 1978. This achievement should be seen in the light that E.A.B.S. has not had the sponshorship of the Government and CDC as in the case of HFCK nor of a large Commercial Bank as in the case of S & L.

E.A.B.S is mainly associated with the higher cost housing in spite of the fact that through AKIBA it has financed large numbers of middle income housing both in Nairobi and Mombasa. In 1978 a total of Kshs. 74.7 million was used for granting 252 new mortgages of which 82 were for new and 170 for existing houses.[5] Loans are rarely granted for more than 70% of cost.

The other institution which has recently registered under the Building Society Act is the Pioneer Building Society (PBS). Its first project in Nairobi, the Pioneer Housing Estate, next to Outer Ring Housing Estate, is under construction. The P.B.S. caters for medium-income housing category.

3.2.4. THE CO-OPERATIVE BANK OF KENYA

The Co-operative Bank of Kenya has very recently (1978) registered a Finance Company in order to offer Mortgage loans to its clients who are all Co-operative Societies.

The bank found that those who utilize the normal banking loans for construction purposes are hard put to repay in five years. Furthermore, the bank felt that a number of credit unions (also registered as Co-operatives) were primarily aimed at helping members raise funds for housing and should be assisted in this effort. The new Company has not started lending yet, but prospects should be good.

3.2.5. KENYA COMMERCIAL BANK

Kenya Commercial Bank is singled out among Commercial Banks because it has recently launched a special loan scheme for farmers' housing. The idea was to encourage housing in rural areas by providing a loan of up to Kshs. 70,000/- at 9.5% interest over seven years. The loan can only be given on the basis of a first charge and the borrower must have contributed 25% of the cost. With a monthly repayment of Kshs. 1,144/- for maximum loans, plus inspection and Insurance charges, this becomes a heavy commitment for most farmers. Hence, these loans are not popular in spite of much publicity.

3.2.6 TERMS AND CONDITIONS FOR LOANS AND DEPOSITS

There is a certain amount of uniformity among the three main institutions with regard to terms and conditions for loans and deposits. The institutions advance between 60-90% of the cost or value (which ever is less) of a house to which there is a clear title (see Table 3.3). If the property is leasehold the lease should run at least 10-15 years after the loans have been paid off. Normally loans have a maturity of 15-20 years.

The maximum loan is now shs. 500,000 and this is given only if the borrower's present income would justify such a committment in terms of his/her ability to repay. The rule of thumb in the business is that the

monthly payment (redemption plus interest) should not exceed 25% of the borrowers monthly income. In some cases the wife's income will be taken into account, but not normally by more than 50%.

3.2.7 EMPLOYERS' HOUSING FINANCE

A number of the larger employers in industry and agriculture make considerable contributions to staff housing. The total sum invested in this way is difficult to ascertain but it most often takes the form of the purchase of existing or construction of new houses for Company ownership. The drawback to this important supply of dwelling units is the loss to the occupant of his house when he leaves his employment.

The current development plan emphasizes encouragement to employers' efforts to provide more housing. This can be done in three ways:

a. Allowing employers the right to subtract housing contributions from their taxable income.

b. Employers to assist workers in organizing housing Cooperatives to construct and manage workers' housing.

c. Assist staff with housing finance by offering a guarantee for a mortgage loan from financial institutions.

3.2.8. HOUSING CO-OPERATIVES

This is one of the more informal ways of raising finance for housing but, so far, underutilized. In post-independent Kenya emphasis has been on agricultural cooperatives which have received the lions share of technical assistance through the Ministry of Cooperatives. Very little attention has been paid, until very recently, to Housing Cooperative Societies. The major problems with Co-operatives is poor administration and other irregularities. It has been suggested that in order to help the housing societies to overcome the prevailing problems a technical service organisation would need to be established to assist with land acquisation, design, tendering, maintenance and administration.[7]

The Co-operative Bank is well suited to provide long-term finance for these societies especially if the proposed plan to place N.S.S.F funds with it becomes a reality.[8] The latter would become the source of long-term deposits for the bank.

3.2.9. HOUSING COMPANIES

This is another informal way of raising money for housing. This form of organisation is prevalent in many squatter settlements e.g. Mathare Valley. Of more recent date is the Civil Servants Housing Company which is building low and medium cost housing for its members in many parts of the country.

Other less formalised organisations include housing groups which have been formed in the Dandora Project. Each member of the group saves say Shs. 100/- per month and the lump sum given to each member in turn.

3.3. CONSTRAINTS ON THE EXPANSION OF HOUSING FINANCE

This section examines some of the limitations to the expansion of the flow of funds into housing.

3.3.1 SUPPLY CONSTRAINTS

One of the constraints on the supply of deposits is the absence of institutions which will not only accept the saver's money but also give him/her a reasonable prospect (not promise) of obtaining a loan for a house, whether publicly or privately built. In Kenya, the N.H.C. and Local Authorities give loans to individuals, but do not accept their deposits. Housing Finance institutions accept anybody's savings but will only give loans to a selected few - not of the lower income groups and not unless there is a registered title and then, only on a first mortgage. Furthermore neither of these institutions are spatially well represented.

The Housing Co-operatives if they are given the proper support may be the best suited avenue for reaching the lower income groups. This however, raises the questions of secondary lending. The Cooperatives may have access to long term finance from the Cooperative Bank but there is need to assure the Cooperative Bank of sources of long term deposits. Hopefully the

use of N.S.S.F. funds for this purpose will soon be a reality.

Another constraint on the supply side is the low interest rates offered on deposits by mortgage finance institutions here in Kenya. It would be expected that if there is a shortage of such deposits, a higher interest on the savings should be offered. Conversely if there is always a queue for loans a higher interest rate on mortgage loans should be asked. This would spur additional savings from small savers.

Unfortunately private sector mortgage finance is a very conservative industry in Kenya. Lending rates have been kept at the 10-12% level for a long time in spite of demonstrated returns of housing investments in the order of 25% - 30%. Corresponding to the relatively low lending rates, institutions have not been able to offer more than 6% - 8% on deposits. Some non-housing finance companies such as the Credit Finance Corporation (CFC) have done far better by offering as much as 11% on time deposits and lending at 18%.[9]

The high profitability in housing investment should call for an expanded involvement, at commercial terms, since here lies a potentially very large market not only for borrowers but also for savers as well. If the existing institutions are reluctant to enter this

market, the public sector should take the initiative and promote "finance company type" institutions which borrow and lend at much higher interest rates and are prepared to take more risk. Finally, on this point, given the returns on housing investments clearly being demonstrated in Kenya there is no reason why the public sector should lend at subsidized rates of interest.

It has been argued that most publicly owned rental units, should be sold in order to generate more housing funds.[19] This argument is based on the observation that a lot of funds are wasted on excessive maintenance costs, partly because tenants are not as careful as owners and partly because of maintenance operations being extremely inefficient. Such funds could be reinvested in new housing. It is also most likely that funds tied up in rental schemes could be freed at a much faster rate, because occupants are likely to accept a higher monthly payment if they were building equity rather than paying rent.

3.3.2. DEMAND CONSTRAINTS

On the demand side, there are two major constraints connected with finance, namely income and repayment terms. Expenditure for housing is related to income. In Kenya, as in most countries, a rough 20% - 25% of present income is used when judging a person eligible for a loan. Future income is rarely included, though half the income of the spouse is sometimes included in

the income creteria.

A progressive repayment rate could be introduced to enhance the elligibility of the low-income people. This system, also known as a low start or variable payment mortgage, has been tried successfully in Israel and in some Scandinavian Countries and is now being started in U.S.[11] The public sector is possibly the most obvious to introduce such a system. The Nairobi City Council has in fact decided to introduce this system on an experimental basis in the Second Urban Project. The success of this system should be monitored and evaluated for adoption in future low income projects.

Progressive repayment systems allow the same borrower to take a larger loan (build a better house) or make the same type of house affordable by a lower income group. This approach could be a major contribution to get away from the traditional dilema of having to constantly reduce standards (costs) in order to make the housing units affordable by the income group for whom they were intended.

3.4 SUMMARY

This chapter has examined the housing finance institutional framework in Kenya. It has been noted that the private and public sector have almost an equally large share of the market for housing finance. It was

further found that there is a big disparity in the allocation of the available resources for housing between the low-income and the high-income housing.

The private institutions (some of which obtain funds from the public purse) direct almost all their lendings to the medium- and high income groups. The N.H.C. is expected to give priority to low-cost housing but its activities have turned into high income schemes such as Kyuna Estate in Nairobi.

The main constraints on the expansion of housing finance were analysed. On the supply side, the absence of institutions which will not only accept the saver's money, but also give him/her a reasonable prospect of obtaining a loan for a house was identified. It was then noted that, given proper support, housing Co-operatives may be the best suited for reaching the lower income groups. Another major constraint on the supply side identified was the low interest rates offered by financing institutions on deposits.

On the demand side it was found that the current income criteria for assessing affordability was found a misleading criteria. It was suggested that future increases in income especially from subletting should be taken into account. Further it was recommended that a progressive repayment system should be introduced in

in future low-income projects. This approach would help us to get away from the classical dilema of having to constantly reduce standards (costs) to make housing units affordable to low income groups.

There is no use advocating housing for low income groups, if they are effectively excluded on the grounds of income, repayment terms, housing standards, security etc. Though some of these prerequisites may be well intentioned they tend to work against those most in need of housing.

Footnotes:

1. Jorgensen, N.O., Kenya Shelter Study, Agency for International Development (AID), Office of Housing, August 1979, p. 176 - 177.

2. Ibid p. 182

3. Ibid

4. Mabia, S.M. Private Housing Development: A Case Study of Doonholm Estate in Nairobi. Department of Urban and Regional Planning. University of Nairobi, 1982 (unpublished).

5. Op. cit p. 183.

6. Ibid p.

7. Ministry of Cooperative Development (MOCD), Cooperative Housing for Low-Income Workers. A Report by the Foundation for Cooperative Housing to COTU and MOCD. 1978.

8. Ibid

9. Ibid p. 171

10. Ibid p. 189

11. Ibid p. 191.

CHAPTER 4

4. DANDORA COMMUNITY DEVELOPMENT PROJECT: BACKGROUND INFORMATION

This chapter presents background information of the case study. It outlines the history of the project and its objectives, and describes the principle physical, social, financial and administrative components of the project

4.1 THE HISTORY OF THE DANDORA PROJECT

The history of Dandora Community Development Project can be traced back to the year 1970. In this year the Nairobi City Council (N.C.C.) set up a study group, the Nairobi Urban Study Group (NUSG) to prepare a comprehensive development plan that will guide the future growth of Nairobi City, and to identify development projects likely to attract international capital. One of the group's major recommendations was the designation of eastern Nairobi for low and middle income residential development.[1]

At the time of this study the International Bank of Reconstruction (IBRD), an agency of the World Bank, had began shifting its financing priorities to urban infrastructure and housing.[2] The N.C.C. took this opportunity and entered into a lending agreement in March 1971. It was in this context the largest site and services project in Kenya, the Dandora Community

Development Project, was formulated.

At this time also the national housing policy-makers were developing interest in the idea of the site and services approach as a means to house low-income earners. One third of the National Housing Corporation's budget had been allocated to site and services programme for the plan period 1970-74[3].

Prefeasibility work of the Dandora project, based on the findings and recommendations of the NUSC, and carried out by N.C.C., was completed in March 1972. The prefeasibility work resulted in an "Interim Urbanization Project" which called for development of a Community of 60,000 people to be located at one of several sites in the City's eastern area.

The general location of Dandora Project had thus been defined by 1972. Preparation work for the project started in January 1973 and continued upto May 1974. The project appraisal report was prepared between June 1974 and May 1975. Actual project implementation of the first phase, consisting of 1029 plots, began immediately, and was completed in November 1976. This first phase was expected to accommodate a population of between 6,000 and 10,000 residents. The plots were handed over to allottees in November 1976.

Plate No.1: The Dandora Housing Estate - Phase one.

Plate No.2: The Administrative Centre of the Dandora Project.

4.2. GOALS AND OBJECTIVES OF THE DANDORA PROJECT

The 1979 preliminary population census figures place the population of Nairobi at about 850,000. This figure may now be approaching one million and it is estimated that by the turn of the century the figure may rise to about 3 million, representing an annual growth rate of about 7%[4]. About 10,000[5] new dwelling units are required annually to meet the existing and future housing demand in Nairobi through 2000. About 40%[6] of Nairobi households have an average income of less than Kshs. 500/- per month, and the aim of Dandora Project was to meet the housing needs for households earning incomes in this lower category through the site and services strategy.

The site and services principle is based on the hypothesis of Turner's incremental community development, wherein such development takes place largely under the control of builder leasee.[7] The hypothesis postulates that in housing all activities connected with building and maintaining a dwelling can be divided into two sets.

The provision of physical infrastructure, such as roads, sewers, water etc. forms the first set. This set of activities, according to this hypothesis, is best carried out by a centralised organisation on a "one shot" instant development basis. The other set of

activities includes such tasks as the building and maintainance of individual dwellings, tasks which are said to be best performed by decentralized, autonomous, small-scale, units on a progressive basis.

Thus the distinguishing feature of the site and services approach is that it seeks to divide the two sets of activities so as to minimize public capital investment and to maximize on the contribution of the individual participants. Hence the following principle of site and services approach.

> "Publicly sponsored subdivisions providing building lots and (generally minimal) services or utilities for low-income owner-builders"[8]

Based on the defination and principle of site and services the following objectives of the Dandora Project were specified.

"a. To provide access to land and security of tenure on a long-term basis primarily for residential use, with supporting community facilities including schools and clinics.

b. To control speculation and profit-making at the expense of the low-income sector.

c. To stimulate employment opportunity and industrial activities in the organisation of local

residents' associations as for credit, purchasing, equipment, training of special skills, management, legal assistance and marketing outlets.

i. To provide a framework within which residents can develop their own associations to administer the development of housing units and utility networks.

e. To provide communications and utilities channels which will stimulate transportation routes, and investment in residential, industrial and commercial activities, both within and near new communities".[9]

The objectives were to be achieved by the following means.

a. "Acquisation and preparation of 10,000 plots to serve as sites for 20,000 rooms (10,000 housing units of 2 rooms each), to accommodate an estimated low-income population of at least 60,000.

b. Formation of a financial institution specialising in loans for materials and equipment to the builder-leasee, providing incremental's

investment housing on plots. This institution could also construct some of the dwelling units itself and rent them to qualified occupiers and,

c. Provision of manufacturing facilities - both plant and equipment in case of the larger facilities [20]

Four major characteristics of the housing components were specified as follows:

a. All services other than those pertaining to the preparation of the plots will be provided by the N.C.C. as part of its regular responsibility and will not be charged to the project. This means that the costs of health facilities, circumferential roads (other than those needed for the direct implementation of the project), educational and social facilities will be borne by the N.C.C budget and only partly covered by charges and taxes paid by the inhabitants of the 10,000 plots;

b. The built form, while circumscribed by the nature of the materials and equipment provided, will be left to the discretion of the builder - leasee subject to regulations pertaining to

safety and sanitation. Design and production assistance will be necessary to ensure sound investment by the individual;

c. The financial institution will be a quasi-private body with powers of eviction, transfer of title, loan moratoria and renewal. The financial institution will procure building materials equipment necessary to construct the housing unit. It will then make loans-in-kind in the form of material and possibly equipment (at an interest rate calculated to cover its administrative expenses) to the builder-leasee. These loans will be repaid over a period of upto 25 years. The financial institution will also act as agent for the N.C.C. for purposes of collecting the plot rent. This will facilitate payment by the builder-leasee and reduction of administrative expenses;

d. The tied loans will be granted in amounts sufficient to enable the construction of a two room dwelling on the plot. The builder-leasee will construct the housing unit, perhaps in cooperation with other such individual's local residents associations. At least one of the rooms built will be occupied by the builder-leasee while one of the rooms could be rented

to another qualified occupant. The responsibilities for payment of the loan and for payment for water, sewerage and refuse disposal and other chargeable services will rest with builder-leasee."[11]

The recommendations of the Interim Urbanisation Project as analysed in the foregoing section were subject to changes and further refinement before implementation. These changes and refinements are reflected in the section that follows

4.3 PROJECT'S ADMINISTRATIVE, SOCIAL, FINANCIAL AND PHYSICAL COMPONENTS OF THE DANDORA PROJECT

The main components of the Dandora Project were guided by the defination of site and services, and the main goals and objectives of the project as outlined above.

4.3.1 ADMINISTRATIVE COMPONENT:

The authority charged with the responsibility of implementing the Dandora Project was established in 1975. This Authority, known as the Dandora Community Development Department (DCDD)[12] was to be responsible for overseeing all administrative and coordinative tasks of the project.

A committee, known as the Dandora Community Development Project Committee (DCDPC) comprising of the N.C.C. Town Clerk (Secretary), Representatives of the Ministry of Finance and Planning, Ministry of Local Government Ministry of Housing and Social Services, National Housing Corporation and the Provincial Commissioner of Nairobi, was established as the projects policy making body. Among the responsibilities of the Committee was the Coordination of D.C.D.D. with other organisations and agencies involved in the project. The DCDD comprised of several sections as follows:

Managerial Section

This section was in charge of the overall activities of the DCDD and was to ensure other sections conducted their specified tasks. It consisted of the Project Manager, Deputy Project Manager and the Project Attorney.

Technical Section:

The work of this section was to supervise detailed planning, engineering and preparation of tender documents for site infrastructure, wet cores and community facilities; ensure proper supervision of construction, and provide technical staff with specific building skills on-site to show allottees how to

perform technical skills. The section consisted of the Project Engineer, Architect/Planner, Architect, Services Engineer, and Surveyor.

Financial Section

This section, consisting of the Financial Accountant/Analyst and Accountant had the following tasks:

a. " To keep all project accounts involving expenditures related to the project,

b. To develop an accounting and management system

c. To prepare quarterly financial reports and annual project accounts audited by an indepedent auditor and,

d. To operate and administer the material loan fund."[13]

Community Development Section

The tasks of this section were;

a. "To publicise the project

b. To solicit and process applications for the residential plots

c. To orient and train allottees prior to the occupation of the plots

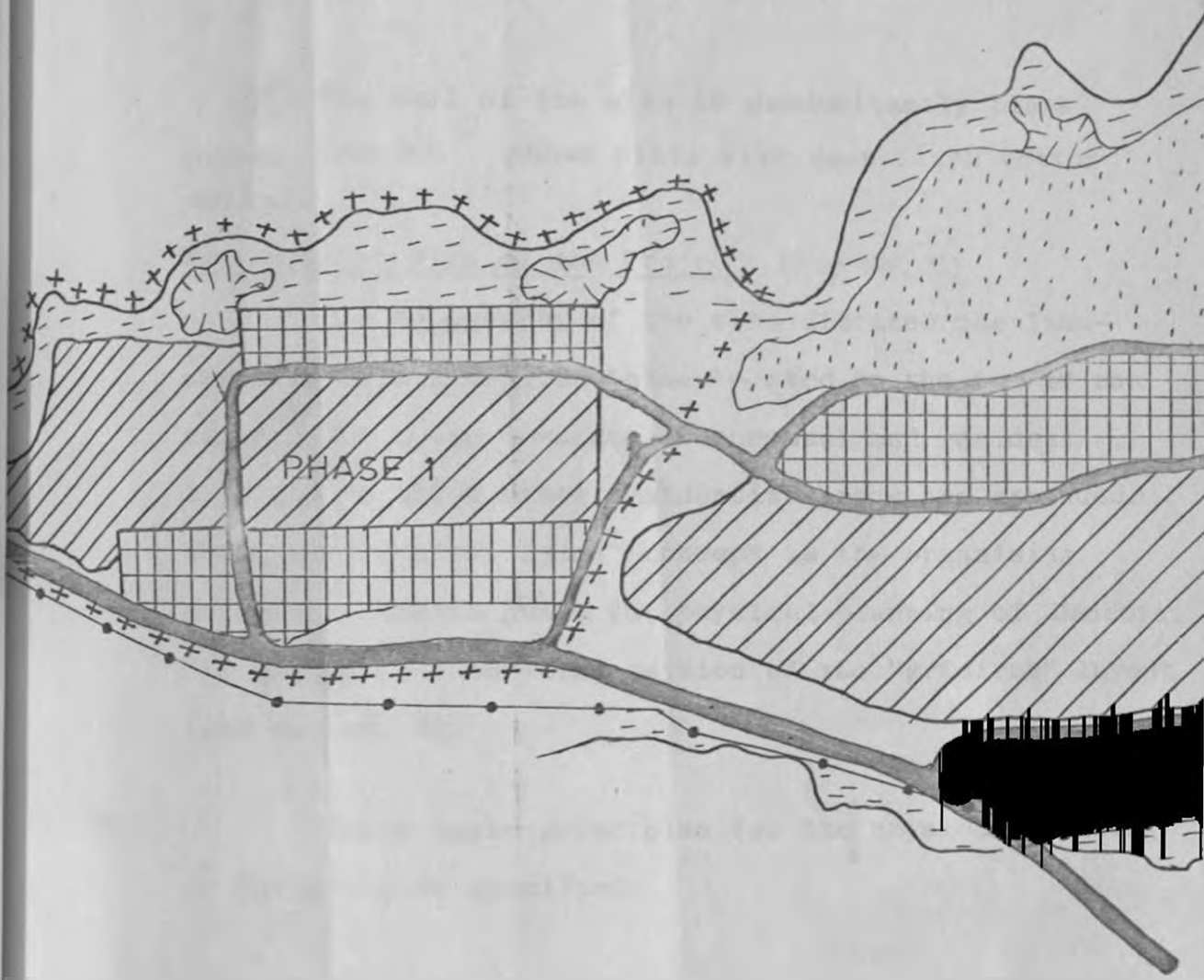
d. To work with families during the construction phase."[14]

4.3.2. PHYSICAL COMPONENT

The selection of site for Dandora Project was based upon the recommendations of the NUSG and those of the World Bank Appraisal Report.[15] The NUSG proposed a location within easy access to existing and planned employment centres. The World Bank Appraisal Report was more specific: the location of the site was limited to areas from east of the Outer Ring Road to Thika Road in the North and to Ngong River in the South.

The site that was ultimately selected was located 11 kilometres North-East of the Nairobi City Centre (see map no. 1). The site straddles a ridge which is bounded on the North and East sides by the Nairobi River, flowing in an Easterly direction within a deep natural valley. Located within this valley are several quarries, some whose working have been abandoned. The quarries have been partially filled with surface and ground water from the Nairobi River (which has flowing water throughout the year). The slopes adjacent to the river are very steep and reduce the easily buildable area. (See Map. No. 3).

Along the Southern boundary of the site extends a seasonally dry watercourse, located in a shallow wide profiled valley. This stream joins with the



THE DANDORA PROJECT | STRUCTURAL

Nairobi River in the Eastern Corner of the site.

The soil of the site is predominantly black cotton. Map No. 7 shows plots with deep black cotton soils).

The Physical Plan of the Project (Map No. 3)

The topography of the site dictated the land-use plan with a central spine located on the top of the ridge. The spine consists of communal and residential land use to which other residential areas are appended. Thus, the "Central Spine" concept is the organising principle used to guide the physical planning of Dandora. The layout is a modified version of the "gridiron" layout (see map no. 4).

Three basic principles for the physical planning of Dandora were specified:

a. "Development of Physical Standards which enable the target population to meet the cost.

b. Development of site layout to minimize public land and infrastructure per area served and to maximize individual responsibilities.

c. To develop layout which could provide for flexibility in the overall site planning."[16]

LAND-USE :

The total gross area of the Dandora Project is 218.2 hectares distributed as follows:

Gross Area	218.2 ha.	
Unusable Area	32.7 ha.	
Development Area	185.5 ha.	100%
Residential Area	89.6 ha.	48%
Circulation Area	44.5 ha.	24%
Community Facilities	51.9 ha.	28% [17]

Following are descriptions of the main physical components of the project. (see map no. 3).

Residential Plots

The project provides about 6,000 residential plots, each with individual water and sewer connection and related basic services and infrastructure, including roads, security lighting and refuse collection. The plots vary in size from 100 metre squared to 160, and are leased for a period of 50 years. The gross density of the project is 32 plots per hectare and the net density is approximately 45 plots per hectare . Plot occupancy rate is assumed to be 10 people per plot, giving a gross residential population density of 320 people per hectre.

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Plot Types:

In attempt to accommodate different income levels within the low-income sector three options of "wet core" and shelter units were provided in the Dandora Project.

Option A: Consisting of 3,900 plots (65% of total Project) in three different sizes - 100 m^2, 120 m^2 and 140 m^2. Each is provided with basic services in the "wet core" and participants are offered a construction materials loan of Kshs. 5,360/- for developing their shelter.

Option B: Consists of 1,800 plots (30%) in three different sizes - 100 m^2, 120 m^2 and 140 m^2. Each plot is provided with a kitchen and a store in addition to the "wet core" outlined in option A. The amount of materials loan offered to plot allottees is Kshs. 2,880/-.

Option C: Consists of 330 plots (5%), all 160 m^2 in area. Each plot is provided with a wet core, a store, a kitchen and one room. No materials loan is provided to plot owners.

At the time of drawing the plans the total development costs of the plots were estimated as follows:

Option A: between Kshs. 11,000 - 12,000

Option B: between Kshs. 12,000 - 13,000

Option C: about Kshs. 16,500/-

Community Facilities

This consists of 6 primary schools 2 health centres, two multi-purpose community centres with day care facilities, one sports complex and 400 market stalls.[1]

Infrastructure:

This consists of water, roads, surface water drainage, sewerage and electricity.

Off-Site Road System:

The principal means of access to the site is via Old Komo Rock Road, which runs East-West and forms the Southern boundary along half the length of the site. Three access roads from the site are provided to connect to this highway.

PHASING OF THE PROJECT

The project is developed in two phases. Phase I (the author's case study) consists of 1,029 residential plots, with 690 type A, 264 type B, 54 type

Plate No.3: The Dandora Health Centre.

Plate No.4: A Primary School in the Phase one of the Dandora Project.

Plate No.5: The wetcore - kitchen, toilet and shower - provided to the builder allottee of type B plot.

Plate No.6: A complete house on Type B plot using type plan 2 shown in figure 2.

and 21 plots for special purposes; 3 community facilities plots, one primary school, and 2 markets. Plots in this phase were handed over to their allottees in November 1976.

Phase II consists of 4,971 plots, with 3,180 type A, 1536 type B. 246 type C, and various community facilities. Construction of this project was anticipated to start by the end of 1976 and ready for occupancy by the middle of 1979. There were, however, problems related to planning and design which needed to be sorted out first and work on this project did not begin until April 1978.[20]

4.3.3. FINANCIAL COMPONENT

The Dandora Project estimated at Kshs. 200m. (US$ 30m), is a joint venture of the Government of Kenya (US$ 14 million), IBRD ($8 million) IDA ($8 million.).[20] Cost estimates for the various components of the project are given in table 4.1 and table 4.2 Foreign exchange costs are estimated at 26%.[21]

LOANS TO PLOT ALLOTTEES

The DCDD section operates a materials loan scheme. Cash loans are made for the value of the materials in that portion of the house already constructed. The rate of interest for loans (material and plot) is 8.5%. Type A plots have a loan repayment period of 30 years and type B plots 20 years.

All loans are repayable in equal monthly instalments (i.e. by way of annuity) consisting of principal and interest. Loan repayment is due at the end of each month, following the month in which the plot is made available for possession.

TABLE 4.1 PROJECT COST ESTIMATES AND ALLOCATION TO BENEFICIARIES

COST ESTIMATES								COST ALLOCATION (%)		
	KSH. '000			US $'000			% OF TOTAL PROJECT COSTS	NAIROBI CITY COUNCIL		
CATEGORY	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL		USER FEES, RATE	COMMUNITY FACILITIES	RECOVERED FROM LOCS
1. Site Preparation	109	9	118	305	1	332	1.6	1	8	91
2. On-Site Infrastr-ucture	803	268	1,071	2,250	750	3,000	14.4	44	6	50
3. Community facilities	295	98	393	824	275	1,099	5.3	100	0	0
4. Core Units	1,146	382	1,528	3,209	1,070	4,279	20.6	0	0	100
5. Materials Loan Fund	1,145		1,145	3,205	-	3,205	15.4	0	0	100
6. Trunk Infra-structure	1,461	702	2,163	4,092	1,965	6,057	29.2	100	0	0
7. Technical Assistance	466	477	943	1,304	1,336	2,640	13.5	87	6	7
8. Subtotals	5,425	1,936	7,361	15,189	5,423	20,612	100.0	-	-	-
9. Contingencies: Physical (7.9% of base cost)	364	223	587	1,019	624	1,643		65	5	30
Price (32% of row 7 & 9	1,972	623	2,595	5,522	1,744	7,266	-	-	-	-
Total	7,761	2,782	10,543	21,731	7,790	29,521		-	-	-

Source: IBRD Appraisal Report 607 a-KE.

TABLE 4.2

DANDORA PROJECT - PHASE I COST PER SQ. METER OR PER UNIT (TOTAL AREA 127820 m^2; TOTAL UNITS 1038, INCLUDING 5 UNSERVICED PLOTS)

	COMPONENT	TOTAL COST K£	COST PER M^2 OR UNIT KSH
1.	SITE PREPARATION		
	a. Clearing and grading	3,014	0.47
	b. Lot Demercation (1038) units	10,000	192.67
2.	ON-SITE INFRASTRUCTURE		
	a. Primary Road + Surface drainage	64,049	10.80
	b. Secondary Roads & Surface Drainage	36,750	5.75
	c. Sewerage Reticulation	66,398	10.38
	d. Water Reticulation (1033) units	15,465	299.41 p.u
	e. Street lighting	15,609	2.44
	f. Refuse collection	15,927	2.49
3.	CORE UNITS		
	a. Wet core (Type A, 704 units)	168,084	4775.11 p.u
	b. One-room Unit (Type B, 273)	136,461	9997.14 p.u
	c. Two-room Unit (Type C 56)	40,808	14574.28 "
4.	TRUNK INFRASTRUCTURE		
	a. Design and Engineering	11,664	1.82
	b. Construction	58,323	9.12
5.	PROJECT ADMINISTRATION	114,688	17.94
6.	COMMUNITY FACILITIES (1 Primary School)	72,600	11.35
	TOTAL	834,885	130.60

Source: The Dandora Project Department.

Repayment of material loans commences 18 months after the date of the first instalment of the plot loan is due, during which period the construction of the plot is to be completed. The interest rate accrued during the construction period on any material loan borrowed is capitalised, and the total interest is repayable by type B plot holder over 19½ years. Type A plot-holders have a five year grace period on principal only. After 18 months they will pay interest only for 3½ years on any material loans borrowed and on which interest is accrued. On the expiry of the 3½ year grace period, payment for interest and principal commences and continues for 25 years. The pattern of cost allocation, including cost recovery for allottees is outlined in table 4.1.

Conditions of Lease Agreement:

The lease agreement specifies four conditions - the plot holder shall;

a. "Undertake construction of dwelling according to the minimum standards laid down by the DCDD, within 18 months of signing the lease. The materials used for the construction is either to be ones own or obtained under the material loan scheme.

b. Pay all charges promptly and in general conform to all lease agreements.

c. Sublet rooms only on conditions specified by the project administration and make the identity of tenant known to it prior to subletting.

d. Notify the administration of intention to leave the project and conform to the project rules and regulations regarding the transfer [22]

4.3.4 SOCIAL COMPONENT: APPLICATION AND SELECTION OF OF PLOT ALLOTTEES

Applications for plots in the Dondora Project were invited in 1976.[23] A total of 20,948 application forms were sold-out at Ksh. 20/- each. Of this 16,018 were completed and returned to the Project Department.

Out of the returned applications 9,308 were short-listed for balloting, and ultimately 5,384 qualified for the plots. The remaining type C plots (616 in number) were to be sold at market value.

The following creteria were applied in eliminating applicants.

a. Income being below Ksh. 280/- p.m. and income being above Kshs. 650/-.

b. Having residential property in Nairobi.

c. Not being head of family and family not living with applicant in Nairobi.

d. Having no supporting documents.

e. Application forms being more than one from the same applicant.

f. Incomplete and illegible application forms and application not on an official form.

House Type Plans

The Dandora Project provides a range of alternative plot layouts, thus giving the allottees choice of plan type. The house type plans which are prepared by the Technical Section of the Project are shown in figure 2. On average, five rooms can be constructed on each plot.

Each stage of house construction is monitored and a progress report maintained by a building inspector the main stages which are monitored and inspected are: setting-up of the rooms, foundation trenches and walls, ground floor slab, external and internal walls, wall plates, roof structure and finishings and fittings. The intended purpose of monitoring and inspecting the house construction are three: to ensure the

construction is based upon the building specifications and meet the general standards of building and planning practice; to ensure the allottee seeks material loans in the stage that the DCDD specified, i.e. at completion of each stage and lastly; to ensure that the "minimum" number of rooms are completed within the 18 month period.

4.4. SUMMARY

The history of the Dandora Project dates back in 1970, when the Nairobi Urban Study Group (Nush) recommended the eastern Nairobi for low-and medium-income housing. Taking advantage of a World Bank loan, the Nairobi City Council (NCC) undertook to develop 6,000 site and services plots, 11 kilometres North-East of Nairobi. The first phase of the project, consisting of 1029 plots started in 1975.

The topography of the area dictated the land-use play of the whole project with a Central Spine located on the ridge. The layout is a modified version of the "gridiron" layout.

The main objective of the project was to provide plots with basic services such as access roads, water, sewers etc. and to allocate them to individuals in the low-income groups, who would then construct the buildings and live there.

Three types of plots, A, B and C were available. Type C plots were sold at market value in order to subsidize Types A and B plotholders. Types A and B were allocated to people earning incomes between Shs. 280 and Shs. 650 p.m. They consecutively and were provided with a materials loan of Shs. 5360 and Shs. 2,850 were expected to complete the construction of at least two rooms, within 18 months.

Several house-type plans were provided to allow families to select what was most suitable for them. It was expected that the allottees would sublet some of the rooms in order to enhance their affordability. So, the plans provided were made in such a way as to allow multi-family occupation.

Footnotes

1. The findings and recommendations of the group were summarised in a document entitled, Nairobi Metropolitan Development Strategy V.1 and 2, 1973.

2. World Bank. Urbanization : Sector Working Paper, June 1972.

3. Republic of Kenya, Development Plan 1970 - 74 para 19.26.

4. Wanjohi, S.G. and T.S. Chana "Strategies for Housing the Lower Income Groups in the D C D P, Nairobi - A Case Study", A paper presented at the H.R.D.U. Seminar on Housing for the Lower - Income Groups, May 1977.

5. Ibid 2

6. N.C.C., Metropolitan Growth Strategy for Nairobi, 1973, para 143.

7. Turner J., "Uncontrolled Urban Settlements: Problems and Policies", A paper presented to the Inter-Regional Seminar on Development Policies and Planning, University of Pittsburgh, U.S.A., 1966.

8. Turner J. and Robert Fitchter, Freedom to Build, New York, MacMillan Co. 1972 p. 157.

9. Nairobi City Engineer's Department, Interim Urbanization Project, Nairobi, February 15, 1972 p.3.

10. Ibid p. 6 - 8

11. Ibid p. 8 - 10

12. Op cit 4 p.7

13. Ibid

14. Ibid

15. Mutiso Menezes International, World Bank Appraisal Report - Dandora Community Development Project, 1975.

16. Ibid

17. Ibid.

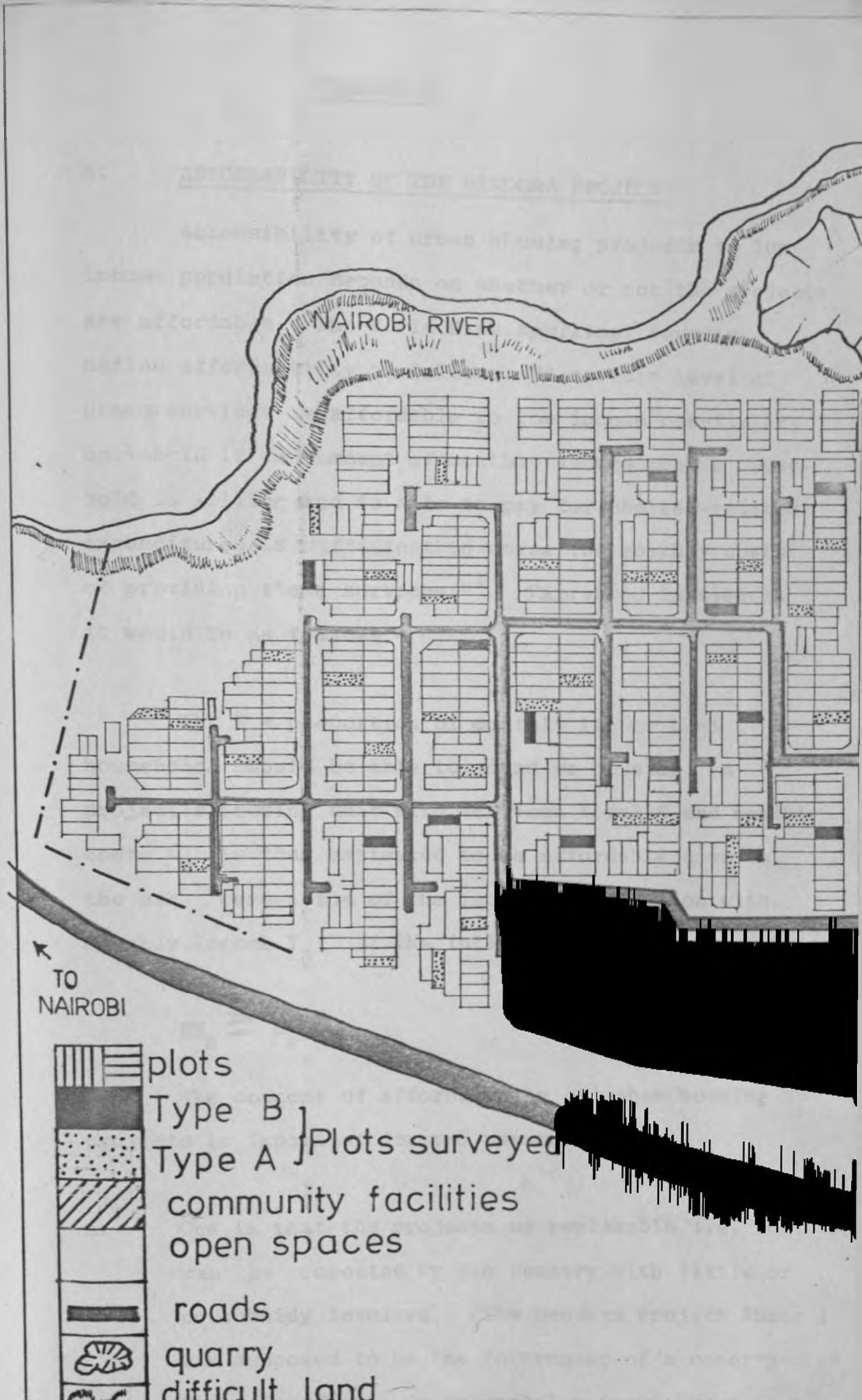
18. Chana, T.S., "Site and Services Strategy Assessed" Guild , Vol. 4 No. 44 Nov. 1979 p.15.

19. Ibid p. 17

20. N.C.C. Annual Report of N C D P Manager. 1975.

21. World Bank Appraisal of a Site and Services Project in Kenya, 1975 p. 10 - 11.

22. Op cit 20. 1976.



THE DANDORA PROJECT

phase

CHAPTER 5

5. AFFORDABILITY OF THE DANDORA PROJECT

Accessibility of urban housing projects to low-income population depends on whether or not the projects are affordable. The World Bank Appraisal Reports define affordability as follows: "A certain level of urban services is affordable to low income beneficiary household if the amount of monthly income that a household is willing and is able to pay for shelter-related expenditures is sufficient to cover the monthly costs of providing these services."[1] Expressed in symbols it would be as follows:-

Let K = proportion of monthly income that households should be able to spend on housing. A project's housing unit with services level S and monthly costs C_s is thus estimated to be affordable down to the nth percentile of the income distribution with monthly income Y_n if the following holds:[2]

$$KY_n \geq C_s$$

The concept of affordability of urban housing projects is important for two reasons:

a. One is that the projects be replicable i.e. that they can be repeated by the country with little or no subsidy involved. (The Dandora Project Phase I was supposed to be the forerunner of a country-wide World Bank/Kenya Government low-income housing programme).

b. The second, and perhaps more important, reason is that urban housing projects should be accessible to a certain portion of the low-income population (In the Dandora case those earning between Kshs. 280-650/- p.m.).

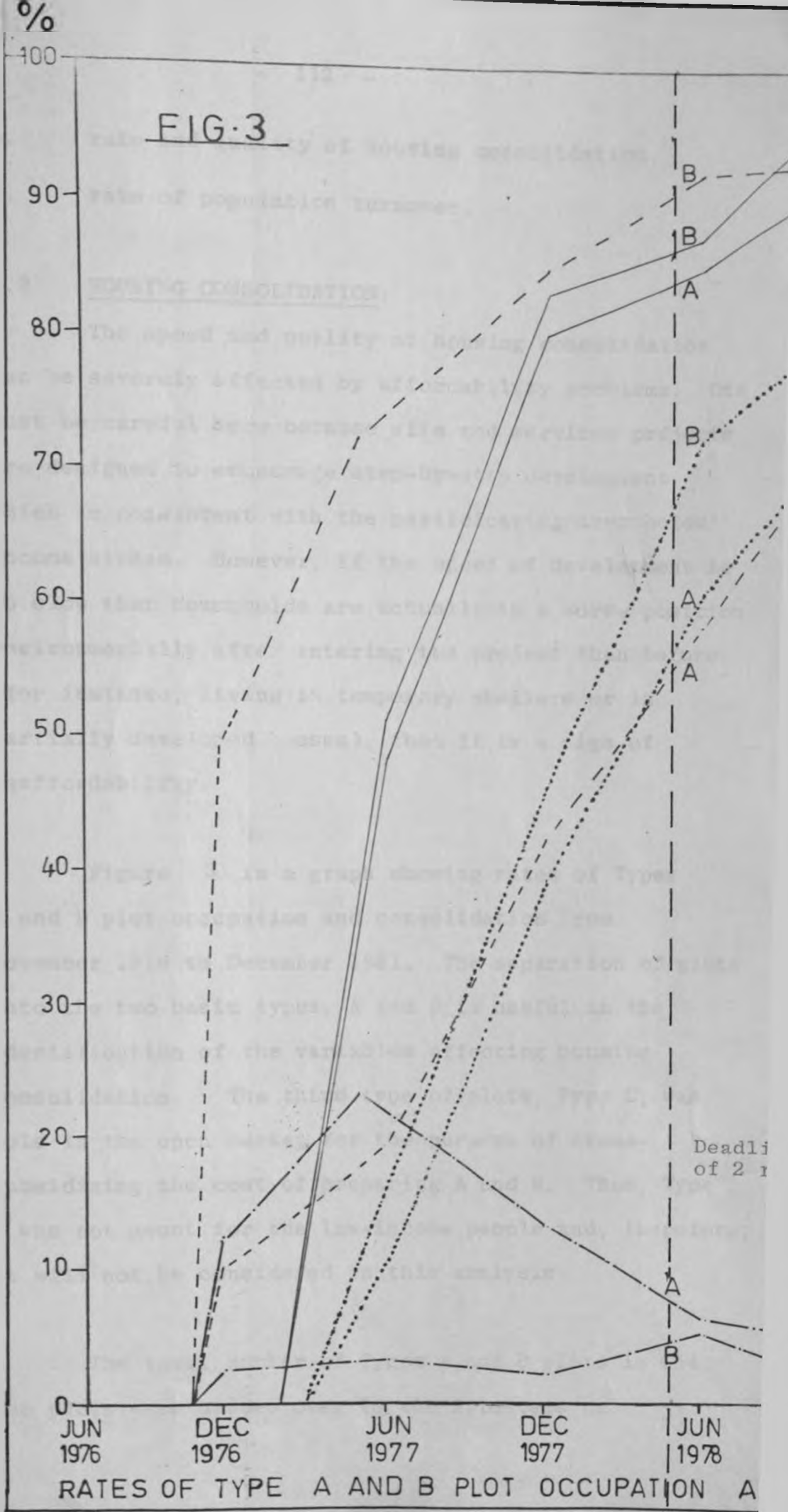
5.1 METHODS OF ASSESSING AFFORDABILITY

There are two methods available for assessing affordability:

a. The first method involves the determination of the values of the demand (K, Y) and supply (C) parameters of the affordability equation presented above.

b. The second method traces certain indicators of affordability problems, and the possible reasons for them.

The first method would have been the more direct one for assessing affordability but there is lack of adequate information with regard to expenditure patterns, incomes and costs (see limitations in chapter 1). Adopting the second method two creteria have been used to assess the affordability of the Dandora Project, as follows:-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RATES OF TYPE A AND B PLOT OCCUPATION A

a. rate and quality of housing consolidation.

b. rate of population turnover.

5.2 HOUSING CONSOLIDATION:

The speed and quality of housing consolidation can be severely affected by affordability problems. One must be careful here because site and services projects are designed to encourage step-by-step development which is consistent with the participating households' income stream. However, if the speed of development is so slow that households are actually in a worse position environmentally after entering the project than before (for instance, living in temporary shelters or in partially developed houses), then it is a sign of unaffordability.

Figure 3 is a graph showing rates of Types A and B plot occupation and consolidation from November 1976 to December 1981. The separation of plots into the two basic types, A and B, is useful in the identification of the variables affecting housing consolidation. The third type of plots, Type C, was sold in the open market for the purpose of cross-subsidizing the cost of preparing A and B. Thus, Type C was not meant for the low-income people and, therefore, it will not be considered in this analysis.

The total number of Types A and B plots is 954. The plots were handed over to the allottees on

20th November 1976, and the allottees were supposed to construct a minimum of two rooms, in the case of Type A plots, and 1 room in the case of Type B plots, within a period of 18 months. The deadline for completing the minimum number of rooms is marked by a broken line in the graph.

It is noted that by the end of 18 months since the taking of possession by allottees a large number of plots (417) had not been developed to the required minimum number of rooms and some others (189) had not had any improvement at all. This situation is demonstrated in the graph and presented in details in Table 5.1

TABLE 5.1 BUILDING PERFORMANCE, BY PLOT TYPE, MAY 1978 (100% SAMPLE)

LEVEL OF DEVELOPMENT OF PLOTS	A		B		TOTAL	
	NO.	%	NO.	%	NO.	%
Minimum Rooms Complete	360	52	177	67	537	56
Minimum Rooms Started	165	24	63	24	228	24
Construction not started	165	24	24	9	189	20
TOTAL	690	100	264	100	954	100

Source: D.C.D.D.

Only slightly more than half of the Type A plots (i.e. 52%) had the the required minimum number of rooms complete by the dealine, May 1978.

The rate of completion for Type B plots was higher (67%), but the overall completion rate was determined by Type A plots, which were the more numerous. The Table shows that the overall rate of completion was again only slightly higher than half of the total number of plots i.e. 56%. Thus 44% of the plots had failed to meet the dealine and 20% had not had any improvement at all.

Table 5.2 is similar to Table 5.1 and shows the building performance one year after the deadline. It shows

TABLE 5.2 BUILDING PERFORMANCE BY PLOT TYPE, JUNE 1979 (ONE YEAR AFTER THE DEADLINE) 100% SAMPLE

LEVEL OF DEVELOPMENT OF PLOTS	A		B		TOTAL	
	NO.	%	NO	%	NO.	%
Minimum Rooms Complete	551	79.9	240		791	82.9
Minimum Rooms started	68	9.9	23		91	9.5
Construction not started	71	10.2	1		72	7.6
TOTAL	690					

Source: D.C.D.D.

that 82.9% of the total number of plots had the required minimum level of construction complete. 17.1% of the plots did not have the required minimum level of development and 7.5% (i.e. 72 plots) had yet to have any construction work started on them.

No data are available for 1980, but the possible trend is indicated in the graph. Table 5.3 presents the building performance by December 1981 (5 years since the allottees took possession), when the author undertook his own survey. 13.5% of the plots had not reached the required minimum level of development and 4.1% had yet to have construction work commenced.

TABLE 5.3 BUILDING PERFORMANCE, BY PLOT TYPE, DECEMBER 1981 (5 YEARS SINCE THE TAKING OF POSSESSION BY ALLOTTEES) (10% SAMPLE)

LEVEL OF DEVELOPMENT ON PLOTS	A NO.	%	B NO.	%	TOTAL NO.	%
Minumum Rooms Complete	58	84.1	25	92.6	83	86.5
Minimum Rooms started	7	10.1	2	7.4	9	9.4
Construction not started	4	5.8	0	0	4	4.1
TOTAL	69	100	27	100	96	100

Source: Field Survey.

The statistics presented above indicate a lower rate of housing consolidation than that had been envisaged by the designers of the Dandora Project. The variables affecting the rate of consolidation are analysed below.

5.2.1 VARIABLES AFFECTING HOUSING CONSOLIDATION

5.2.1.1 PLOT TYPE

Figure 4 is a graph showing the rates of occupation, temporary shelter construction, building activity and house construction, for Types A and B Plots, recorded over the first four months. Each curve is a function of the relevant activity as a percentage of the total number of plots. The functions have been put together in order that the interrelations and differences between them may be grasped easily. The graph shows that the rate of house occupation of Type A is much slower than that of Type B. This is explained by the existence of a kitchen on Type B plots which permitted immediate occupation by allottees. Detail of rates of occupation by type of plots, in March 1977, are presented in Table 5.4.

TABLE 5.4: PLOT OCCUPATION, MARCH 1977

PLOT TYPE		OCCUPIED	UNOCCUPIED	TOTAL
A	No.	172	518	690
	%	25%	75%	100%
B	No.	180	84	264
	%	68%	32%	100%
TOTAL	No.	352	602	952
	%	37%	63%	100%

Source: Quartery Report of D.C.D.D. April 1977.

It is noted that the rate of occupany of Type A plots is almost identical to the rate of construction of temporary shelters. The explanation to this is that the Type A plotholders could not take occupation except if they were prepared to live in temporary shelters, as the only accommodation provided was a toilet and a shower.

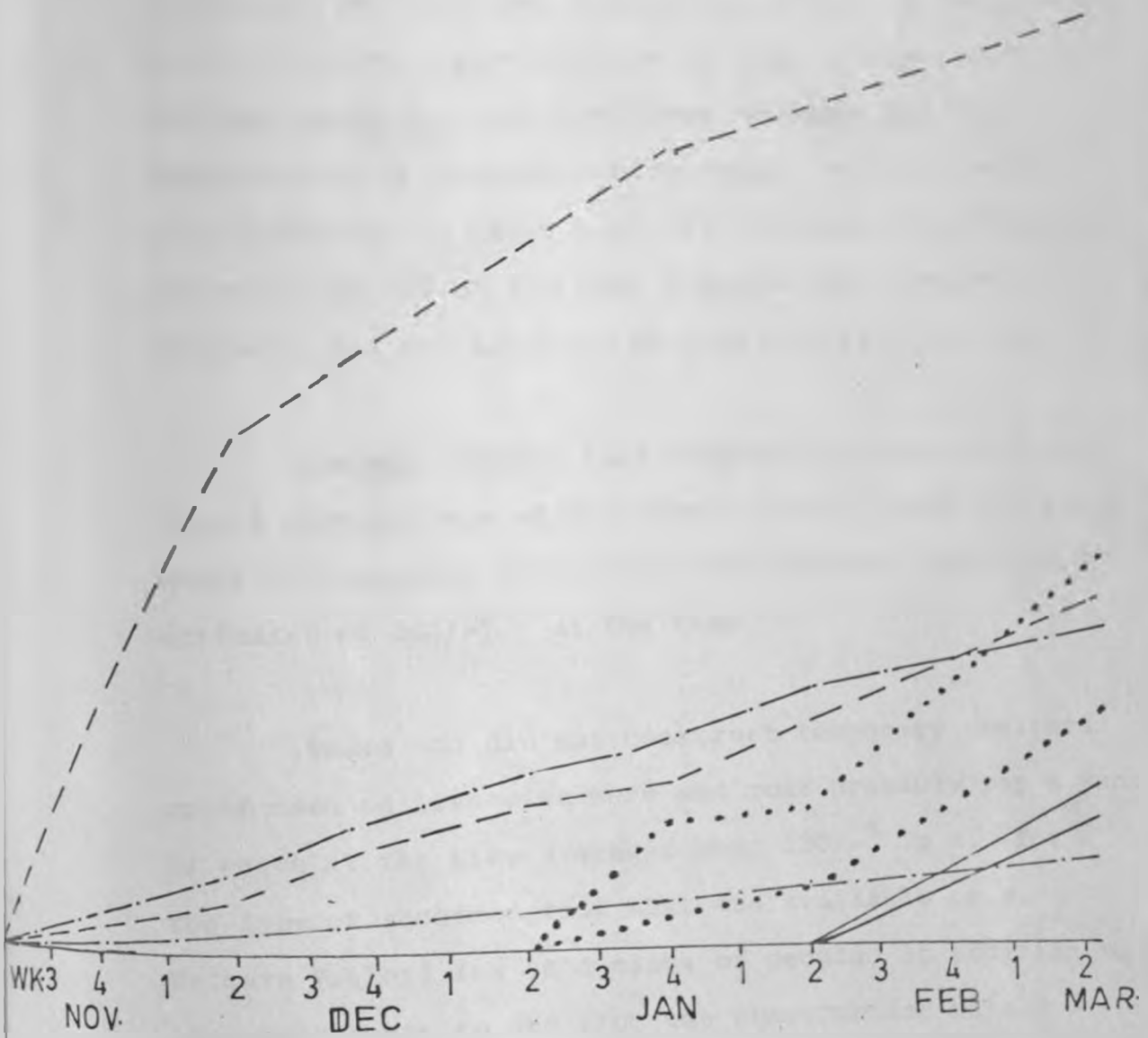
A close relationship between the construction of temporary structures and building activity on Type A plots is also identified and presented in details in Table 5.6. It is shown that the rate of building activity on Type A plots was higher (10%) for plots with temporary shelters than for those without (6%).

TABLE 5.5 BUILDING ACTIVITY IN RELATION TO TEMPORARY SHELTERS (SHOWN IN PROPORTION OF TOTAL PLOTS), MARCH 1977

PLOT TYPE		BUILDING ACTIVITY WITH T/SHELTER	BUILDING ACTIVITY WITHOUT T/SHELTER	NO BUILDING ACTIVITY BUT T/SHELTER	NO BUILDING ACTIVITY OR T/SHELTER	TOTAL
A	No.	69	42	90	489	690
	%	10%	6%	13%	71%	100%
B	No.	6	64	6	188	264
	%	2%	24%	2%	72%	100%
TOTAL	No.	75	106	96	677	954
	%	8%	11%	10%	71%	100%

Source: Quaterly Report of D.C.D.P., April 1977.

FIG 4



_____TEMPORARY SHELTERS

_ _ _ _ _ _PLOT OCCUPATION

. . . . . BUILDING ACTIVITY (eg materials on site

_____BUILDING CONSTRUCTION

ES OF TYPE A AND B PLOT OCCUPATION AND CONSOLIDATION
EMBER 1976 TO MARCH 1977

The temporary structure in this case facilitated building activity by providing the necessary accommodation for the builder-allottee during the period of construction just as it was the case with the one room (kitchen) provided in Type B plots. While this may be seen as an advantage, the construction of temporary structures may have had a negative effect on the overall rate of housing consolidation in that it reduced the limited funds that may have been available for the construction of permanent structures. This effect is also indicated in Table 5.5. It is shown that 90 plots, representing 57% of the Type A plots with temporary shelters, did not have any building activity at all.

Clearly, Type B plot-holders had advantage over Type A plot-holders as the former did not need to invest money on temporary structures whose average cost was estimated at 600/-[3] at the time.

Those who did not construct temporary shelters would need to live elsewhere and most probably pay a rent of which at the time averaged shs. 120/-[4] p.m. for the type of accommodation that was available (e.g. Mathare Valley) for this class of people, in addition to transport costs to and from the construction site.

The purpose of providing two types of plots, A and B, was to make the project affordable to two income levels of the low income population. Type A, with a

a lower level of services (toilet and shower), and whose plot charges averaged shs. 76/- was supposed to be cheaper and therefore meant for that group of people whose incomes fell between shs. 280-460 p.m. Type B, with a higher level of services (toilet, shower and one room) was meant for a higher income group i.e. those earning between shs. 460-650/- p.m., and whose plot charges averaged shs. 148/- p.m., because it was thought to be the more costly.

This position seems to have reversed with Type A plots becoming less affordable than Type B plots as demonstrated in Table 5.6.

TABLE 5.6 COST COMPARISONS BETWEEN TYPES A AND B PLOTHOLDERS (1977)

PLOT TYPE	AVERAGE COSTS TO PLOTHOLDERS SHS/P.M.		
	PLOT CHARGES	RENT	TOTAL COSTS
A	76	120	196
B	148	-	148

Source: D.C.D.D.

The project designers concentrated on development charges and ignored other important costs to the participating families. Without any accommodation provided on the site, Type A plotholder had to spend an extra shs. 120/-[5] per month for his/her accommodation or a capital sum of shs. 656/-[6] on the construction of

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a temporary shelter. The total monthly housing expenditure by Type A plotholder who rented a house was shs. 196/- as compared to shs. 148/- in the case of Type B plotholder.

From the foregoing discussion it appears that the common assumption that poor families would prefer, and are more suited to plots with lower level of construction as the monthly plot charges are lower, is false as derived from the Dandora Case. The assumption has also been found wrong in studies carried in El-Salvador and Phillippines where the poor families often prefer a higher level of construction, and it is the wealthier families who prefer lots with only the service connections.[7]

5.2.1.2 SIZE OF LOAN FOR MATERIALS AND METHOD OF DISBURSEMENT:

The objective of materials loans fund was "to provide materials loans to plot allottees for self-help construction of dwellings to a maximum of two rooms for Type A and one room for Type B allottees."[8] This means that the loan did not cover the cost of the whole building, and excluded entirely any cost of labour. The amounts were Kshs. 5,760/- for Type A, and Kshs. 2,880 for Type B, plots, which was considered adequate to meet the cost of all the materials required in the construction. The figures were calculated at the time of project design but no provisions were made for increasing costs of materials (estimated at between 10-15% p.a.[9]) over the period of building construction.

Without such provisions it is clear that the value of materials loan would be reduced by approximately 20% to 30% by the end of the 18 month period given for the construction of the required minimum number of rooms. A plot allottee who did not construct the building immediately, therefore, needed to look for other sources of funds to meet the cost of materials (at least 44% of all the allottees were affected as they could not complete constructing the buildings within the 18 month period) besides labour costs, normally estimated at 25% of construction cost.

But even though the plot allottees would have wanted to take advantage of the materials loan provided immediately to avoid increasing costs of materials, two factors militated against it. One factor is that there was a delay in the disbursement of materials loan due to some disagreement regarding the building standards that had been used in this project.[10]

Plans for the Dandora Project had been prepared in accordance with the design standards and cost estimates outlined in the Appraisal Report.[11] Moreover, the Works and Town Planning Committee, composed of all the Departments of the Council, had in January 1975, approved the structural plan for the Project and designated the project area as a Grade II By-law zone, to which special density provisions would be applicable. Despite these legal agreements, the overall layout plans for Phase I

and the house type plans were not approved by the various departments of the Council. The departments maintained that the design standards did not conform to the Planning and Building Code and the Public Health Act, and therefore approval could not be granted. Finally, after six months of discussions and meetings the plans were accepted by the joint meeting of the Works and Town Planning Committee and the Dandora Community Development Project Committee held on 20th January, 1977.

The delay caused by the above controversy resulted in delay in the issuing of type plans to the plot allottees and disbursement of materials loans.

The other draw-back was the method in which materials loan was disbursed. The method amounted to retroactive financing since allottees were reimbursed for materials initially bought from their own individual resources.

Given the limited financial resources of the low-income groups many allottees could not start any construction work, for a long time, which would have enabled them to start benefitting from the loan. As has already been stated 20% of the plots had no improvement at all by the end of the 18 month contruction period. Another 24% had been started but not reached the minimum required minimum level of 2 rooms.

The method of disbursing the materials loan was unsuitable in another way: it did not allow bulk purchasing which would have reduced the cost of materials to the plot allottees. The loan was disbursed in five installments as Table 5.7 shows.

TABLE 5.7 MATERIALS LOANS DISBURSEMENT SCHEDULE

LOAN STAGE	AMOUNT DISBURSED (SHS)	
	1 ROOM	2 ROOMS
		CUMULATIVE
Preliminary (trenches dug)		
Preliminary (trenches dug)	400	400
Stage 1: foundation slab complete	600	1000
Stage 2: walls built to roof level	1200	2200
Stage 3: roof complete	680	
Final Stage: finishes complete	0	
Maximum payable		

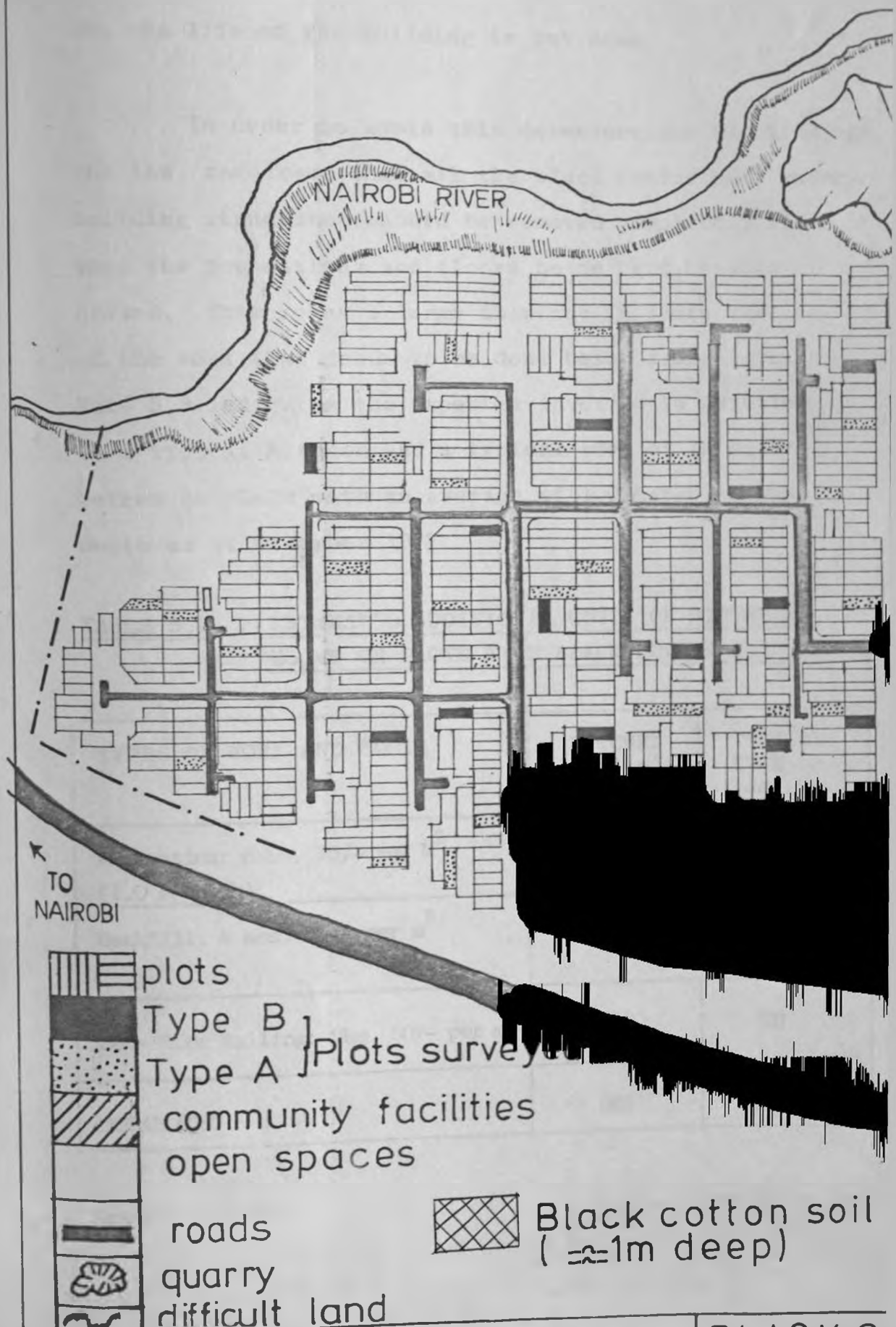
Source: D.C.D.D.

5.2.1.3 THE INCIDENCE OF BLACK COTTON SOIL (MAP. NO. 5)

. Site conditions is an important factor influencing the cost of building, affordability, and hence rate of building construction.

In the Dandora Project Phase I, 251 plots (24%) had predominantly black cotton top soil, the depth of which ranged from 900-1200 mm. The problem of black cotton soil had been known from the preliminary stages of planning and design when trial holes were dug. The black cotton soil area was discovered and accordingly the Quantity Surveyors measured all the additional work that would be involved if this area was to be considered. The area was rejected for development of any community facilities since these would normally cover larger areas and be heavier structures than the wet cores. With wet cores covering an area of only 3.6 sq.m. per plot, and an average depth of soil of 1.o.m. it was judged more economical at the time to allocate the area for housing.

The additional work that the allottees in these areas had to do was due to the general rule that no buildings should be constructed immediately on top of the black cotton soil. This is because of the nature of this soil: it swells up when saturated with water and it shrinks and cracks when it dries. This continuous swelling and shrinking causes movement in foundations and floor slabs, thus making them crack. Cracks in foundations may then cause walls to crack, and in the long



DANDORA PHASE I

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run the life of the building is cut down.

In order to avoid this deterioration of buildings, the law requires that all the black cotton soil under building structures should be removed completely and that the foundations and floors be on hard, stable ground. This means a large increase in costs because of the work that needs to be done below floor level. Tale 5.8 indicates the expenses involved in relation to a typical kitchen and a typical room of 12 square metres on plots with an average of 1.0 meter soil depth as at December 1977

TABLE 5.8 ESTIMATED ADDITIONAL COSTS OF DIFFERENT ROOMS ON PLOTS WITH BLACK COTTON SOIL (1977)

TYPES OF WORK AND COSTS	KITCHEN 9.04 m^2	TYPICAL ROOM 12m^2
Excavation: @shs. 15/- per M^3 (1.0 m depth)	180	250
Backfill: @ shs. 25/- per m^3	300	250
Sub-Floor Walling: Shs. 50/- per m^2	385	537
TOTAL COST	865	1205.0

Source: D.C.D.D.

From this Table it is shown that the additional costs incurred in constructing in the black cotton soil are: Typical Kitchen Shs. 856/-; Typical room, Shs. 1205/- Table 5.9 shows the rate of completion of the required minimum number of rooms on plots with black cotton soil. While the overall percentage of completion of the required minimum rooms in May 1978 was 56% (Table 5.1), th figure for plots with black cotton soil was only 28%, indicating a far much slower rate of consolidation.

TABLE 5.9 PLOTS ON BLACK COTTON SOIL WITH MINIMUM NO. OF ROOMS COMPLETE, MAY 1978

	A		B		TOTAL	
	NO.	%	NO.	%	NO.	%
Yes	42	26	18	35	60	28
No	121	74	34	65	155	72
TOTAL	163	100	52	100	215	100

Source: D.C.D.D., Quartely Report, May - August, 1978.

The primary cause is obvicusily shortage of funds. Basically, the greatest hardship experienced by many allottees was in starting construction, since the loan money came after work had been done. In the case of black cotton soil, the situation was even worse, since the initial costs of excavation and foundations were higher.

Also there may be additional problems on black cotton soil plots. Sometimes, the excavated area gets flooded with rain water, or by water seepage from adjoining areas. Additional costs in form of hired labour are incurred to keep the foundations dry.

Thus, the occurance of black cotton soil was a source of uncertainty and unaffordability since the amount of loan given to affected allottees was the same as that allowed for other allottees, until mid-1978.[12]

5.2.1.4 CONSTRUCTION METHOD

Three main alternative construction methods were available to plot allottees of the Dandora Project.

a. Building groups
b. Contractors
c. Self-built.

Construction by building groups involved several allottees coming together and constructing buildings for the members, each in turn, using money contributed by all members. The Contractors Method of construction applied to allottees who contracted out work. Construction by self-built method applied to allottees who organised, hired and supervised labour themselves throughout the process of construction.

Each alternative had different implications in terms of level of self-help, and cost and speed of building construction.

5.2.1.4.1 LEVEL OF SELF-HELP

Table 5.10 presents the mean number of paid and unpaid skilled labourers per plot by building method. The unpaid labour represents the self-help component. The sub-total columns show that out of a total of 3.6 skilled labourers only 0.2 or about 6% is unpaid. In other words the average amount of self-help in terms of skilled labour is only 6%. The rest of 94% of the skilled labour is hired.

Table 5.10 presents data for both skilled and unskilled labour. The Table shows that out of a total of 8.2 labourers per plot only 1.8 or about 22% is unpaid or self-help.

The conclusion here is that there is very little self-help involved in the Dandora Project as most of the labour i.e. 78% is hired. This must have severely affected the affordability of the project as no loan was provided for hiring labour. If it is assumed that labour constitutes 25% of the construction cost the self-help componenet in the Dandora Project is only $(\frac{22}{100} \times \frac{25}{100} \times 100) = 5.5\%$. Thus the common assumption that site and service projects attract large amounts of self-help (free labour) which may reduce the cost of the

TABLE 5.10 MEAN NUMBER OF SKILLED LABOURERS PER PLOT BY BUILDING METHOD, DEC. 1977

BUILDING METHOD	A PAID	A UNPAID	A TOTAL	P PAID	P UNPAID	P TOTAL	SUB-TOTALS PAID	SUB-TOTALS UNPAID	SUB-TOTALS TOTAL
Building grounds	2.2	0.0	2.2	2.2	0.6	2.8	2.2	0.2	2.4
Constract-ors	3.2	0.1	3.3	3.2	0.0	3.2	3.2	0.1	3.2
Self Built	3.9	0.2	4.1	3.7	0.5	3.3	3.8	0.3	4.1
TOTAL	3.5	0.1	3.6	3.3	0.5	3.8	3.4	0.2	3.6

Source: D.C.D.D. Quarterly Report, Dece. 1977.

TABLE 5.11 MEAN NUMBER OF LABOURERS PER PLOT, BY BUILDING METHOD; DEC. 1977

BUILDING METHOD	A			B			SUB-TOTAL		
	PAID	UNPAID	TOTAL	PAID	UNPAID	TOTAL	PAID	UNPAID	TOTAL
Building groups	3.5	2.3	5.8	3.8	2.8	6.6	3.6	2.4	6.0
Contractors	7.1	0.4	7.5	7.1	0.3	7.4	7.1	0.4	7.5
Self-help	7.1	2.3	9.3	6.5	1.8	8.3	6.9	2.1	8.9
TOTAL	6.5	1.8	8.3	6.0	1.8	7.8	6.4	1.8	8.2

Source: D.C.D.D, Quarterly Report, Dec. 1977.

house to the allottee by as much as 25% is clearly dismissed in the case of the Dandora Project.

In comparation, a study carried in EL Salvador estimated that on average mutual help construction reduced the cost to the participants by about 10%[1]. From the El Salvador study and the present study it appears that in practice the self-help component achievable in site and service schemes is far much less than what is generally assumed. This is explained by the fact that urban dwellers tend to have full time jobs, either in the formal or informal sector, and they would not get time to construct the houses themselves. But even though they had the time their participation would still be limited by lack of skills.

5.2.1.4.2 COST IMPLICATIONS

Tables 5.12, 5.13 and 5.14 illustrate the cost implications in the use of the three different methods of construction. Contrary to what would be expected, building by contractor is cheaper than building by the other two methods, despite the fact that the former has the least number of unpaid labour per plot (see Table 5.11) and Table 5.15).

The implication here is that the use of a building method that utilizes more self-help does not necessarily reduce the cost of the house. In this particular case

TABLE 5.12 MEAN LABOUR COSTS PER ROOM, BY BUILDING METHOD DEC. 1977(SHS).

BUILDING METHOD	A	B	AVERAGE
Building Groups	683.6	1195.0	866.2
Contractors	945.0	1187.7	987.8
Self-Built	1062.7	1425.5	1171.6

Source: D.C.D.P., Quarterly Report, Sept. - Dec. 1977.

TABLE 5.13 MEAN MATERIAL COSTS PER ROOM, BY BUILDING METHOD: DEC. 1977 (SHS)

BUILDING METHOD	A	B	AVERAGE
Building Groups	3269.5	2770.6	3091.3
Contractors	2461.4	2971.3	2551.4
Self-Built	2740.5	2738.8	2740.0

Source: D.C.D.P., Quarterly Report, Sept-Dec. 1977.

TABLE 5.14 MEAN LABOUR PLUS MATERIALS COSTS PER ROOM BY BUILDING METHOD DEC. 1977 (SHS)

BUILDING METHOD	A	B	AVERAGE
Building Groups	3953.1	2965.6	3957.5
Contractors	3406.4	4158.9	3539.2
Self-Built	38033	4164.4	3911.6

Source: Calculated from Tables 5.12 and 5.13.

in fact, the statistics show a reverse situation (Table 5.15). It may be that the contractor is able to exercise more efficiency in the use of materials and labour, thereby spending less. Unfortunately most of the allottees could not use this method because it required a regular flow of funds.

TABLE 5.15 MEAN COST PER ROOM BY BUILDING METHOD AND NO. OF UNPAID LABOUR (1977)

BUILDING METHOD	MEAN NO. OF UNPAID LABOUR PER PLOT	MEAN COST PER ROOM (SHS)
Building Groups	2.4	3957.5
Contractors	0.4	3539.2
Self-Built	2.1	3911.6

Source: Derived from Tables 5.11 and 5.14.

5.2.1.4.3 SPEED OF CONSTRUCTION

Table 5.16 shows the duration of construction per room built, by building method. The building groups and self-built methods took a duration of 1 to 10 weeks to complete one room while the contractor took a shorter period i.e. between 1 to 6 weeks.

Thus in terms of speed and cost the contractor method emerged as the most efficient building method. As has already been stated only those allottees with adequate finance would engage a contractor due to the

TABLE 5.16 DURATION OF CONSTRUCTION PER ROOM BUILT, BY BUILDING METHOD, DEC. 1977

BUILDING METHOD	1 - 2 WEEKS NO.	%	3 - 4 WEEKS NO.	%	5 - 6 WEEKS NO.	%	7 - 8 WEEKS NO.	%	9 - 10 WEEKS NO.	%	TOTAL NO.	%
Building Groups	9	64.3	2	14.3	2	14.3	0	0.0	1	7.1	14	100
Contractor	8	47.1	6	35.3	3	17.6	0	0.0	0	0.0	17	100
Self-Built	25	50.0	14	28.0	5	10.0	2	4.0	4	8.0	50	100
TOTAL	42	51.9	22	27.2	10	12.3	2	2.4	5	6.2	81	100

Source: D.C.D.P., Quarterly Report, Sept.-Dec., 1977.

need to maintain minimum disruption once work has started as any stoppage of work due to, say, lack of materials may involve additional costs.

If the rate of housing consolidation were the only measure of affordability, it may be concluded that the project has ultimately succeeded despite the delay as almost all plots (except 4%) had the minimum required number of rooms commenced by December 1981. But other factors have to be considered before accepting such a conclusion.

5;3 POPULATION TURNOVER

A high rate of population turnover in a project is one possible indicator of affordability problems. However, this would only be so if there is evidence that households are leaving the project area as a result of financial hardships imposed by the project. Households may leave for a number of other reasons including selling out to higher income dwellers to realize a capital gain.

There are three ways through which the original plot allottees of the Dandora Project have left the project

a. Forfeiture for failure to pay the required initi deposit.

b. Eviction for defaulting monthly payments.

c. Sale of plots.

5.3.1. FAILURE TO PAY THE INITIAL DEPOSIT

There were 954 original allottees for Types A and B plots in Phase I of the Dandora Project. The allottees were informed from 7th October 1976 that they pay Kshs. 530/-, as deposit, and take possession of the plots within 6 weeks. By the end of the period, 55[14] plots, representing 6% of the total number of plots, had not been paid for. These were repossessed and offered to other people. The population turnover resulting from this action was 6%.

It is not difficult to establish why some allottees could not pay the required deposit, despite the fact that they were not available for interview. The maximum period given to pay was only 1½ months. Given the low incomes of the allottees it would take most of them many more months than the 1½ provided to raise the deposit, except if they obtained credits.

Table 5.17 presents the sources of deposit for 31 original plot allottees found and interviewed by the author. The Table shows that only 16% of the interviewed allottees could pay the initial deposit without resorting to borrowing. 84% of the allottees obtained credit, the main sources being two: relatives and friends, and Co-operative Societies.

TABLE 5.17 SOURCES OF DEPOSIT FOR PLOT ALLOTTEES

SOURCE OF DEPOSIT	NO. OF ALLOTTEES	%	AVERAGE AMOUNT OBTAINED PER PERSON
1. Co-operative Societies	9	29	1,800
2. Relatives and Friends	12	39	380
3. Employers	4	13	465
4. Commercial Banks	1	3	550
5. Savings	5	16	
TOTAL	31	100	

Source: Field Survey, December 1981.

The implication here is that contrary to what may generally appear, a capital sum of Kshs. 550/- for these income groups is large enough to warrant credit (borrowing). But credit was not guaranteed, and those who could not obtain it from the above sources and did not have any saving may have forfeited their offers, as they needed a minimum of between 4 and 6 months to save Shs. 550/-.[15]

5.3.2. EVICTIONS FOR DEFAULTING PAYMENTS

A relatively high rate of default for households whose payments lags persist, will manifest itself in population turnover as the project management evicts them

Here again one must be careful: default rates may be caused by other factors other than financial hardships, chief among them being the inability of the authority concerned to collect payments.

For Dandora Project, it can be fairly stated that the payment collection system is efficient enough. Payments are made at an office within the project site. Thus, the residents do not need to travel far to make their payments, a factor that may otherwise affect rate of payment. Allottees who fail to make their payments, which are due at the end of every month are served with notices immediately. The notices specify the amount of arrears, and warn that if the same are not paid within six months, the plot would be repossessed. With such efficient collection system, any default in the Dandora Project cannot be attributed to inability of management in collecting payments.

Table 5.18 presents the level of development of plots whose allottees have been evicted. The total number of evictions by December 1981 was 83, representing 9% of the total number of Types A and B plots. The Table shows that most (77%) of the defaults were for Type A plots which had not been developed at all. All the repossessed plots except five had less than two rooms development. These facts indicate that the allottees who were most likely to default, and ultimately be evicted, were those who had problems in developing their plots due to financial hardships. Once developed an allottee

TABLE 5.18 LEVELS OF DEVELOPMENT OF PLOTS WHOSE ALLOTTEES HAVE BEEN EVICTED AS AT THE TIME OF EVICTION

LEVEL OF DEVELOPMENT (NO. OF ROOMS)	A		B		TOTAL	
	NO.	%	NO.	%	NO.	%
0 rooms	64	93	-	0	64	77
1 room/Kitchen	3	4	11	79	14	17
2 Rooms +	2	3	3	21	5	6
TOTAL	69	100	14	100	83	100

Source: D.C.D.D., Files:

could let some or all the available accommodation to be able to meet the monthly charges, instead of losing the plot.

5.3.3 SALE OF PLOTS

Selling of plots by allottees in the Dandora Project is illegal and it is therefore very difficult to establish the number of plots which have been sold. There is, however, enough evidence that selling of plots in the project does take place.

The property columns of the local daily papers such as "Standard" is one such evidence. The plots are advertized for sale at between Kshs. 18,000/- and 120,000/ depending on the level of development. Since the

Plate No.7: Building construction continues in Dandora Phase one.

Plate No.8: A type A plot being erected in whole after sale.

advertisements do not state the actual sellers of the plots it is difficult to identify them.

Another clue suggesting that plots are being sold to higher income groups is the quality and speed of construction on some of the Types A and B plots (see Plate No. 5 and 7). It has been observed that a number of plots have not been developed in stages as it would be expected with low income people. Some units have exceptionally high quality finishes in terms of internal and external plastering and painting, ceilings, boundary walls, steel gates and drives.

A further indicator that may lead to the same conclusion is the class of residential estates that some of the plot owners live. Table 5.19 shows that 51% of the plots are fully rented. The owners of these plots are distributed in various estates as indicated in Table 5.20. Most of the absentee landlords (67%) live in estates of higher income groups than Dandora e.g. Milimani, Nairobi West, Donholm Estate, Buruburu etc. Only 8% of the owners live in Shanties such as Mathare Valley. This dispels the commonly held belief that a big number of plot allottees in site and service schemes let their units and go back to shanties to await another allocation.

TABLE 5.19 TYPE OF OCCUPATION BY PLOT TYPE AS AT DECEMBER 1981 (10% SAMPLE)

TYPE OF OCCUPATION	A NO.	%	B NO.	%	TOTAL NO.	%
Allottee only	7	10	3	11	10	11
Partial letting	21	31	9	34	30	31
Tenants only	36	52	13	48	49	51
Not occupied	5	7	2	6	7	7
TOTAL	69	100	27	100	96	100

Source: Field Survey, December 1981.

TABLE 5.20 CLASS OF RESIDENCE OF PLOT OWNERS NOT LIVING ON THEIR PLOTS

CLASS OF RESIDENCE OF ABSENTEE LANDLORDS	A NO.	%
High Income e.g. Milimani	2	
Medium Income e.g. Buruburu	14	
Lower Medium e.g. Umoja	8	
Low Income e.g. Dandora	4	
Shanties e.g. Mathare Valley	4	
Outside Nairobi	4	
TOTAL	36	

SOurce: Field Survey, December 1981 (information obtained from Tenants).

Plate No.9: A sold type A plot built and finished to an exceptionally high standard - estimated cost of construction Shs. 150,000.

Plate No. 10 : Type B plot suspected sold - note the expensive building materials used e.g. roofing tiles.

Estimated cost of construction Shs. 140,000/=

A number of cases of sale have however been confirmed. A survey carried out in November, 1978 revealed that 25 plots (2.6%) had certainly been sold, while 45 others were being investigated. The author's own survey has revealed a higher rate of sale as Table 5.21 indicates.

TABLE 5.21 PLOT SALES

	TYPE A PLOTS NO	%	TYPE B PLOTS NO%	%	TOTAL NO.	%
Confirmed sales	14	20	6	22	20	21
Suspected sales	17	25	4	15	21	22%
No information	5	7	1	4	6	6%
Not sold	33	48	16	59	49	51%
TOTAL	69	100	27	100	69	100

Source: Field Survey, December 1981.

Out of the 96 plots in the sample, 20 plots (21%) were confirmed sold, while 21 (i.e. 22%) others were suspected sold. If all the suspected sales are confirmed, the total population turnover arising from plot sales would be 43%.

It was not possible for the author to contact the original plot allottees to ascertain reasons for selling, but an earlier survey of sold plots, as presented in Table 5.22 shows that most (52%) of the

TABLE 5.22 CASE ANALYSIS OF 25 SOLD PLOTS: NOVEMBER 1978

CASE NO	PLOT TYPE	PLOT AREA	DATE OF SALE	STATE OF PLOT AT TIME OF SALE	PRICE	BUYER	DATE OF CONSTRUCTION	NO. ARREARS NOTICES BEFORE SALE	NOTES
1	B	119	April 777	Undeveloped	10,000	Same as case 23	1977	1	Legal documents
2	A	119	Early 77	"	?	New occupier	1977	2	Family occupying with kiosk
3	B	99		"	8,000	New occupier	1977	3	Family occupying
4	A	99	Late 77	"	11,000	Estate agent	1977-8	8	
5	B	99	Late 77?	"	10,000	?	1977-8	None	
6	A	119	Late 77?	"	7,000	?	1977-8	1	
7	B	119	Late 77?	"	8,000	?	1977	None	
8	A	139	Late 77?	"	8,000	?	1977-8	4	
9	A	138	Late 77	"	14,000	"Businessman"	1977-8	2	
10	A	138	Late 77?	?	?	Buyer with several plots	1977-8	3	
11	A	138	Late 77?	?	?	Shopowner, Old Dandora	1977-8	None	
12	A	119	Late 77?	?	?	?	1977	1	
13	B	139	Early 78	Undeveloped	30,000	Driving Sch. Employee	Late 78	2	Allottee had been in prison
14	B	139	Early 78	"	?	?	Early 78	1	Allottee died, wife sold
15	B	139	Early 78	"	?	Hospital Sister	Early 78	None	
16	A	119		78	"	15,000	"Businessman"	-	2	Trenches dug late 78
17	A	138	Early 78	2 rms started	8,000	?	1977-8	1	Wife died
18	A	119		78	1 + kitchen	30,000	Agent	1977	None	
19	B	99		78	2 rooms	25,000	Agent ex-village official	1977	None	Agent tricked old woman
20	B	99	Late	78	2 rooms	40,000	Neighbour's wife	1977	2	Long-established allottee didn't tell family
21	A	99	Late	78	1 + kitchen	30,000	Same as case 20	1978	4	
22	A	119		78	?	?	?	1978	None	
23	A	99		78?	?	?	Same as case 1	1977-8	None	
24	A	138		78?	?	?	?	Early 78	7	Buyer lives in kitchen
25	A			78?	2 rooms?	?	?	1977-78	2	Seller lives on plot (ex-village official who acts as agent for sales)

Source: Evaluation and Monitoring Study of the D.C.D.P

plots sold were undeveloped and none of the sold plots had more than two rooms. This implies that it is those plot allottees who had problems in developing their plots that were more likely to sell.

5.4 SUMMARY

In the foregoing analysis a number of indicators of affordability problems and their causes in the Dandora Project have been identified. It was noted that a large number of temporary structures were built during the first four months since the taking-over of plo by the allottees. The rate of construction of this type of shelters would have increased but for the warning by the City Council, in March 1977, that they would be demolished. The emergence of shanties in this project implied that the allottees were having problems in getting finance to construct permanent houses.

The rate of building consolidation has been found far much slower than was expected by the designers of the project. The construction of the required minimum two rooms per plot was supposed to be complete by May, 1978. But by that time as much as 44% of the plots had not been developed to the minimum required level, and 20% did not have any development at all. By December, 1981, 5 years after allottees took possession, about 13.5% of the plots had still not reached the required minimum level of development. A number of factors contributing to this slow rate of consolidation

were identified.

It was found that the amount of loan provided to the allottees was not sufficient to meet all the cost of materials as had been initially intended. The effect of inflation over the period of building consolidation reduced the value of the materials loan significantly for the allottees who could not take it immediately. Given that an allottee got money for work already done, only those allottees who had other sources of finance to be able to start work could obtain the loan. The fact that the allottees of this project were of the low-income categories meant that their resources were limited and most of them could not commence construction to be able to take advantage of the loan scheme. A further drawback to the loan scheme was that the loan was released in small amounts and, hence, the allottee could not reduce the cost of materials by purchasing and transporting them in bulk.

It was hoped that the cost of constructing the buildings by the allottees would be significantly reduced perhaps by as much as 25%, by the use of self-help labour. Accordingly, no loan was provided to meet the cost of labour. It was found, however, that most of the labour used in the construction was paid labour, and only 5.5% of the total cost of construction constituted self-help.

The three methods of construction (building groups, contractors and self-built), available to the plot allottees were examined, and it was found that contrary to what would be expected, the use of self-help (i.e. unpaid labour) did not lower the cost of construction, perhaps, due to misuse of materials and hired labour by the inexperienced free labourers. The contractor's method of construction, which had the least number of unpaid labour, proved the least costly to the allottees. Unfortunately most of the allottees could not maintain a contractor because he required a regular flow of funds, and, therefore, used the self-built method although it was the most costly.

Rate of population turnover was the other creteria used to assess the affordability of the Dandora Project by the allottees. It was shown that 6% of the original allottees forfeited their plots as they could not raise the required intial deposit of Kshs. 550. Another 9% of the original allottees had been evicted by December 1981, because they could not afford the monthly charges. From the field survey it has been estimated that about 21% of the original allottees have sold their plots while 22% are suspected to have sold. It was concluded that the main reason for selling was lack of funds to construct the buildings.

Putting the suspected cases of sale a side the population turnover in the project can be placed at (6% + 9% + 21%) = 36%. If the suspected cases of sale

are also confirmed the rate of population turnover would be (36% + 22%)=58%. This would mean that less than half of the original allottees benefitted from the project.

Footnotes:

1. World Bank: A Report on the Sixth Annual Conference on Monitoring and Evaluation of Shelter Programms for the Urban Poor. Ottawa, 1981, p. 30.

2. As an example, Consider a project whose costs are such that, if it is to pay for itself, beneficiaries must be charged C_1 = Kshs. 100 p.m. (a project with a higher level of services may charge C_2 = Kshs. 130 p.m.) If all households are assumed to be willing and able to set aside K = 20% of their income on housing, then a household must earn at Y_1 = Kshs. 500 to afford the project. If the income distribution is as follows.

Percentile Population	Monthly Income
10	Y_{10} = Sh. 450
11	Y_{11} = Sh. 500
12	Y_{12} = Sh. 550

then the project is affordable down to the 11th percentile of the population.

3. Dandora Community Development Department (DCDD) "Monitoring and Evaluation Study" No. 1, 1977, p. 49.

4. Nairobi City Council: Research Division Memo 1975/76, Eastern Mathare - Kariobangi: Some Socio-Economic Indicators.

5. Ibid

6. Op. cit. 26.

7. Op. cit. 1 p. 26

8. DCDD, Annual Report 1976, p. 7

9. Central Bureau of Statistics, Statistical Abstracts, 1976, to 1978.

10. Op. cit. 3 p. 44

11. Ibid

12. An additional loan of 900/- was made available to plotholders with black cotton soils in mid - 1978, op. cit. 3 No. 6 p. 45.

13. Op. cit. 1 p. 44

14. Op. cit. 8

15. Assuming that an allottee is able and willing to set aside 25% of his income for housing, Type A plotholders whose incomes averaged shs. 370 would need 6 months to save shs. 550/- while Type B plotholders whose incomes averaged shs. 550/- would need 4 months.

CHAPTER VI

6. CONCLUSION

This Chapter presents the major findings of the study, the conclusions arising from these findings, and recommendations.

6.1 FINDINGS AND CONCLUSIONS

This study set out to examine the problem of finance in the development of housing for the urban low-income groups through a case study of the Dandora Site and Services Project. An examination was made of the various policy responses to the problem of urban housing from the early years of urbanisation to the present time. It was noted that the Government has ultimately settled, at least for the time being, for "site and services" as the main policy tool through which it hopes to realize housing for the majority of the urban poor. Unfortunately, it has been found that the approach has failed to effectively reach the intende beneficiaries, and has instead benefitted the more well-to-do.

To explain this situation it was found necessary to examine the crucial question of affordability. Accordingly, two of the major objectives of the study were; to assess the affordability of the plot allottees of the Dandora Project, with a view to identifying factors influencing it, and to recommend measures for alleviating affordability bottlenecks in future site and services projects. Two broad criteria for

determining affordability - rate and quality of housing consolidation, and population turnover in the project area - were used. Under these two broad creteria, the various factors influencing affordability were identified and analysed.

It was found that the amount of loan provided to the plot allottees for the purchase of materials was inadequate. The project designers made estimates of the cost of materials as at 1976, but failed to provide for inflation over the period of construction. The statistics available showed that over the 18 months during which the construction of the required minimum number of rooms was to be completed, the cost of building materials had gone up by as much as 30%. Noting that 44% of the plot allottees had not completed the construction by the end of the period, the effect of inflation on the project was a major cause of affordability problems.

A part from inflation, the loan was inadequate in another way; as much as 23% of the plots were lying on black cotton soils which were difficult to build on. It was found that as at 1977, the holders of such plots required an extra shs. 860 for the kitchen and shs. 1206 for a room to meet the cost of the extra materials arising from extra excavations. Inspite of the fact that such difficult sites were known right from the beginning no extra loan was made available to their holders. This factor was a cause of inequity

and unaffordability, affecting nearly a quarter of the plot allottees.

The manner of loan disbursement was inappropriate too. The loan was given for work completed, amounting to retroactive financing. This implied that only those allottees who had other sources of finance could take advantage of the loan scheme. It was found that such sources were limited for the low-income groups because they could not meet the terms and conditions laid down by the financing institutions. A second reason why the method of loan disbursement was inappropriate was that it was released in small amounts, thereby, making it uneconomic as materials could not be purchased and transported in bulk.

The importance attributed to self-help in low-income housing was critically examined. It was found that despite much publicity its application has met with difficulties due to a general lack of building techniques, (and in some cases time), on the part of the plot allottees. The anlysis showed that the self-help componenet in the Dandora Project was only about 5.5%. This low level of self-help was a major cause of unaffordability because no loan was provided for labour, which is estimated to take about 25% of the total cost of construction.

Different rates of housing consolidation for plot types A and B were noted. It was found that the Type A plots which were expected to be cheaper because of their lower plot charges were actually more costly that Type B plots with higher plot charges. This was because while the Type B plotholder could immediately take occupation of his plot and live there while carrying on the extension work, the Type A plotholder could not do so unless he/she constructed a temporary shelter whose cost was estimated at an average of shs. 656 as at 1977. Construction of temporary shelters was initially illegal, and although it was later allowed, the authorities did not openly encourage it. So, most of the Type A plotholders continued paying rents elsewhere, estimated at shs. 120 per month as at 1978, while paying an average of shs. 76 p.m. as plot charges. The total cost of housing for the Type A plotholder was, therefore shs. 196 p.m. (excluding any transportation costs to and from the construction site) as compared to shs. 148 p.m. for Type B plotholders.

The construction of a temporary structure or the renting of accommodation by Type A plotholder had the effect of reducing the amount of finance that may have been available for the construction of a permanent structure. Thus, the rate of housing consolidation was lower for Type A plots than for Type B plots. Since the Type A plots were the more numerous, they determined the overall rate of housing consolidation in the project.

It was found that by the end of the 18 months during which all plots were expected to have been developed upto a minimum of two rooms, 44% had not reached this level.

Further causes of unffordability were identified by examining the population turnover in the project area. It was found that the initial deposit of shs. 550 the allottees were required to pay out some of them into heavy financial committments. The one-and-a-half month period given to pay the deposit was inadequate considering the low incomes, and hence savings,, of the plot allottees in this project. It was found that for those who managed to raise the deposit most of them (84%) resorted to borrowing, and mainly, from non-institutional sources such as friends and relatives. For the 55 allottees who could not pay the deposit the most probable reason was lack of funds as not everyone of the allottees could have been lucky enough to have rich friends and relatives. It was found that (taking into consideration the incomes of the allottees, and assuming 25% of the incomes could be saved for housing) a minimum period of four to six months was required if the allottees were to pay the deposit from their own savings.

The problem of eviction of the initial plotholders by the administration was examined. It was noted that the loan collection system was efficient enough and could not encourage default. Default, however,

occurred. It was found that the majority (94%) of the evicted allottees had not added any development on their plots over what was originally provided. This implied that it was those allottees who had problems in raising funds to construct the houses that were more likely to default payment and get evicted. This argument also applied to the cases of plot sales, where it was found that the majority (52%) of the plots sold had no development, besides what was originally provided as at the time of sale.

The factors outlined above led to problems of affordability in the Dandora Project, which exhibited themselves in terms of slow rate of housing consolidation and shanty development, and a high rate of population turnover estimated at between 36 - 58%. The recommendation that follow are aimed at alleviating these affordability bottlenecks, not in the Dandora Project, as this may be already too late but in future Site and Services Projects.

6.2 RECOMMENDATIONS

In view of the severe limitations in the application of "self-help" in urban low-income housing, loans given to plot allottees in site and services projects should aim at meeting the costs of both materials and labour. It is important, however, that any self-help is encouraged by offering to the plot allottees courses in basic construction techniques to enable them to

participate, whenever possible, in the construction of their own houses, hence reducing their costs. The work of the monitoring and evaluation team of the Dandora Project could be extended to include technical courses in future site and services projects.

The method of loan disbursement needs an improvement. First, the present requirement that an allottee can only get a loan for work already done is unsuitable and renders the loan scheme ineffective. It is here recommended that loans should be disbursed before the particular stage of the building for which it is provided starts, and not after it is complete. In order to guard against the misuse of such a loan the portion meant for materials could be given in kind. An institution specializing in the making and supply of the building materials required by the builder allottees could be established. This institution could then open-up branches at strategic points to serve sites and services schemes in the country. Further, it is recommended that in order to gain from economies of bulk purchase and transportation of materials, the loan instalments should be reduced from five to three. The first instalment could cover the cost of foundations and the floor slab. The second instalment to cover the wall and the roofing; and the third one to cover all fittings, such as doors and windows, and finishings.

Differences in site conditions should be taken into account in determining the amount of loan each plot allottee should get. This is because, as has already been noted, allottees of difficult sites, such as black cotton soils, have extra costs to meet and therefore require more money. This recommendation is made in recognition of the fact that low-income housing projects tend to be located on marginal lands, where the land is cheaper. There is need, however, to avoid a situation whereby money saved on the purchase of land is lost in extra work required in constructing on difficult sites. Thus, a full assessment of all the costs involved on the part of the project as a whole and to the individual plot allottees, should be made in advance and the right decision on the most suitable site taken.

Whereas it was the objective of the Dandora Project to allow subletting of some rooms by plotholders so as to supplement their incomes to be able to repay the loans, it was noted that no money was made available to the allottees for the construction of the extra rooms. The loan given was meant to cover the cost of materials for two rooms only in the case of Type A plots and one room in the case of Type B plots. Subletting can only occur after construction. So, if the allottees do not have the finance required to meet the construction cost of the extra rooms, then no subletting should be expected. It was found, however, that some allottees let out some or all the little accommodation they had,

and either lived in one room/kitchen or a shanty built on the site in order that they may be able to repay the loan. This led to an additional problem of overcrowding and slum conditions in the project area.

It is recommended that in order to achieve the national standards of a self-contained two-roomed housing unit per family, and at the same time make the units affordable to the low-income people, loans should be made available to the allottees for the construction of the extra rooms required for subletting. The profits reaped from the investment could then be used to enhance the affordability of the low-income people.

Flexible repayment systems should be introduced so that each family may be able to select the most suitable terms. Families whose present incomes are low and expect them to rise in future, for various reasons, including subletting, are most likely to prefer a progressive repayment system, whereby the family starts with a low repayment rate and increases it in future when incomes rise. Loan rebates may be introduced to encourage early repayment. Progressive repayment allows families to borrow more more, build better houses and to get out of the classical dilemma of trying to reduce housing standards in order to make housing affordable to the low-income people. Tables 6.1 and 6.2 have been prepared to illustrate the application and advantages of progressive loan repayment system in low-income housing.

Table 6 : 1 PROPOSED PROGRESSIVE LOAN REPAYMENT SCHEDULE FOR LOW-INCOME GROUPS : AN ILLUSTRATION

INCOME GROUP (SHS)	LOAN AMT. AFFORDABLE (SHS)	INTEREST RATE (%)	AMOUNT AFFORDABLE P.M. FOR 25 YEARS		
			PERIOD 1 1-5 (SHS)	PERIOD 2 6-15 (SHS)	PERIOD 3 16-25 (SHS)
A	49,000	8	80	500	700
	39,000	10	80	500-	700
(270-330)	31,000	12	80	500	700
	25,000	14	80	500	700
	21,000	16	80	500	700
B	58,000	8	100	600	800
	46,000	10	100	600	800
(331-500)	37,000	12	100	600	800
	30,000	14	100	600	800
	26,000	16	100	600	800
C	67,000	8	150	700	850
	54,000	10	150	700	850
(501-700)	43,000	12	150	700	850
	36,000	14	150	700	850
	30,000	16	150	700	850

Table 6:1 Contd.....

INCOME GROUP (SHS)	LOAN AMT. AFFORDABLE	INTEREST RATE (%)	AMOUNT REPAYABLE PER MONTH FOR 30 YEARS			
			PERIOD 1 (1-5) (SHS)	PERIOD 2 (6-15) (SHS)	PERIOD 3 (16-25) (SHS)	PERIOD 4 (26-30) (SHS)
A	52,000	8	80	500	700	500
	41,000	10	80	500	700	500
(270-330)	32,000	12	80	500	700	500
	26,000	14	80	500	700	500
	21,000	16	80	500	700	500
B	62,000	8	100	600	800	600
	48,000	10	100	600	800	600
(331-500)	38,000	12	100	600	800	600
	31,0001	14	100	600	800	600
	25,000	16	100	600	800	600
C	72,000	8	150	700	850	650
	58,000	10	150	700	850	650
(501-700)	47,000	12	150	700	850	650
	35,000	14	150	700	850	650
	29,000	16	150	700	850	650

Table 6:1 Contd....

INCOME GROUP (SHS)	LOAN. AMT. AFFORDABLE	INTEREST RATE (%)	AMOUNT AFFORDABLE P.M. FOR 35 YEARS			
			PERIOD 1 1-5 (SHS)	PERIOD 2 6-15 (SHS)	PERIOD 3 16-28 (SHS)	PERIOD 4 29-35 (SHS)
A	55,000	8	80	500	700	450
	42,000	10	80	500	700	450
(270-330)	33,000	12	80	500	700	450
	26,000	14	80	500	700	450
	21,000	16	80	500	700	450
B	66,000	8	100	600	800	600
	51,000	10	100	600	800	600
(331-500)	39,000	12	100	600	800	600
	31,000	14	100	600	800	600
	25,000	16	100	600	800	600
C	75,000	8	130	700	850	600
	58,000	10	150	700	850	600
(501-700)	46,000	12	150	700	850	600
	37,000	14	150	700	850	600
	31,000	16	150	700	850	600

Table 6.2 : ADVANTAGES OF PROGRESSIVE LOAN REPAYMENT ILLUSTRATED:

Terms: 35 years at 8% interest

INCOME GROUP	PRESENT MONTHLY AMOUNT AFFORDABLE FOR HOUSING (SHS.)	AMOUNT OF LOAN AFFORDABLE BASED ON THE PRESENT INCOME	AMOUNT OF LOAN AFFORDABLE BASED ON PROGRESSIVE REPAYMENT
A	80	99,400	55,000
B	100	14,000	66,000
C	150	21,000	75,000

Table 6.2 clearly illustrates the advantage of progressive loan repayment system. If the loan amounts to be given to families A,B and C, were based on their present incomes they would get Shs. 9,400, 14,000 and 21,000 consecutively. These loans would be too small for any housing unit. A progressive loan repayment system (which takes into account future increases in incomes) would enable families A,B and C to obtain loans amounting to Shs. 55,000, Shs. 66,000 and Shs. 75,000 consecutively.(see table 6.1 on p: 161)

The difference in rates of building consolidation noted, between Types A_ and B plots, arose from the fact that the Type B plot was provided with a room in which the builder allottee could live while carrying on the extension work. The Type A plotholder had no such accommodation on the plot, and had either to rent a house elsewhere or erect a temporary structure on the site in which he/she could live during the construction period.

It is recommended that all future site and services plots be provided with, at least, one habitable room to accommodate the builder allottee. This will facilitate building construction by ensuring that any funds that may be available for housing are used for the extension of the houses and not diverted to pay rents elsewhere, or to erect temporary structures on the sites. By living on the site, the builder allottee will also be able to guard his building materials against loss or damage. Further, the allottee will be able to save any transportation costs he/she may have incurred to and from the construction site.

Figure 5 is a proposed plot layout plan for future site and services schemes. Each housing unit contains four living rooms, a toilet and a shower. The initial provisions including one room, a shower and a toilet are shaded. It is expected that two rooms will be sublet to enhance the affordability of the plot allottee. The rooms are, hence, arranged in such a way as to facilitate this subletting. All the extension work to be done by the builder allottee

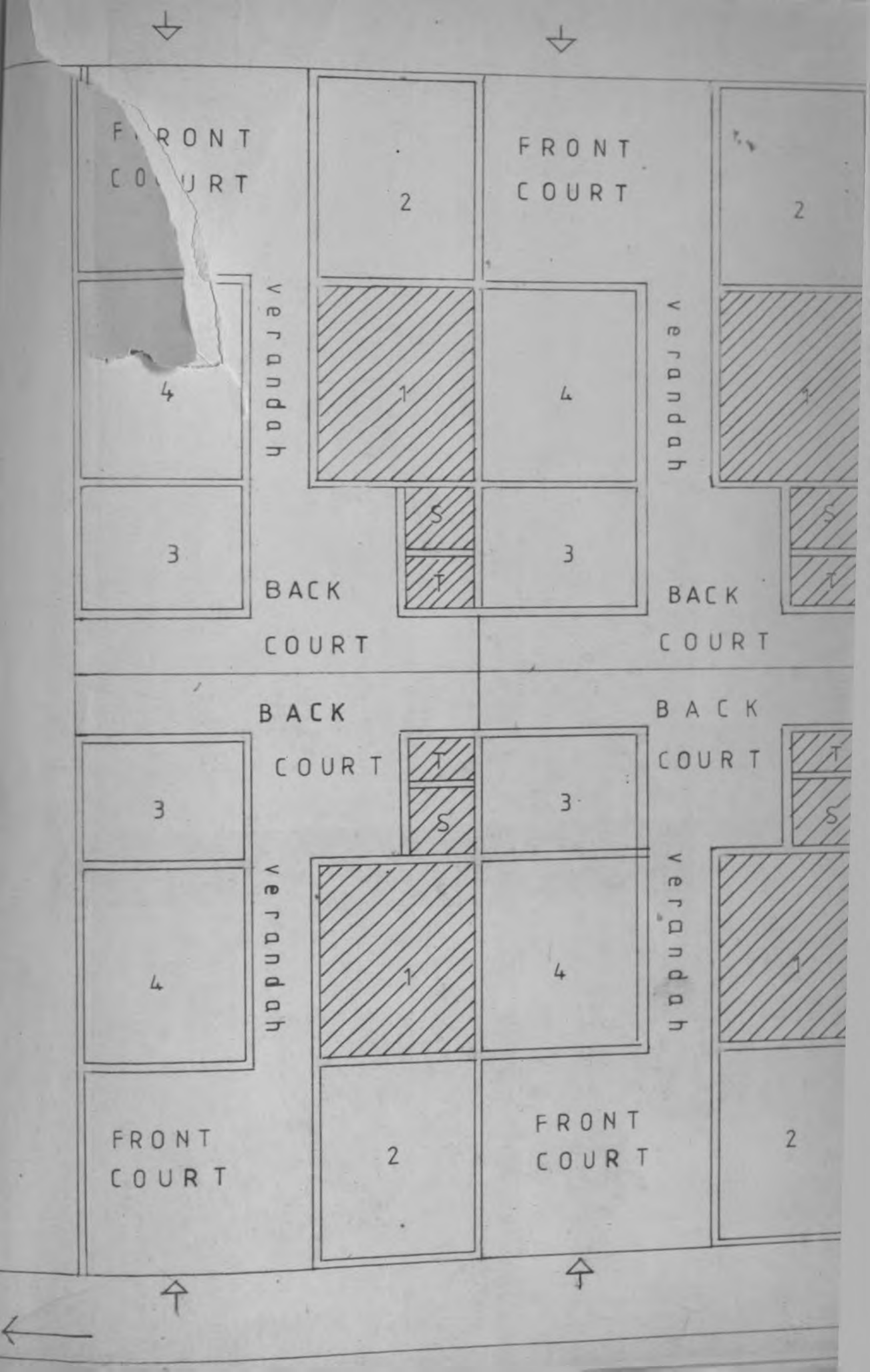
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Plate No. 11 : Shows 2 walls of adjacent buildings standing against each other. This is duplication of work.

will spring out from the initial provisions. It will be noted that a lot of economy is to be achieved in this plan as the housing units are connected and sharing walls. Plate No. 13 illustrates that there are unnecessary costs incurred in the construction of walls in the Dandora Project. In this plate the walls of the adjacent buildings are seen standing against each other. In the proposed plan such duplication of work is avoided by having adjacent buildings connected.

The present practice of allocating most of the available public funds to the medium and high income housing, as indicated in Chapter Three, whereas the greatest shortage is in the low-income housing is improper. The allocation of funds is based on what is referred to as "effective demand" in economics. This demand is inturn based on the "present income" and the prevailing terms of lending, both of which favour the higher income groups, with the result that low-income housing is normally thought to be obtainable only on subsidy. The magnitude of the housing problem is such that, given the present economic status of Kenya subsidies would have very little effect. A more effective way of dealing with the problem is by enhancing the incomes of the low-income by allowing and facilitating subletting, and by providing flexible repayment arrangements as has already been recommended.

It is also necessary to limit the amount of loan given to individuals from public and [illegible] institutions.

Luxury developments using public funds before basic needs have been met should be discouraged. It is recommended that housing finance institutions, such as the Housing Finance Company of Kenya receiving any financial assistance from the Government, be required to reduce their lending from the present maximum of Shs. 500,000 to a figure of, say, Shs. 200,000, an amount considered presently adequate for a medium - cost housing unit in Nairobi. In addition the terms and conditions of all such loans should be made in such a way as to discourage big loans. The introduction of progressive interest rates could be one way of achieving this objective. The effect of these measures would be to reduce the amount of finance going to the construction of high-income housing and to increase the opportunities of the people in the lower income groups to obtain credit for housing.

Finally, it is recommended that the Government should encourage the utilization of private funds in sites and services projects. The Ministry of Housing in conjunction with the National Housing Corporation and the Local Authorities should develop appropriate guarantee and security provisions, whereby private builders and financiers can lend money to the allottee for house completion with the allocated plot being used as loan security. The private loan programme in operation at Nanyuki to develop Site and Services Scheme plots should be researched as a case study to develop future national guidelines.

APPENDIX

PROBLEMS OF HOUSING FINANCE FOR THE URBAN LOW-INCOME GROUP:

A CASE STUDY OF THE DANDORA SITE AND SERVICES SCHEMES

HOUSEHOLD QUESTIONNAIRE

RESPONDENT PLOT ALLOTTEE----------

TENANT----------

1. Plot No.----------
2. Date of allotment----------
3. Date of occupation ----------
4. Size of family (a) Males----------
5. (b) Females----------

5. Number of rooms occupied by landlord----------
6. Income of the head of household----------
7. Income from other members of the family----------
8. Total household income----------
9. Occupation of head of household
   (a) Formal sector----------
   (b) Informal sector----------

10. Distance to place of work ----------Km.
11. Main expenses
    (a) Food
    (b) Energy ----------

(c) Education

(d) Transport

(e) House rent

(f) Others

12. How many rooms have you added since you were allocated the plot?----------

13. When did you start the construction?----------

14. If complete, when did you complete?----------

15. How many stages of improvement did you have and their costs?----------

16. What problems do you experience when building in stages?----------

17. How much money have you so far spent on construction?----------

18. What were the sources of finance?----------

(a) N.C.C Shs.----------

(b) Family savings shs.----------

(c) Co-operative loans shs.----------

(d) Borrowing from friends/relatives shs------

(e) Bank loan shs.----------

(f) Others---------- specify Shs.----------

19. What were the sources of labour?----------

(a) Hired

(b) Family

20. How many members of the family participated in the construction, each time work was going on

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21. How much was actually spent on hiring labour? Shs.

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22. How much was the cost of materials?----------

23. If you do not get finance to complete the house what do you intend to do?----------

(a) Sell the plot

(b) Let it

(c) Others - specify ----------

24. What plans did you have for obtaining your own house before you were allocated this plot?---------

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---

25. What was the source of your initial deposit?-------

(a) Personal savings

(b) Loan from bank - specify

(c) Loan from employer

(d) Loan from co-operative

(e) Borrowing from friends/relatives.

26. What is the total amount of loan have you borrowed?----------

27. What are the terms of your lenders?----------

28. How much are you paying for the new house? ----------

29. Former place of residence----------

30. Number of rooms occupied----------

31. Rented or owner - occupied----------

32. Monthly rental if rented?----------

33. Number of rooms you have let----------

34. Number of tenants----------

35. Rental per month----------

36. What technical advice have you had from the community Development officers?----------

37. Have you purchased the plot from an individual or it was allocated to you?----------

38. What observations can you make regarding this project?----------

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39. Is the plot owner living on the plot----------

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40. If the plot owner is not living on the plot where is he living?----------

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41. Quality of construction----------

(a) Very Good

(b) Good

(c) Fair

(d) Poor

42. Estimated Cost of Construction ----------

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