THE IMPACT OF RENT LEVELS ON MANAGEMENT AND MAINTENANCE OF LOCAL AUTHORITY HOUSING IN KISUMU MUNICIPAL COUNCIL

BY

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DECLARATION

This is my original work and to the best of my knowledge has never been presented in any other University for examination:

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This thesis has been submitted for examination with my approval as University Supervisor

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DR. Peter O. Ondiege

DEDICATION

This work is dedicated to my parents, brothers and sisters for their love and encourangment.

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ABSTRACT

The quality of Housing has become a matter ofserious concern to developing countries like Kenya, which are facing colossal problem of improvement of housing conditions. Capital investment in the built environment within an urban area is very expensive. This colossal sum of capital therefore requires huge investment to maintain so as to realize functional, financial and aesthetic role of the asset.

There is a general acceptance that building and infrastructure are a pre-requisite to national economic growth and their maintenance will ensure that assets survive their life service. However, there are several constraints which have led to unsatisfactory levels of maintenance with the following manifestations, leaking roofs and taps, blocked sewage, falling fences, broken and missing window panes, defective floors and walls, potholes in driveways and defective sanitary appliances.

Poor management of housing estates would in the first instance lead to loss in housing stock through rapid decay and deterioration of the structure and its surrounding. Such a state not only worsens the housing shortage but also involves loss of capital and revenue. Other symptoms include, unhealthy residential environments, spiralling rates of rents, congestions.

With the current shortage of housing especially in the major urban centres in Kenya, the existing housing stock is as important, if not more important as the newly constructed housing. In this context therefore, timely maintenance and rehabilitation work assumes a special significance as inadequate attention to this area could accelerate depreciation of building stock, ultimately leading to

considerable loss of national assets. The housing agencies therefore have to ensure effective control on maintenance costs and look for innovative means of cost recovery.

Housing once constructed is believed to be self-supporting. Part of the rent collected could be recouped for maintenance. Local Authority Housing are generally charged far below the market rent (at times as low as 25 per cent of the market rent). This has sometimes encouraged "over consumption" of housing and has led to a reduction in household mobility which has undesirable effect on labour market.

The failure to charge realistic prices which would reflect the cost of operation, maintenance and long term capital stock replacement has partly contributed to low funds available for the maintenance of the various infrastructural services within respective local authorities and little incentive to undertake further investment in it. It is also possible that where building maintenance is considered less important to say the provision of new housing, less resources in form of staffing, equipment and material will be made available for maintenance, resulting to rapid deterioration or dilapidation of the building stock.

Buildings begin to deteriorate immediately after completion and therefore the amount of maintenance to be undertaken increases with age of the structure. While preventive maintenance requires cheap availability of resources, lack of sufficient funds is always cited by many urban authorities, as a constraint to respond to maintenance requests. The councils have been accused of providing very poor services while charging rates in some areas not even rendering the services at all.

The paper therefore attempts to present the predominant defective elements of the building fabric, assessment of maintenance problems of council estates, urban authority maintenance practices and finally propose better management and maintenance techniques. This is in view of the fact that funds are in short supply and maintenance should not be carried out on ad hoc basis.

TABLE OF CONTENTS

CHAPTER FIVE

LIST OF TABLES

LIST OF FIGURES

LIST OF PLATES

CHAPTER ONE

1.0 INTRODUCTION

1.1 AN OVERVIEW

There is a general acceptance that buildings and infrastructure are a pre-requisite to national economic growth and that their maintenance will ensure that assets survive their life service. However, there are several constraints which have led to unsatisfactory levels of maintenance of capital assets, with evidence of some buildings facing rapid deterioration,to the point requiring excessive high cost of replacement. The Government has a fundamental role to play in promoting maintenance, through revising legislation, streamlining institutional arrangements, supporting skill development programmes, improving sources of funding and promoting community participation in certain selected programmes.

Local Authorities have experienced the greatest difficulty in fulfilling their responsibilities to provide local services within the limit of the sources of revenue. In the meantime, the population of municipal areas is growing at an average rate of 7% p.a (Republic of Kenya,1989). The demand for local services is rising steadily as a consequence of this population increase, while a clamour for higher quality of local services exacerbates the problems of Local Authorities further.

The implication of this is that unless there is planned maintenance of the existing facilities, the facilities may soon fall into a state of disrepair. Realistic pricing of these services become a pre-requisite to effective cost recovery especially if maintenance expenditure is to be derived from returns from the services, for instance rents for houses.

While the realization of a decent house within a suitable living environment for every citizen is no doubt an important goal in public policy, components of such an environment can not be easily discerned and blanket public action can frequently disregard important economic forces and issues on the road to a social ideal prescribed by the government.

The rents of greater majority of Local Authority dwellings are below the market rent level, for instances, some of the rental houses which were sold on tenant purchase scheme in Ondiek Estate are going at an average rent of ksh 1200/- while the council charge the same housing units ksh 300/-. Local Authorities are required to raise rents over a certain time period. This has an immediate political impact as the local councillors protect the tenants and is likely to prompt considerable reluctance and even defiance on the part of some Local Authorities to raise rents to market levels. The proposed rent increases often go obsolete before approval by the

Minister for Local Government such that by the time of approval another upward revision is necessary. The control therefore takes political rent control.

The rent control policy of Municipal housing has been levelled with criticisms. Robinson (1979) says that;

(a) By reducing the profitability of rented housing, it leads to reduction in the supply of such housing.

(b) The reduction in profitability also leads to a neglect of the existing stock of housing and a resultant deterioration in its quality.

(c) It leads to a reduction in household mobility yet labour should be mobile.

The relative low rent levels consequently leads to smaller margins for maintenance expenditure. This may imply neglect of residential properties and hence contributing to high incidence of maintenance problems.

In order to maintain already completed housing stock, planners and housing experts should lay more on planned preventive maintenance emphasis than hitherto been accorded to extend their productive life in this aspect. To achieve this, there is need to establish housing management concepts and techniques that would not only retain the utility of the houses, but also promote community development, social improvement and sound financial arrangement for repayment of

development costs as well as the maintenance of the estates .

In housing estates, it is common for organization to emphasize on provision of new houses while only minimal maintenance is carried out to existing. Not only are day-to-day repairs neglected, but efforts at improvement and rehabilitation are considered inferior to new constructions. This is true despite the fact that the economy of the country cannot afford the provision of new housing at the rate of household formations .

1.2 STATEMENT OF THE PROBLEM

The management of urban areas in Kenya is the responsibility of Local Authorities, Ministry of Local Government, Lands and Urban Development, and several community organizations, but urban authorities suffer from insufficient administrative system and chronic financial and management problems. The Local authorities are ill fated to be delegated such responsibilities. The failure of formal Local Government has been manifested in a number of ways, including inability to raise revenues, inability to provide and maintain infrastructure and services, emergence of corrupt practices and on the part of the residents, a general loss of confidence in Local Authorities (Agevi et al, 1992)

In some cases these problems particularly alleged corruption, have sometimes resulted in the abolition or suspension of local authorities by Central Government e.g. Nairobi, Mombasa, Kisumu, Naivasha before the general elections in 1992. A major reason underlying the public's loss of confidence in the formal Local Government has been the absence of accountability.

Several accusations have been levelled against the Local Authorities especially in the area of services they render to the public. The former National Chairman of the National Chamber of Commerce and Industry, Mr Macharia, said the Local Authorities were providing 'very poor' services while charging high rates in some areas not even rendering the services at all (Daily Nation, 29th Oct.1983) Such accusations have sometimes militated against implementation of Local Authority Policies.

Tenants pay rents to maximize housing amenity which is a function of maintenance standard of the building and its surrounding. Where the property is poorly maintained, the tenants will be unwilling to pay rents. Tenants normally complain about poor services in the housing estates such as leaking roofs,non-collection of refuse and the non-painting of the housing units.

Poor management of housing estates would in the first instance lead to loss in housing stock through rapid decay and deterioration of the structure and its surrounding. Such a state not only worsens the housing shortage but also involves loss of capital and revenue.

The study aims at assessing the maintenance problem incidence in medium rental estates viz-a-vis low rental estates, and seek the possibility of increasing rent levels with a view to improve the maintenance standards. The relatively low rents charged on council houses minimizes the financial bases of Local Authorities, leaving no margin for maintenance. It is this inability to provide enough housing stock that makes it necessary to maintain and modernise the existing stock so that they can last much longer for the future generation.

Maintenance problem also emanates from the house design. The houses with single rooms are generally overcrowded and they are provided with communal facilities. Such facilities are not the responsibility of one tenant and therefore are generally carelessly used. Breakages of water taps, toilet components are for instance a frequent occurrence. Kisumu units are provided with separate facilities and command relatively high rents compared to Mombasa and Thika (Syagga, 1979) due to higher construction costs. Its

units therefore do not attract the very low income families.

We still in the 90's have serious, indeed often desperate residual housing problems - particularly for the worst off in our society. We have families living in squalid conditions. We have a system of subsidies which distributed aid to housing in a whimsical manner and we have lurches in total investment in housing which amongst other things have seriously reduced employment creation in the building industry from 9.7% in 1989 to 3.9% in 1990. This has damaged the efficiency of our building industry.

It would be generally agreed that among the symptoms of housing problems are spiralling rate of rents , unhealthy residential environments and congestion, high proportion of poor quality houses, long journeys to work and housing market that caters only for minority. Urban housing are either too few or economically and socially irrelevant to the majority of the urban population. Solution to this problem lies with not only development of new units but maintenance of existing stock also.

As a political football, housing has suffered from ill conceived and excessive Legislation, successive short-lived subsidy systems and incongruous taxation policies. Strong policy initiatives are clearly overdue in the field of housing as subsequent

analysis will show.

Oyugi (1978) argues that the financial situation of the local authorities is a problem of increasing demand which could not be satisfied with the available resources. He further says that the little that the local authorities collect is poorly managed. Corrupt practices rob the councils of their revenue. Over costing and payments are common practices during contracts. This makes even maintenance works unduly expensive. This is a financial loss i.e. cuts down revenue on rents.

These illustrate that poor management procedures will only make it more difficult for us to provide more housing and maintain the existing stock because of loss in revenue that could otherwise have been recouped for development.

It is also realized that rapid deterioration of the existing stock helps to escalate demand for new housing because poorly maintained houses are not only unpopular or command low rents but quickly become unusable.

An estate that does not have refuse and garbage removed regularly become a health hazard with possible outbreaks of epidermic diseases such as cholera and diarrhoea. It is not uncommon to find that in some estates in Kenya refuse is not collected for days with the result that the estates become dens of flies.

The need for this study arises from the declining conditions of municipal housing. Finance has always been cited as a constraint to maintenance work. An analysis of rent structure is therefore necessary to establish 'reasonable' rent levels to facilitate maintenance of municipal housing.

To the members of the public, a house should provide a home with the necessary amenities and facilities for a happy life. Where tenants are unhappy they will probably react negatively to the detriment of the property. Tenants may also refuse to pay rents regularly thereby reducing the ability of the council to carry out meaningful maintenance. Thus maintenance problems of whatever source tend to be cyclic. The study therefore attempts to identify whose responsibility maintenance of council houses should be, and to suggest better management techniques.

The rent structure for municipal houses influences the ability of the council to carry out the maintenance as well as eligibility of tenants in terms of affordability. High rents may imply stronger revenue base and even effective repair works but excluding the low income earners from such housing or leads to sub-letting. This influences the frequencies and nature of the repairs. The other problem arises from inefficient rent collection systems and eventually the expenditure of the little collected

with cases of over costing.

Answers to questions poised under review may not be easily found but they have implication on maintenance of local authority housing and accessibility to such housing. It is therefore necessary to carry out a study that will identify and where possible quantify the impact of these problems on municipal housing.

1.3 OBJECTIVES OF THE STUDY

The primary objective of the study is to determine the relationship between the incidence of maintenance problems and the rent levels of Local Authority housing .

The specific study objectives are:

(i) To evaluate rent structure of Local Authority housing and collection system by the council.

(ii) To analyze the maintenance practices by the council in relation to cost, frequency and the type of the repairs and maintenance.

(iii) To assess the maintenance problems in the various council estates.

(iv) To propose better management techniques of municipal housing estates.

1.4 STUDY HYPOTHESES

The following have been adopted as study hypotheses:

1 . H_0 :There is no difference between maintenance expenditure on low rental estates and medium rental estates.

H_1 : Alternative.

2 . H_0 :Maintenance problems of municipal housing is not a function of the council's budgetary priorities.

H_1 : Alternative.

3 . H_0 :Incidence of maintenance problems of municipal housing is not a function of the apathy of the tenants.

H_1 : Alternative.

1.5 SCOPE OF THE STUDY:

Management and maintenance of housing is a broad field that extends from the design to demolition. It is practically difficult to cover all the aspects of housing managements due to the constraint of time and finance.

Much as there may be other issues affecting the maintenance of the local authority housing such as legal status, operational relationships with the central government, the effects of the political dynamics and their functional bases, rent levels would

be given most prominence; for the detailed analysis with regard to the temporal limits, the study is focused on the time period between 1980-1992.

Though rent levels would be used for analysis of maintenance problems, an appreciation of other factors affecting maintenance of council housing would be made.

The aspects of maintenance functions to be studied include the observed defects during the survey, rent structure and policy and the accounting, maintenance and repairs organisation, major repair works, rent collection procedures and expenditure.

1.6 RATIONALE FOR THE STUDY:

Economic development follows a variety of courses and assumes different patterns at different times and in different parts of the World. But whatever the particular content of development programmes, economic growth implies increasing investment in fixed capital assets. Since building is an essential component of all economic activities and the demand for residential building is a function of rising output and incomes a large part of any country's newly created assets must appear on the landscape in the form of bricks and mortar. Thus economic development can not be sustained for long without a rising level in building activity. The need for a strong and efficient building industry

becomes apparent early in the process of development. If it should prove inadequate in meeting demands placed upon it, investment may be slowed down and development be grounded to a halt.

There is little doubt that cities will continue to grow and attract people from the rural areas. This is due to the present rural-urban development inequalities. The population movement will lead to inevitable mushrooming of slums and squatter settlements in the urban and peri-urban areas. A 1987 report showed that urban areas in Kenya require 60000 dwelling units each year (Department of Housing, 1987:2) The country was not meeting its housing demand as it constructs less than 10 per cent of the annual requirements. It is very important that we orientate our policies and strategies making them more pragmatically inclined towards the uplift of living standards of the inhabitants of these areas (Agevi,1992).

In Kenya, urban management function would appear to fall squarely on urban local authorities. The number of local authorities in Kenya has rapidly increased since independence. A complex hierarchy of local authorities has also evolved. This consists presently of 30 Municipal Councils, 17 Town Councils, 40 County Councils and 27 Urban Councils.

While the authorities have grown in numbers, they have definitely not done so in terms of increased power, competence and resource bases. Urban residents are increasingly getting disillusioned by the poor performance of local authorities in terms of provision and management of urban services and infrastructure, housing being one of them. There is therefore a need to guide urban development towards increased finances for maintenance of the existing stock.

Urban management has become a contemporary issue due the rapid urbanization trend. The rapid urbanization is coupled with a series of problems, housing featuring very prominently.

Housing problem manifests itself in the mushrooming of slums and squatter settlements especially in the major urban areas. This study therefore is an attempt to delve into implications of resource availability and management of Local Authority housing. This would help to appreciate the role of Municipal housing in the urban housing market.

If there is a good housing in the country, it is common knowledge that most of the known health hazards will be avoided, hence the lives of the citizens will be in good condition and this enhances the availability of man power to be channelled in the organs of the state. If there is poor housing, most of those who can not afford resort to squatting and this

in turn imply the use of increased funds in public health facilities.

The existing local authority housing are not only few but are suffering maintenance problem. The cost of repairs is far below the cost of construction of the new housing. Good housing management and maintenance is in keeping with the utility of the house for the present and future use.

Housing once constructed is believed to be self-supporting. Part of the rent collected could be ploughed back into maintenance work. The study therefore attempts to analyze the Local Authority budgetary priorities in terms of rent collections and maintenance expenditure as a proportion of rent collected. Maintenance expenditure has a direct implication on the maintenance standards of the facilities.

The maintenance problems of housing faced by Municipal Council of Kisumu are likely to be faced by other local authorities.This therefore makes the study necessary because the conclusion arrived at can be applied to other municipalities.

1.7 METHODOLOGY.

Having identified the need to carry out the study,the researcher collected data using questionnaire, interviews and from secondary sources.

A prepared questionnaire was used in the interviews of the household heads selected.Information on income and rent paid, infrastructures, maintenance and repair problems building characteristics was collected. All interviews were made at the resident of the respondent to ensure on-the-spot observation on the condition of housing facilities.

Chief officers of the municipal council were also interviewed. A prepared recording schedule was used to record the information procured during the course of interviews. The information revolved around rent collection system and expenditure, maintenance and repair works and problems of management of municipal housing.

1.7.1 SAMPLING DESIGN:

For effective scientific research,the municipal housing were visited.From each estate, questionnaires was administered to the households as sample units.

The sampling process which was employed in each spatial unit was systematic random sampling.The list of tenants was obtained from the council offices and the names were sampled at specified intervals. The number interviewed is a proportion of the total tenants in each estate. This was maintained at 4.5% in each sampling unit-estate. This was done to ensure representative sample.

A questionnaire was then administered to household head. To provide a clear picture of the housing conditions and the level of maintenance, photographs of some building elements were taken.

1.7.2 DATA ANALYSIS:

The data collected during the survey was analyzed using computer packages including SPSS, Havard Graphics and Lotus 123. The data is presented using descriptive statistics including Cross Tabulation , Frequency Distribution and Charts.

Maintenance problems was measured in terms of occurrence of defective elements within a building. These maintenance problems are presented in terms of percentage of housing units within each estate with particular defective building element. This allowed for the visualization of the most defective element within Municipal housing and the estate with the most occurrence of maintenance problems.

To test the statistical significance of the difference between mean rent charged and mean maintenance expenditure ,T-test was used.

CHAPTER TWO

2.0 LITERATURE REVIEW

In this section an attempt has been made to present a brief review of literature pertinent to the subject of the study.

2.1 LOCAL AUTHORITIES AND URBAN MANAGEMENT

The history of Local Authority Housing really begins in 1919 when the Housing Act of Britain placed the responsibility for dealing with the housing needs of their areas with the local authorities.

The Local Government system in Kenya plays an important role in the process of development at the local levels of the country. The basic role of the Local Authorities is to stimulate economic and social development by providing vital infrastructure services that are required in their areas of jurisdiction. Through the provision and maintenance of such facilities and services, they can support the private [illegible] growth and development. Local Authorities must therefore be in a position to engage themselves in capital formation activities, at the same time incorporating the local community in the provision and management of the facilities.

Although the local authorities are thought of as being mainly concerned with the provision of housing for rent, this is only one, albeit important, part of their multifarious responsibilities, which encompass

all tenure groups from provision of housing subsidies to slum clearance and renovation programmes (Robinson, 1979)

Local Authorities have wide and complex functions as duties to carry out for the public, inter alia, construction and maintenance of public roads and streets and housing, maintain gardens and parks and to provide health, water, and sanitary services and to manage purely such services as markets and cemeteries. Their primary concern is the regulation of the environment in which people live and work. The exercise of all these powers involves the expenditure of public money (Agevi, 1992). To be able to carry out these functions council's must raise money from specified and approved sources.

(i) From within a council's area by people paying taxes, licences, cess fees and charges levied by a council for use of its services.

(ii) From outside a council's area e.g. Government grant.

Because of limited financial bases Local Authorities need to complement with the community and/or NGO's to realize the provision of these facilities or services.

In Kenya, the structure and operation of Local Government are modelled on British framework. Only a few scholars have questioned the transferability of

Western management traditions to the African context. (Moris , 1977) The Local Authorities are established under Local Government Act, Cap 265. They have enormous Legal and Institutional responsibilities in the planning and management of urban areas (Agevi, 1992) Local Authorities in Kenya were created with the express aim, inter alia, to encourage the participation of the people in their local affairs and enable the Government to become more responsive to the needs and wishes of the people either directly or through their elected representatives.

The Local Authorities in Kenya are faced with a number of challenges particularly as new urban trends emerge. With political independence, the indigenous population which had hitherto far removed from previous development process assume an important status in the urban development and management.

Kenya is rich in traditions of self-help and community participation in both the formal and informal networks. Some of these have been tried in a number of projects in Kenya. It has been observed that self-help community participation may be based on time tested traditions and/or new economic and political formations. However, Government has mostly seen community participation as a rural rather than urban management strategy (Diana and Syagga, 1989:28)

A number of Local Authorities have started providing outreach services as some community based organizations. For instance, Naivasha Urban Council is serving 147 Women Groups with advice on house building, water storage, transport and marketing of milk.

The participation of the people has been inhibited by poverty exhibited by most urban residents. Over 60% of the urban population can be categorised as low income earners. With regard to democratic management of urban areas, the structure of Local Authorities are so rigid in terms of decision making process. There is a parallel between the professionals and the councillors who owe allegiance to the electorates

Smoke (1987) argues that the failure of the Local Authorities to set and adjust taxes and user charges and local fees at an economic rate causes the problem of poor cost recovery from some of the revenue generating projects. Whereas this may be so, Smoke does not put forward the capital cost of such projects compared to the ability of local user populace to pay for their use at an economic rate and therefore generate enough revenue to pay for the loans and remain with surplus to pay maintenance operation.

According to Murumba and Nderi (1982) the principal causes of financial problems of Local

Authorities in Kenya emanates from the inadequacy of traditional services of the Local Authorities in conjunction with the ever growing population of urban centres. Whereas finance is cited as a bottleneck in management and maintenance of municipal housing, the issue of accountability still remains glaring in many local councils. The little collected is sometimes mismanaged. Minister for Local Government, Mr Ole Ntimama cited financial mismanagement and non-commitment to duty by the council's staff as some of the reasons for dissolving the council (Daily Nation, April 13, 1993)

Agevi (1992) argues that management of urban areas is the responsibility of Local Authorities and Ministry of Local Government, but urban authorities in Kenya suffer from an inefficient administrative system and chronic financial and management problems. They are ill fated to be delegated such responsibilities. It is the considered opinion of this paper that further delegation of these functions requires sharing of responsibilities between the local populace and council authority. The prime objective being, to enhance effective public participation without losing sight of their income levels.

This calls for concerted efforts of councils and urban residents in the management of urban facilities. Better management and maintenance of urban facilities

may extend their economic life. Hence housing supply can not have robust solution without proper management and maintenance of the existing stock.

2.2 HOUSING MANAGEMENT AND MAINTENANCE

Building maintenance is a functional, social and economic necessity. Maintenance refers to work undertaken in order to keep restore or improve every facility i.e. every part of a building, its services and surrounding to a currently acceptable standard and sustain the utility and value of the facility. (Department of Environment, HMSO, London, 1972) Maintenance of buildings entails the repairs or replacement of worn out or damaged parts in order to keep the building in the state corresponding to its original technical characteristics and function.

Man has needed to be housed and whether this has taken the form of crudest modifier of climatic conditions or a symbol of affluence where weather protection has long since been taken for granted and embellishments apparently dominate, the life of family groups has rotated around this central focus. With the passage of time, the range of housing has widened and the means of assessing its relative qualities has represented an increasingly perplexing task. The development of housing has been carried out by both private, institutional and government agencies.

Private development constitute over 3/4 of the total units (CBS, 1989:132). It is however not known with any precision why the national physical assets are falling into disrepair (Syagga, 1985:1)

While it is generally acknowledged that inadequate finance is a major bottleneck in proper management, it appears less obvious that other factors such as poor management organization for maintenance works or irrelevant rent policies may be more significant in causing maintenance problems. Bad management may result in wrong priorities, in budgeting, with the resultant neglect or relegation of maintenance. Realistic pricing is important since housing should be self-supportive. But again the council officials should be more accountable to avoid loss of revenue through corrupt practices. The little collected if well spent may improve the maintenance standards.

The age of dwellings has sometimes been used as an indicator of the state of the national housing stock. While this yardstick may give satisfactory statistical results nationally, the 'average' age of replacement dwellings is only of limited interest to the planner concerned with conditions in a particular urban area .(Duncan, 1971) The poorest of the very old can be demolished and the remaining can undergo modernization. After all, it is often not the age of

the structure which is so important; rather the extent to which it has been modernized during its lifetime and the standard of maintenance which it has enjoyed. It is not uncommon to find old buildings in better state of repairs and maintenance than relatively new buildings. This may be attributed to other factors like good workmanship, design, and user activities.

The linking of housing stock with a time piece is indeed an appropriate association for just as the cycle of a timepiece recurs every twelve hours, so is each house or housing group at some stage or other in the total replacement cycle. A house does not collapse after 100 years but rather its life can be lengthened or shortened very substantially according to the treatment it receives.

Mbogua (1967) in his paper on housing management noted that the character of a nation is influenced by the homes of the people. Good homes require good housing. Housing is a vital factor in the nation's economic and social development and its effects have a bearing on the morale and stability of a country. (Mbogua,1967:31) Good management of housing is a contributory factor in nation building and the well being of the people . It is therefore imperative that housing management has to be treated as a business enterprise alongside its social and welfare aspects The houses must be well looked after, fairly rented

and economically managed to extend their life spans.

Syagga (1979) notes that poor management of housing estates would in the first instance lead to loss in housing stock through rapid decay and deterioration of the structure and its surrounding. Such a state not only worsens the housing shortage but also involves the loss of capital and revenue hence default or non-repayment of loans. Here Syagga does not tell us the interplay between rents and maintenance level. The revenue base of the council could be boosted by improved rent collection policies. Efficient and effective rent collections may enhance maintenance of municipal housing especially if maintenance rank high in their budgetary priorities.

It should be recognized that the physical provision of housing alone does not necessarily bring about the desired standard of the house (Syagga, 1975: 12). The study would seek the opinion of both the and the council officials on who should be responsible for maintenance of urban facilities. Urban management function which has traditionally been viewed as a responsibility of the local authorities should now be pragmatically oriented to achieve the desired standards of the existing facilities.

In terms of health, Section 117 of the Public Health Act, Cap. 242 of the Laws of Kenya, specifically requires Local Authorities to ensure that

buildings are constructed and maintained in such a manner that they are neither injurious, unsafe nor dangerous to health. The study wishes to identify the common defects in a building as well as the environment around it. This will enhance the understanding of the municipal housing conditions and suggest ways and means to improve the housing to achieve the original aim they were intended for - improve the welfare of the low income earners .

Maintenance, conversion and improvement of the old housing stock give jobs to the poor and better housing to urban residents. Within the constraints of income and time, this enables households to get better shelter more cheaply than moving to newly built dwellings (Strassmann, 1982) Since the process is largely informal, poorly documented and little understood, it has received meagre support from public agencies and financial institutions in many local authorities. Indeed some officials hinder the process. The tendency may now be reversed, however, if a suitable financial mechanism were devised.

New housing development may not always be a panacea to housing problem. If anything old structures constitute the greatest proportion of total housing stock as is reflected in the subsequent sections. This therefore calls for ways of securing funds for timely maintenance before the houses reach state of

disrepair. One basic source of maintenance funds is rent collections. There should therefore be clear cut policy on rent structure of municipal housing.

2.3 RENT ASPECTS OF LOCAL AUTHORITY HOUSING

Rent refers to periodic payment made to the landlord by the tenant in consideration of the rights granted to the tenant under the lease. Rent is mainly paid for the occupation and use of the land or premises owned by the landlord. David Ricardo (1772-1823) defined rent as a payment for the original and indestructible powers of the soil.

The rent paid approximates to the full annual income produced by a property after all other costs incurred in its use have been met. Thus the rationale for the payment of rent is that the developer or the landlord is in a position to recoup his money invested in that particular property after some time. Other important reasons for charging rent include the following ;

(i) For proper maintenance of the property so as to prolong its useful life

(ii) To use these payments for further new developments or re-development of the same property

(iii) To use these payments on other personal uses

The quality of the house we are able to occupy is largely a reflection of what we are willing and able

to pay for. In many countries, the nation is willing to set a portion of its income in order to treat housing as a form of social service, so that low income families are able to occupy houses of a better quality than they might otherwise be able to afford in a completely Laissez-faire society (Duncan, 1971) For instance, the share of the total GDP in 1976 was 6% and its contribution to capital formation was 42%. Government efforts are seen in the housing development through National Housing Corporation e.g. Kibera High Rise and several institutional houses which are built through the Ministry of Public Works.The extent to which a nations housing falls below any particular standard may be as much a reflection of its priorities as of its wealth in aggregate. This is not always the case as is reflected by the incomes of Kisumu Municipal Council tenants. The houses have found their way to the middle income earners partly because of the allocation procedures and rent structures. The low income earners are pushed to poor quality housing of the slums like Nyalenda, Manyatta and Obunga. It is often asserted that housing investment requires too many inputs to produce a few outputs. In United States it was found out that it takes US $7.00 of investment to produce US $1.00 increase in value of additional housing services per year and only US $1.80 of added investment would be required in a steel plant to yield

US $1.00 increase in the value of steel produced per year (Abrahams, 1964) This state of affairs could lead to housing being subordinated in the priority of expenditure, with the result that only few housing units may be produced or repaired. But in practice Local Authorities and Central Government should consider housing as an investment good if the stock and quality is to be improved.

The Local authorities have regarded housing as a trading undertaking to be expected to produce a surplus. They have however historically recognized the need for housing to be self financing, a concept which has been interpreted as relating to the recovery of the direct cost attributable to the plots and houses on a specific scheme rather than any attempt to ensure that all the costs of housing provision should be recovered from the council's housing operations as a whole. Moreover there has been a desire to keep costs and rents as low as possible with the result that not all direct costs associated with housing provision like maintenance expenses have been charged. This in some instances has resulted in accumulation of maintenance work and hence high incidence of maintenance problems. The frequent occurrence of maintenance problems is a health hazard to users e.g. sewerage bursts, leakage through roofs, non-collection of refuse. The aesthetic qualities of houses are also

killed and the houses degenerate to slums. In Britain, until 1972, Local Authorities have been forced to determine their own rental policies and most had adopted a rent pooling scheme whereby the rent of the house was related to total average historic costs including subsidies of all local authority houses irrespective of when such individual housing was built and at what cost (Stafford, 1978: 128) Housing rents were therefore not tied to actual cost of housing, but to the age, size, services and conditions of the individual house. In Kenya, once the municipal houses are completed, rent levels is usually the discretion of the respective councils and the Ministry of Local Government. This makes rent structure vulnerable to political abuse with consequent rent charged below economic rent. Consequently, revenue from housing is minimized. The calculation of rents should be based on gross construction cost. The annual rent charged should be approximately 11.4% of the construction cost (Syagga, 1979 : 137)

Rent control was first introduced in Britain in 1915 as one of a number of price controls designed to protect the consumers from the inflationary conditions that were expected to rise because of war time shortages. Initially the control was viewed as an ad hoc emergency measure that could be dispensed with at the end of the war, (Robinson, 1979). Rent Control is

necessary to protect the urban poor. In this way, they are able to occupy houses which in a complete Laissez faire situation they may not afford.

Rent control is usually cited by writers of elementary economics textbooks as an example of a price control policy, which by restricting price below its equilibrium level, can be expected to result in unsatisfied excess demand for housing and a reductio in supply (Lipsey, 1975: 117-119) Rent control may be defined as a policy designed to protect tenants from the market rents which otherwise would result from a shortage in the supply of rented housing and high rents. The policy involves specifying the maximum rents and the policy also requires a tenant should be guaranteed a minimum standard of accommodation and the right to continue occupying a dwelling at a designated rent. At present, this is not the case. In Kenya it is hoped that Rent Restriction should benefit both the tenants and landlords. This means that if well administered both tenants and landlords would gain. But due to legal and administrative constraints this has not always been the case.

It is frequently asserted that rent control encourages 'over consumption' of housing and has led to a reduction in household mobility. The first claim is a straight forward application of consumer demand theory which predicts that a reduction in the price of

a commodity will lead to a greater quantity being demanded. The controlled rents below the market level, it is argued leads to greater consumption of housing space than would occur in unregulated market. Hence in some instances, relatively small families occupy more rooms in regulated market.

Household mobility is associated with a particular form of rent control; whereby only existing tenancies are controlled. In such circumstances, a tenant who quits a controlled property is not likely to be able to find alternative housing at a rent similarly to his previous controlled level. This is seen as undesirable side effect of control when the labour market requires mobility. Some tenants continue to occupy council houses even after retirement because of minimal rents.

Moorhouse (1972) and Frankena (1975) have developed formal models to show how reducing maintenance and repair expenditures will be the optimal response for the profit maximizing landlord faced with rent control. In their work they both make use of the concept of housing as a vector of attributes. Thus the rent (r) a landlord receives for a dwelling may be expressed as the sum of the average price per unit of services (p) multiplied by the number of units supplied (q), that is r=p.q When r is low the amount that goes into maintenance expenditure

is accordingly low. This has a direct bearing on the maintenance standards especially if maintenance generators are at work.

President Moi (Daily Nation May 1 ;1990) instructed all Local Authorities to stop any contemplated increases in house rents. He said rent increases at this time were unacceptable as the workers could not bear the financial burden. If the move was endorsed, City Commission rental income could have increased from Sh 8 million to Sh 20 million. Such political interventions jeopardizes the local authority attempt to come out of financial constraints. This impedes the ability of the Local Authorities to undertake any maintenance work because lack of finance is always cited as a constraint to carry out their neglected responsibilities. The tenants also reacted angrily to the proposed increases accusing Commission of picking on them because they were an easy target (Kenya Times May 8, 1990) The tenants also complained that their houses had been neglected for years and that many had leaking roofs and had not been painted as long as 10 years The then Minister for Local Government, Mr Ntimama responded that the Commission needed money to improve these houses.

This implies that some tenants may be willing and able to pay relatively more rents if maintenance of

the houses were guaranteed. The research will therefore attempt determine the optimum rent levels within economic and social considerations. These conflicting statements and policies puts the local authorities at crossroads to implement any policy. It is envisaged that well formulated policies on maintenance if implemented could improve the standards of maintenance of the existing stock.

2.4 POLICY ASPECTS OF HOUSING

Shelter is a basic societal need and accessibility to decent housing is an important aspect of socio-economic development as it is positively related with labour productivity. Hitherto, the growth in demand for shelter and housing especially in the urban areas has far outstripped supply, posing a serious challenge to the Government. (Republic of Kenya, 1989)

Rapid urban growth has made the need for adequate housing for all an important concern for development planning in Kenya (Syagga, Gatabaki, Ondiege, 1989) The adequacy of housing is determined not only by shelter and the contiguous facilities it provides but also by the entire system of supportive and facilitative infrastructure and services.

The causes of housing problems in the urban areas in Kenya may be many, but the major one is the rapid

population influx into these centres .The accelerated population growth and migration to towns has put a burden upon the housing agencies whose capacity is insufficient to provide and maintain an adequate supply of housing.

The Kenya Government has taken cognizance of the seriousness of the urban housing situation for the low income earners. The seriousness of the housing need can be revealed by the unusually large numbers of applicants for municipal housing market . The affordable expenditure on housing has been fixed at 20% of the income of the household (Republic of Kenya,1989). But there is a clear evidence that some categories of low income group do in fact, spend up to 50% of the income on housing .

An analysis of housing provision and maintenance implies recognition that the housing problem as an ever changing nature of dynamic proportions does not lend itself to a static appraisal or a belief, evidenced in Government declaration of policy, that housing problem can not be solved once and for all by robust and determined programmes expeditiously implemented.

While the realization of a decent home within a suitable living environment for every citizen is no doubt an important goal in public policy, the components of such an environment can not be easily

discerned and blanket public action can frequently disregard important economic forces and issues on the road to social ideal prescribed by the government.

The separate financial budget and prescribed limitations invariably pose problems for any local authority which seeks to implement an overall housing strategy. This results in a piecemeal and somewhat compartmentalized approach to housing issues with allocation of council houses as a primary function and other functions as rent reviews and maintenance of secondary importance.

It has been estimated that only about 30% of all urban households in Kenya have incomes sufficient to afford minimum cost housing; and that over 60% earn incomes that fall below the mean urban income (Macoloo;1988 : 165).The implication is that even if the government had to sponsor low income housing projects,an insignificant number of the target population would be able to afford them.Those houses would invariably find their way into the hands of the upper income groups. The dichotomy here is how to house low income earners without encroaching the revenue base of the local authorities?

The extension of basic infrastructure (particularly housing, water, access ways, security lighting, solid and human waste disposal as well as storm water drainage) constitutes major problems to

all urban settlement in Kenya.The local authorities do not have adequate resources to extend infrastructure particularly to the low income sectors. The need for innovative mechanism for financing urban infrastructure is therefore urgent.

The 1979-83 National Development Plan, while appreciating the role of local authorities in reducing the imbalance of rural-urban development, notes that they have been deteriorating over the years as a result of the elimination of Graduated Personal [illegible] deficits. Among the objectives of the local government during the plan period was;

> ''Improvement in the finance of the local authorities so that they can finance most of their own requirements for shelter and infrastructure as well as meet the maintenance o and other recurrent expenses (Republic of Kenya 1979 : 455)''.

Amongst the strategies adopted by the plan to achievement of the above was to make the valuation unit in the Ministry of Local Government more effective. That way it was expected that valuation rolls of local authorities would become more current and useful as a major source of revenue for the council. It was stated that

'' ... existing financial regulation will be reviewed to ensure that cost of services ... are fully covered by the fees charged'' (Republic of Kenya, 1979 : 457)''.

By extension, the rates charged should reflect the cost of providing such services. The maintenance costs should be covered from rents collected in case of housing estates.

The assumption that the improvement in the administration of the property rates and cost effectiveness of the services offered would make the local authorities self reliant is unrealistic given the varying property rates, potential and ability of the local populace to pay for the services at an economic rate among them. The houses must be well cared, fairly rented and economically managed.

In terms of health , section 117 of the Public Health Act, Cap. 242 of the Laws of Kenya specifically requires local authorities to ensure that buildings are constructed and maintained in such a manner that they are neither injurious, unsafe nor dangerous to health. The study wishes to identify the common defects in a building as well as the environment around it The houses could be health hazard if poorly maintained.

Local authorities have to contend with a number of problems in their efforts to provide appropriate

housing to the residents within their areas of jurisdiction. These problems range from socio-economic status of the household such as income levels, through technical issues such as standards and design to policy issues which are not fully formulated and are characterised by contradictions. Since the maintenance problems are varied for analysis purposes rent levels will be considered and appreciation of other problems made.

2.5 CONCLUSION:

Urban management appears to be squarely a responsibility of the local authorities. The primary concern is the regulation of the environment in which people live and work. These functions, inter alia, construction and maintenance of roads, streets and housing, refuse collection, and provision of other infrastructure like water, education, social halls, cemeteries, market and bus park.

The Local Authorities have to contend with a number of problems in their efforts to provide appropriate housing to the residents within their areas of jurisdiction.

The rate of population influx into the major urban centres is so rapid. This has put burden on housing agencies. The bulk of this population is either unemployed, or engaged in poorly paid

activities, yet there is no discrimination in the use of urban infrastructure. Those who pay and those who do not pay for the services all have access. The Local Authorities therefore meet serious challenges in the provisions and maintenance of these services, including housing.

Housing is a factor in nation's economic and social development. Good management of housing therefore become central to the well being of the people. The houses must be well looked after, fairly rented and economically managed to extend their productive life. Poor management of housing estates would lead to loss in housing stock through rapid deterioration of the structure. The maintenance expenditure in a majority of cases is derived from rent collections.

The rents charged for the Local Authority housing should reflect the economic rent because most local authorities would relegate maintenance of the housing when the revenue base is small. This calls for regular review or restructuring of rents. The dichotomy here is that the council houses are intended for the low income group who may not afford the quality houses in an open market. The challenge is how to maintain those houses given the small revenue base or review rent levels upwards without throwing the low income group out of the market.

CHAPTER THREE

3.0 STUDY AREA PROFILE

3.1 LOCATION AND SIZE

The study area, Kisumu Municipality is located in Kisumu District, in Nyanza Province. It is located in the shore of Lake Victoria. To the North, it borders the Nandi Escarpment, to the East and South it borders the Kano Plains and to the West it borders Lake Victoria and part of Kisumu Rural Constituency. The Municipality is situated between latitudes $34^{0}35^{1}$ E and $34^{0}55^{1}$ E and longitudes
$0^{0}0^{1}$ S and $0^{0}12^{1}$ S.

It is located at the tip of Winam Gulf. In terms of land area, the Municipality covers 417 sq.km of which 157 sq.km (35.5%) is covered by water and 260 sq.km is under land.

3.2 RELIEF AND DRAINAGE

Kisumu Municipality lies in the down faulted lower ridge on the floor of geographically complex Nyanza Rift Valley (Onyango, 1987) Originally the town covered the residual hill which now contains half the built up area including the commercial centre, government offices and the better residential areas. This is due to the fact that this area is better drained.

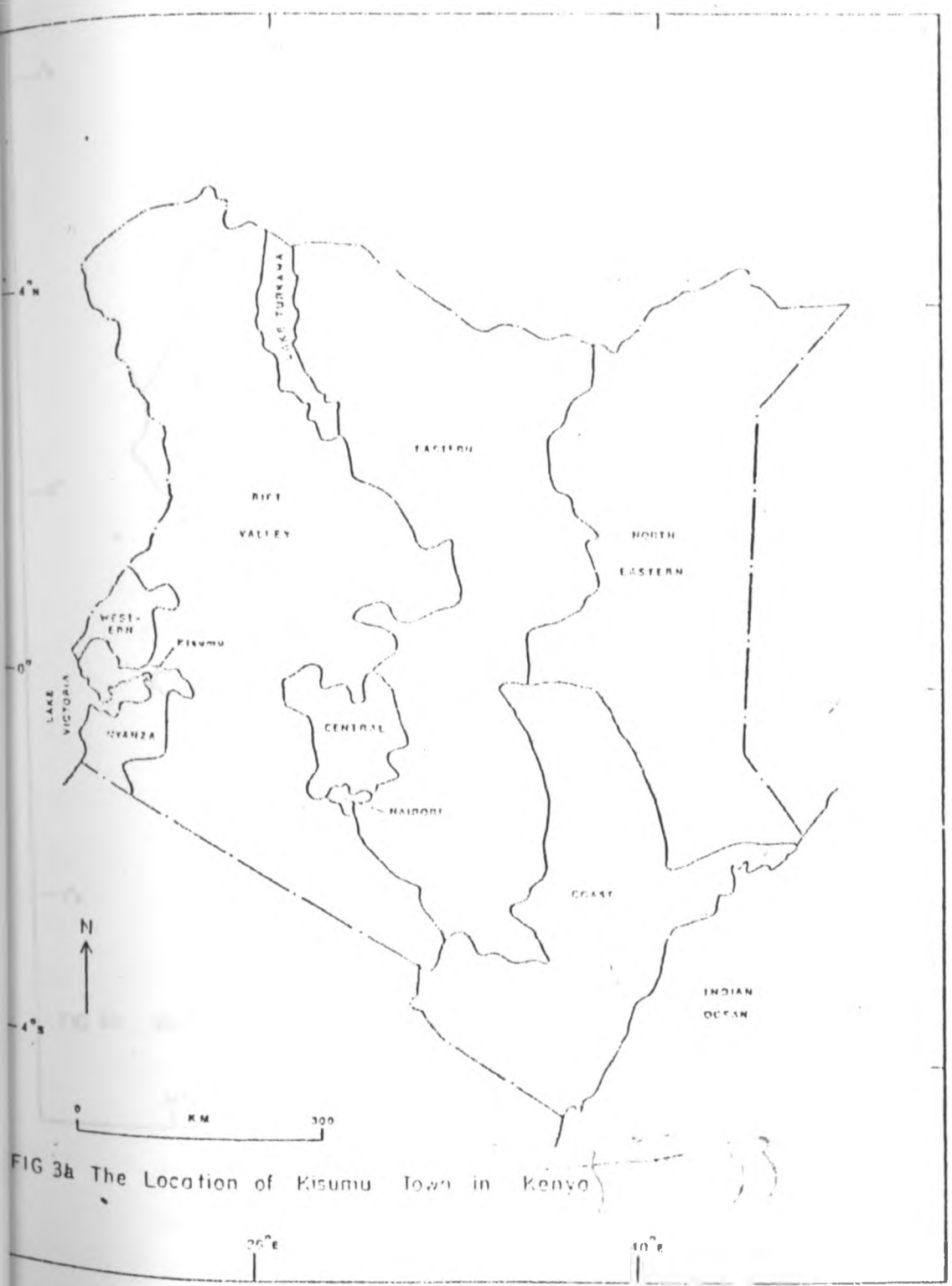


FIG 3a The Location of Kisumu Town in Kenya

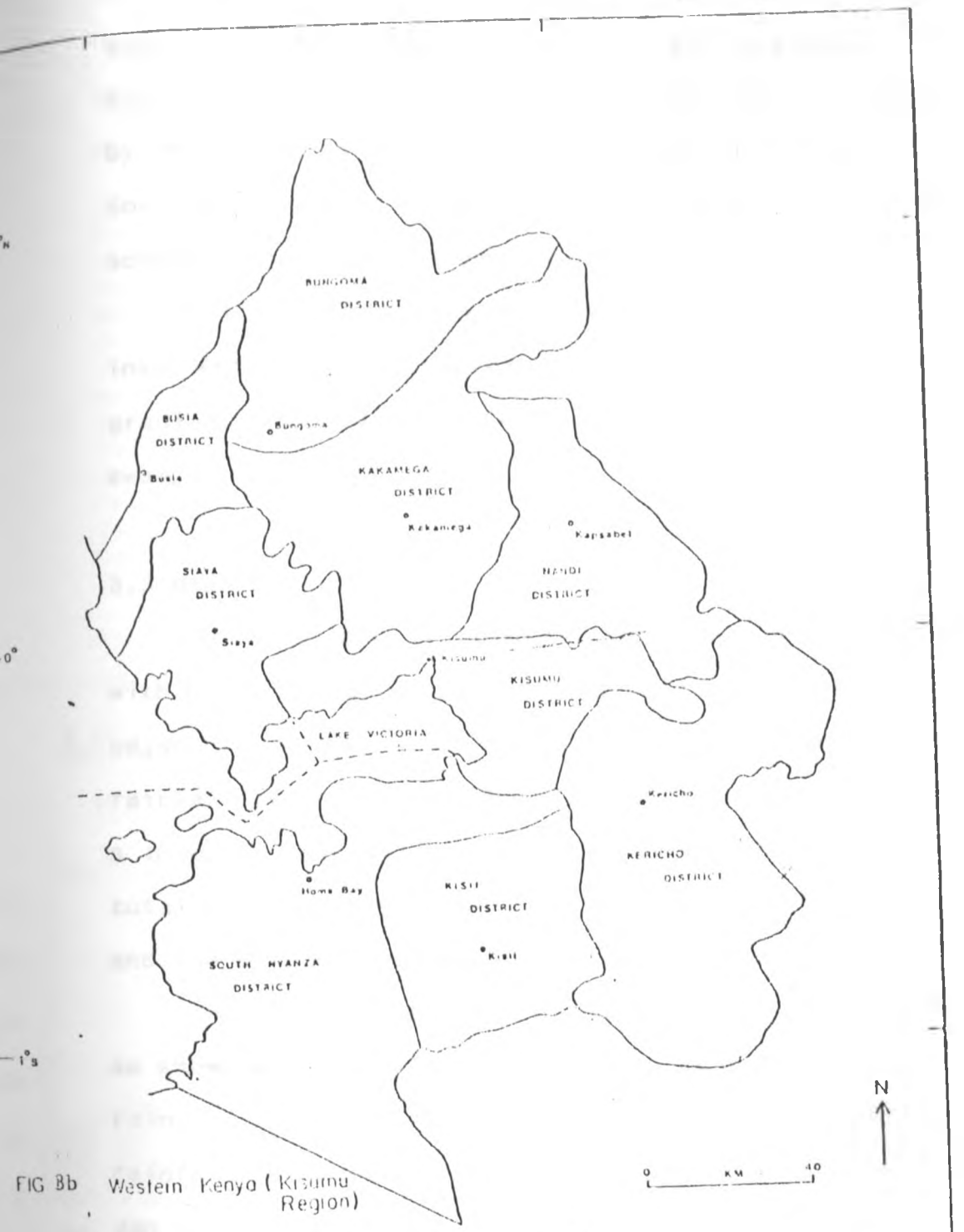


FIG 8b Western Kenya (Kisumu Region)

The Municipality has however expanded to include the poorly drained area such as Nyalenda and Nyamasaria. Expansion of the Municipality is limited by The Nyando hills to the north, Lake Victoria to the South West, Miwani Sugar Plantations, Ahero irrigation scheme and seasonal swamps to the east.

All the streams within the Municipality drain into Winam Gulf, however, due to the very gentle gradient some of the streams form vast expanses of swamps.

3.3 RAINFALL

The mean annual rainfall varies with altitude, with higher areas receiving more rain than those areas adjacent to the Lake. The town receives an annual rainfall ranging from 876mm to 1306mm The region has a bimodal rainfall regime, with more than 40 % of total rain falling between March and may (first peak) and the second peak between September and December.

There is no marked dry season in the lake basin as shown by the fact that there is more than 55mm of rain in all the 12 months (Fig.3a) The highest rainfall recorded is 405mm in April and no rainfall in Jan and Feb.

Such rainfall pattern affects maintenance of residential properties. Rainfall varies in intensity, direction, droplets and duration. Rainfall erodes

maintenance standards.

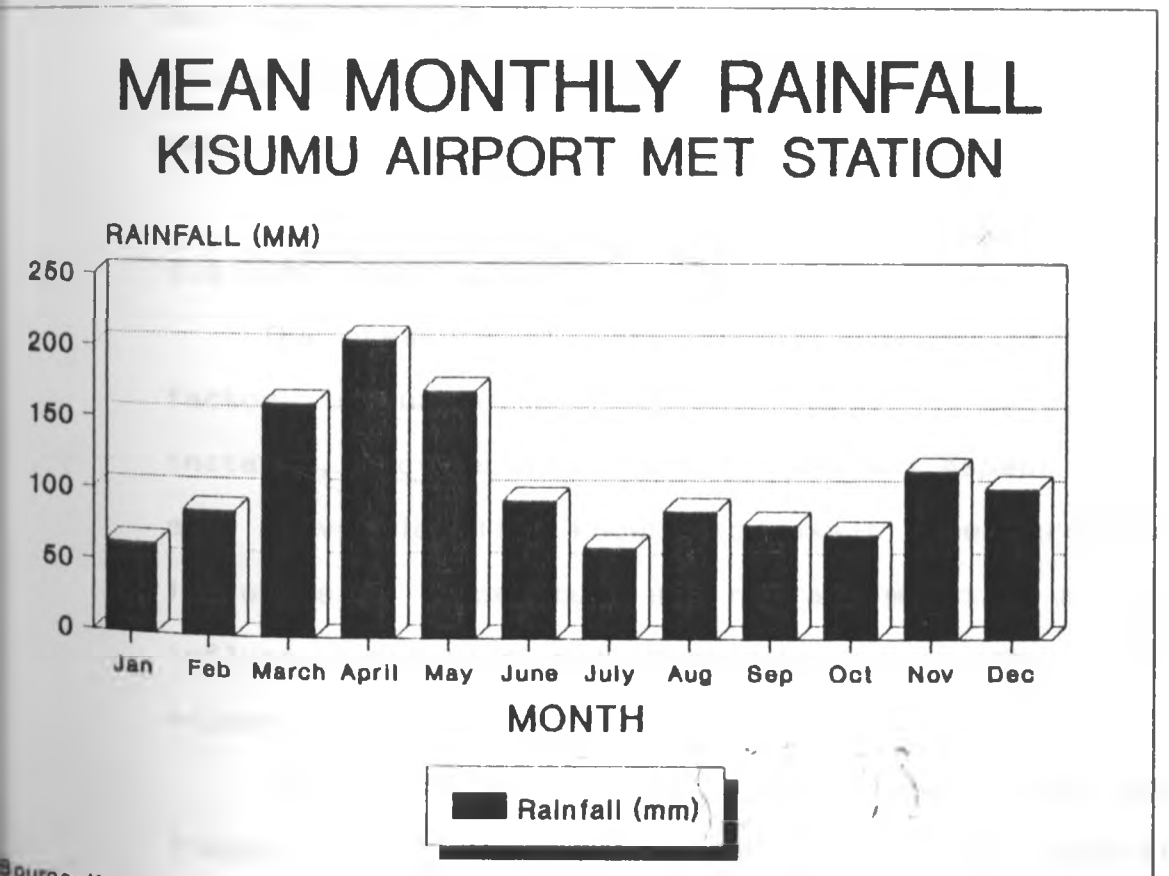
TABLE 3a

KISUMU AIRPORT METEOROLOGICAL STATION 1938-70

MONTH	MEAN MM	HIGHEST MM	LOWEST MM
Jan	63	186	0
Feb	87	158	0
March	162	334	25
April	206	405	93
May	171	358	77
June	95	192	14
July	63	147	27
Aug	88	220	27
Sep	79	151	2
Oct	72	195	9
Nov	116	449	6
Dec	104	301	1
Total	1306	1884	946

Source: Kisumu Met. Station

Fig. 3c



It creates dampness on the walls, destroys ceiling boards when there is a leaking roof. Metals may corrode when brought into aqueous contact and glass may be etched.

Conditions are particularly conducive to deterioration when moisture condenses in relatively inaccessible crevices, from which subsequent evaporation is slow.

Rain when particularly by strong winds can erode soft materials and washing over a surface may remove part of it in solution. High precipitation consequently implies not only a more complete but also a more prolonged wetting of materials
such as brick, stone and concrete. Stresses are produced which may cause spalling of the surface, general cracking and disintegration.

3.4 TEMPERATURE

The presence of Lake Victoria is an important factor in understanding the local climate. For instance, factors such as altitude and aspect which are conventionally known to exert the greatest influence on temperature are not as important as the influence of land and lake breezes in the areas adjacent to the lake.

The low lying plains around the lake are frequently hot and humid. Closer to the lake, however

are well marked lake breezes during the afternoon that help to keep the temperatures down. The higher areas to the North such as Riat hills also experience lower temperatures than expected due to the influence of the altitude. In general, Kisumu experiences high temperatures throughout the year. The mean monthly maximum temperatures range from 27.7^0C to 30.8^0C for Kisumu Airport. The mean minimum temperature range from 16.1^0C to 17.9^0C.

TABLE 3b
KISUMU AIRPORT MET.STATION (1931-1970)

MONTH	MEAN TEMP. ^{0}C	HIGHEST TEMP. ^{0}C	LOWEST TEMP. ^{0}C
Jan	30.6	36.0	11.0
Feb	30.8	36.9	12.8
March	30.3	36.6	13.0
April	28.8	35.5	13.3
May	28.2	32.2	14.1
June	28.0	31.4	12.4
July	27.7	33.4	11.9
Aug	28.2	34.1	11.4
Sep	29.4	34.3	13.1
Oct	30.5	34.7	12.4
Nov	30.2	34.4	12.8
Dec	29.9	35.7	12.0
Mean	29.4	36.9	11.0

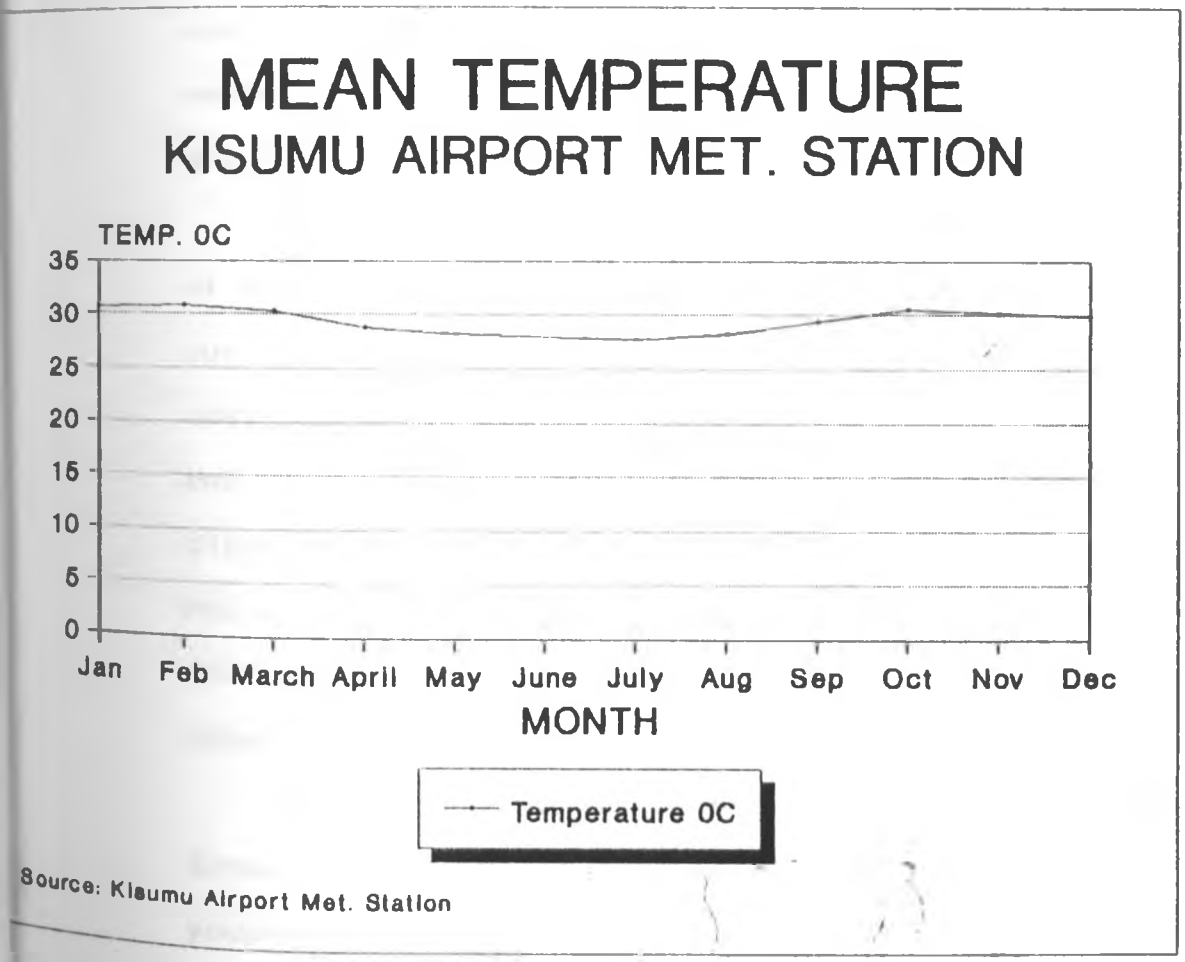
The hot period in Kisumu starts from October through March as shown in the table 3b. The cold months are from May to September. The highest temperatures recorded is 36.9^0C and the lowest is 11^0C.

The absorption by surfaces of solar radiation is accompanied by a rise in temperature. Buildings can also emit long wavelengths radiation and in so doing cool. The drop in temperature can be considerable

particularly on clear nights when radiation from dark surfaces such as asbestos roofs can cause surface temperature to fall (Ramson,1990)

A rise in temperature leads to an increase in the rate of reaction and can accelerate many degradation processes. High temperatures in themselves also lead to high rates of evaporation and volatilization. Loss of volatile from sealing compounds can cause shrinkage and brittleness.

Fig. 3d



Evaporation of water from cement can lead to early weakness, poor adhesion and cracking. Some building materials for example bitumen, soften or melt with high temperatures. In contrast, temperatures that are permanently below freezing can be highly favourable which is not often recognized.

3.5 SOILS

The major types of soils within the municipality are namely red loams, black cotton, laterite and decomposed rock (Fig 3e) The well drained loam soils are found in the area to the north east of the old municipality boundary. The less fertile red loam soils are found on the granite slopes of East Kisumu.

The black cotton soils occur in low lying areas of poor drainage. These areas are usually waterlogged during the rainy season. They are mainly found to the east and South East of the old municipality boundary and to a lesser extent to West of the Airport. The black cotton soils are calcareous of high plasticity has a large silt clay proportion, high swelling and shrinkage properties which are significant to building construction.

On the undulation slopes Kodero, Konya, Dago, Korando, and Ojola Sub-Location, the soils are youthful and consist of shallow gravel , sandy clay silt mixed with murram and are well drained thus

making the areas particularly suitable for urban development.

Crack may result from overloading of the ground on which the building rests. For example floors may deflect and may cause cracks to appear on the underside.

Quite often the performance of a building depends on the degree of compatibility between design material specification and methods of construction on one hand and the physical environment on the other hand. The physical environment provides the overall setting/framework of the dwellings or buildings components and the need for design, materials of construction and erection methods to be compatible to the detailed characteristics of the site.

A building,its foundation and the supporting soil interact with one another in a complex manner, the behaviour of one depending upon and influencing that of the other. Foundation designs must therefore take into account not only the type of the structure to be supported, its function and the constructional materials to be used but also the soil conditions on site.

Foundations on sands settle quickly once the load is applied and settlement after construction is completed is unlikely to be of any significance. However in clay soils, settlement caused by

consolidation can continue for years after construction. The extent to which solids deform under pressure depends on the properties such as hardness and the size of the imposed load.

Brick work and plaster quickly slow the effects of differential movement and the onset of cracking can be associated with an angular distortion.

Soil investigation before construction therefore are necessary because from these tests on soil bearing capacities, building stability may be taken care of in design stage. Weak soils like black cotton soils will have been excavated from the building site and deep foundations opted for. It is imperative that stability of a building begin from the foundations as this forms the basis of building fabric.

3.6 HISTORICAL DEVELOPMENT

Kisumu is the third largest town in Kenya after Nairobi and Mombasa. It has an estimated population of 193000 (Republic of Kenya, 1989).

Kisumu's original importance as a growth centre started at the turn of the century with the construction of the railway line from Mombasa. It formed a major port connection between Uganda and Mombasa and expanded fast into a large port with trade connections to Tanzania.

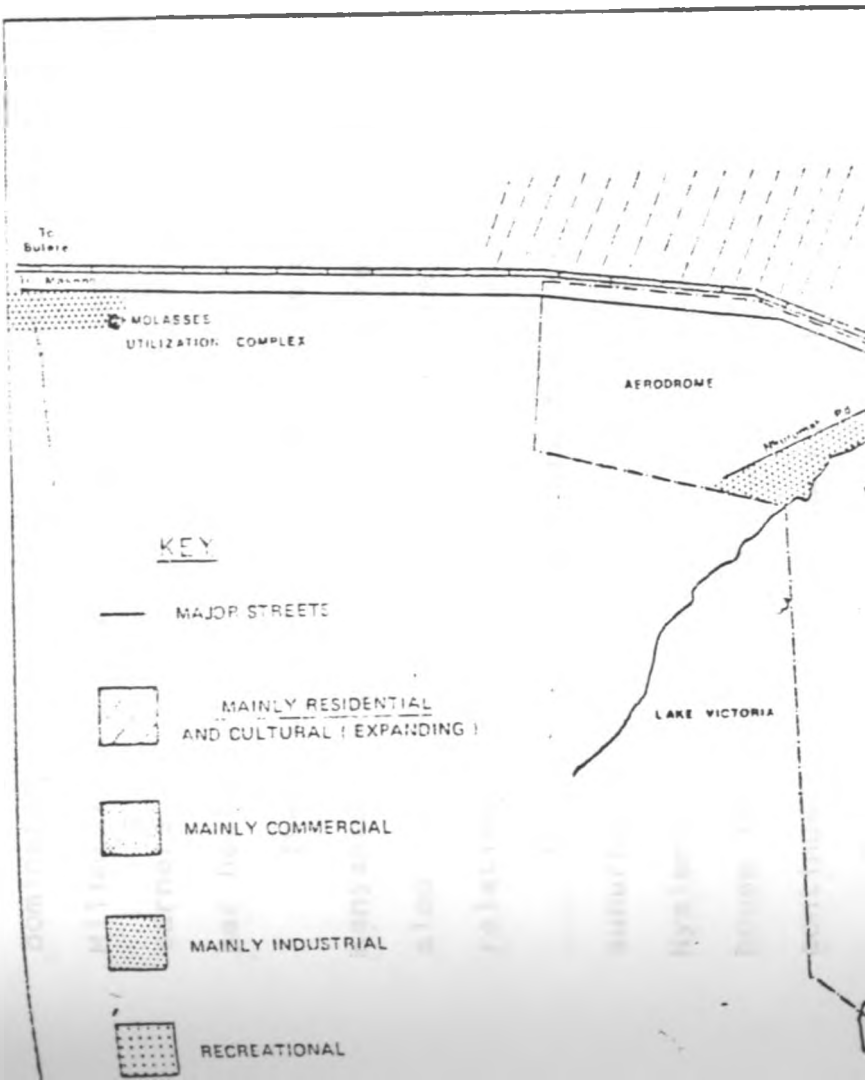
Its prominence as a trading centre rose out of the arrival of the Uganda railway at this port site on Lake Victoria in 1901. From the early days upto the mid sixties the town also remained as administrative centre besides its port services. However, more recently it has progressively gained prominence as the administrative, commercial, collective and distributive centre for Western Kenya.It also forms a major industrial core for Western.

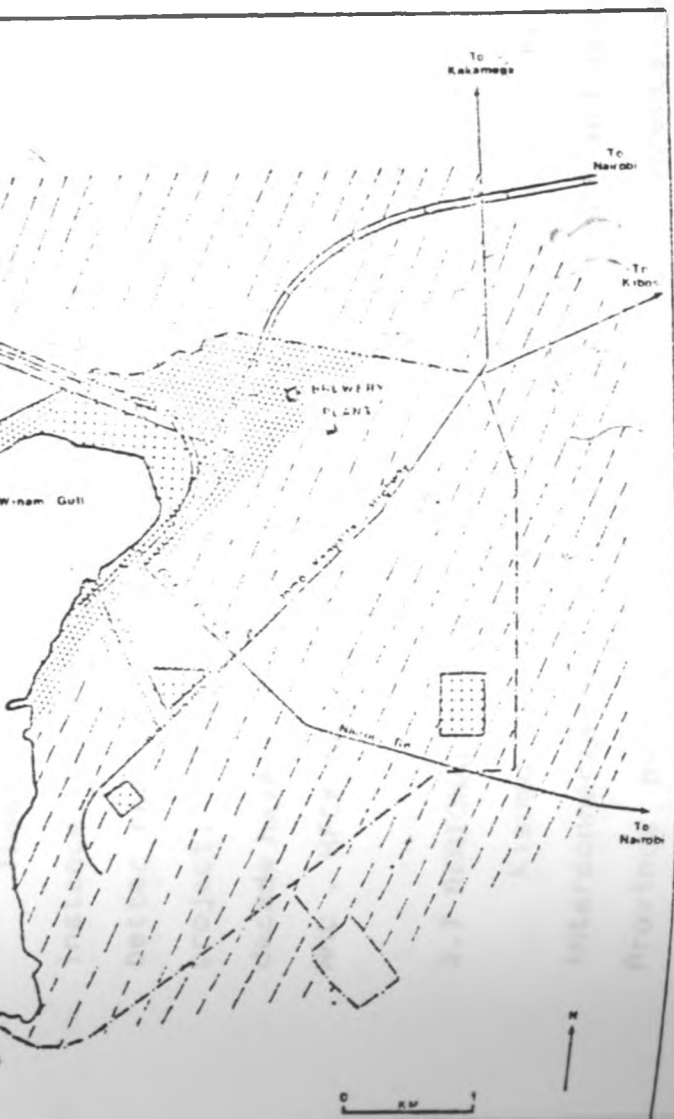
In 1941, Kisumu got its local government or Local authority. The population was growing at a very fast rate. Tenant purchase and rental schemes were developed. However, this could not cope with the high increase in population (Oucho, 1980)

By 1969, the town had a well established zones which were mainly a result of colonial planning. The short term development plan for the town prepared in 1969 for a five year period, did not do much to change the land use pattern and Obudho (1969) points out that the planning and lay out of the better residential areas and the town centre can be traced as far back as 1902.

The 1969 development plan and the structure plan of 1983-2013 both point out that migration would be the main factor influencing the towns growth.

By 1986, the town had a commercial zone with Oginga Odinga as its centre. This zone surrounded


To
Bukoto
MOLASSES
UTILIZATION COMPLEX
AERODROME
KEY
MAJOR STREETS
MAINLY RESIDENTIAL
AND CULTURAL (EXPANDING)
MAINLY COMMERCIAL
MAINLY INDUSTRIAL
RECREATIONAL
LAKE VICTORIA


To
Kakamega
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better shops and warehouses to cater for the town and the region. Down Oginga Odinga road was the so called bazaar area which was more African than the Asian dominated areas on the upper part of the road. The Milimani area is mainly occupied by high income earners and the densities here are about 30 persons per hectare.

There are medium income houses on the areas near Kanyakwar. Some of the Municipal rental estates are also in this category though they are rented at relatively cheaper rate.

To the North East and the East are peri-urban suburbs made up of slum settlements of Pandpieri, Nyalenda, Manyatta, Migosi and Kanyakwar. These areas house the majority of the urban population and have continued to do so as new migrants move into town.

These peri-urban slums are being upgraded (for instance, Pandpieri, Manyatta, and Migosi) to provide better residential environment under World Urban II project. Other private developers in the current decade have also improved housing supply, particularly NHC . HFCK has also financed private developers.

3.7 REGIONAL FUNCTION

Kisumu is the dominant town in Western Kenya interconnected to Tanzania, Uganda, Western and Nyanza Province by road and rail routes. Commerce and

industry needs no emphasis in its dominance in the region.

Kisumu experiences a nett immigration unlike the surrounded districts (Oucho, 1974) However the region has been a labour reservoir in Kenya to the detriment of the region. But this trend is changing as the town grows, thus attracting more and more immigrants.

Basically the area is an agricultural region though fishing is undertaken. Cash crops include cotton, sugar cane, coffee and tea. The Kano plains and the Yala Swamp area are where rice production is undertaken on commercial scale.

Kisumu town accommodates a complexity of resources which raise the level of migrants expectation, hence its dominance as an area of in-migration.

This rapid in-migration has caused poor housing conditions as noted by the field survey. Thus necessitating prompt action not only to develop new housing but more importantly, maintain the existing stock.

3.8 HOUSING

In 1979, Kisumu Municipality had a population of 152,643 (Republic of Kenya, 1979). The Urban Food Purchasing Survey (UFPS) report (1) has shown that the average composition of national urban household is 5.6

persons. This means that in 1979, there were 27, 260 households in Kisumu. In 1984, the estimated population was 193,000 giving 34,464 households (Kisumu District Structure Plan, 1989). This assumes a growth rate of 6.5% p.a.

The rate of housing construction (of both public and private sectors) has been extremely low. From 1969 to 1979, the formal construction added 1965 dwellings to the housing stock of Kisumu, including those constructed by the Local Authority.

The last public sector housing scheme completed was the 280 units of USAID estate. This was in 1981. The only other notable low rental housing scheme developed in the last decade was Arina - 575 units, completed in 1977/78. These houses which were intended for low income households have found their way to medium income earners mostly civil servants and employees of parastatals, and the Local Authority.

Overall, it is estimated that in Kisumu, more than 50% of the population live in slum conditions in the squatter settlement areas of Pandpieri, Manyatta, and Obunga, all of which are located in the periphery of the urban area.

According to Waweru and Associates Report (1978) 31,000 inhabitants lived in Manyatta, 29,000 in Nyalenda, 2,000 in Bandani, 20,000 in Pandpieri, 10,000 in Kanyakwar, and 1,000 on the hill, making a

sub-total of 98,000 inhabitants. Thus in 1978, out of 152,643 urban residents about 2/3 lived in the informal built up areas. In 1962, this population was 1/3 and in 1969 about 40%.

As the Municipal does not have record on the existing total housing stock, it was not possible to calculate the housing shortage. The only information on housing demand is from the council's waiting list which indicates that as at September, 1992, there were about 8,000 applicants in the waiting list.

Most of the construction work is currently undertaken in Manyatta and Nairobi area. This are is developing as a mixed density residential area. There are new estates being constructed off the Kakamega road, middle and high density housing is also being developed off the Kakamega-Kibos roads. To improve this area, the World Bank has put markets, water points and tarmacked roads. This has raised the land value and the construction of higher value housing has been stimulated. This are seems to be developing as a middle income residential as the low income people are pushed to areas where the land values are lower and site and service schemes constructed in Migosi estate.

3.9 DEMOGRAPHIC PROFILE

Kisumu Municipality is situated in one of the most densely populated areas in Kenya. From the census of 1948, the population of Kisumu has grown tremendously. The following table indicates the populating growth during the intercensal year.

TABLE 3c
INTERCENSAL POPULATION OF KISUMU

YEAR	POPULATION	ANNUAL GROWTH RATE (%)		
		1948/62	1962/69	1969/79
1948	10,899	-		
1962	23,526	5.7		
1969	32,431		4.7	
1979	152,643			16.8

Source, Republic of Kenya, 1989

From table 3c it can be seen that Kisumu Municipality (old boundary , pre-1972 boundary) grew at an average rate of 4.7% between 1962 - 1969 . This growth rate is lower than the growth rate between 1948 and 1962 which was 5.7% p.a. The reason for the drop in growth rate is explained by the fact that there was a permanent emigration of Non-Africans after 1962 (after attainment of independence)

In 1972, the boundary of the old municipality was extended. The present boundaries of Kisumu Municipality embraces Manyatta, Kasule, Nyalunya, Chiga, Buoye, Korando, Kogony, Wathorego, Nyalenda, Ojola, Kanyakwar, Kanyawegi, Mkendwa (Swahili) sub-locations. Of the units embodied into the new

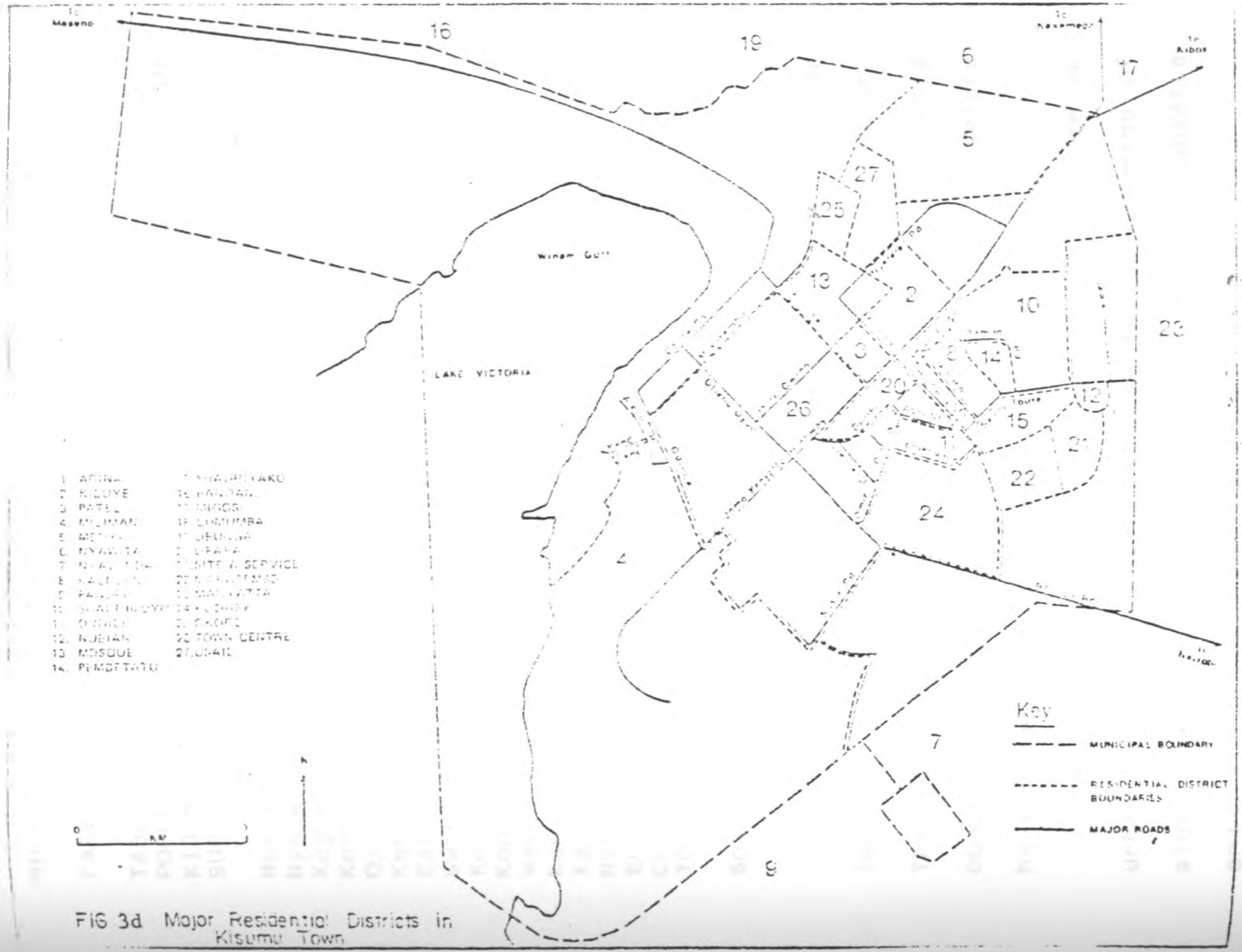


FIG 3d Major Residential Districts in Kisumu Town

municipal area, Manyatta, Nyalenda and Kogony, and the whole of Kajulu Location showed excessive high growth rates.

TABLE 3d
POPULATION AND AREAS OF THE ANNEXED SUB LOCATIONS IN KISUMU MUNICIPALITY

SUB LOCATION	POPULATION (1979)	AREA (KM^2)
Manyatta	23008	8
Nyalenda	21778	26
Kogony	6897	11
Korando	6705	19
Ojola	4031	19
Kanyawegi	7505	30
Dago	2711	11
Swahili	426	1
Konya	4309	14
Kodero	3406	12
Wathorego	5394	11
Kanyakwar	7147	8
Kasule	4317	15
Nyalunya	4155	12
Buoye	5084	27
Chiga	5582	22
TOTAL	112455	246

Source, Republic of Kenya, 1979

The extension of the Municipal boundary, has implied increased population in the peri-urban areas. The peri-urban areas of Nyalenda and Manyatta has a combined growth rate of 11.3%. These areas therefore have to be provided with urban services.

The failure to meet the demand and pressure on urban services is manifested in the mushrooming of slums especially in the peri-urban areas of Manyatta and Nyalenda.

According to the 1979 Census reports, Kisumu is the third largest town in terms of population size

after Mombasa and Nairobi. It holds 2.2% of the total urban population of Kenya. Of the 482,300 people in Kisumu District 32% of the people live in the municipality, while considering Nyanza Province with a population of 2,644,000 the percentage distribution of population living in the Municipality is 5.7% . The Municipality therefore exerts and influences the development of Lake Basin Region.

Wholesale, Retail, Restaurants Bars and Hotels which make up much of the major formal employment sector in Manyatta-Kondele-Migosi-Nairobi area employs about 8.6% of the working population in Kisumu. However, this sector has acted as a stimulant to the informal sector. Thus it is a common sight to find open air garages, vegetable and fruit sellers, fish mongers, and such self employment ventures that generate income to the people in the area. This informal employment leads to the growth of employment sector. This in turn acts as a pull factor to in-migration to the urban area.

3.9.1 AGE STRUCTURE

In 1969 the percentage of children under 15 years was 39.6% out of population of 32,431 sex ratio was 126.3. In 1979, the percentage of children under 15 years was 43.3 out of a population of 152,643 ; sex ratio was 103.7.

Naturally with an increase in the percentage there is a decrease in labour force. The number of [illegible] is as shown below.

TABLE 24

POPULATION BY AGE AND SEX (1979)

AGE	0-4	5-9	10-14	15-49	[illegible]	N.S.
MALE	13516	10331	8500	38750	6163	. 463
FEMALE	13717	10815	9155	36076	4821	341
TOTAL	27233	21146	17655	74822	10984	803

Source : Republic of Kenya, 1979

It is assumed that Kisumu will benefit from the government policy of upgrading Kisumu as the third important urban centre after Nairobi and Mombasa. Such a policy will go along way with an increased industrial investment in terms of processing and manufacturing which will in turn offer more employment opportunities.

CHAPTER FOUR

4.0 RESPONSIBILITY FOR MAINTENANCE AND RENT STRUCTURE OF MUNICIPAL HOUSING

4.1 RESPONSIBILITY FOR MAINTENANCE WORK

It is generally accepted in Kenya that a well planned housing of a reasonable standard when combined with essential services affords dignity, a sense of security and a proper status in the society for the individual (Republic of Kenya, 1983) Thus the need to provide housing accommodation for the population is unquestionable and so is the need to preserve the existing housing stock so that they can be used for several decades.

In Kenya urban management function appears to fall squarely on urban local authorities. Currently, the strategy is moving towards community participation. There are many Government Ministries, departments, parastatals, private and community sector organizations which have an interest in urban development and management. The structure and operation of Local Government in Kenya are modelled on British framework. The local authorities were created with the express aim, inter alia, to encourage participation of the people in their local affairs and enable the government become more responsive to the needs and wishes of the people either directly or through their elected representatives.

The responsibility of housing management under Kisumu Municipal council is derived from Local Government Regulation Section 177 (Republic of Kenya, 1963)

Several departments in the Municipal council are involved at various levels in the organization and execution of maintenance and repair works in the council's housing estates.These include, Department of Social Services and Housing, Engineering department, Public Health department and Town Treasurer's department.

The department of Social Services and Housing is the one directly responsible for the management and maintenance of Local Authority Housing. Public Health department through the Medical Officer of Health, in addition to approving building plans and housing matters for safety of tenants to ensure conformity with health by-laws does all the cleansing work in the housing estates through its cleansing section. The cleansing work include refuse collection and cleaning of drains in the estate.

The Town Engineer is in charge of the construction and maintenance of the council properties including roads water and sewerage installation, municipal schools, markets and housing estates. To prevent undue deterioration of buildings, there is thus need to create a sense of national responsibility for building maintenance.

There is a growing awareness that human society depends on personal responsibility for the full and proper use of resources rather than on public control of activities. It is argued that the management and maintenance of dwellings and their surroundings and therefore their longevity depends primarily on the care of their residents and users (Turner, 1976)

Consequently, it is proposed that the Government of Kenya and the Local Authorities in particular should have concerted responsibility with the public in the management and maintenance of Local Authority housing. This has not been internalized in the Legislation and hence responsibility for management and maintenance of local authority estate still remains the council's. In terms of management and maintenance of Local Authority housing, the Director of Social Services and Housing is responsible for initiating the maintenance work to be done. According to the Tenancy Agreement, all defects in the housing units should be reported to the Housing Officer by the tenants. The department's staff is also supposed to carry out inspection exercise to identify any defects on the premises to ascertain what needs to be corrected that might not have been reported by the tenants.

After receiving maintenance requisition through tenants reports or through inspection, the Director of

Social Services and Housing sends an inventory of maintenance problems, by estate and housing unit to the Town Engineer. Essentially maintenance work is done by Town Engineer's Staff. The Director of Social Services and Housing prepares annual budget for maintenance funds. The budget is usually based on previous years expenditure to which he adds some arbitrary figure say 2% of the previous year's expenditure to take care of expected increase in costs.

The allocation for maintenance is hardly 20% of maintenance requirement. This has implied accumulation of maintenance work.

Once the Town Engineer certifies that repairs should be carried out, he make an order to Town Treasurer to write an LPO. The budget is usually presented to the Finance Committee at which Town Treasurer and Engineer are present to guide the Director of Social Services and Housing, the financial implications of maintenance budget. All the costing is done by the Town Treasurer.

After pricing, the Town Treasurer's department then makes the necessary entries according to which estate the work is to be carried out. The Director of Social Services and Housing commented that repairs are done as soon as funds become available. This means maintenance requests can stay for longer periods when

funds are scarce. This may contribute to the accumulation of maintenance work and hence worsen the maintenance problems of Municipal housing.

When the tenants were asked as to who should carry out the maintenance work, there was a mixed response. Some felt that it should be the tenant, others felt it should be the council and others felt it should be both the tenant and the council.

TABLE 4a

WHO SHOULD REPAIR

RESPONSE	PERCENTAGE
Tenants	8.8
Council	84.2
Both	7.0

Source : Field data, 1992

Majority of the respondents felt maintenance of the house should be done by the council (84.2% of the respondents) The reasons they put up include ;

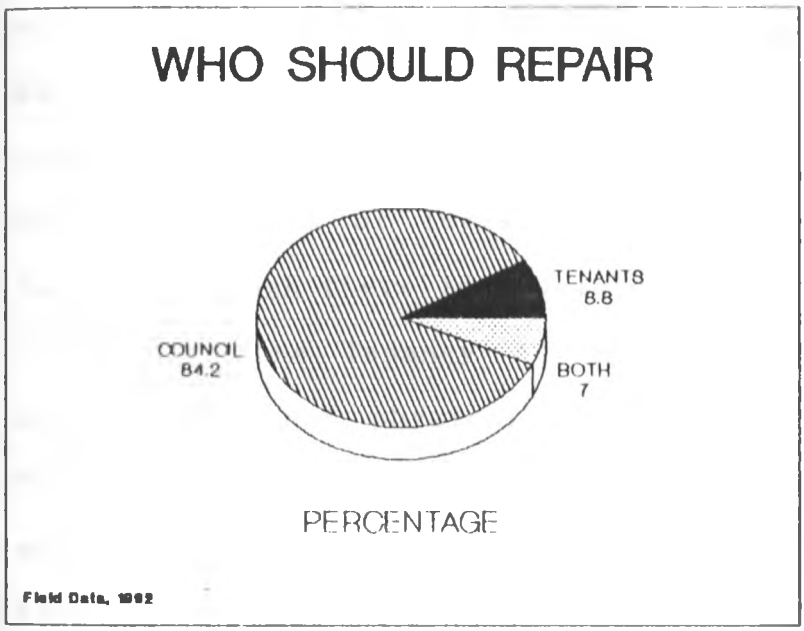
(i) They are never refunded even if the did their own repairs (24.6%)

(ii) Some felt the cost of building materials were too high for an average tenant, therefore most of them are not likely to afford maintenance costs (15.8%).

(iii) Some felt the houses were not theirs and could only do repairs if the houses were sold to them (24.6%) This was coupled with the fact that they can not remove the installations they could have made, say when, they vacate the house. therefore no motivation.

According to the Tenancy Agreement, the council will repair those elements only when they are damaged by other forces other than the tenants negligence. Otherwise any other damage incidental to tenants negligence will be met by the tenant, or if by the council, he/she will be surcharged.

Fig4a



The problem is how to determine the cause of the defect by the council so as to undertake the responsibility of repairs accordingly. The tenants on other hand argue that the rents they pay should cover maintenance charges and if anything he is a 'transit' user and can not remove the installations even if he

did the repairs.

For the tenants who felt that they could undertake their own repairs and/or with the assistance of the council they argued that the prefered to stay comfortably than to stay in a poorly maintained house. The opportunity cost of carrying out their repairs is lower than health risk.

Judging from the response that only 8.8% are willing to undertake their own repairs, most tenants have not appreciated the cost sharing policy and/or community participation concept in urban management because of lack of legislative framework to force tenants. Though there is provision for maintenance by tenants in the Tenancy Agreement so long as the structure is not physically changed or modernized. This support the third assumption that 'Incidence of maintenance problem is a function of attitude of the tenants'. Because the strategy is towards community participation in the management and development of urban centres, where there is apathy, little or no participation is likely to be got. Lack of participation on the part of the tenants coupled with small revenue base of the council is likely to subordinate maintenance work. Where there is apathy, utmost care is not exercised in the use of facilities. This may subject the facility to premature 'death'.

4.2 RENT STRUCTURE PROFILE

As living facility, the built environment should provide an environment with all the amenities and facilities for optimum function of all their daily operation. The built environment is therefore a product of relatively very expensive investment, it requires large sums of capital formation tied down in the form of a variety of structures.

The colossal sum of capital therefore requires huge investments to preserve and maintain it for the opportunity cost of lack of maintenance are very high to the council since the initial capital for such development is invariably borrowed and must be repaid.

To guarantee higher returns from an individual development, the state of maintenance and repairs of the structure should be a major consideration in establishing the levels of rent a single building can command in real estate market (Stone, 1980) Housing is theoretically viewed to be self supporting, subsequently, returns by way of rents should cover the maintenance expenses.

The department of Social Services and Housing in the Municipal Council of Kisumu executes all housing and estate administration matters of all rental estates. According to the Director of Social Services and Housing, lack of sufficient funds has been a major problem to respond to a lot of maintenance requests.

In this section, an attempt is made to assess the levels of rents and total rent collections with reference to maintenance work.

TABLE 4b

RENT LEVELS OF MUNICIPAL HOUSING (KSH)

ESTATE	YEAR OF CONSTRUCTION	1970	1971	1974	1975	1977	1984
Lumumba	1961	85	90	140	185	230	250
Ondiek	1967	95	105	160	210	270	300
Makasembo	1968	110	130	180	240	320	360
Kibuye SD	1969	100	115	170	225	300	340
ArinaI,II	1970	-	135	180	240	320	360
Arina IV	1977	-	-	-	-	300	320
Mosque	1965	150	155	300	390	550	600
Argwins	1970	310	350	500	650	800	900
KibuyeFl.	1971	220	275	360	470	635	670
ArinaIII	1974	-	-	300	390	500	550

- Were not yet developed
Source : Kisumu Municipal Council Report

Rents in various estates have been rising at different rates. In some cases, housing units of similar accommodation have their rents reviewed on different footings, thus creating disparities in the rental tags as shown in table 4b. It should also be noted that the interval of rent reviews is not regular, neither is the rate of increase uniform in every estate during any reviews for example Ondiek and Lumumba Estates. Since 1984, rent review proposals have been made, but so far, has never been approved by the Minister for Local Government.

The rate of rent revision has not kept pace with price increase in construction industry (table 4c).

For instance, between 1980 and 1990 prices of both building materials and labour in the construction industry increased 3.08 times, that is, 308% , while the last time rents were increased was in 1984. By applying the Residential Building Cost Index , the costs of construction both labour and materials were brought to comparable values, using the 1990 prices.

TABLE 4c
RESIDENTIAL COST INDEX
1972 = 100

YEAR	COST INDEX	DEFLATOR FACTOR
1980	303.2	3.08
1981	346.8	2.69
1982	395.6	2.36
1983	423.0	2.21
1984	452.1	2.06
1985	514.8	1.82
1986	546.1	1.71
1987	610.2	1.53
1988	637.0	1.47
1989	750.8	1.24
1990	934.6	1.00

Source ; CBS, Reports.

Using the 1990 prices the value of 1984 rents which are still reigning remarkably reduced. For instance between 1984 and 1990 cost of construction of residential building increased 2.06 times or 206% (Table 4c) When these deflators are applied to rent levels, the 1984 equivalent are as shown in table 4d

Due to high rate of inflation in the residential construction the real value of rents have reduced and their 1990 equivalent is below half the 1984 value. For instance, in Lumumba Estate where rents were raised from Ksh 230/- in 1977 to Ksh 250/- in 1984,

the 1990 equivalent is Ksh 120.90 per month per housing unit.

TABLE 4d
RENT LEVELS OF MUNICIPAL ESTATES PER HOUSING UNIT (KSH)
1984 PRICES

ESTATE	1984 RENT LEVELS	1990 RENT VALUE
Lumumba	250	120.90
Ondiek	300	145.10
Arina	320	153.60
Makasembo	340	163.20
Mosque	600	288.00
Kibuye Flats	670	321.60
Argwings Kodhek	900	432.00

Source; Author's own compilation

According to the Director of Social Services and Housing, the problem arises from political influence, whereby the politicians are only interested in protecting their political posts without sight of realistic pricing. Tenants also protest whenever proposals to increase rents are made.

Rents have been increased by varying rates for each estate. The frequency of reviews as can be noted from table 4b were higher in the 70's compared to 80's. It should be noted that since 1977, rents have only been reviewed once in 1984 and the rate of increase was not remarkably high to warrant such a break as can be seen from the table 4e. The rate of rent increase has lagged behind the rate of increase in construction costs as was revealed in table 4c.

TABLE 4e
PERCENTAGE RENT LEVEL INCREASE 1970 TO 1984

ESTATE	YEARS					
	1970/71	1971/74	1974/75	1975/77	1977/84	Ave. Annual Increase
Lumumba	5.0	55.6	32.1	24.3	8.6	13.9
Ondiek	10.5	52.3	31.2	28.6	11.1	15.4
Makasemb	18.1	38.5	33.3	33.3	12.5	16.2
KibuyeSD	15.0	47.8	32.4	33.3	13.3	17.1
ArinaI,II	-	33.3	33.3	33.3	12.5	11.9
Arina IV	-	-	-	-	6.6	1.0
Mosque	3.3	29.0	30.0	41.0	9.1	21.4
Argwins	12.9	42.9	30.0	23.1	12.5	13.6
KibuyeFl.	25.0	30.9	30.5	35.1	5.5	14.6
Arina III	-	-	30.0	28.2	10.0	8.3
AVERAGE	13.0	41.3	31.4	31.1	10.1	13.3

SOURCE : Kisumu Municipal Report

Between 1970 and 1984, the average annual rent increase was 13.3%. The highest rent increase was recorded between 1974 and 1975. This increase was over a relatively shorter period of time and the percentage rental increase was also high (averagely 41%) The percentage increase could be high to raise eye brows. The rental increase should therefore be gradual, regular but responsive to cost of construction.

The average increase varied from one estate to another with the lowest registered in Arina estate, with an average annual increase of 1% and the highest annual increase was recorded in Mosque (21.4%).

Though the percentage increase in some years were relatively high, in actual figures, the rents were increased by only a few shillings e.g. in Lumumba

estate in 1975, the rents charged were ksh 185/-, in 1977 it was raised to ksh 230/- and in 1984 it was increased to ksh 250/- This shows that between 1975 and 1984 rents for Lumumba estate were increased by ksh 65/-

This implies that even though percentage increase of rents could be high, the actual amount was not high and therefore not responsive to price levels/inflationary pressures. The task therefore should be to establish the minimum rent payable per month.

The rent should not fall far below the market rate. This is to ensure that rents collected is enough to cover the running cost as well as surplus for sinking funds since the houses have limited life spans and cost of replacement is expensive.

The prices are the allocative machinery in the economy. They guide resources from less to more important uses. If the prices are fixed like the rents of Municipal council housing, they can no longer perform these functions in response to changing conditions. Adequate and proper financial planning is critical to successful management and maintenance of Local Authority Housing. Management affects each of the elements of costs by recommendations and actions based on concepts of economy and efficiency. First, the rents charged should be realistically scaled to

the segment of the population to be served.

In Kisumu, the rents charged do not reflect the occupants income. The average monthly income of the Municipal tenants is ksh 4096/-. This is far above the low income category (Republic of Kenya, 1989) According to the Government of Kenya, a household should spend up to 20% of the monthly income to live comfortably according to his income bracket. In many instances, the council failed to allocate the houses to the low income group for whom they were intended. Evidence exists to show that these houses developed for low income groups evolve into the middle income groups. Over 40% of the tenants interviewed earn Ksh 4000/- and above per month. Therefore, the reluctance of increasing rents for fear of encroaching tenants income should be dispelled. The existing rents charged still give room for increase. The amount accrued could be ploughed back into maintenance programme.

The Local Authorities though are exempted from Rent Restriction Act Cap 296, they are subjected to unlegislated 'Rent Control' whereby the tenants can protest and seek legal redress for such an increase. For rents to be increased, the Local Authorities have to seek approval from the Minister for Local Government. The process of approval is long and in a majority of cases are never approved. At the time of the survey, the council had proposed rent increase for

the year ending 1991/92 which was still pending. The last time rents for Municipal Housing were reviewed was 1984.

This has undesirable effect, that is, inadequate return from property create little incentive to would be developer to undertake any further investment in it. The result may be a neglect of maintenance and repair expenditure and the deterioration in the quality of housing stock. This is reflected in the housing programmes currently undertaken by Kisumu Municipal Council, namely, site and service schemes like USAID and Migosi estates, Tenant Purchase schemes like Okore, Tom Mboya and Pembe Tatu estates, slum upgrading like in Manyatta and Nyalenda estate. Of all the rental housing owned by the council, the most recent was constructed in 1977- Arina Phase IV estate. The total number of all the rental housing owned by the council is 1160 units yet there are over 8000 people on the waiting list.

The other possible effect of such 'Rent Control' is perpetual occupation of the housing units. 42.1% of the households surveyed had stayed in their units for over 10 years, 22.3% of the households had stayed in their units since the completion of the construction. For low income households who therefore can not afford the building materials for repairs and maintenance , their continued occupation of such houses worsen

maintenance problem especially if the council does not take maintenance work. The medium and high income tenants in some cases effect the repairs of their houses. In a rising market with shortage of alternative accommodation available, the tenants may be prepared to pay higher rents rather than face the prospect of moving.

The rent levels thus in addition to determining maintenance undertaking also affects the number and type of construction or housing development by the council. High rents enhance returns from the houses and likely to attract more investment in that area. The rent collected is assumed to cover all the running costs plus amount for replacement of the structures.

The application of consumer demand theory, predicts that a reduction in the price of a commodity will lead to a greater quantity being demanded. The low rent levels of council estates leads to a greater consumption of housing space than would occur in unregulated market. For instance, in Ondiek estate with 3 habitable rooms a sub-tenant who is sub let a room pays ksh 400/- per month while from the whole housing unit, the municipal gets only ksh 300/- per month. The genuine tenant's rent is covered by the sub-tenant and gets an excess of ksh 100/- from the house. In a free market, it follows that such a housing unit should command ksh 1200/- per month. This

is well evidenced with private landlords who purchased similar housing units and their monthly rents vary between ksh 1200/- to 1500/-

The 'Controlled Rent' of Municipal housing also restricts household mobility. A tenant who quits a controlled property is not likely to be able to find alternative housing at a rent similar to his controlled level. Hence, there is a disincentive for him to move. This is seen as a particular undesirable side effect of control when labour market requires mobility.

Such immobility of tenants may affect maintenance of housing especially if the existing tenant is not keen on performance level of housing as was in section 4.1. From the survey 84.2% of the respondents felt that maintenance of housing should be the responsibility of the council and were unwilling to carry out any maintenance without seeking refund from the council.

4.3 CONSTRUCTION OF MUNICIPAL HOUSING

The Municipal housing are constructed with the assistance of National Housing Corporation. After the completion of the construction the houses are handed over to the municipal council. The management and adminstration of the houses are undertaken by the council. National Housing Corporation recover their

costs from the monthly repayment of loans by the council. According to the Loan Agreement, the council is expected to repay the loans at average monthly interest rate of 2% p.a under a repayment period of 40 years.

The flow of funds associated with relative interest rates, has important consequence in the net lending by the financial institution, its corresponding rate of return and consequently the rate at which the council will let out the housing units. If the interest rates at which they are borrowing the money increases, the pass on the costs as much as possible in form of higher rents in order to maintain their profitability. This is not the case with municipal estates since rents are politically determined.This accounts for the council's concentration on segments of the market that offer higher returns for instance Migosi Site and Service Scheme, USAID Tenant Purchase.

Consequently, there is increase in the supply of more profitable units and an almost static supply of the low income housing units, despite their great demand especially the municipal rental estates. At the time of the survey, the following estates had been repossessed by National Housing Corporation , Arina Phase I, II, III and IV, Kibuye Flats and Semi-detached and Ondiek estates. The outstanding balance

was Ksh 120,652,000/-. This followed the failure of the council to service their loans. The rents should be realistically determined to take care of such costs like loan repayment. Such repossession is a financial loss to the council and only helps to reduce the financial base of the council. The reduction in the sources of revenue also reduces the ability of the council to carry out its responsibility, maintenance of housing included. Coupled with the above scenario is the rapid increase in the construction costs, which account for the unattractiveness of most investment ventures. Construction cost should take into account not only the initial building and material costs but also inflation in regard to maintenance and repair costs as discussed in section 4.2. Such costs should be reflected in the rents.

An analysis of construction industry in regard to cost of construction for the last decade shows the following.

TABLE 4f

COST OF CONSTRUCTION PER SQUARE FOOT OF UNITS WITH STANDARD FINISHES 1984-90

YEARS	1984	1985	1986	1987	1988	1989	1990
P.S.M.	3000	3200	3500	4000	6000	6500	7500
P.S.F.	279	297	325	370	550	600	690

Source : Armstrong and Duncan Quantity Surveyors

The construction has picked up which has resulted in an average of 1.5% increase in cost per month as per 12 month period of 1988. The trend is also expected to continue as there is massive construction work in progress especially by private developers in major urban areas. Where imported finishes and fittings are utilized, the costs are even higher as a result of the fall in the Kenya shilling, against the major currencies.

The trend of increase in construction cost is [illegible] the trend in rent reviews in Kisumu Municipal Council. Since 1977, the rents have been re[illegible] in 1984. Such static rents reduces the maintenance works because maintenance funds is basically got from rents collected. The percentage of rents allocated to maintenance has grossly reduced since early 80's, from 12.9% in 1983 to 2.3% in 1989 (table 5e). While the percentage has reduced and therefore the actual allocation for maintenance, such negative relationship has implied minimal if any, or no maintenance undertaking in certain estates.

Lack of maintenance funds only helps to worsen the problems of maintenance. Poor state of housing therefore negates the original policy that such housing were meant i.e. to improve the welfare of low income earners. Poor state of housing evident by

incidence of defective building elements is a health risk e.g. uncollected garbages, leaking roof and water shortage .

After the legislation for housing programme is enacted, (as was recommended by the National Workshop on Building Maintenance Strategy 13-14 March, 1992) the desirable minimum housing standards should be determined. Once established, these standards should not be compromised with rent levels. Construction should be a sufficient improvement over accepted local housing norm to remain structurally sound for a 40- 60 year period and to be a desirable commodity during that period.

As soon as the houses are completed. The councillors of Kisumu Municipality, chief officers of the council and government officers sit down to propose the rents that should be charged. From the deliberation, average rent for each estate is determined. The proposed rent is then sent to the Ministry of Local Government. The ministry has power to reduce the proposed rent or leave it at that level.

4.4 DETERMINATION OF RENTS

Housing rents like any other commodity price, are theorically expected to rise with time. Great dissatisfaction with the prevailing rental trends has however been expressed.

Local Authorities cite lack of funds as a constraint to any maintenance undertaking. Maintenance expenditures are basically derived from rent collections. It is usually a fraction of the rent. This implies that when the rent levels are relatively high, even if the fraction that goes to maintenance (say 15% is maintained), in actual terms, maintenance votes become quite high. Conversely when rent levels are relatively low, and the fraction that goes to maintenance is maintained, the actual figures for maintenance become low. This minimizes the council's ability to carry out any maintenance. For instance in Ondiek estate where rents charged are ksh 250/-, if 15% of rent is maintained for maintenance only ksh 37.50 goes to maintenance.

Tenants on the other hand site negligence on the part of the council to carry out meaningful maintenance, yet they pay the rents duly. They consider the rents currently charged satisfactory in light of the incidence of maintenance problems in the houses. With the high incidence of defective elements, the tenants would protest any proposal to increase rents by the local authority.

In broad terms, rents are determined through the forces of demand and supply just like any other commodity in a free market. In the case of Local Authority housing, rents are controlled by other

forces (mostly political) other than demand and supply.

Rent structure is so politically determined such that an increase which may threaten the popularity of the politicians are never approved. The political influence is measured in terms of the number of proposals to be approved by the politicians and how long they take to approve the proposals. For instance, the building by laws are technically formulated, the approval must be done by the Minister for Local Government.

The Local Authority housing are charged low rents because they are meant theoretically to improve the welfare of low income earners who would be thrown out of the market when the forces of demand and supply are left to operate. There are many low income households living in private housing where market forces are in operation. This therefore questions rationale for low rents for a small segment of population.

According to Mbogo (1976) the most important element of demand for housing, are the prices at which the units are made available, the ability of the family to pay and the fraction they are willing to devote to housing. In Kisumu, the low income housing are rented as low as Ksh 250/- for 2 bed roomed house, self contained, while the medium income housing, the highest is rented at ksh 900/- for 3 bed roomed, self

contained. Another aspect of demand is the question of the type and size of accommodation at certain pre-determined price by the council.

Despite such high demand as reflected in the number of persons on the waiting list, (6144 for medium cost and 2555 for low cost) supply in respect of additional developments on the whole has been quite low. Currently, for over 30 years since independence, the Municipal council has been able to develop only 1160 rental housing units vis-a-vis demand.

Though the Local Authority housing are viewed as welfare investment and not profit oriented investment, in real life, this is not so as seen from the change in housing policy from the supply of rental housing to tenant purchase and/or site and service schemes. The houses should be self supportive and surplus funds should be sunk for further redevelopment. When rents charged are too low, the council is likely to be impaired to carry out its responsibility of maintenance and further housing development.

The market competition in our society is imperfect. The investor is a speculator whose main aim is to maximize profits. He will thus reduce investment in the area without great returns in relation to demand so as to hike prices and obtain above normal profits. The local authorities are not expected to make profits and the returns are only expected to meet

the running costs including maintenance.

This means that when rents charges are relatively low, the amount going into maintenance expenditure is relatively low, especially if maintenance is subordinated to other priorities. The low maintenance expenditure may exacerbate maintenance problems as reflected in high incidence of maintenance problems in municipal housing.

The rents are determined by the forces of demand and supply, but the policy in Kenya is to keep rent under review and to impose some measures of control to prevent abuses like unjustified evictions, too high rents for low income earners.

4.5 RELATIONSHIP BETWEEN RENT LEVELS AND MAINTENANCE PROBLEMS

In the study, maintenance problem is measured in terms of the percentage of housing units with defective building elements as discussed in chapter 5. The percentage is arrived at after an inventory of maintenance problem was taken.

The rent levels are measured in terms of monthly rents paid per housing unit and subsequently per housing estate. From the survey, it was learnt that the council effects maintenance expenditure from the rent collected.

TABLE 4g

PERCENTAGE OF HOUSING UNITS WITH MAINTENANCE PROBLEMS

ESTATE	RENT/ UNIT	HOUSING UNITS (%)
Lumumba	250	75.1
Ondiek	300	67.4
Arina	320	62.2
Makasembo	340	66.3
Mosque	600	58.3
Kibuye	670	43.3
Argwings	900	47.9

Source , Field Data, 1992

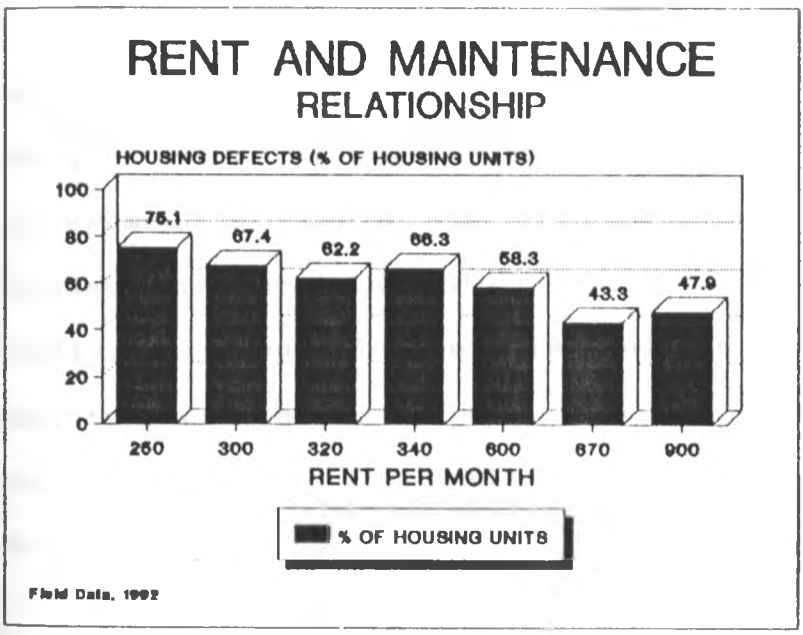
The percentage of housing units with maintenance problems vary by estates with the highest registered in lowly rented housing units For instance 75.1% of housing units rented at ksh 250 have maintenance problems while only 43.3% of housing units rented at ksh 670 have maintenance problems. This partly explains the affluence and influence of the occupants as shown in chap. 5. To get the degree of association between rent levels and maintenance the rent paid per month were cross tabulated with percentage of housing units with maintenance problems.

This showed that estates where rents charged are ksh 670/- and ksh 900/- the percentage of housing units with maintenance problems is relatively low. This represents only 12% of the total housing units owned by the council. But on average 59.9% of housing units owned by the council have maintenance problems.

Here it is assumed that the only source of funds for maintenance is rent collection (as reflected in

maintenance expenditure budgets, chap 5 and the amount expended on maintenance is a fraction of the rent. The rent collected is also assumed to be having separate bank account and therefore the issue of diversion of funds does not arise. Rent collected is exclusively spent on housing matters.

Fig 4b



The council talks of lack of funds for maintenance while tenants talk high incidence of maintenance problems and therefore unwilling to pay more rents. During the survey, an opinion of the tenants was sought on how much more rent they were willing and able to pay.This was in light of the increased cost of maintenance as shown in table 4c

while the prevailing rate is far below the market rate. Based on these, the researcher proposed the following increases per estate.

The proposed rent levels are got on the basis of

(i) the tenants willingness and ability to pay.

(ii) size and number of rooms.

(iii) age and incidence of maintenance problems

(iv) comparable market rates .

The proposed rents are arrived at after summazation of the proposed increases by various tenants and an average is got. The United Nations and Government of Kenya has also provided for 25% of tenant's income going into rent (Ministry of Finance, 1984). The assumption here is that the house in sound maintenance status. The market rates are far above the municipal rents, for instance in Ondiek Estate, the Municipal rate is about 25% of private landlords rate.

It is proposed that the propsed rents be increased upto 25% of tenant's incomeafter the maintenance undertaking.

TABLE 4h
PROPOSED RENT LEVELS OF MUNICIPAL HOUSING (ksh)

ESTATE	CURRENT RENT/UNIT	RENT/ ROOM	AVERAGE MONTHLY INCOME	PROPOSED RENT	25% OF INCOME
Lumumba	250	83.30	3750	425	937
Ondiek	300	100.00	4516	567	970
Makasembo	340	113.30	3964	571	991
Kibuye	670	167.50	4262	1000	1065
Mosque	600	150.00	4125	800	1031
Argwings	900	225.00	4333	1200	1083
Arina	320	160.00	3473	493	868

Source : Author's own compilation, 1992

When the tenants were asked whether they would be willing to pay more if maintenance is guaranteed, the following response were got.

TABLE 4i

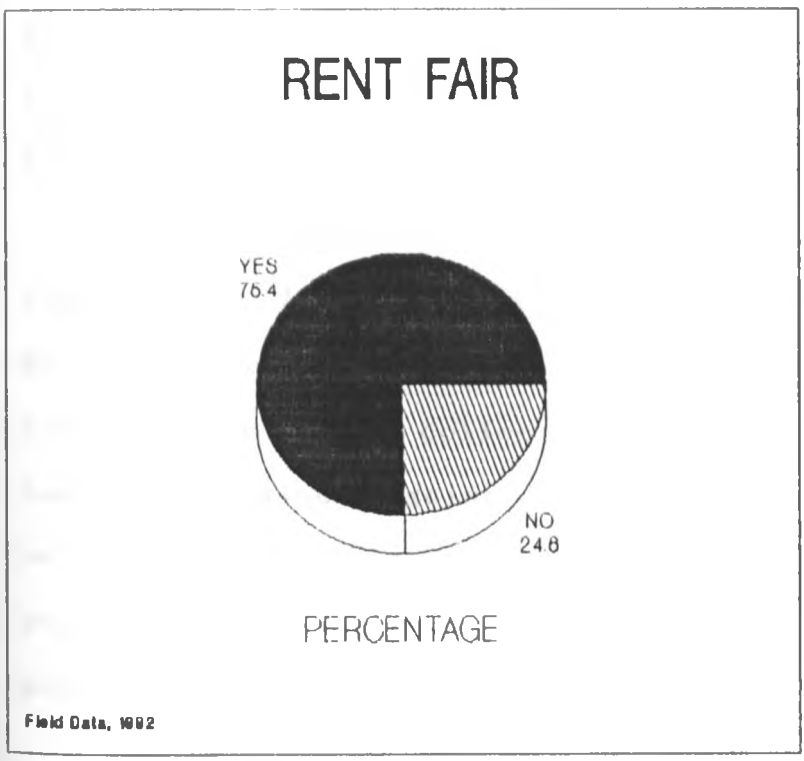
RENT FAIR

RESPONSE	PERCENTAGE
Yes	75.4
No	24.6

Source : Field data, 1992

75.4% of the respondents were willing to pay more rent so that maintenance could be undertaken. 24.6% of the respondents felt the rents they pay is enough to cover maintenance and were unwilling to spend more on rent.

Fig 4c



The average rents are arrived after getting the average of the tenants monthly income to assess his ability to pay for each housing unit.This average is

assumed to take care of those unwilling to pay more and is not too high as some respondents proposed. The incomes of the tenants are not so encroached. For instance in Lumumba estate, where the average monthly income is ksh 3750/- The reigning rent is 6.7% of the average monthly income of the tenants.

4.6 CONCLUSION

In the real estate market, the state of maintenance and repairs of the structure determines the returns from the property Hence a better maintained house can command higher rents than similar structure poorly maintained in the same neighbourhood. The Municipal estates should be realistically priced to increase margin for maintenance finances.

Poor maintenance of Municipal houses is partly a function of low financial bases of the council. Maintenance expenditure is basically derived from rent revenues. When rent collections are relatively low, the actual amount going into maintenance is also relatively low. This may imply neglect of the houses and hence increasing the incidence of maintenance problems.

Incidence of maintenance problems is relatively low in medium rental estates than low rental estates. This could be due to higher allocation for maintenance per housing unit in medium rental estates. The

allocations are relatively higher due to relatively high rents leaving bigger margin for maintenance expenditure and political motivation.

The rents charged for council houses are far below the market rates (less than 25% of the market rent) This provides room for an upward review of rents. The more funds realized with proper management could be recouped to maintenance hence improving maintenance standards and consequently the welfare of the occupants.

Rent levels of council houses have both negative and positive effects on status of the houses and the occupants. The advantages include; the rent limits control the inflationary tendencies of housing market. The low rents charge for municipal houses helps in the redistribution of income and allows low income earners to occupy better quality housing. The negative effects include reduced maintenance expenditure, reduced household mobility. The low returns discourages development of more rental units.

Local authorities should have concerted responsibilities with the public in the management and maintenance of council housing. This is in pursuit of policy of community participation in the management of urban facilities. This inculcates the culture of discipline (responsibility) in the residents and promotes cost sharing venture.

CHAPTER FIVE

5.0 MAINTENANCE AND MANAGEMENT CHARACTERISTICS

5.1 SYNOPSIS

Houses are costly assets which are protracted in construction and it is expected that they should have a reasonable life span. This may never be achieved considering that resources set aside for maintenance are inadequate.

It should be appreciated that whereas the process of gradual deterioration of buildings is inevitable, the speed at which it proceeds can be regulated through appropriate maintenance measures. Maintenance should indeed be viewed as a key process in the sustenance of the life and value of a house since it is a common knowledge that buildings start to deteriorate soon after completion. It should also be understood that the condition and quality of houses reflect public pride or indifference
(Maina, 1991)

In the present economic circumstances, Local Authorities are finding it difficult to allot financial resources for construction of new buildings to add to existing stock or to replace old structures. Thus the Local Authorities are required to cope with and work within the constraints of managing stock of buildings that need great attention, if they are to remain serviceable.

This chapter presents an analysis of maintenance practices by Kisumu Municipal Council. This is done by first considering the incidence of maintenance problems in each sampled housing unit. This is later presented in terms of percentage of housing units in each estate with maintenance problems. In order to do this, an inventory of defective elements of the building was taken. The study therefore evaluates percentage of the housing estates requiring maintenance and specifies the kinds of maintenance and the expenditure incurred by the council on maintenance between 1980-90. Maintenance problems for the purpose of the study is measured in terms of percentage of housing units in each estate with building defects.

5.2 MAINTENANCE PROBLEMS AND MANAGEMENT PRACTICES OF THE LOCAL AUTHORITIES.

Maintenance may be defined as work necessary to keep and restore every part of the building, contents and surrounds to a currently acceptable standards (Lee, 1976). Standards are on the other hand difficult to define and quantify because of differentials in tastes, income, environment and circumstances. But generally acceptable standards is one which sustains the utility and value of the facility and is deemed to include some degree of improvements over the life of the building and its surrounding, and encompasses

planned cleaning and painting.

Maintenance serves 3 major roles; functional, aesthetics and financial roles(Miles and Syagga,1987:5). The functional role of maintenance is to retain the usefulness of the property within acceptable standards of a reasonable user. The financial role of maintenance is that of ensuring that the built assets are in a state whereby their value to the owner does not diminish. A badly maintained property not only reduces its value but has a depressant effect on the value of the neighbourhood properties. The aesthetic functions ensure that the appearance of the asset is acceptable. In an attempt to implement the policy of providing decent, healthy and affordable shelter before and after independence, the Municipal Council, first and foremost built the following rental houses as was the earlier policy to meet the demand mainly of low income and middle income urban dwellers. The funds were provided for development from the following sources;

(i) Ministry of Local Government through Local Government Loans Authority.

(ii) National Housing Corporation

(iii) World Bank

TABLE 5a
KISUMU MUNICIPAL COUNCIL RENTAL HOUSING ESTATES STATISTICS

LOW RENTAL ESTATES

NAME OF ESTATE	UNITS BUILT	YEAR OF CONSTRUCTION	MONTHLY RENT	CURRENT RENT
Lumumba	100	1961/62	77	250
Ondiek	167	1967	78	300
Makasembo	125	1968	80	360
Kibuye (semi-detached)	40	1969	115	340
Arina Ph I & II	225	1970/71	115	360
Arina Phase IV	300	1977	300	320

MEDIUM RENTAL ESTATES

NAME OF ESTATE	UNITS BUILT	YEAR OF CONSTRUCTION	MONTHLY RENT	CURRENT RENT
Mosque	88	1965	155	600
Argwings Kodhek	48	1970	290	900
Kibuye Flats	14	1971	295	670
Arina Ph III	50	1974	250	550

Source : Kisumu Municipal Council Report, 1990

The total rental housing units that have been constructed by the council since 1961 is 1160 with the last being Arina Phase IV having been constructed in 1977. The demand for housing has far outstripped the supply.

Against the population statistics discussed in chapter 3 the Municipality as a matter of policy implementation has endeavoured to fulfil its housing obligation to the urban dwellers with dismal achievement. Not even a quarter way has it met the demand recorded in their applicants Waiting List Book. At the time of the survey, the number of people on the waiting list for low rental housing was 6144 and for

medium rental housing, was 2555, while the total housing units owned and administered by the council are only 1160.

It is against this background that planned preventive maintenance is necessary not only to extend productive life of existing stock but also develop new housing for the urban dwellers.

In the late 60's and 70's there arose the concept of urban home ownership as opposed to provision of rental housing. The rationale behind this shift in policy was that maintenance, repairs and improvements of housing stock became more and more expensive as prices of building materials (Chapter 4) kept on rising when rents appeared fairly static. Coupled with this was the commonly observed neglect by tenants which pre-disposed house to rapid depreciation. Following this reasoning by the council more attention was turned to Tenant Purchase and Site and Service Housing Schemes.

Financial organizations and Ministries concerned seemed to have accepted this type of housing and more are now being provided along this line at the expense of the rental ones e.g. Migosi, Pembe Tatu, Okore, USAID and Tom Mboya Estates. This only augur well for applicants both in the upper position of medium income and the top class level. It does not favour the low income people for the very fact that they can not

afford to raise the initial requirement for example the 10% deposit which often ranges from Ksh 20000/- to 50000/- depending on the unit cost of building such a house. For example Okore Estate which is similar in design, size and construction to Mosque were developed for Tenant Purchase and rents range between ksh 2000/- and 2800/-

Building costs continue to rise year after year e.g. recently cement increased from Ksh 234/- to ksh 300/- (Daily Nation, March 10, 1993). The impact of these costs on the financial bases of a Local Authority is severe. It is only sensible that the present stock of dwellings should be maintained in a satisfactory condition.

Maintenance should be done not only to keep the asset in good condition, but also to ensure that they keep the same performance standards as intended for user needs, whether for present or future generations. However due to insufficient maintenance, walls decay, roofs fall apart, water pipes leak, health risks increase and the full potential of the building is not obtained.

During the survey, an inventory of under maintained parts of Municipal housing estates was taken. This was recorded in terms of incidence of defective elements per housing unit. The elements considered included roofs, walls, windows, water and

sanitation, site work, floor.

For each estate, individual housing units were inspected and inventory taken of the defects found unattended at the time of inspection. Table 4b provides the results of maintenance problems. It is for instance evident that 50.2% of all the units had not been repainted with the result that the walls looked dirty and paint work peeling off.

TABLE 5b

PHYSICAL CONDITION OF KISUMU MUNICIPAL HOUSING

PERCENTAGE OF HOUSING UNITS WITH DEFECTS

	1	2	3	4	5	6	7	Total
UNITS	100	167	88	126	48	56	575	1160
ROOF	44.5	64.2	58.3	61.9	33.3	25.0	34.6	46.0
WALL	77.8	66.6	66.7	80.9	66.7	41.7	59.0	65.6
FLOO	83.3	71.4	25.0	64.3	50.0	37.5	79.5	58.6
DOOR	83.3	64.2	75.0	64.3	66.7	50.0	71.2	67.8
WIND	83.3	47.7	58.3	57.1	33.3	41.7	64.3	55.1
WATER								
SANI.	83.3	52.4	58.3	76.2	66.7	41.7	65.4	63.4
SITE								
WORK	77.8	57.2	58.3	71.4	33.3	58.3	69.2	60.8
PAINT	66.7	74.1	50.0	42.8	33.3	50.0	53.8	52.6
TOTAL	75.1	67.4	58.3	66.3	47.9	43.3	62.2	69.9

Source : Field Data, 1992

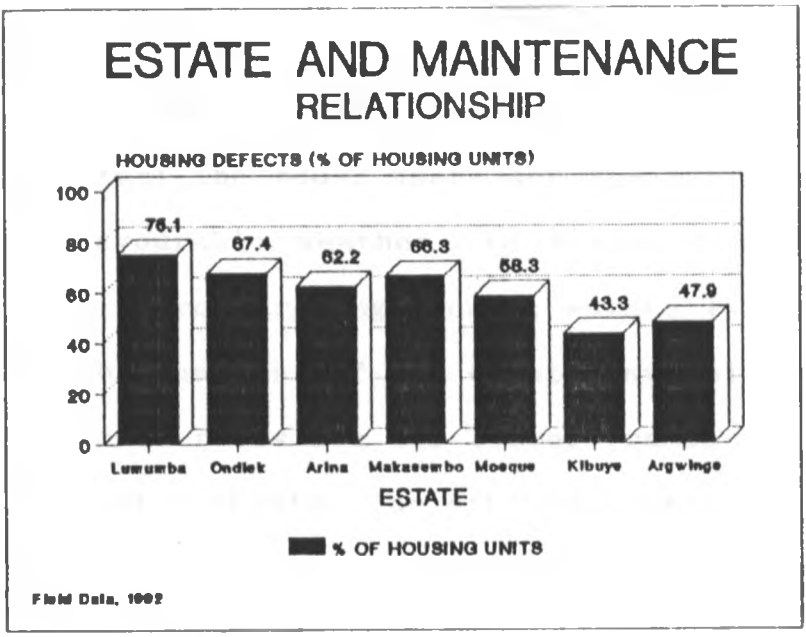
KEY

1 Lumumba Estate
2 Ondiek Estate
3 Mosque Estate
4 Makasembo Estate
5 Argwings Kodhek Estate
6 Kibuye Estate
7 Arina Estate

In general, the percentage of housing units with maintenance problems varied from one estate to another and one unit to another. Maintenance attention is most

required in Lumumba, Ondiek, Makasembo, Arina, Mosque, Argwings Kodhek and Kibuye with the percentage of defective building elements of 75.1% , 67.4% , 66.3%, 62.2% , 58.3% , 47.9% and 43.3% respectively of the housing units.

Fig 5a



5.2.1 PAINTING

Painting reflects cleanliness of the house. It is essentially done for decorative purposes. It is for instance evident that 52.6% of all the units had not been repainted for 10 or more years with the results that the walls looked dirty, damp and paint work peeling off.

Painting has been variously done in different estates both by the council and the tenants. The last painting done by the council was in Lumumba Estate in 1981. Tenants painting work has been concentrated in the sitting rooms and bed rooms leaving the exterior appearance in awkward state.

5.2.2 ROOFS

These are important part of any building. Roofs protect the house users and their properties against unfavourable weather. In Kisumu Municipal housing, apart from Argwings Kodhek estate (which is concrete slab) the rest of the estate have pitched roofs. The pitched roofs are all timber framed and covered with asbestos sheets. The pitched roofs account for 95.1% of the roof types observed while flat roofs accounted for 4.9% of the roof types observed.

46% of the units had defective roof coverings. The major defects on the roofs are

(i) leakage through defective roof covers (47.8%)

(ii) sagging and spreading (7%)

(ii) It was also noted that 3.6% of the roofs were made of an assortment of GCI sheets and asbestos hence killing the aesthetics of the building. Leaking roofs have affected housing units with ceilings e.g. Mosque estate. This has led to staining and/or falling off of ceiling boards.

Plate 5a

A house that was knocked by a vehicle. Because of incompatibility of roofing materials, the finishing is poor and the aesthetic quality of the house is killed. The roof leaks at the point of the joint.

According to the Town Engineer, the asbestos after exposure to climatic elements become quite feeble and can easily break. Such leakages cause dampness in the house during the rainy seasons.

Household properties are also destroyed by water. If a bed room is affected, sleeping arrangements are distorted and may cause anxiety.

5.2.3 DOORS

Doors are the most affected element in the [illegible] of the housing units had defective doors. The highest incidence occurred in Lumumba Estate (83.3%) while the lowest incidence was recorded in Kibuye Estate where 50% of the units had defective doors. The major defects on the doors included:

(i) rotting (22.8%)

(ii) broken locks (52.6%)

(iii) blistering of paints (12.3%)

Due to rain and water spillage from mobbing, the lower part of the doors have extensively been damaged. According to the tenants locks which were used were too weak and ended up breaking few years after completion of the construction and subsequent occupancy. Tenants complained of security risks because of defective doors. This has sometimes led to loss of property due to burglary

5.2.4 WINDOWS

These serve as a means of receiving lights and ventilation for the occupants. In the survey, 2 types

were observed, wood casement (41.1%) and metal casement (59.9%). It is evident from the survey that 55.1% of the housing units had defective windows. These included

(i) broken or missing window panes (21.7%)

(ii) broken shutters (5.3%)

(iii) worn out grills and wire meshes (21.2%)

(iv) paint peeling off (18.6%)

Here again the highest incidence was recorded in Lumumba Estate where 83.3% of the housing units had defective windows, Argwings Kodhek had the lowest percentage of defective windows (33.3%)

Some tenants have responded to this problem by using cartons or polythene to cover it. The cause of window breakage included children playing around the house (32.4%), vandalism (28%), wind forces (24%) Apart from window panes, the wiremesh appeared generally old and therefore need for total replacement.

5.2.5 WATER AND SANITATION

Water is so basic to man and availability and access to clean and reliable water supply can considerably reduce water related ailments. A lot of time can also be saved for productive purposes. 3.4% of all the housing units owned by the council had defective water and sanitary services. The water and

sanitary problems included;

(i) broken water closet pans (9.7%)

(ii) water problem (52.9%)

(iii) peeling surfaces (9%)

(iv) Leaking taps (6.8%)

(v) cisterns not flushing (18.8%)

The tenants complained of antique cistern systems (34.6%) (Eastern type) and some of the cisterns flushing contained water which was continuously leaking or dripping (18.8%). The old models lack spare parts and tenants are impaired technically to make such repairs.

The floors and walls of the bathrooms and toilets have peeled off or cracked and worn out, requiring immediate rescreeding. In terms of proportion of housing with defective water and sanitary facilities, Lumumba Estate had the highest (83.3%) This is the oldest Municipal housing. Kibuye Estate had the least proportion (41.7%)

The most serious problem is water shortage. Water is supplied basically between mid-night and 3.00 a.m. Arina, Mosque and Makasembo Estates have chronic water shortage. The tenants complained of

(i) exorbitant sale of water by vendors at Ksh 6/- per 20 litre tin (28.9%) which is beyond the reach of most tenants.

Plate 5b

Eastern type closet.
Such old models lack spare parts hence the cisterns do not flush and leak continuously. The walls are also peeling off.

(ii) Contaminated water, where in some cases certain sediments float on water or settle in a container. Vendors also transport water in contaminated

containers. Some tenants (3.6%) attribute typhoid incidence to water problems.

(iii) Water disconnection by the council (22.4%) The tenants complained of harassment with big water bills to the tune of Ksh 4500/- while the taps are perpetually dry. Some water pipes are rotten and therefore can not supply water.In one instance, a tenant had to be sued by the Public Health Department for staying in a house without water supply under Public Health Act. The tenants on the other hand, according to the council, have improvised ways of tapping water even after disconnection of water metres. The tendency of consumption without paying is a loss of revenue to the council.

5.2.6 WALLS

The choice of walling material depends on the availability of the material, cost of the material and aesthetic consideration. The wall material used include concrete blocks (94.4% of housing units) and burnt bricks (8.6% of housing units) Wall condition differs according to the material used and nature of the accommodation. The percentage of defective walls varied from one estate to another with the highest incidence in Lumumba Estate (77.8%) and Lowest proportion in Kibuye (41.7%)

The common defects on the walls include;

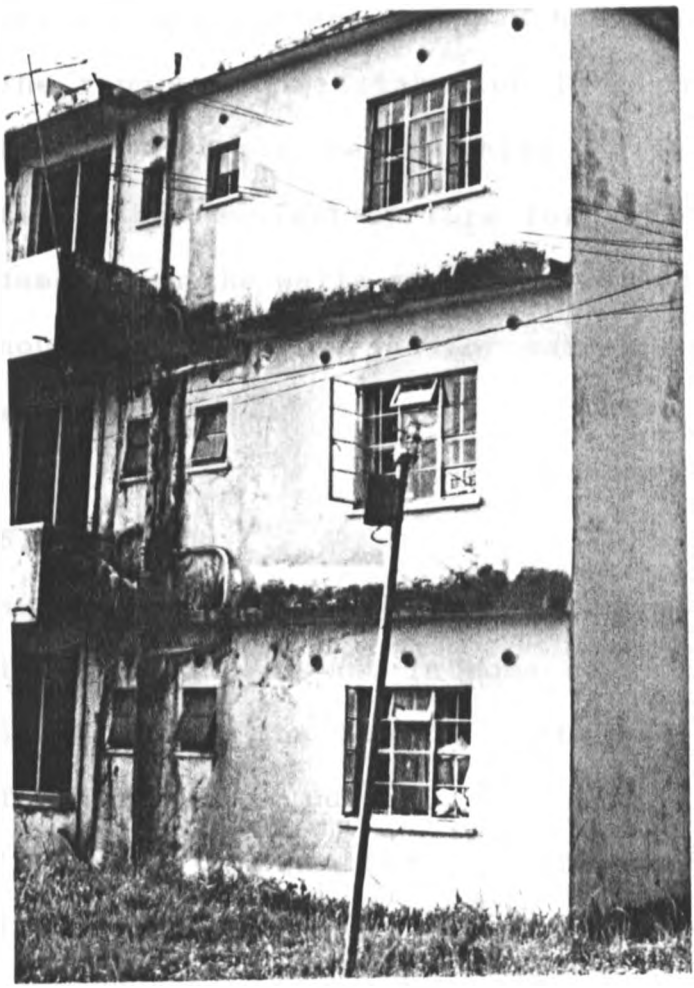
(i) cracks (15.9%)

(ii) peeling of surfaces (18.1%)

(iii) damp walls (26.3%)

(iv) stained surfaces (36.2%)

Plate 5c



Damp walls . Fungi developing and the walls looking dirty. Plants germinate on the walls and the roots creat cracks on the walls. This worsens maintenance problem. The houses are generally too cold during the rainy season because of this impact.

Externally cracks and dampness were evident and in some cases plant growth. The percentage of Municipal housing with defective walls accounted for 65.6% of all the surveyed units.

Some tenants (18.7%) who have reported damage severally to the council, use the municipal labour on private arrangement and pay him for their services. The reported cases take too long to be attended, as long as 5 or more years, while the tenant continuously fills the requisition form for various repairs. Such damages on the walls over time worsen and may make the house unserviceable and/or make the maintenance cost so exorbitant.

5.2.7 FLOOR

Most of the floors are in bad state and require immediate repair and in some cases need rescreeding. 58.6% of all the housing units had defective floors The defects include;

(i) cracks and peeling of surfaces (33%)

(ii) floor generally looking dirty (49%)

The floors have cracked such that cleaning of the floor has become a problem. Also due to wear and tear, the cement screed has already been worn out leaving the site concrete exposed. A good floor according to Barry (1974) is that which amongst other things is smooth and easily cleaned.

Plate 5d

Kitchen. The cement screed has come out.
The floor looking dirty with alot of potholes. The cooking slab has alot of cracks. The sink does not function because of the dry tap. The kitchen condition appears healt risk.

The floors which are good are those where the house size is bigger e.g. Mosque Estate which has 4 habitable rooms had only 25% of defective floors while

the incidence is more in Lumumba where 83.3% of the housing units had defective floors. It is also the oldest estate with 3 rooms.

The repairs of the floors have been done by tenants (23%) when they have complained to the council without repairs being effected. Here again no refund was made to the tenants who carried out their repairs. The tenants said they preferred clean houses to saving their money for other uses.

5.2.8 SITE WORK

In the case of site works, no estate enjoyed garbage collection services by the council. Uncollected garbage accounted for 50% of the site works problem. Other problems included damaged pavements (20%), defective manhole and sewerage bursts (11%). Several septic tanks were found overflowing and drains blocked.

On the whole, the percentage of municipal housing units with site works problem was 60.8% . Lumumba Estate had the highest incidence of site works problem (77.8% of the housing units) while Argwings Kodhek had the least incidence (33.3% of the housing units)

Garbage collection has been affected by lack of trucks. The Municipal has only 2 garbage collection vehicles of which one is grounded and the other is not in sound condition.

Plate 5e

Uncollected garbages. These are littered on the open space in the estates. The site turns to be a den of flies. This is a health hazard.

Tenants were provided with dust bins of which 32% of the surveyed households said they had been stolen for brewing local liquor purposes.

Tenants pay Ksh 50/- for bin hires yet they do not receive the services. The tenants have developed communal dumping which are finally burnt. The tenants whose housing units are located near dumping sites

complained of offensive smell of wastes. The responsibility of who should burn the garbage is not well defined and in some cases causing misunderstanding between neighbours and/or high hills of garbages.

Plate 5f

Road pavement has come out. The roads is dust during the wet season and too mudy during the wet season. The roads have also developed deep potholes. Vehicles use the road side thus causing traffic conflict.

5.3 MAINTENANCE PROBLEMS AND EXPENDITURE

Inadequate maintenance funds and shortage of trained man power have led to an over emphasis on crisis-maintenance practice, with consequent neglect of preventive maintenance in Kisumu Municipal Council. This often leads to increased maintenance costs and user dissatisfaction. Preventive maintenance of critical elements such as roofing, floor, plumbing and drainage on a planned basis can improve maintenance performance without adding much to cost. With the longer life of a well maintained building, there will be a saving on material costs, time and man power.

Most of the Local Authorities in Kenya (Kisumu Municipal Council inclusive) use the contingency system of maintenance management. Thus the incidence of repair as well as repair costs are based on what are reported rather than what is inspected and planned for in advance.

While saving could be made on maintenance costs it still remains the duty of building owners and managers to ensure that necessary arrangements are made not only to keep the buildings in good conditions but to ensure that they keep the same performance standards as intended for users needs.

In Kenya, maintenance policy is found in various pieces of legislation. For example, Public Health Act (1972) section 117-118 require that building and

sanitation including associated infrastructure be properly maintained in order to avoid nuisance, health hazard, and rodents. In the study, any element of deterioration was considered as under-maintenance e.g. cracks on walls or floors, poor decoration in terms of painting, poor performance of housing elements like sanitation.

The Rent Restriction Act (1982) imposes an obligation on the landlord of any premises to maintain and keep the premises in a state of good structural repair and in a condition suitable for human habitation. Therefore any defect on the structure in the study considered as a threat to users safety.

Maintenance process has the following purposes;

(i) To retain the value of the investment i.e. by way of repair and replacement of worn out parts.

(ii) To keep the building in a condition in which it continues to fulfil its function within the acceptable standards as prescribed by various legislations related to maintenance.

(iii) To present a good appearance to the building.

Currently it is the duty and responsibility of Kisumu Municipal Council to ensure that necessary arrangements are made not only to keep the building in good condition but also to ensure that they keep the same performance standards as intended for users needs. This is in exercise of responsibility and

powers provided by Local Government Act, Cap 265.

Council houses are provided for the welfare of tenants (ideally low income earners) are most dilapidated and yet progressively less money are spent on their maintenance.

Being dilapidated means the buildings do not provide for maximum amenity to users and therefore socially unacceptable. The process may be described as vicious circle of dilapidation (Syagga, 1988) The result is a vortex effect whereby the building finally degenerates into a tenement.

Where policy considerations as well as organizational considerations ignore technical criteria buildings may in many cases suffer since technical needs are subordinated to subjective influence. For instance in the case of Kisumu Municipal Council where the maintenance budget have to be approved by the council, budget figures are often pruned in favour of other pressing services such as payment of workers, provision of health and education.

According to Syagga (1979) the criterion for measuring economy in maintenance and repair is that no more than 15% of rent collectable should be spent on the same works. However where far less than 15% is spent on the above works, one should impute inefficiency on the part of the authority to undertake the same unless there are special reasons for the low

expenditure. The expenditure on maintenance has been varying for each estate and shows a steady decline since 1983.

TABLE 5c
EXPENDITURE AND RENT COLLECTIONS (1980 - 1990) IN K£

YEAR	Lum.	Ondiek	Mosque	Kibuye	Makas	Argwings	Arina
1980							
A	2515	2601	3086	2130	3616	2344	5683
B	3337	7970	10890	4622	7405	8646	53620
C	11100	21040	20590	9060	18000	18720	90900
1981							
A	13330	60000	4897	1528	20736	15392	9259
B	22895	26008	24465	10633	36168	32156	89736
C	12605	24708	26530	11090	21920	21045	93730
1982							
A	7013	4121	1903	3224	14713	7025	54936
B	13736	6881	5053	10954	19238	12805	96157
C	13800	27056	29040	12150	24000	23040	102600
1983							
A	1343	-	1436	3628	2063	264	5115
B	3346	44481	4995	5710	4827	3645	26873
C	10975	22829	24009	6859	18852	17953	88827
1985							
A	400	700	1000	250	280	400	500
B	7120	13070	13100	6290	10880	11980	46200
C	12360	25780	24850	8870	20550	20290	38840
1986							
A	399	752	29157	260	733	450	1929
B	9643	13270	42801	12836	6790	1665	49123
C	16840	32060	31680	16080	22760	22800	111440
1987							
A	999	1580	207	520	622	1941	1140
B	14717	26317	26944	22060	13485	25427	92863
C	15000	29880	31680	27000	16080	27920	111900
1988							
A	593	1162	1016	28	1413	4316	2010
B	14311	15365	12349	5538	10921	16329	9995
C	15000	30060	31680	12985	27000	25920	111900
1989							
A	202	1593	274	136	737	1160	1120
B	4014	10085	8148	3014	4731	10047	48513
C	15000	30060	31680	12953	27000	25920	111900
1990							
A	821	922	198	232	1975	312	1974
B	5951	12172	7848	3962	7425	10602	50902
C	15000	28605	31598	12980	27000	25920	111900

A : Maintenance Expenditure

B : Total Expenditure

C : Rent Collected

Lum. Lumumba Estate

Makas. Makasembo Estate

Source : Abstract of Accounts, Kisumu Municipal Council

Annual budgetary allocation for maintenance of council housing has considerably declined over the past decade, notwithstanding the increasing workload, the growing age of buildings and the continuing inflationary pressure. Annual allocation are usually based on last years' actual rather than on a real maintenance needs, the allocation being as low as 20% of financial requirements based on technical needs for repairs and upkeep. Consistent neglect of maintenance has led to serious deterioration in the condition of Municipal housing as evidenced in the building failure characteristics. Maintenance strategy should then be formulated and adopted by the council to ensure value for money expended and protect value of the asset.

To test the budgetary priorities of the council, the mean maintenance expenditures on all estates and rent collections from all estates are considered. T - test statistics is used.

TABLE 4d
MUNICIPAL MAINTENANCE EXPENDITURE ON AND RENT COLLECTED FROM HOUSING ESTATES (K£)

YEAR	MAINTENANCE EXPENDITURE	RENT COLLECTED
1980	21975	189410
1981	71142	211624
1982	92935	231695
1983	13875	190304
1985	3530	151540
1986	33680	253660
1987	7009	259460
1988	10538	254545
1989	5222	254513
1990	6434	253003
Average	26634	224975

Source, Kisumu Municipal Report

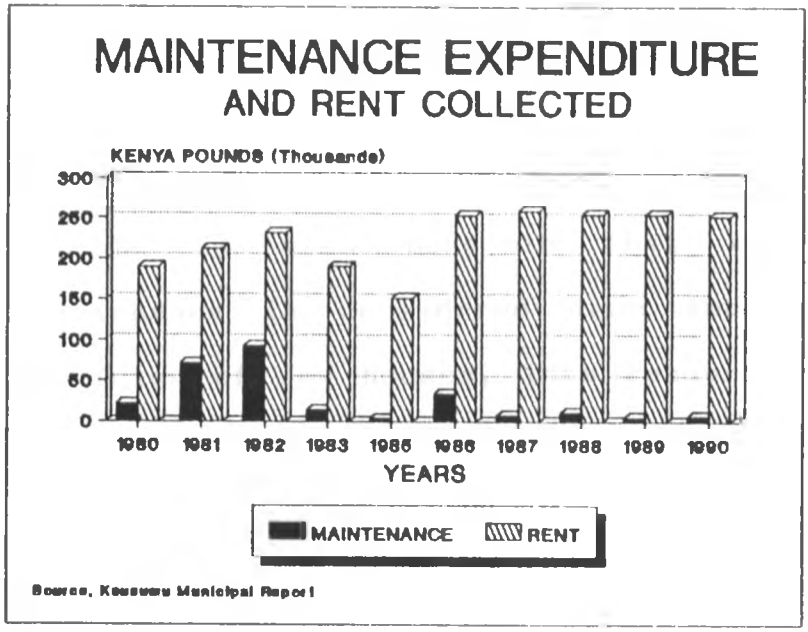
The mean annual maintenance expenditure by the council (average annual expenditure over 1980-90 period) is K£ 26634 per year while mean rent (average annual rent collection from the estates over 1980-90 period) per year is K£ 224975. The Standard Deviation of maintenance expenditure is 31011.6 with a Standard Error of 9806.7. The Standard Deviation of rent is 37457.3 with a Standard Error of 11845.0.

The t_0 is 12.9. The critical value t_e with 18 Degrees of Freedom for 2-tailed test at 95% significance level is 1.73. Since the calculated t-value (t_0) is greater than the critical value (t_e) H_0 is rejected.

Therefore, we can conclude that there is a significant difference between maintenance expenditure and the rent collected from Municipal estates. This difference expresses the budgetary priorities of the

council.

Fig 5b



When rents have been received in the Town Treasurer's offices, entries are made in the estate ledger. Although the council maintains a separate housing account, it does not maintain a separate banking account for housing. All council revenue is banked in one account, against which all expenditures are made according to votes. The Treasurer commented for instance that it would be of no use to maintain a healthy housing account when other council services are at a standstill for lack of finance. Similarly it was argued that housing operations would benefit from

surplus revenue from other sources such as rates, for instance in 1981 105.8% of the rents collected from Lumumba Estate were spent on the maintenance work. This was one of the rare incidence because from 1985 to 1990 expenditure on maintenance for the same estate was below 7% .

It is also possible that where building maintenance is considered less important say to provision of new houses, less resources in form of staffing will be made available for maintenance. Lack of resources imply that the buildings will be physically badly maintained.

With reference to Kisumu Municipal Council, maintenance have to be approved by the council, where budget figures are often pruned in favour of other pressing services such as provision of health, education and payment of workers.

This supports our argument that 'maintenance problems of municipal housing is a function of the council's budgetary priorities'

When maintenance is subordinated to other priorities house deteriorate prematurely and hence the high incidence of housing units with maintenance problems. Once funds have been received from various revenue sources of the council, the whole amount is banked in one account from which different votes are made. In this case, housing maintenance is likely to

be neglected vis-avis other priorities. From revenue accounts, though rents are duly paid, the percentage allocated to maintenance work is relatively below the recommended percentage. This in effect has led to the accumulation of maintenance work and hence high incidence of housing units with defective building elements.

Such an accumulation of the maintenance work only helps to aggravate the poor state of housing which subsequently increases the maintenance costs and also makes the housing inhabitable.

With the current shortage of housing in the Municipal Council (as reflected in the waiting list) the existing housing stock is as important, if not more important as newly constructed housing. In this context, therefore, timely maintenance and rehabilitation work assumes a special significance as inadequate attention to this area could accelerate depreciation of building stock, ultimately leading to considerable loss of national assets. The municipal council will therefore have to ensure effective control on maintenance costs and look for innovative means of cost recovery.

The maintenance expenditure increased progressively from 1980 when the maintenance expenditure was K£ 21,975/- for all the estates, in 1981 it increased to K£ 71,142/- and in 1982 it rose

to K£ 92,935/- The figures are still high even after considering the inflation rate in the construction industry of 72% between 1980 and 1982 (CBS, 1982 ,table 4c) 1990 is taken as the base year. This could imply more maintenance attention by the council since maintenance problems were attended as reflected in the maintenance expenditure.

The maintenance expenditure reduced drastically in 1983 to K£ 13,879 and the least recorded maintenance expenditure in 1985 when it was K£ 3,530/- This could imply neglect of municipal estates as is evidenced by accumulation of maintenace problems (table 5b). The maintenance expenditure was maintained below K£ 10,000/- but because construction cost rises year after year, and therefore maintenance costs, this could imply neglect of maintenance work. The only excuse advanced by local authorities for such reduced expenditure is unavailability of funds but not that the state of maintenance was good to warrant such reduced expenditure.

The major items of expenditure from the Housing Revenue Account are, loan repayments which account for over 30% of the revenue from rent; maintenance and repairs which account for about 10% of the rent collected. Debit balances usually arise where anticipated rents are not collected or where expenditure is high. Other expenditures include,

insurance, contribution to General Funds, Central Administration, Wages, Retirement Benefits.

5.3.1 LEVEL OF PERFORMANCE OF MAINTENANCE WORK

The level of performance in executing maintenance and repair works will be first examined against the level of expenditure in relation to the rents collected. It has been mentioned in the foregoing that expenditure on maintenance should not exceed or fall far below 15% of the rents charged (Syagga, 1979)

In Kisumu Municipal Council maintenance expenditure records available between 1980 and 1990 do not show cases of excess expenditure except in 1981 and 1982 when maintenance expenditure was 48.6% and 34.9% respectively of the rent collected. Low expenditure on maintenance was evident with some years expenditure on maintenance as low as 2.3% of rent collected (1989), 2.5% of rent collected in 1985.

Table 5e gives comparison of sums spent on maintenance against sums collected from rent for the years 1980 to 1990

What appears evident from table 5e is that maintenance expenses have declined since 1980. Exceptions are seen in 1981 and 1982 when maintenance expenses accounted for 48.6% and 34.9% respectively of the revenue accrued from rent collections. This is far above the calculated expected percentage of not more

than 15% .In absolute terms, the highest maintenance expenses recorded was K£ 92935 for all the estates in 1982 followed by 1981 when maintenance expense for all the Municipal Housing accounted for K£ 71142. This could imply higher maintenance levels of the Municipal housing for those years.

TABLE 5e

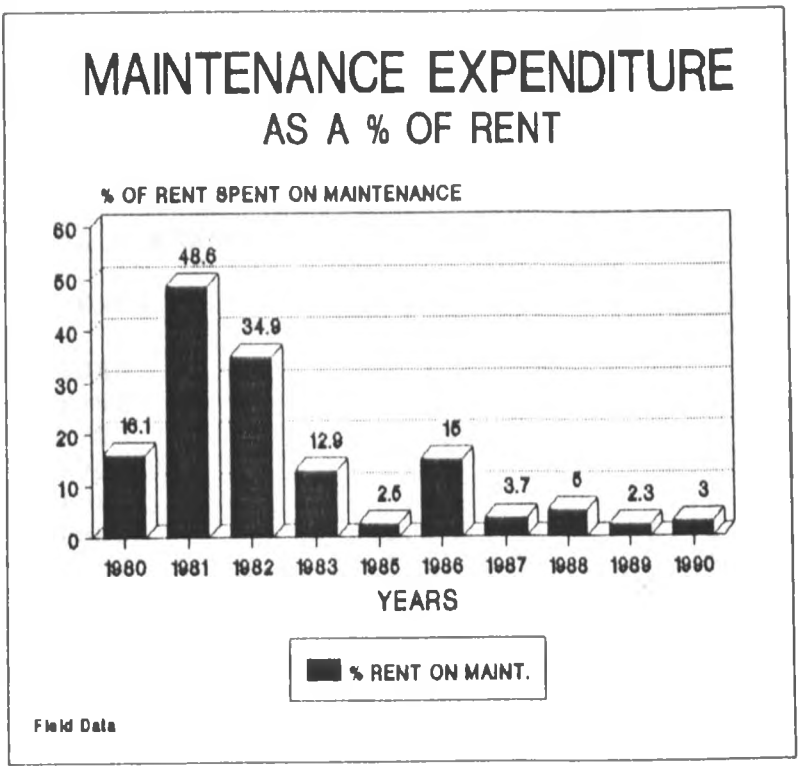
MAINTENANCE EXPENDITURE AS A PERCENTAGE OF RENT COLLECTED 1980-90

YEAR	Lum.	Ondi.	Mosque	Kib.	Makas	Argw.	Arina	Total
1980	22.7	12.4	15.0	23.5	20.0	12.5	6.3	16.1
1981	105.8	24.3	18.5	13.7	94.6	73.1	9.9	48.6
1982	50.8	15.2	6.6	26.5	61.3	30.5	53.5	34.9
1983	12.2	-	6.0	52.9	11.1	1.5	5.8	12.9
1985	3.2	2.7	4.0	2.8	1.4	2.0	1.3	2.5
1986	2.4	2.3	92.1	1.6	3.2	2.0	1.7	15.0
1987	6.6	5.2	0.06	1.9	3.9	7.0	1.0	3.7
1988	4.0	3.9	3.4	0.02	5.2	16.7	1.8	5.0
1989	1.4	5.3	0.07	1.1	2.7	4.5	1.0	2.3
1990	5.5	3.2	0.06	1.7	7.3	1.2	1.8	3.0

Source : Field Data, 1992

In 1985, maintenance expenditure accounted for K£ 3530. This was 2.5% of the total rent collections for the year. This is too low for the required percentage (15%) of the rent collected. Low expenditure on maintenance may imply neglect of the housing stock so that estates appear in bad structural and decorative state of repairs. The systematic decline in maintenance expenditure since 1983 could have contributed to the accumulation of maintenance work, hence high incidence of defective elements in the building fabric as shown in table 5b where an analysis of building failures were examined.

Fig 5c



Maintenance expenditure vary estate by estate. When Kisumu Municipal estates are categorised according to rent paid, two categories came up. Estates where rents paid are below Ksh 600/- as low rental and those above Ksh 600/- as medium rental housing as shown in table 5f.

TABLE 5f
MAINTENANCE EXPENDITURE (K£):

YEAR	LOW RENTAL ESTATES	MEDIUM RENTAL ESTATES
1980	3604	2520
1981	12331	7272
1982	20196	4050
1983	2130	1776
1985	470	550
1986	953	9956
1987	1085	889
1988	1295	1786
1989	913	523
1990	1423	247

Source: Field Report, 1992.

When maintenance expenditure is compared for individual housing units in each estate, a different scenario emerges.

TABLE 5g

MAINTENANCE EXPENDITURE PER HOUSING UNIT (K£)

YEARS	LOW INCOME ESTATE	MEDIUM INCOME ESTATE
1980	3.7	13.1
1981	12.7	37.8
1982	20.9	21.1
1983	2.2	9.3
1985	0.5	2.9
1986	1.0	51.8
1987	1.1	4.6
1988	1.3	9.8
1989	0.9	2.7
1990	1.5	1.2

Source: Field Report, 1992

Using the deflator in table 4c, and taking 1990 prices, the 1990 equivalent of maintenance expenditure are as shown in table 5h.

TABLE 5h

KISUMU MUNICIPAL HOUSING MAINTENANCE EXPENDITURE (K£)

(1990 PRICES)

YEAR	LOW RENTAL ESTATES	MEDIUM RENTAL RENTAL
1980	1100.32	7761.60
1981	3170.39	19561.68
1982	7662.56	9558.00
1983	4707.30	3924.96
1985	855.40	1001.00
1986	1629.63	17024.76
1987	1660.05	1360.17
1988	1903.65	2625.42
1989	132.12	247.00
1990	1423.00	6371.30

Source: Author's own compilation, 1993.

From table 5h statistics, the mean annual maintenance expenditure on Municipal estates is K£ 16895 using 1980-1990 data. The average expenditure in absolute terms is higher in low rental estates than medium rental estates. This can be attributed to the number of housing units in low rental estates which account for 88% of total municipal housing units.

The maintenance expenditure if again compared for individual housing units, another scenario emerges,

TABLE 5i

MAINTENANCE EXPENDITURE PER HOUSING UNIT (K£)
(1990 PRICES)

YEAR	LOW RENTAL ESTATES	MEDIUM RENTAL ESTATES
1980	11.4	40.4
1981	34.2	101.7
1982	49.3	49.8
1983	4.8	20.6
1985	0.9	5.3
1986	1.7	88.6
1987	1.7	7.0
1988	1.9	14.4
1989	1.1	3.5
1990	1.5	1.2

Source: Author's own compilation

When individual estates were examined, the amount of rent that went to maintenance expenditures was relatively higher in the low rental estates like Lumumba, Makasembo, Arina and Ondiek than in medium income estates of Argwings Kodhek, Mosque and Kibuye. Ironically, these estates where greater proportion of rent is spent on maintenance relative to their rents had higher proportion of defective elements of the

building than the other estates. It is possible they are subjected to greater wear and tear on account of age as can be seen from percentage of rent spent on maintenance for Lumumba Estate in 1981.

Since the house sizes vary according to estates, the comparable unit becomes maintenance expenditure per habitable room. Habitable room in this context is a room used for purpose of working, living, or sleeping, other than kitchen, bathroom, lavatory or laundry (CBS, 1989). In low rental estates, each housing unit has an average of 3 rooms, while medium rental estate has 4 rooms. The maintenance expenditure per room are as shown in table 5jbelow. The assumption here is that rooms are of similar sizes.

TABLE 5j

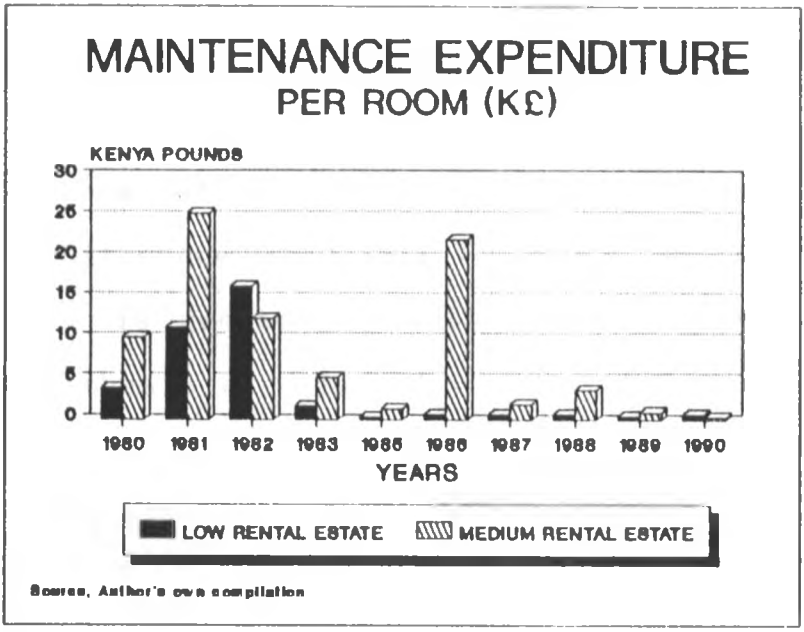
MAINTENANCE EXPENDITURE PER ROOM (K£) 1990 PRICES

YEAR	LOW RENTAL ESTATES	MEDIUM RENTAL ESTATES
1980	3.8	10.1
1981	11.4	25.4
1982	16.4	12.5
1983	1.6	5.2
1985	0.3	1.3
1986	0.6	22.2
1987	0.6	1.8
1988	0.6	3.6
1989	0.4	0.9
1990	0.6	0.3

Source : Author's own compilation

From the statistics above, it clear that maintenance expenditure is more in medium rental estates than low rental estates.

Fig. 5d



To test the significance of the relationship, T-Test Statistics is applied to test difference between mean maintenance expenditure per room in low rental housing unit and medium rental housing unit . The average expenditure per room in low rental housing unit is K£ 3.62 per year with a Standard Deviation of 5.64 and Standard Error of 1.78.

The mean maintenance expenditure per room in medium rental housing unit is K£ 8.33 per year with a Standard Deviation of 9.12 and Standard Error of 2.88.

The H_0 is : There is no difference between mean maintenance expenditure in two zones- low rental estates and medium rental estates.

The t_0 is 1.96. The critical value, t_e with 18 Degrees of Freedom for two-tailed test at 95% significance level is 1.73. Since the calculated value of t is greater than the critical value, the Null Hypothesis is rejected .

We can then conclude that there is a statistically significant difference in maintenance expenditure between the low and medium rental housing units. In medium rental housing units there is more maintenance expenditure per room than low rental housing units.

This partly explains the relatively low incidence of housing units with maintenance problems in medium rental estates than low rental estates . More maintenance expenditure implies more attention to maintenance.

The municipal council spent more in medium rental estates than low rental partly due to pressure from tenants. The senior staff of the council stay in the houses and can lobby for prompt maintenance. The occupants could also be more aware of importance of preventive maintenance and therefore report any observed defects in the house . They are also more affluent and influential. The rents charged for medium

rental housing is relatively high hence a bigger margin for maintenance expenditure. The maintenance expenditures could be politically motivated by the councillors and the technocrats to please the middle and high income groups living in the medium rental estates

TABLE 5k
MAINTENANCE EXPENDITURE AS A PERCENTAGE OF RENT FOR LUMUMBA ESTATE

YEAR	RENT COLLECTED K£	MAINTENANCE EXPENDITURE K£	PERCENTAGE %
1980	11100	2515	22.7
1981	12605	13330	105.8
1982	13800	7013	50.8
1983	10975	1343	12.2
1985	12360	400	3.2
1986	16840	399	2.4
1987	15000	999	6.6
1988	15000	593	4.0
1989	15000	202	1.4
1990	15000	821	5.5

Source : Abstracts of Accounts (Kisumu Municipal Council)

In 1981 all the rent was spent on maintenance and additional sources had to be sought. This was followed by decline in 1982. The percentage rent spent on maintenance varied as low as 1.4% in 1989 to 105.8% in 1981. This means that in 1981, all the rent collected from Lumumba estate was spent on maintenance and additional sources of revenue had to be sought for maintenance. The decline in the maintenance expenditure could have contributed to the accumulation of maintenance work and greater percentage of housing units with defective building elements in Lumumba

Estate. According to the Director of Social Services and Housing, lack of sufficient funds has been a major constraint to respond to a lot of maintenance requests from the estates with a requisition list of 5430. This constraint in his view emerges from pricing mechanism of the utilities and services provided by the Local Authority. The prices charged for rents are far below the market rate even in the same estate. For instance, in Ondiek Estate where some units were sold under Tenant Purchase Scheme, the average rents are Ksh 1200/- while those owned and administered by the council in the same estate are uniformly charged Ksh 300/-. This rent charged by the council is 25% of the rents charged by individual landlords while the units are similar structurally and are of the same age.

The failure to charge realistic prices which would reflect cost of operation, maintenance and long term capital stock replacement has contributed to low funds available for the maintenance of the various infrastructural services within the Municipal Council Housing.

The overall problem seems to be the price of the borrowed capital for the housing facilities being quite high. The houses were developed by National Housing Corporation and handed over to the council and must be serviced with the meagre collections from the various user charges.

With the falling value of the Kenya Shilling and the unprecedented rise in the value of the dollar and other major currencies, the burden of servicing the initial capital has been a major constraint which has led to less funds allocated for the maintenance operation within the council.

The weak financial position of the council (evidenced by the council's failure to pay even salaries and wages on time) has partly been brought by the mismanagement and misuse of funds by the former Kisumu Municipal Council and also the relatively low rents charged. At the time of survey, management was done by Commissioners after the Minister for Local Government dissolved the council in 1990. Workers often strike over salaries and hence priority is given to payment of workers (Daily Nation, Sept 16, 1992)

This implies that resources for maintenance are usually particularly scarce because of relegation of maintenance work by the council to other priorities. It therefore becomes vital that they should be planned and used to the best possible advantage. The maintenance budget therefore become a crucial tool for effective cost control. The rents charged should therefore reflect the costs or the resources necessary for maintenance.

The physical needs of a building are used as the basis for determining the necessary resources in terms

of equipment and manpower. Theoretically, the more serious the maintenance problem the greater and more urgent the attention required by the building and presumably,the greater the expenditure (Syagga, 1988). The maintenance requirement in terms of urgency and amount of resources, theoretically depend on the maintenance generators which act upon the building and erode the standards. The maintenance generators include

(i) CLIMATIC CONDITIONS

These have great effects on the external elements such as roofs and walls. Due to fluctuations in the climatic factors such as rains, temperatures, wind, and humidity, cracks develop on the walls, while other appear damp. This is evident in the percentage of the building units with defective walls (65.5% of the municipal houses). Roofs are affected by changing weather. The asbestos then become feeble and causes leaking on the roofs as evident in percentage of units with defective roof covers (46.0% of municipal housing) The influence of climate is almost uniform in all estates irrespective of their rental levels since they are all located in the same climatic zone.

(ii) USER ACTIVITIES

These include both human and mechanical agencies and authorised and unauthorised usage. For this purpose a burglar may be considered a user of the building

albeit an illegal and unwelcome one. Children playing also may be a nuisance to maintenance, for instance writing on walls using charcoal, breaking window panes.

The family size occupying any housing unit also determines the intensity of use of the housing facilities and hence high occupancy rates imply intensive usage thus eroding maintenance standards . For instance the average family size of Kibuye Flats estate is 6 and there are 4 habitable rooms. The occupancy rate is 1.5 persons per room while in Lumumba estate the average family size is 8 while there are only 3 habitable rooms. The occupancy rate is 2.7 persons per room. At this rate, the rate of deterioration is likely to be higher in Lumumba Estate than Kibuye Flats.

(iii) CHANGING STANDARDS AND TASTE

These, while not worsening the existing condition may create a demand for work to be carried out more frequently than functionally necessary. For instance, repainting of the building for the sole purpose of changing the colour scheme. Also cleaning operation which is undertaken at varying frequency e.g. floor swept daily and polished weekly.

In summary the rate at which maintenance generator create need for maintenance depends to a large extent on the design as well as the construction

of the building.

(iv) DESIGN :

Design encompasses a wide range of activities including choice of materials, decision about size and lay out as well as choice of method of construction(Syagga, 1988:4) If inappropriate design can create major maintenance problems. For example heights and floor area can increase the maintenance requirement if higher and larger respectively.

(v) AGE: Because of the above maintenance generators a dwelling that has been exposed longer has more incidence of maintenance problems. It therefore implies that the amount of maintenance to be undertaken increases with age of the building as would be shown in the next section.

5.3.2 AGE AND MAINTENANCE OF MUNICIPAL HOUSING

Buildings start to deteriorate immediately after completion as most of the factors causing deterioration are often present. For instance, climate as one of the factors will at least affect some of the building elements at this stage as it is impossible to assemble the fabric in such away as to match perfectly with the changing climatic conditions. This therefore connotes that 'maintenance starts with the day the builder leaves the site '(Seeley, 1976)

The age of the building units owned by the Municipal Council of Kisumu varies from one estate to another (table 51).

TABLE 51

AGE OF KISUMU MUNICIPAL HOUSING

ESTATE	UNITS	AGE (YEARS)	AS % OF TOTAL HOUSING UNITS
Lumumba	100	32	8.6
Ondiek	167	25	14.3
Mosque	88	28	7.5
Makasem	125	24	10.7
Argwing	48	23	4.1
Kibuye	56	26	4.8
Arina	575	18	49.5

Source : Kisumu Municipal Reports

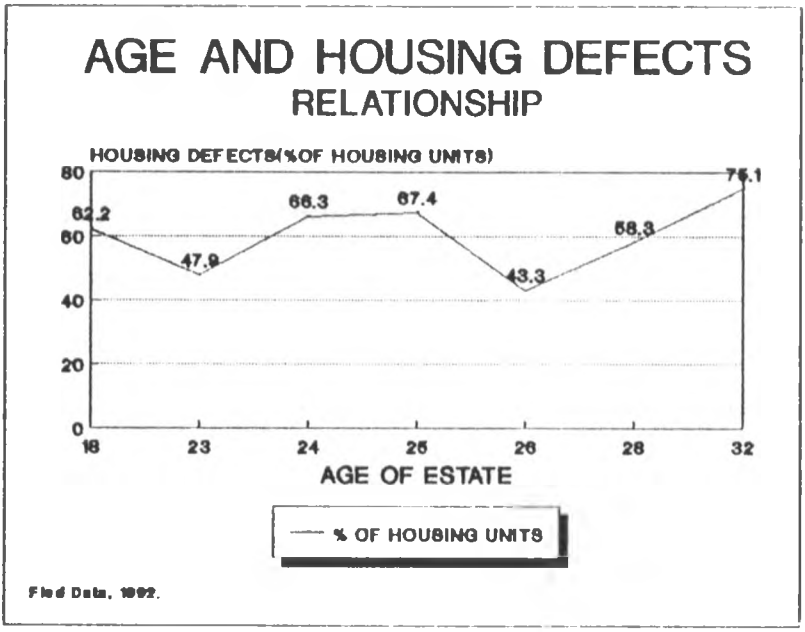
As observed earlier, buildings begin to deteriorate immediately after completion. It follows that the amount of maintenance to be undertaken increases with age of the structure. According to the ages of the Municipal housing stock, 49.5% of the units are below 20 years, 29.9% are between 26 to 30 years, and 8.6% of the units are above 30 years.

This shows that there is a greater need to implement effective and efficient maintenance policy(ies) to preserve the Municipal housing stock.

Nuh Bev et al (1976) in their research on housing obsolescence, suggested that the owner of the house can be relied upon to maintain his house and that there should be no appreciable physical deterioration or obsolescence for the first 20 years of life. After that, they suggested that it should loose 2% of its

original value in each succeeding year and therefore, becomes valueless at the age of 70 years.

Fig 5e



This implies that 50% of the Municipal housing are on the depreciation side. It is only Arina Estate with 575 units that is less than 20 years of age. Though Arina Estate is the most recent of all the Municipal houses, 62.2% of its housing units have incidence of defective building elements. This occurrence may be due to maintenance generators like climatic conditions, user activities as well as workmanship, design and building materials. According to the interview with the tenants, the houses in Arina Estate have never been painted since the completion of

construction. 32.3% of the tenants interviewed also complained of weak building elements, for example the locks came out shortly after the occupation of the units. These factors could have contributed to premature obsolescence.

Conversely, Mosque Estate which is 28 years old, only 58.3% of the housing units surveyed had incidence of defective elements. This could be attributed to less impact of user activities because of bigger house size (4 rooms). Good workmanship and good building materials could have also sustained minimal incidence of maintenance problem. Other possible reason could be the tenants carry out their own repairs. 56% of the tenants responded that they carry out their repairs because the council takes too long to respond to maintenance requests.

Lumumba Estate is the oldest (32 years) and 75.1% of the housing units have defective building elements. The high incidence of housing units with defective building elements could be attributed to maintenance generators like age of the structure climatic conditions, user activities, design and construction attributes.

Even though this is the case, the aim of maintenance is to retard obsolescence but not to eliminate it. In other words, maintenance aims at protracting productive life of a building. This means

that maintenance problems in housing can be managed, controlled or reduced but it can not be eliminated entirely. Therefore a well maintained estate is that whose houses, though may be already dilapidated, something substantial must have been done to retard their deterioration and hence less incidence of housing units with maintenance problems.

5.4 CONCLUSION

The process of deterioration of building is inevitable but the rate at which it proceeds could be regulated through appropriate maintenance practices. Maintenance therefore plays 3 roles - functional, financial and aesthetics.

In Kisumu, 59.9% of Municipal housing have defective elements of building fabric. The most affected element is doors (67.8% of all units). The percentage of housing units with maintenance problems is highest in low rental houses than medium rental houses. This could be attributed to age of the buildings with the exception of Arina estate. Other reasons could be low finances spent on maintenance as reflected in table 5f. Low expenditure could imply neglect of houses. Poor workmanship could be another possible reason for high incidence of maintenance problems in Arina.

Budgetary allocation by the council tends to relegate maintenance priorities below other

expenditures like loan repayments, salaries, insurance. Thus far below the recommended fraction of the revenue from rent (15%) goes to maintenance, with exceptions in 1981 (48.6%) and 1982 (34.6%)

The priorities also vary according to estates such that more finances go to maintenance expenditure in high rental than low rental. This has reflected better maintenance in medium rental estates than low rental.

The weak financial position of the council has partly contributed to neglect of maintenance work. Funds for maintenance are basically derived from rent collection. This therefore suggests that realistic pricing of Municipal housing is of paramount importance if maintenance expenditure are to be availed through rent collections. The rent collected must be wisely spent and well accounted for. The officers charged with management must be of sound training and exercise high levels of accountability.

The cost of construction has steadily increased Since maintenance work is a component of construction, the cost of maintenance has consequently increased. The inflation rate in the building residential construction has been far above the rate of rent increase. Unless alternative sources of revenue are sought, maintenance expenditure can not be met from the rent collection.

CHAPTER SIX

6.0 FINDINGS, CONLUSIONS AND RECOMMENDATIONS

6.1 FINDINGS

Study was an attempt to delve into the impact of rent levels on management and maintenance of Local Authority Housing. After an indepth analysis and examination of major issues related to Local Authority Housing with reference to Kisumu, the following fings were got;

1. That the demand for council houses has far outstripped the supply of the same. This is partly due to change in policy from rental to Tenant Purchase housing schemes and Site and Services schemes and also scarcity of funds to develop new units.

2. That the cost of construction of residential building has risen by 308% between 1980 and 1990. This means that the prices of building materials went up by more than three times. Such increases by extension, has also inflated cost of maintenance of municipal housing. Hence more financial resources are required to effect maintenance and repairs. The costs are even higher especially when imported fittings have to be used.

3. 59.9% of Municipal housing estates have defective elements of building fabric. The highest incidence of

maintenance problems was registered in Lumumba estate where 75.1% of the housing units have defective building elements.

4. The most affected building element is the doors. 67.8% of the housing units have defective doors. This means that more attention should be put on maintenance of doors as doors influence the security of the tenants and their properties.

5. The percentage of housing units with maintenance problems vary from one estate to another. The percentage of housing units with defective elements of the building is higher in the low rental estates (67.8% of the housing units have defective building elements compared to medium rental estates having 49.8% of housing units with defective building elements)

6. No municipal estate enjoys garbage collection services by the council, yet tenants pay ksh 50/- for bin hires every month. Uncollected garbage is health hazard and lowers property value.

7. Even though Kisumu Municipality is at the shore of Lake Victoria, Municipal tenants experience chronic water shortage compared to those occupying private

property units. Municipal tenants have to buy water from vendors exorbitantly - ksh 6/- per 20 litre tin. This kind of water is sometimes contaminated and rampant typhoid cases have been attributed to it.

8. The annual budgetary allocation for maintenance of council housing has considerably declined since 1982, notwithstanding the increasing workload partly due to the growing age of buildings and the continuing inflationary pressure in the cost of residential building construction. The maintenance votes is hardly 20% of maintenance expenditure requirements.

9. The council has no fixed percentage of rent going to maintenance. The figure is arbitrarily determined and in a majority of cases below the recommended 15%. The lack of guiding principle has subjected maintenance expenditure to alot of pruning. This could have exacerbated maintenance problems due to accumulation of maintenance work.

10. Maintenance expenditure per housing unit was higher for for medium rental housing than low rental housing between 1980 and 1990. This could have attributed to relatively low percentage of housing units with maintenance problems in medium rental estates.

11. The council has been unable to meet housing running costs including maintenance of the houses, servicing of loans, contribution to general fund and insurance. This has lead to repossession of some council estates by NHC due to loan default of over Ksh 120 million.

12. Building maintenance has been relegated to other responsibilities hence high incidence of maintenance problems. The only reason given by the council is lack of finances.

13. Age of Municipal housing units is got no direct relationship with state of maintenance, since relatively older buildings are at times in better state of maintenance than new ones. For instance Mosque estate compared to Arina estate. Other factors affecting maintenance are user activities, size and number of rooms, climate and workmanship.

14. Rental levels of Municipal housing are far below the market rent (as low as 25% of the market rent). This minimizes rent revenue from rent collections.

15. The procedure for rent reviews causes delays in implememntation of proposals. Since 1984 rents have never been revised yet the cost of construction

including maintenance has consistently increased.

16. The low rents charged has contributed to household immobility. Some tenants have stayed in the same houses for over 30 years. This kind of scenario when combined with tenants not keen on maintenance exercabates maintenance problems.

17. The houses are never inspected for maintenace problems. Even when the tenants report the defects, the council takes as long as five years or more to respond to maintenance requests, hence high accumulation of maintenance problems.

18. 84.2% of the tenants feel that maintenance of council houses should be a responsibility of the council and not a joint venture with the tenants. The Local Authority should complement with the community in urban management.

19. 75.4% of the tenants felt that the rents charged for council housing are fair. On average, the rent charged is only 12% of tenant's income compared to [illegible] of Kenya. Since the rents charged are far below the market rate, the cost of bu[illegible] has also gone up and the income of the occupants is above the

prescribed bracket, therefore there is room for increase.

20. The Municipal tenants are weary about rent increases because in their view, there is high incidence of maintenance problems in the housing units yet they pay rent they believe covers maintenance cost. Maintenance has never been effected irrespective of the requests they have made to the council.

6.2 CONCLUSION:

From the above findings is clear that Kisumu Municipal Council is finding it difficult to allot financial resources for development of new housing. The last development was done in 1977. This has increased pressure on the existing stock. This therefore calls for more emphasis on maintenance of the existing stock than hitherto laid. Maintenance should be done to keep the asset in the same performance standards. This has the positive effect of extending productive life of the asset.

Maintenance expenditure of Municipal estate is basically got from rent collections. Thus when low funds are realized from rent collections, subsequent maintenance allocation are low. There is normally no indication of what percentage of rent should be set aside for building maintenace. Rents charged should

therefore reflect the running costs of the houses. For instance rents should cover Loan Repayments, maintenance expenditure, salaries, insurance and "sinking fund" for future replacement costs. This means that realistic pricing of Municipal housing is of paramount importance if maintenance expenditure are to be availed through rent collections.

Maintenance and repairs of council houses is quite minimal. This coupled with maintenance generators like user activities, climate and age of the building has exacerbated maintenance problems hence a high percentage of housing units with defective building elements.

Kisumu Municipal Council allocates more maintenance expenditure budgets on medium rental estates than low rental estates. The difference apparently emanates from difference in returns from the houses. Medium rental estates command higher rents hence giving bigger margin for maintenance expenditure. The occupants of medium rental estates earn more than the occupants of low rental estates hence have more economic powers and hence political forces to lobby for better maintenance standards.

Maintenance of Municipal houses has suffered from skewed priorities of the council. Maintenance of council houses has been subordinated to other pressing services like payment of workers, provision of health

and education. Maintenance budgets have always been pruned in favour of other needs. Once funds have been received from various revenue sources of the council, the whole amount is banked in one account from which different votes are made.

The rents charged for municipal houses are far below the market rate - sometimes below 25% of the market rent, hence do not generate sufficient income to cover all housing running costs. The percentage of income of the occupants going into maintenance is far below the accepted 25%, sometimes as low as 10% of the tenant's incomes. This provides room for upward rent revision. The increase in funds realized from such upward rent revision could be recouped into maintenace work hence improving maintenance standards and consequently the welfare of the tenants. Alternatively, other forms for financing maintenance be adopted if the reigning low rents have to be maintained.

The incidence of maintenance problems is so high in municipal estates. The estate were targeted for low income households who could not afford quality houses in Laissez-faire market. The purpose for which the houses were intended (improve the welfare of low income earners) has been defeated by poor maintenance undertaking exhibited by high percentage of housing units with maintenance problems.

Tenants protest any increase in rent levels basically because of high incidence of defective elements within a building fabric. They feel that the houses are in dilapidated conditions and therefore do not warrant any rent increases. The municipal could get more returns from the estates if they kept them in better state of maintenance. High returns from the houses could increase margin for maintenance and hence better condition. Because the tenants expressed ability and willingness to pay more rent up to some level, the council could work modalities of upward rent revision.

There is need to improve supervision and quality control by Local authorities to reduce future maintenance costs and to improve the quality of living environment of the inhabitants. For example the high incidence of maintenance problems in Arina estate could be attributed to poor workmanship and poor quality building materials. In many instances, there is little participation by users in the maintenance of buildings. This is due to lack of motivation on the part of the council and even in cases where maintenance is done by the tenants no refund is ever made. The tenants also view themselves as transit users.

6.3 RECOMMENDATIONS

Due to low investment on municipal rental housing the study suggests that the existing stock be well maintained to acceptable standards of maintenance. Planned Preventive maintenance should therefore be adopted by the council to save the houses from going into state of disrepair.

The Municipal council and other public authorities should strengthen their planning, programming and budgeting procedures based on assessment of user needs. Regular inspection of public housing should therefore be carried out as inventory of maintenance problem exercise. The Local Authorities should then ensure timely allocation for maintenance.

In order to ensure that adequate funds are set aside for the maintenance of the estates, separate maintenance accounts should be created into which not less than 15% of rent collected could be banked. Such moneys would be treated as "sinking funds" such that it can cater for serious maintenance problems requiring large financial outlays and could also be used for further redevelopment of council estates. This would ensure continued supply of rental estates.

Attacking the problem of inadequate local revenue is a pre-requisite to better maintenance of council estates. The improvement of building maintenance depends on the pricing of the facilities. The study

therefore recommends an upward revision of rent levels of Kisumu Municipal estates by the following levels. This is based on

(i) tenants ability and willingness to pay more rent.

(ii) Inflation rate in the residential construction sector.

(iii) Market or economic rent levels.

PROPOSED RENT LEVELS OF MUNICIPAL HOUSING (ksh)

ESTATE	CURRENT RENT LEVELS	PROPOSED RENT LEVELS
Lumumba	250	425
Ondiek	300	566
Makasembo	340	571
Kibuye Flats	670	1000
Mosque	600	800
Argwings	900	1200
Arina Ph IV	320	493

The increased revenue from the rents is recommended to be banked in housing account. The account should be credited every month. All the housing related costs are expected to be offset from this account. This would avert default cases which has in some cases led to loss of revenue by the council, like the repossession of some estates by National Housing Corporation due to outstanding balance of about 120 million.

For most efficient and effective utilization of returns from the facilities the council official concerned with management and adminstration of finance must be accountable and transparent. Corruption must be done away with at all costs. This would limit

embezzlement of public funds and reduce overcosting of projects. Frequent auditing with conscience of professionalism is therefore encouraged.

Financial agencies should also consider funding maintenance and rehabilitation of buildings instead of concentrating only on financing construction of new buildings. The old housing stock constitute the greatest percentage of housing supply. Other innovative forms of financing maintenance could also be opted. For example formation of management trustees.

Local Authority tenants should be encouraged to undertake minor repairs without necessarily making claims. More user participation in the maintenance of buildings and their environment is a means of cost sharing exercise.

Because the cost of maintenance can be drastically reduced if maintenance is considered during the design and construction stage of the building, potential users should be involved in the planning stage to evaluate their needs and values. This would ensure efficient use of housing facilities without subjecting them to premature death. The poor workmanship could be solved through vigilance of council officials especially the engineering section during the construction stage. The liability of the contractors could also be extended so that they should

be bound to make good any defects that become apparent.

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UNIVERSITY OF NAIROBI DEPARTMENT OF URBAN

AND REGIONAL PLANNING

HOUSEHOLD QUESTIONNAIRE

BACK GROUND INFORMATION

1) Name of the tenant----------

2) Sex----------

3) Age----------

4) Marital status ----------1) Single

2) married

3) Divorced

5) Religion 1) Christian 2) Muslim

3)Hindu 4) others

6) Education level----------

7) Occupation----------

8) Income leves----------

9) Place of employment----------

10) Name of the estate----------

House number---------

11) Rent paid per month----------

12) What is the size of the household----------

13) Fill the following information in the table below.

sex	Relation/ to household head	Age	Marital status	Level of education	Occupon

14) Do you sublet some rooms? 1) yes 2)No

15)Are you sublet? 1) Yes 2) No

16) If (14) and (15) are Yes,why----------

17) How long have you lived here?

1) 1-5 years

2) 6-10 Years

3)Over 10 years

18) where were you living before?

19) Why did you move from your previuos house /estate?

1) neede more rooms

2) Needed self-contained house

3) Needed house with lower rent.

4)Wanted to be closer to place of work.

5) Other reasons (specify)

20) What factors do you consider in choosing an area for residence?

---

21) How did you obtain information about the council houses?

1) Through newspapers

2)Through conversations with friends/relatives

3) Through contact with housing department of the council.

22) Do you think this source of information is sufficient or you would recommend a better one ?

---

23) What is the procedure in obtaining council houses?

---

24) Do you like it ? 1) yes 2) No

MAINTEINANCE AND REPAIR WORK

1) State the condition of the roof:

   1) Leakeage through chimney stacks

   2) Leakage through defective roof coverings

   3) Insect attack on timber

   4)Saggging and spreading of roofs.

   5) Decay of bituminous felt.

   6) Any other (specify)

   7) None

2) State the condition of the walls

   1) Small cracks----------

   2) Large cracks---------

   3) Drainage on the mortar joints

   4) Flaking and peeling of the surfaces

   5) Stained surfaces/efflorescence
   appearance of white deposits

   6) Walls looking damp

   7) Others (specify)

   8) None

3) State the condition of the floor ;

   1) Cracked/scratched/dented floors

   2) Tile/ wood peeling off

   3) Floor looking dirty

4) Sanitary and water problems.

1) Broken WC pans

2) Broken bath/showers

3) Cracking /crazing /chipped surfaces

4)Taps leaking

5) Cisterns not flushing

6) Defective pipe joints/caves gutters

7) Frequent water shortage

5) Environmental problems

1) Blockage in soil drainage system

11) Blockage in surface water drainage system

111) Defective man-hole covers

1V) Damaged paved areas

V) Damaged boundary walls

Vi) Uncollected garbages

Vii) Sewarage bursts

VII) Bushy compounds

6) Do you consider the rent charged for the house you occupy fair in comparison with the utility you get from the house?

1) Yes 2) No

6(1) If no, 1) Too high 2) too Low

7) What procedures do you have to follow to get repairs carried out in the house?----------

---

---

8) Who carries out the repair work?

---

1) Tenant 2) Landlord

9) Who should carry out the mainteinance work of the house?

1)Tenant 2) Lanlord

10) Would you be willing to pay more rent if maintenance is assured? Upto how how much?

11) How frequent is the rent level revised?

12) How and where do you pay the rent ?

13) In your opinion, What would be the effect on maiteinance standards if rent level is increased or decreased? in terms of payment of (i) rent

(ii) Cases of subletting

(iii) Frequency of damages

(iv) repair works

14) How long does the council take to effect repair works after notification

15) What effect does the procedure of the repair works have on the state of the house?----------

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16) Does the estate have any of the following facilities?

1)Shops

11)Health clinics

III) Libraries

IV)Schools/nurseries

V)Recreational grounds

VI) Access roads

VII)Street and security lights

17) How regularly has the house been painted and by who ?

18) Do you consider the standard of mainteinance in the estate to be satisfactory? 1) Yes 2) No

If no, state your reasons----------

---

19) What suggestion would you make for improvement?

UNIVERSITY OF NAIROBI

DEPARTMENT OF URBAN AND REGIONAL PLANNING

QUESTIONNAIRE FOR COUNCIL MANAGEMENT

1) State the procedure followed by the council to realize the construction of the conceived housing scheme?

---

2) How are the rent levels determined for each housing unit?

---

3) What procedures does the council follow in allocating housing accomodation?

---

4) Which of the following reasons make it difficult for council to provide enough housing accomodation?

1) Lack of finance

2) rapid population increase

3) Lack of building land

4)Lack ofplanning

5) Social and political squabbles

5) The council's mainteinance and repair work is undertaken by---

1) Contract labour

11)Own labour under council engineer/housing manager

6) How long does it take for the repairs to be effected after the tenant has notified the council?

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7) What procedures is a tenant requesting repairs expected to follow?

---

8) Does the council keep mainteinance schedules for housing?

1)Yes 2)No

9) What have been the major mainteinance problems in the estate?

---

10) What would you consider to be the effect of rent revision on the maintenance standard and programme?

11) What is the range of services offered by the council to the tenants?

12) What problems do you face in trying to offer the above?

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13) How do you cope with the problems?

---

14) What are your main sources of revenue?

---

15)Do you think the revenue got from the rent collections is enough to maintain the houses?

1) Yes 2) No

16) If yes, how?

---

17) If no, why?

---

18) How often do you revise rent levels?
