



**UNIVERSITY OF NAIROBI**

**AN EVALUATION OF THE IMPACT OF TENANT SATISFACTION  
ON RENT ARREARS IN PUBLIC HOUSING: A CASE OF KIBERA  
DECANTING SITE**

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## **Declaration**

I hereby declare that this project report is my original work and that this work has not been submitted before for the award of any other degree at another university.

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This research project report has been submitted for examination with my approval as University Supervisor.

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PROF. PAUL SYAGGA

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## **Abstract**

Several international policy instruments particularly the United Nations as well as national guidelines define adequate housing as encompassing more than just a roof over ones' head. Adequate housing is thus multi-faceted and complex. As a result, achieving access to adequate housing for all as was envisaged in the Habitat Agenda remains a challenge to most households particularly in developing countries in which a significant majority of urban residents cannot afford decent housing delivered by the market systems partly due to their low and inconsistent income streams. Consequently, it is inevitable that public agencies provide or facilitate access to affordable and decent public housing to ameliorate housing deficiencies of the poor emanating from inadequacies of the market systems.

Although public housing rents are often relatively lower compared to market and sometimes economic rents in similar neighbourhood, the management of public housing by the public agencies in most countries is often bedeviled by poor maintenance, rent arrears and more often than not, tenants are unsatisfied with their living environments. These factors set in a vicious cycle which contributes towards the general decline of public housing (Hegedus & Mark, 1994).

This research project report therefore explores the relationship between the phenomenon of rent arrears in public housing and tenant satisfaction focusing on the Kibera Decanting Site in Nairobi-Kenya. The objectives of this study are thus to:-

- Establish the extent of rent arrears in public housing
- Establish to what extent tenant satisfaction contribute to rent arrears in public housing

- Propose ways of improving tenant satisfaction and rent collection in public housing

To tackle these objectives this research uses a conceptual framework grounded on a modification of the Structural Equation Modeling (SEM) which is a statistical technique for testing and estimating causal relationships using a combination of statistical data and qualitative causal assumptions. In this conceptual framework four main focus areas of tenant satisfaction namely building features, building quality, neighbourhood aspects and management are latent variables. The methodology used is the canvasser method using a structured questionnaire that measured level of tenant satisfaction towards housing using the five-point Likert Scale.

The results confirm that tenant arrears as associated with most public housing is indeed a challenge in the Kibera Decanting Site. As such over 70 percent of the tenants are in arrears and owe the Government in excess of Kshs 14 million. The residents are however largely satisfied with most of the components addressed in this study except elements of the neighbourhood particularly on security which recorded low levels of satisfaction. However, this research established that in this public housing facility, there is no direct relationship between rent arrears and tenant satisfaction.

# Chapter 1

## 1.0 Background

A significant majority of urban residents in many developing countries cannot afford decent housing delivered by the market systems partly due to their low and inconsistent income streams. Consequently, it is inevitable that public agencies provide or facilitate access to affordable public housing to ameliorate housing deficiencies of the poor emanating from inadequacies of the market systems. One notable factor is that rent paid by tenants in public housing is normally cheaper compared to prevailing market rates in the same vicinities. For instance instance in 2012, rents charged on a three bed roomed public housing unit in Mariakani in South B of Nairobi stood at Sh10,000 per month while the market rent for a similar unit in the same area fetched between Sh50,000 and Sh55,000 (East African Standard -Home and Away of Thursday, August 30 2012). In fact, government subsidies have results in lower public housing rental as compared to the real markets (Salleh et al, 2008). As is true in other developing countries, a number of challenges are militating against the optimum performance of public housing (Ibem et al 2011). As a result, public housing estates often register some of the highest rent arrears while also remaining in deplorable state of repair. Salleh asserts that the problem of rent arrears faced by public housing management is not only a third world phenomenon but is also rampant in developed countries. Various approaches have therefore been employed by the housing management bodies to overcome the recurring rent arrears problem in public housing with different outcomes.

While this scenario presents an almost state of paradox, i.e. low rents verse high rates of arrears in public housing, this is the core of this study and therefore the is aimed to be explained by the end of this study.

Because it is the ultimate social safety net for so many families who cannot find decent shelter in the private market, public housing is too important to neglect and too critical to cities and towns (Stegman, 2002). Often public housing is situated in very prime and strategic zones within the inner cities. Coincidentally it is only in public housing that most urban residents can access housing at affordable – sometimes unsustainably low – rents, yet the level of satisfaction in these houses tend to be lowest and hence further resulting in continued decline in public housing (Hegedus & Mark, 1994)

The management of public housing by the government in most countries is often bedeviled by poor maintenance, low rentals and more often than not, tenants are unsatisfied with their dwelling units. These factors contribute towards the general decline of public housing (Hegedus & Mark, 1994).

The resultant derelict state of public housing sadly also incubates high vandalism rates which in turn further contribute to the high maintenance cost. British researcher Sheena Wilson (1979) asserts that it is often difficult to distinguish intentional forms of damage from wear and tear, indifference, neglect and thoughtlessness in public housing estates. Vandalism in such neighbourhoods therefore, is part of a spectrum of behaviour which begins with very common forms of carelessness such as dropping litter, and continues through a wide range of rough handling—bumping prams into glass swing doors, taking short cuts through newly planted flower beds, for example—to the stage where damage is deliberate: glass broken by stray objects such as stones when children are playing, smashed fittings, and dismantled fire-hoses. These are typical features in public housing owing to various factors.

Different types of vandalism have been identified on the basis of their motive [Cohen, 1973]. The Cohen's Typology of Vandalism can therefore be presented as follows to understand the causes of vandalism especially in public housing estates:-

- Acquisitive to acquire money or property e.g. breaking open telephone boxes
- Tactical damage as a conscious tactic e.g. to break a window to get arrested and be accommodated overnight in a police cell
- Ideological similar to tactical vandalism, but carried out for an explicit cause or to deliver a protest message
- Vindictive damage to obtain revenge
- Play damage in the context of a game e.g. who can break the most windows
- Malicious an expression of rage or frustration against a symbolic item of property. For example, vandalism to a bus shelter when the perpetrator is angered at having missed the last bus or at the length of the wait.

The problem cannot be overcome due to a lack of funds faced by the housing management bodies among many challenges. One of the main reasons leading to this financial crisis is the rent arrears faced by the public housing management institutions (Oxley & Smith, 1996).

## **1.1 Problem Statement**

Public or social housing is one of the essential components of public sector intervention in addressing housing needs of the poor and the low income segments of society which results from inability of market systems to cater for this segment. As a result, the rents charged on such housing are usually relatively low compared to both market and economic rents in the neighbourhood. Sadly, these facilities often face a much higher incidence of rent arrears.

## **1.2 Objectives**

The place of public housing in addressing housing deficiencies of the low income urban dwellers that cannot access housing from the market systems cannot be gainsaid. However, it has been documented in various studies that the

management of public housing alongside the attendant problems of rent collection is not an isolated but a common challenge (Byrne, Day and Stockard, 2003, *Basorun and Fadairo, 2012*). The physical state of public housing has depicted this noble intervention as unsustainable and has been used by those opposed welfare economics as a scapegoat to urge for limited or zero financing for public housing. This declining focus and funding for public housing continues to exhibit its most natural symptom – ever expanding and worsening slums and informal settlements – especially in urban areas.

The main objective of this study is therefore to establish if there is a link between the high rates of rent arrears in public housing and the level of satisfaction of the tenants. The specific objectives are thus to:-

- Establish the extent of rent arrears in public housing
- Establish to what extent tenant satisfaction contribute to rent arrears in public housing
- Propose ways of improving tenant satisfaction and rent collection in public housing

### **1.3 Hypothesis**

Tenant dissatisfaction is the main cause of rent arrears in public housing.

### **1.4 Research questions**

Tenant satisfaction ratings have taken on growing significance in their contribution to official judgment of landlord effectiveness (Pawson and Sosenko 2009). There is a growing awareness of linkages between social and demographic factors, on the one hand, and ‘raw’ resident satisfaction scores, on the other. For example, it is well documented that older people tend to be less critical of service providers and that there is a strong relationship between dissatisfaction and the incidence of poverty and disadvantage (Heriot-Watt

University and Ipsos MORI 2009). This also means that tenant satisfaction has linkages with many socio-economic and other parameters. As a result of these revelations in earlier research, this study will attempt to address the following questions

1. Is there a significant challenge of rent arrears in public housing?
2. What are the major causes of tenant dissatisfaction in public housing
3. To what extent is dissatisfaction a cause of rent arrears?

## **1.5 Significance**

Public housing although critical and inevitable in facilitating access to decent housing for the low income earners especially in cities and urban areas, should not be unsustainable. If adequately managed, public housing is capable of supplementing the inadequacies of market driven housing delivery systems and delivering a more inclusive society. The management of public housing cannot be feasible if rent collection is not efficient and optimum. A functional rent collection and management system can be an integral component of a responsive policy platform that facilitates sustainable delivery and management of public housing.

Therefore, maximizing rental income is vital in order to ensure that housing management and maintenance is adequately funded, and that the optimum service is delivered to tenants.

This study will therefore greatly contribute towards improving practice in the assessment, collection, accounting and control of rent arrears in public housing.

## **1.6 Definition of key terms**

**Rent:** Sum of money payable by a tenant to the landlord for occupation of the landlords' property.

**Rent Arrears:** the unpaid amount of rent that is owed to the landlord by a tenant after occupation of the landlords' property.

**Economic rent:** sum of money payable to the landlord for occupation of property assessed on the basis of the net expected income after estimates of expenses are taken into account.

**Market rents:** refers to sums of money payable to a landlord by a tenant established on free market economy and particularly determined by the forces of demand and supply

**Building features:** dwelling subsystems that relate to the human habitat

**Public Housing:** housing developed by a public agency for the purpose of accommodation of the low income mainly for rental accommodation and whose tenants are selected through established procedures.

**Building quality:** the extent to which building features meet prevailing regulations and expectations of occupants.

**Social Housing:** residential accommodation mainly for rental purposes established through state intervention mainly of a state agency. In some countries, the state appoints or enlists non-public agencies to provide social housing within established frameworks to ensure affordability and targeted tenant selection.

**Tenant Satisfaction:** the extent to which the tenant is perceives and/or is convinced that their rental accommodation meets their desires and needs which may be physical or "soft" i.e. non-physical.

**Decanting site:** a holding site where communities/residents are temporarily relocated to give way for development in their residential zone in an organized manner

## **Chapter 2: Literature Review**

### **2.1 Background**

Housing is a multi-faceted essential because it is both an investment and consumption good for the consumer (Smith 1971). Aside from providing shelter, privacy, and other basic needs of an individual or family, the social amenities concurrent with the surrounding community or neighborhood deem housing consumption good. Housing is part of an individual's or a nation's standard of living and hence is properly related to the general wealth or poverty of the individual or the nation.

Therefore for housing to be adequate, it should go beyond the traditional two walls and sustain as well as facilitate vibrant activities that will enable holistic community. It is thus apparent that if housing is inadequate in certain aspects, the occupants would not register satisfaction with their living environment since their expectations will not have been met.

According to paragraph 8 of Comment No. 4 of 1991, the UN Committee on Economic, Social and Cultural Rights, housing adequacy is determined in part by social, economic, cultural, climatic, ecological and other factors. However, there are certain aspects which can establish the adequacy of shelter. They include the following:

- a) Legal security of tenure
- b) Availability of services, materials, facilities and infrastructure
- c) Affordability
- d) Habitability
- e) Accessibility
- f) Location
- g) Culturally adequacy

*Adequate shelter as defined in the Habitat Agenda means more than a roof over one's head. It also means adequate privacy; adequate space; physical accessibility; adequate security; security of tenure; structural stability and durability; adequate lighting, heating and ventilation; adequate basic infrastructure, such as water-supply, sanitation and waste-management facilities; suitable environmental quality and health-related factors; and adequate and accessible location with regard to work and basic facilities: all of which should be available at an affordable cost.*

From both the definition of adequate shelter as spelled out by the Habitat Agenda (1996) and the UN Comment No. 4 of 1991, attaining adequate shelter for all within the UN framework remains a challenge to most Government especially those of developing countries.

Lack of adequate housing in most developing countries is a manifestation of poverty; the main reason why significant proportion of the urban dwellers live in high density housing and environmental conditions which constitute serious health hazard and threat to their general productivity (Basorun and Fadairo, 2012). Lack of adequate housing has also yielded a situation where informal, illegal, or unregistered housing became the main source of new housing in many cities (Mayo et al 1986, pg. 190)

## **2.2 Housing and Public interventions**

Although housing is a universal need, its facilitation and/or provision has over the years assumed diverse dimension with regard to policy paradigms and institution setups in different parts of the world.

Over the past 10 years or so, the number of Kenyan families with critical housing needs — those who spend more than the universally recommended one third of their incomes on housing or live in seriously substandard housing — has remained significant. Essentially, according to the Kenya Population and Housing

Census of 1999 and 2009 slightly over 50% of households live in inadequate housing conditions. Both absolutely and relatively, a larger share (over 13%) of the nation's families has a critical housing problem today as was the case 10 years ago. A great majority of those households that are deficient in housing especially in urban areas often live in informal settlements where congestion, poor and sometimes precarious environments and lack access to basic services are the norm. Most of these households in informal settlements live on less than two dollars a day besides lacking consistent income streams.

These are some of the challenges of housing which the private sector players cannot indulge and thus are often the responsibility of public agencies to address. Public housing is just but one of the approaches that in the past have been initiated to address the housing deficiencies of the low income.

### **2.2.1 Public Housing**

It has been variedly established that a majority of those in need of housing in many less-developed nations in Africa, Asia and South America are in the low income categories and that some require special housing programs to be able to live in decent housing (Ibem et al 2011).

Since market solutions and funds may not be suitable for housing this category of people and in view of the vital role housing plays in the socio-economic and political development of any nation; governments in these countries have over the years been engaged in public housing provision. It has however taken varied forms in different geographical contexts and other descriptive terms are sometimes used in its place – such as social housing, state-housing, state-sponsored housing, welfare housing, non-profit housing, low-cost housing, affordable housing, and mass housing.

For the purpose of this study, *public housing* refers to a form of housing provision, which emphasizes the role of the State (government and its agencies)

in helping to provide housing, particularly for poor, low-income and more vulnerable groups in the society (Van Vliet, 1990). Although most public housing is often for rental accommodation, there are certain types or forms of public housing that deviate from this norm. There are also some forms of public housing that specifically address special need of segments of the society such as the elderly, immigrants, persons living with disabilities etc.

Because of the nature of housing need (i.e. imperfections of the market systems and its inability to address the needs of the low income) that public housing is meant to satisfy, the rental option is the most appropriate form of public housing mainly for the following reasons

- It allows room for redressing any problems that may arise in allocation.
- Enables those with inconsistent income streams to access housing despite their inconsistent incomes because it is a short term commitment as opposed to purchase
- Often rental accommodation is cheaper compared to the costs associated with servicing a mortgage for a similar accommodation in the same neighbourhood

Because it is the ultimate social safety net for so many families who cannot find decent shelter in the private market, public housing is too important to neglect and too critical to cities and towns (Stegman, 2002). However, according to Drakakis-Smith (2000), many governments in developing countries have persistently refused to see the provision of adequate shelter as a priority issue in the development process. Low-cost housing provision in particular is considered to be resource-absorbing rather than productive and loses out to investment in industrial infrastructure.

The management of public housing remains a challenge to many Governments especially in developing countries. As a result most public housing remains in

deplorable state of repair. Well intended but misguided public policy has fostered poor fiscal and operating management practices. These practices have led to deteriorating physical conditions, and public housing has become a permanent residence for persons cut off from opportunities available in the broader community (Lane 1995). This isolation has been not only physical but social, cultural and economic as well. Coincidentally it is only in public housing that most urban residents can access housing at affordable – sometimes unsustainably low – rents, yet the level of satisfaction in these houses tend to be lowest and hence further resulting in continued decline in public housing (Hegedus & Mark, 1994). Where rents are inadequate, the saying goes that a rational landlord will seek to disinvest in housing through the only available means available – under maintenance (Rydell 1970 pg. 1) However, with reduced public investments in affordable housing programmes in the last 30 years, public housing has continued to form a small percentage of affordable housing options for the modest income earning urban residents in developing countries.

### **2.2.2 The Challenge of Public Housing in Nairobi**

Notwithstanding the commendable legacy of public housing in Kenya, particularly in the immediate post-independence era, public housing is presently confronted by a number of significant challenges. As is the case in many jurisdictions, too frequently, the quality of public housing management is poor. Although not universal – there are housing authorities that are effective, and even outstanding, performers – the problem is large enough and deep enough to be systemic, both in its condition and its causes. The management challenge is particularly acute among larger agencies, resulting from a confluence of factors. Public housing authorities (PHAs) have, unfortunately, have not appropriately responded to these management challenges but by and large adopted defensive organizational structures that are out of sync with private practice and ill-suited to delivering effective property management services. These management challenges can be broadly categorized into four key areas as here below:-

### **2.2.2.1 Administrative, Institutional and Management Challenge**

Inadequacy of up-to-date and detailed records has been the bane of housing provision in Kenya. Meeting the challenge of public housing in Kenya and Nairobi in particular requires taking stock of the present state in quantitative and qualitative terms. The management challenge is particularly acute in large and old city council estates in Nairobi where the need has arisen to shift from a restrictive organizational structure that is out of sync with private practice and ill-suited to effective housing delivery to a less hierarchical one.

### **2.2.2.2 Financial and Economic Challenge: Inadequate funding**

Perhaps the most critical challenge confronting housing delivery in Kenya is financial. This is significant because the capital-intensive nature of housing provision requires the availability of a large pool of long term savings. The last two decades have witnessed substantial cuts in funding to operate, improve and maintain public housing particularly in Nairobi. Funds are needed for both routine operational needs of the estates, and new development to increase the supply of additional housing. This situation is compounded by the nature of housing financing system in Kenya, which is characterized by: structural weakness in the capital markets, distortions in the legal and regulatory frameworks, especially as relating to land titling and ownership, and limitations in the knowledge base in an environment of mostly informal income and limited collateral.

### **2.2.2.3 Physical Challenge**

The older public housing units face critical needs for comprehensive rehabilitation and improvement in the face of insufficient revenues. Significant numbers of the housing units require such improvements that would go a long way towards removing the stigma of public housing.

#### **2.2.2.4 The Land Challenge**

Land tenure and administration remain pivotal to any meaningful policy on housing delivery. There are various legislative, administrative and policy issues confronting easy delivery of housing, particularly to the low income group and people in the informal sector of the economy, for which appropriate land reforms would be necessary panacea. A review of the land tenure system should facilitate development to assure people access to land and mortgage loans. Strategies to make land available for low income housing development may include land exchange (urban land for rural), land pooling and readjustment and guided land development. In all these strategies, acquired land should include mixed-income developments with majority skewed towards low income housing.

Given the socio-economic dynamics most urban households which largely earn low and inconsistent incomes, the past public interventions in housing delivery has been justified especially in Kenya. These interventions however minimal have managed to cushion the beneficiaries from housing related deprivation. However, to address the challenge of public housing today, radical changes in public policies relating to housing, welfare, human services and community development is necessary, along with improved management practices.

### **2.3 Tenant Satisfaction**

Studies of peoples' satisfaction with their residential environment have showed complex patterns of relationship (Sam et al 2012). Life satisfaction refers to the degree of subjective satisfaction achieved when each individual's life needs and expectations are fully met. Based on their respective life background and expectation, different groups and social classes have different living environment perception and satisfaction (Kangjuan et al 2010). A tenant satisfaction study therefore should attempt to apply three first grade indicators namely material satisfaction, spiritual satisfaction and system satisfaction to construct a life satisfaction index system (Mao-kui Wang, Yu-song Yan, 2007; TSUNODA

YASUKO; 2002; Zhang H, Ma J, 2008). In housing therefore, material satisfaction may be linked with the physical components of shelter while spiritual satisfaction may be linked to relationships with neighbourhood factors and system satisfaction may on the other hand be associated with management factors and systems.

A dwelling that is sufficient enough from the physical or design point of view may or may not be sufficient enough from the user's point of view (Onibokun, Oladapo, 2005). Onibokun (2005) promotes the concept of user satisfaction by incorporating four interactive subsystems: the tenant, the dwelling, the environment, and the management subsystems. The concept of housing satisfaction has been used as an ad hoc evaluative measure for judging the success of housing developments constructed by the public sector and by private sector. In this case, satisfaction as a process of evaluation between what was received and what was expected. Oliver (1989) proposed that expectations could be exceeded in two different ways:

1. The level of performance is within a normal range (product was better than expected);
2. The levels of performance are surprisingly positive (one would not expect that the product would have performed so well) and delight.

Tenant satisfaction measurements have their roots in the surveys developed in the 1960s and 1970s to assess resident views on architectural design of housing estates. Lu (1999) observed resident satisfaction as a complex construct which, is affected by a variety of environmental and socio- demographic variables among which include gender, age, family size, educational level, monthly family income, employment statute, length of residency, and socioeconomic status.

In simple terms tenant satisfaction may be defined as the feeling of happiness when one gets what he/ she needs in a house (Mohit et al., 2010). However, it

seems that there are different interpretations and definitions of tenant satisfaction driven from different opinions of various professional which makes it difficult to be addressed properly and logically. For instance urban planners and designers on one hand and environmental psychologists on another hand, emphasizes on environmental quality and quality of life as well as people behaviour (van Kamp et al., 2003). On the contrary, policymakers focus on the relationship between the extents of fulfillment of individuals' housing desires and needs without touching the details of tenant satisfaction.

However there are some similarities in those definitions which stems from the fact that there is a core in all of those interpretations which emphasizes that residential satisfaction is significantly positively related to different aspects of people's temporal experience in the residential neighbourhood.

Critics have however questioned the validity of the 'satisfaction' concept, partly on the grounds that expressed satisfaction is wholly dependent on the respondent's expectations. Distinct from this is the critique that the degree of 'satisfaction' expressed by a tenant will be dependent on a range of factors, many of which may be unconnected with the practical performance of the landlord or environment in question (Satsangi and Kearns 1992).

Therefore, although it is a subjective phenomenon, it has always been cited as one of the most significant factors which should be considered in design and planning processes (Sam et al 2012).

It should be appreciated that measurement of tenant satisfaction may be both qualitative and quantitative. Measurement of tenant satisfaction is therefore an element of performance evaluation. However, in the authors' view it is not necessary for all performance indicators to be quantitative and objective; some may be qualitative and more subjective. What is important is that they are useful measures of inputs (levels of resources used, or measures of economy),

throughputs (levels of services provided, or measures of efficiency), or outputs (outcomes achieved, or measures of effectiveness).

Based on this therefore, besides the critiques of measurement of tenant satisfaction, it still remains a useful tool for assessing progress and improving service delivery –in this case management of the built environment. An informed view of the quality of housing management therefore can only stem from recurrent observation and analysis that can only emanate from periodic customer (tenant) satisfaction assessments.

Using these subsystems, a tenant can base his or her needs on all four areas according to his or her expectations, rather than just one, two or three areas alone. The fewer the number of areas considered, the more likely the tenant will be dissatisfied with their residence and with the landlord.

To reduce the probability of tenant dissatisfaction, the landlord should strive to incorporate all four interactive subsystems. In today's competitive market, forward-thinking property managers and landlords should be thinking and implementing a tenant/landlord relationship-management program to better satisfy the needs and wants of their tenants( Lisa Scarboro - undated).

Previous research has shown that tenants base residential satisfaction more on environmental influences than the home itself (Varady and Preiser, 1998, p.203). Some of these environmental influences include: the surrounding neighborhood and community, crime, social interaction within the community, renters associations for neighborhood involvement and quality of the homes or apartments. The landlord, hence, should anticipate external environmental changes to better prepare and adjust to unexpected changes in the external environment.

Berkoz and his other colleagues have emphasized on six rubrics that increase the level of RS in housing and environmental quality (Berkoz et al., 2009). The first

parameter is accessibility to various function areas in the residential area. That includes accessibility to shopping centre, city centre, work, places of entertainment, the market where daily needs are obtained, educational institution, open areas, health institutions, and public transport. The second main parameter is environmental features of the housing. It includes the following factors: environment maintenance of open areas, environment maintenance of green areas, building and traffic density and adequate of environment night lighting. The third parameter is facilities in the inhabited environment. It includes recreational areas, centrality, substructure (water, electricity, natural gas, telephone, and cable television), transportation and social facilities.

The fourth parameter is environmental security. It includes: housing's structural safety, environmental safety, and life and property safety. The fifth parameter is neighbor relationships. It includes: satisfaction in neighbor relationships, satisfaction in social relationships, acquaintance with many people in the building and neighborhood, sufficient privacy from the neighbors nearby. The last parameter is appearance of the housing environment, including physical appearance of housing estate area and propriety to user status (Berkoz et al., 2009)

Tenant satisfaction is so critical for sustainable neighbourhood management and rent collection and even with its complex dimensions need to be practiced and deepened especially in Kenya to enable public housing management authorities to continuously evaluate their performance. The practice of evaluation of tenant satisfaction in public housing in especially developed countries has enabled the management authorities to be able to address many of the challenges of public housing management and thus has yielded less maintenance problems in public housing in those countries.

## 2.4 Rent Management

Rental payment is an obligation that must be fulfilled by tenants to their landlords. This obligation is often enshrined in the tenancy agreement which takes different forms especially in private and public accommodation. Tenants must therefore pay rent to the management or landlords either on a monthly basis or weekly basis as agreed in the tenancy agreement (Sethu, 1986). Rental income is thus a form of revenue received by the public housing management. This rental income is then used to pay all costs pertaining to the management and maintenance activities as well as to repay loans provided by the landlord which in public housing is a public agency.

It is therefore clear that the payment of rental impacts greatly on the public housing management in maintaining the houses owned by them. The recalcitrant attitude of some tenants who refuse to pay rental to the public housing management has indirectly hampered the effective and efficient public housing management operations. If no mitigation steps are taken to address such situations, it negatively impacts on the public housing management and the occupants as well.

In any housing facilities, rental revenue is the main ingredient of overall estate management. In housing facilities where there is efficient rent management, as is often the case in some privately owned housing facilities, the state of the living environment is often better compared to public housing facilities. It is important to understand that the emphasis here is on some private housing facilities as evidence has shown that particularly in Kenya, the state of some privately owned housing facilities are not in a better state compared to public housing facilities. For instance the state of the living environment in Kayole, Dandora<sup>1</sup>, Mathare

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<sup>1</sup> Although some of these estates emanated from public initiatives through site and service schemes, they are currently owned by private citizens who were allocated and paid up for the services plots. As such the rent collection and estate management in these areas should be as private as any other privately owned living environment.

North in Nairobi just to mention a few are not in any better state compared to council estates and other public housing facilities.

It must however, be recognized that efficient rent collection and management is also dependent on the socio-economic status of the tenants and the administrative systems that facilitate efficient rent collection. For instance, collecting rent from tenants who are in stable employment and salaried is much easier compared to collecting rent from tenants whose incomes are irregular and often low. In poorer neighbourhoods such as in slums and informal settlements, rent collection may generate political tensions and often leads to social unrest. As a result, normal mechanisms employed by private landlords to ensure prompt rent payment by tenants cannot be applied in low income neighbourhoods especially by a public agency which is deemed to share a responsibility in facilitating access to housing by all.

The above illustrated factors therefore make rent collection and management in public housing facilities a complex and sensitive affair since tenant protection in public housing is still considered to be strong. This thus often results into persistent rent arrears in public housing facilities. However, this should not excuse obvious administrative flaws that make efficient rent collection difficult. Such basic administrative flaws that inhibit efficient rent collection in public housing facilities include lack of authentic records on who exactly occupies the housing facilities, for how long have they occupied the dwelling and the type of dwelling occupied. Without this basic information it is virtually impossible to track records of rent collection.

Rent arrears are debts incurred by the tenants to the management due to delays in paying rent. The payment of rent should be done in accordance with the tenancy agreement signed. Delays in paying rent will result in rent arrears (Sethu, 1986).

Rent arrears in public housing is a problem faced by almost every country in the world. It is a problem faced by public housing management is not only a third world phenomenon but it is also rampant in developed countries. For instance, The Audit Commission & Housing Corporation in England and Wales reported that local authorities in the United Kingdom and Wales are burdened with rent arrears amounting to £647 million where on average, every local authority faces rent arrears of £2 million (England Audit Commission & Housing Corporation, 2003). While in in France, it was found that 500,000 occupants in public housing had to be evicted due to nonpayment of rent. The same thing happened in Italy resulting in 600,000 public housing tenants being threatened with eviction actions due to the problem of rent arrears incurred by them (<http://www.habitants.org/article/articleview/1449/1/276> ). In New York it was found that 150,000 tenants were faced with the possibility of loss of homes due to rent arrears problems. In Malaysia, a developing country, it was reported that in 1990 tenanted public housing in Johor had a rent arrears liability of RM2,637,507 (SUK Johor, 1993).

In Kenya, There is a high rate of rent defaulting in council housing and the number of cases of rent arrears is increasing due to diminished household incomes, political favours by councilors and tenant negligence. Rent officers rarely take action against defaulters without direct political support from councilors. Between the 1983-84 and 1995-96 financial years, council tenants in Nakuru accumulated rent arrears of about Kshs 10 million (Mwangi, 1997).

Further, rent arrears in city, municipal and other council estates developed jointly with the National Housing Corporation(NHC) resulted in the inability of the local authorities to service the loans advanced to them by the Corporation especially in the 1990s( See Kenya National Assembly Official Record (Hansard) 6 Oct 2005 in

The loans arrears owed to NHC by local authorities accrued to an all-time high of: 2,689,526,266.59 during the financial year 2003/04 at which time the total debt stood at Kshs. 3,503,657,026.23.

The phenomenon of high rent arrears is very disturbing especially to the government. Even though rent arrears problem in most public housing is endemic, not many empirical studies on rent arrears have been done in the past. The root causes for rent arrears manifested in low income tenants are often attributed to the ability to pay rent. Some quarters have even suggested that they are caused by poor management. Some have attributed rent arrears to low tenant satisfaction. Rent arrears may be attributable to the following:-

- Dissatisfaction with the accommodation facility, environment or management
- Total lack of income
- Very low income compared to rents paid even if below market. It is possible for a tenant to earn to low even to enable him/her pay below market rents.
- Poor rental collection system: some tenants' earnings are irregular and thus unable to organize them to pay rent say at month end, to such tenants, a flexible and sensitive system should be put in place to assist them pay rent in bits. Failure to apply such an appropriate system will make them fall in arrears even if they would ordinarily not be in arrears
- Political interference: public housing is normally targeted at the very low incomes that are vulnerable to political manipulations and will often be persuaded by politicians that they are addressing their plight and therefore should not be paying rents. Some politicians even incite the tenants that they are working ways to enable them own the housing (never mind that

they cannot afford to pay the rent let alone paying mortgage) and thus should stop paying rent until negotiation for ownership are complete. This inevitably make the tenants fall in arrears which once set, is difficult to reverse

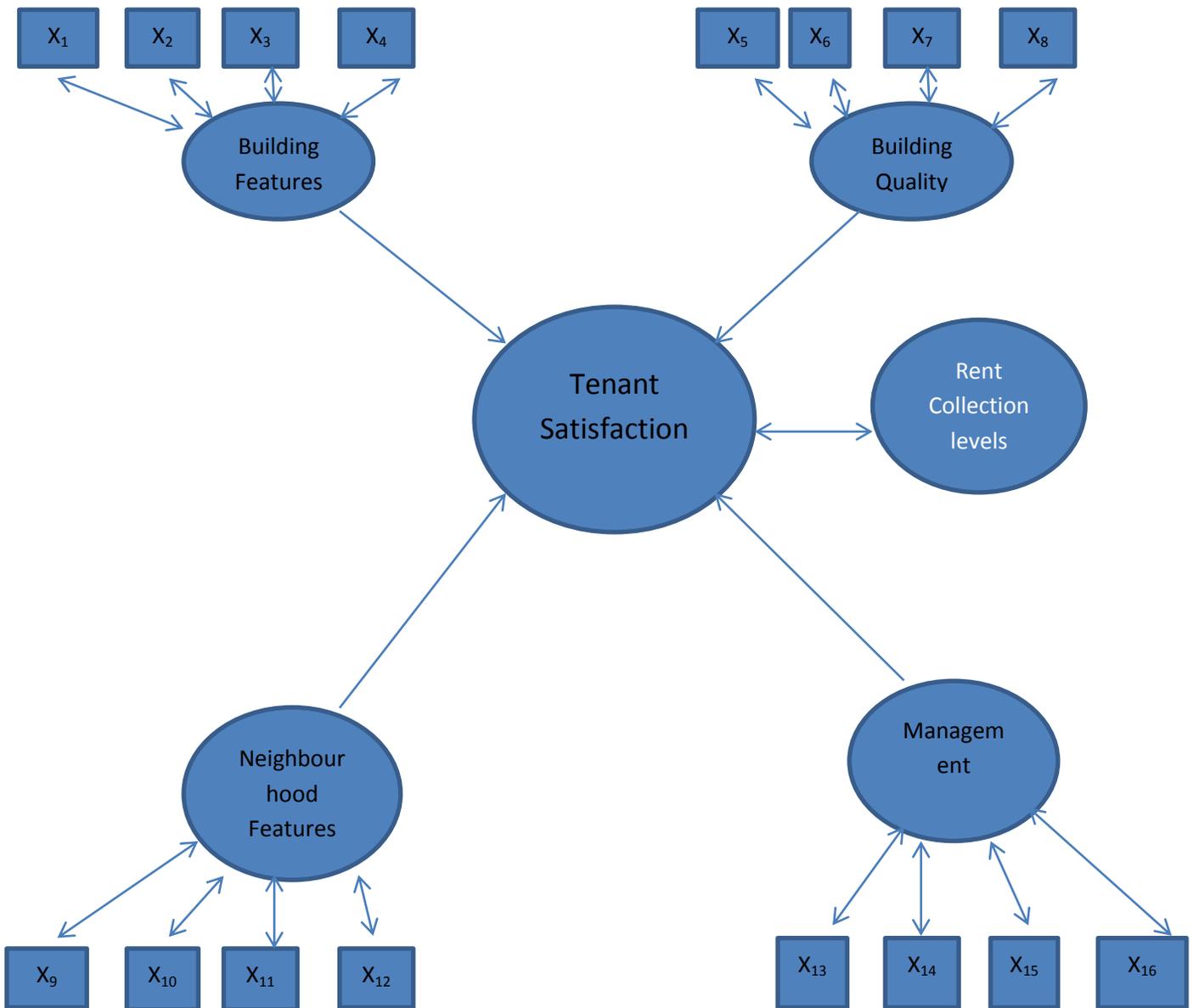
- Inappropriate attitude by tenants, there are tenants who simply view public housing as supposed to be free and thus expect to pay nothing. These kind of tenants even when capable of paying, will always neglect their duty of rent payment and fall in arrears
- Temporary social setbacks such as loss of a bread winner or key family member etc., prolonged sickness to mention a few instances.

The failures of many housing and dwelling projects stems from lacking of knowledge on the determinants of Residential Satisfaction (RS) concept (Salleh, 2008). RS reflects the degree to which individuals' housing needs are fulfilled (Salleh, 2008). The achievement of housing programmers does not only depend on development of housing units, but also on other factors that Influence the needs of residents (Salleh, 2008).

Rent management and collection in public housing although comparable in many ways to rent management in private rental dwellings, elicits emotion and focus compared to private rental units. The dynamics in public housing are different because of the political, economic and social factors at play. There are therefore some best practices in rent management that are practiced in private rental units that may not applied in the same manner in public housing. However, systems need to be put in place to facilitate development of best practices in public housing rental management that cautiously borrows for practice in private sector.

## 2.5 Conceptual Framework

In facilitating a comprehensive understanding of tenant satisfaction dynamics, this study will apply a modification of the Structural equation modeling (SEM) which is a statistical technique for testing and estimating causal relationships using a combination of statistical data and qualitative causal assumptions. The variables in SEM are mainly classified into latent variables (which are not measured directly) and measured indicators (which are measured directly).



**Figure 2.1: Conceptual Framework**

The distinction between these two types of variables is whether the variable regresses on another variable or not. In this sample, four primary indexes, namely building features, building quality, neighbourhood aspects and management are latent variables. These relationships as reflected in the figure are elaborated hereafter.

The sub-elements under each of the four indices denoted by  $X_1, X_2, \dots, X_{15}, X_{16}, \dots, X_n$  are described as below:-

Satisfaction towards housing that is related to dwelling units is apparent from the building conditions and the features manifest in the buildings (Ukoha & Beamish, 1997). Therefore building features in this framework includes but not limited to housing characteristics, among them the number of bedrooms; the sizes of bedrooms, kitchens, bathrooms, study areas, living rooms; the level of privacy; the location of bedrooms, staircases, living rooms, dining areas, kitchens; and the overall size of the house. The building features sub-elements may thus be represented within the framework as in the table below

Building Features	Space	Location	Room Sizes	Electrical fittings	Plumbing features
	$X_1$	$X_2$	$X_3$	$X_4$	$X_5$

In this conceptual frame work, building quality captures factors such as Wall Quality, Floor Quality, Window Quality, Corridor Lighting, Internal Paint Quality, External Paint Quality, Door Quality, Plumbing Quality, Water Pressure, Wiring Quality, Air Quality, Number of Sockets to mention a few. These building quality sub-elements as depicted in the conceptual framework can be represented as below

Building Quality	Wall Quality	Floor Quality	Window Quality	Corridor Lighting	Paint Quality
	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>	X <sub>9</sub>	X <sub>10</sub>

Low-income households based on limited income chose dwellings that suit them. Factors like accessibility to the workplace, schools and shops are considered. Usually, areas inhabited by this particular sector of the population were chosen based on their social status (Troy, 1973).

Studies related to aspects of the surrounding area were prolific and among the empirical studies done was one on 6,000 respondents in eight municipalities in Sweden. This study found among the top 10 neighbourhood qualities are: security and surrounding area control; good public transport; proximity to commercial areas; building exteriors with high aesthetic values; proximity to open spaces; not noisy and no traffic congestion; good reputation; good quality along the building surrounding; proximity to town centres and a conducive environment (Bjorklund & Klingborg, 2005).

Based on this background, in this framework for this study, the neighbourhood factors considered includes Location of Dwelling Unit, Neighbourhood Relations, Distance to Workplace, Distance to Shopping Areas, Secure Environment, Public Transportation, Distance to Schools, Landscaping, Clean Environment, Building Image, Parking Facilities, Proximity to Police Services, Proximity to Recreational Facilities

Neighbourhood Factors	Recreation Facilities	Parking	Waste Management	Security	Children Playing Area
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Neighbourhood Factors	Recreation Facilities	Parking	Waste Management	Security	Children Playing Area
	X <sub>11</sub>	X <sub>12</sub>	X <sub>13</sub>	X <sub>14</sub>	X <sub>15</sub>

The role played by the management in managing the housing environment is crucial especially in tenanted housing. Effects of management can be discerned through the way tenant selection was carried out, implementation of the law, methods and times of rent collection, hygiene, maintenance, security and tenant relations (Ahlbrandt & Brophy, 1976). The Management sub-elements in this framework include location of estate management office, response to maintenance requests, facilities at the estate office etc.

These may thus be represented as below

Management Factors	Location of Estate Office	Response to maintenance request	Mode of rent payment	Facilities in estate office	Allocation procedures
	X <sub>16</sub>	X <sub>17</sub>	X <sub>18</sub>	X <sub>19</sub>	X <sub>20</sub>

## **Chapter 3: Study Methodology**

### **3.1 Study Area**

The Kenya Slum Upgrading Programme (KENSUP) is a key core poverty Programme aimed at addressing the challenge of housing problems affecting the majority of the urban population who live in slums and informal settlements.

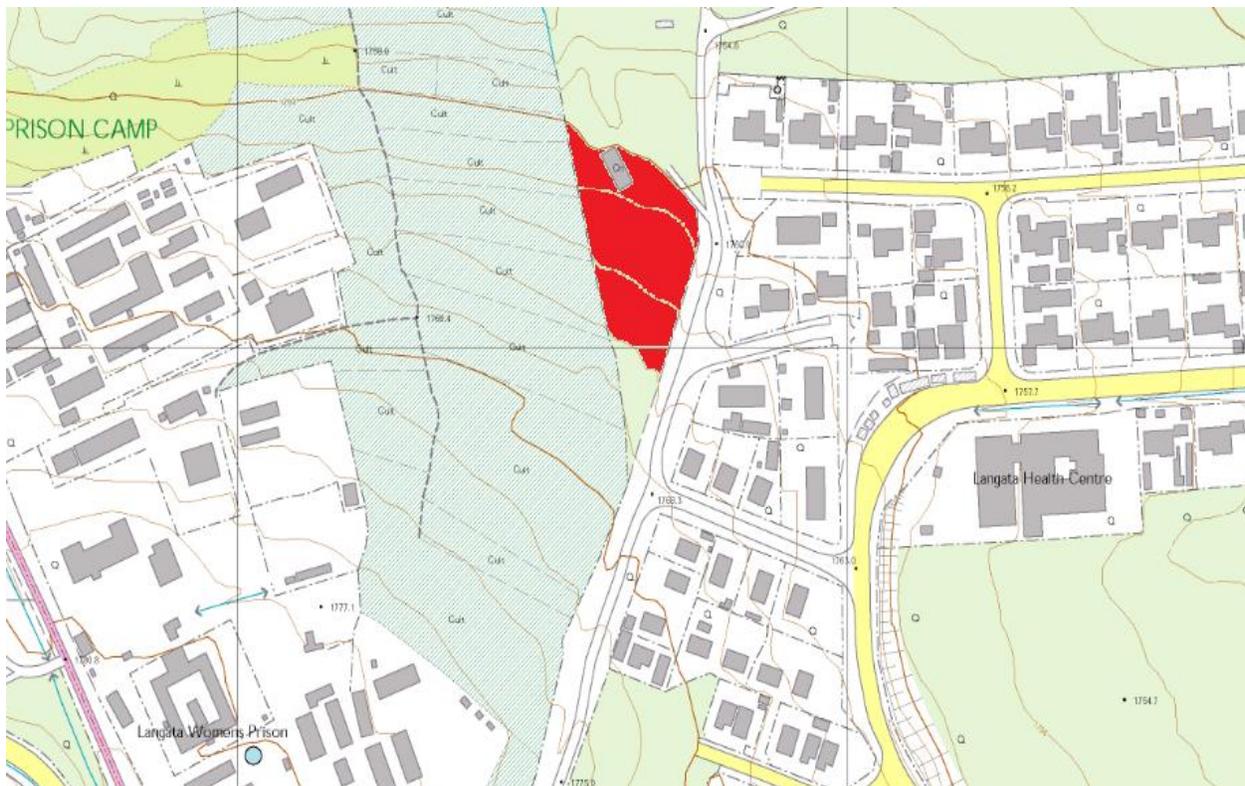
As elaborated in its implementation strategy, KENSUP is a collaborative initiative between the Government of Kenya (GoK) and the UNHABITAT whose goal is to improve the livelihood of at least 5.3 million people living and working in the slums and informal settlements in all urban areas of Kenya by the year 2020 and to contribute to poverty reduction and fulfilment of the Millennium Development Goals, specifically Goal No 7 target 11- of improving the lives of 100 million slum dwellers by the year 2020.

The implementation of the KENSUP broadly falls under three key institutions namely; the Government, Local Authorities; and United Nations Human Settlement Programme- UN-HABITAT. The Programme is coordinated through the following institutions:

**Inter-Agency Steering Committee (IASC):** IASC is the supreme Programme organ composed mainly of Accounting Officers of Key relevant Ministries, Local authorities, UN-HABITAT and Development Partners. The IASC set for approval of policy decisions, giving policy direction and reporting to the Head of State as the patron to KENSUP. This brings KENSUP to the centre of national decision-making and provides opportunity for fundraising.

It is designed to cover all urban areas of Kenya starting with selected settlements within legal boundaries of Nairobi city council, Mombasa, Kisumu and Mavoko Municipal Councils.

A criterion for identification of priority settlements for upgrading was developed out which Kibera Settlement was prioritized within the boundaries of Nairobi City Council, one of the pilot projects of KENSUP is to cover Kibera Soweto East Zone A. Soweto is one of Kibera’s 12 “villages”. Due to the high levels of congestion in this settlement, it was deemed that in-situ upgrading of Soweto East Zone A would not be practical. It was therefore decided that there would be need for development of a decanting site. This site (see site map below) was eventually identified and secured in Langata next to Langata Women’s Prison.



**Figure 3.1: Site Map**

Design work which started in 2003 was officially inaugurated by H.E the president during the Global observance of World Habitat Day in October 2004.



**Figure 3.1: A section of the residential Blocks at the Kibera Decanting Site**

In order to upgrade the Kibera slums, it was necessary to relocate sections of the community (in phases) to a decanting site to free up way leaves for infrastructural services so that construction works in the main project area could progress smoothly. The Langata decanting site was identified as a suitable holding ground for the residents who will have to be relocated.

The Site is located at Langata across the slum settlement adjacent to the Raila village. It measures 2.00 Ha. Construction of 17 blocks of 5 storey high flats totaling 600 three roomed self-contained units was completed by 2009.

The construction of the decanting site was preceded by an exercise of enumeration in the larger Kibera but more specifically in Soweto East Zone A which was to form basis for relocation to the decanting site in 2009. Some 2000 households were relocated to the decanting site occupying varied sizes of dwelling units ranging from one room, two rooms to three rooms (two bedroom

unit). The rent charged<sup>2</sup> was initially Kshs 700 per month per room which is inclusive of services (water, electricity, garbage, security etc.).

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<sup>2</sup> This was later reviewed to exclude individual electricity and water utility bills

### **3.2 Methodology**

To objectively and comprehensively address the objectives of this study, the required data has been obtained on the number and socio-economic profile of the residents of the decanting site, their assessment of satisfaction with various aspects of the housing and neighbourhood as well as overall management of the estate. Information and data has also been obtained on the records of housing allocation and rent payments. Data and information was also obtained on the management approaches with regard to estate management as well as rent collection and management. This information was counter checked with the input of community leaders through the settlement executive committee.

For the households, the entire population of this study comprised all Kibera Decanting Site tenants totaling 900 households. The list of tenants residing at the decanting site which is a public housing facility has been obtained from KENSUP verification records and estate office records. All the community representatives representing the residents through Settlement Executive Committee (SEC) members were interviewed while the estate office representative and an official of the Ministry of Housing were interviewed to elaborate the management's perspective on the objectives of the study. Information from the households, settlement executive committee and management representatives were solicited through structured questionnaires.

Therefore, based on the canvasser method using questionnaires, this study has attempted to reveal the level of satisfaction with various housing attributes in the study area. This was facilitated by among other approaches, the use of the Structural Equation Model (SEM) to further explore the profile of the residents as well as the social perception structure of the entire residents and find out the influence of each indicator to the entire satisfaction structure.

The study sample was a portion of housing units' tenants selected through two-tier strata sampling method. Samples were stratified into types of housing<sup>3</sup> and types of tenants whether facing rent arrears or otherwise.

Applying the Sekaran Sample Size Table, a sample size of 322 households was selected from the 900 households living at the decanting site (Sekaran, 2003). This was guided by a decision to achieve 95% confidence interval within plus or minus 5% margin of error which is sufficient enough to estimate the true population proportion with accuracy for this kind of study. The sample size was distributed such that each of the 17 blocks of the decanting site was allocated a sample of 18 households. Care was taken to ensure that within each block, samples are drawn from those residing in lower and upper floors.

This study applied the canvasser method in which face-to-face enumerator administered structured questionnaires were administered to the targeted respondents. This method of distribution had also been used in Mohd. Isa, et.al. (1990), Mohd. Zulfa, (2000) and Yeh (1972).

Even though this method of questionnaire distribution can be costly, it was adjudged to be more appropriate. The questionnaire was divided into a few main sections which are Section A: Tenant Background; Section B: Information on Housing Allocation; Section C: Satisfaction towards Housing, Surrounding Area and Management; Section D: Renting ability and Arrears among the Tenants. Section A was intended to collect information on the backgrounds of heads of households in public housing. Section B is the section devised to study the level of financial abilities of public housing tenants. Meanwhile, Section C was structured to attempt to find out the level of tenant satisfaction towards housing and services

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<sup>3</sup> Although the general type of housing in this place is generally standard, type of housing here will entail the amount and location of space allocated to a household. For instance, some households are located on lower or ground floors notwithstanding the space, such location given the nature of the residents here provide certain advantages such as use of door front for small scale business.

provided by the public housing management. Section D is formulated to determine in detail matters related to rent arrears faced by tenants.

The level of tenant satisfaction towards housing was measured using the five-point Likert Scale which are 1 – Very Dissatisfied, 2 – Dissatisfied, 3 – Not Sure, 4 – Satisfied, 5 – Very Satisfied. The development of this questionnaire is the product of a combination between past researches from various countries and later reconstructed to achieve the aims of this research. The use of instruments or measuring tools with high credibility and trustworthiness towards the collection of data required in the research is something that was given due weightage.

As a result, the Cronbach's Alpha test was applied to ensure that the instruments used particularly to assess satisfaction with regard to building features construct, building quality construct, neighbourhood aspects and for management aspects elicit reliable and consistent response even if the questions were replaced with other similar ones. The Cronbach's Alpha test carried out found that for building features construct, the overall Alpha value of 0.9 was ascertained while for building quality construct, there was an Alpha value of 0.87. For neighbourhood aspects, the Alpha value obtained was 0.749 and lastly the Alpha value for management aspects was 0.748. All these was undertaken to ensure that data measured for tenant satisfaction is at a good level as observed by Chua (2006) and Pallant (2005).

## **Chapter 4: Data Analysis and Presentation**

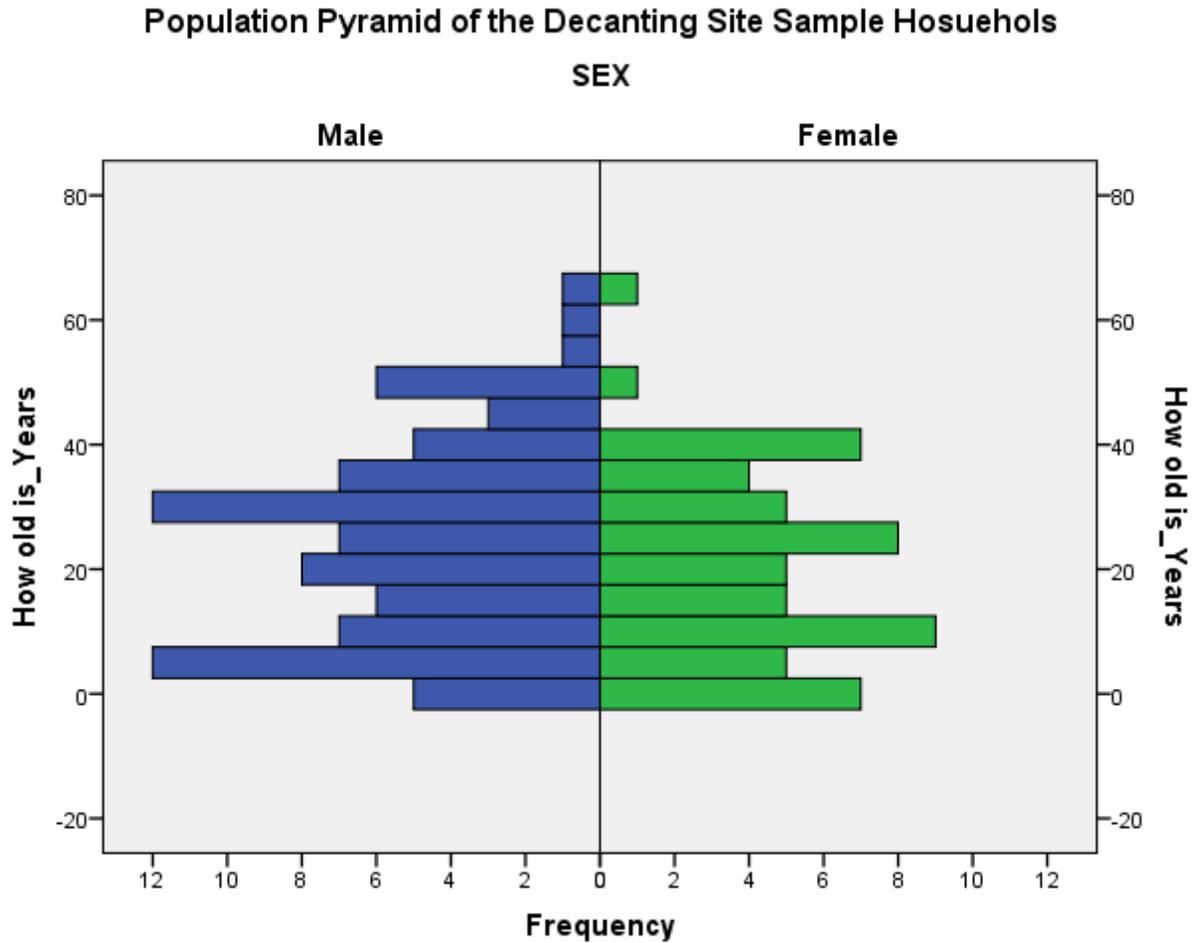
As illustrated earlier, this study aims at establishing the relationship between tenant satisfaction and rent arrears in public housing in general although with a focus on the Kibera Decanting Site.

### **4.1 Socio-economic profile of Kibera Decanting Site**

The results reveal that the average household size in this public housing facility is 3.9 which compares well with the national average urban household size derived from other recent surveys. For instance from the Kenya Demographic Health Survey of 2008/2009, the average national urban household size was 3.1 while according to the Kenya Integrated Household Budget Survey of 2005/2006, the average urban household size stood at 4.0.

The male respondents were 58.6 percent while the female respondents were 41.4 percent. This ratio is characteristic of informal settlements in most urban households as in various instances, the married males in such settlements tend to live only with a few school going children while leaving their spouses and younger children in the rural mainly due to limited accommodation space in such settlements.

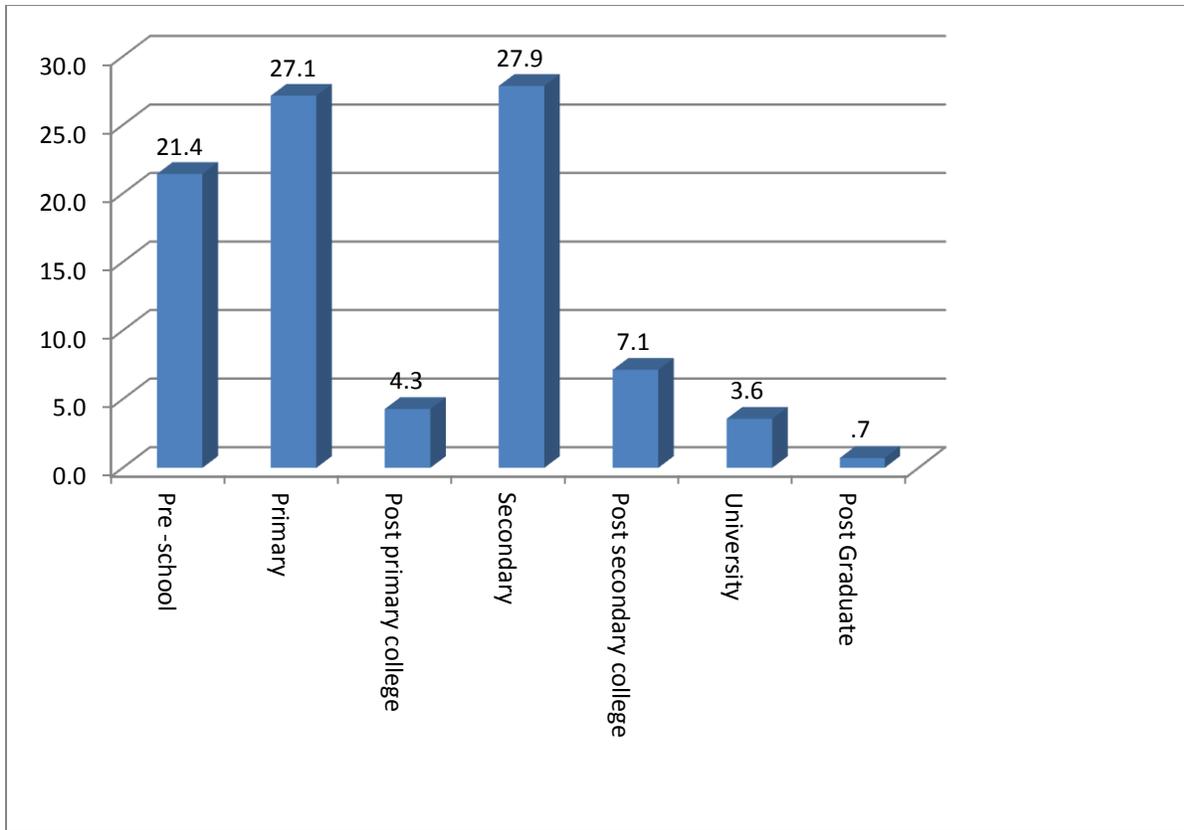
The population of the decanting site is generally distributed through the ages as depicted by the pyramid below.



**Figure 4.1: Population Pyramid of the Decanting Site**

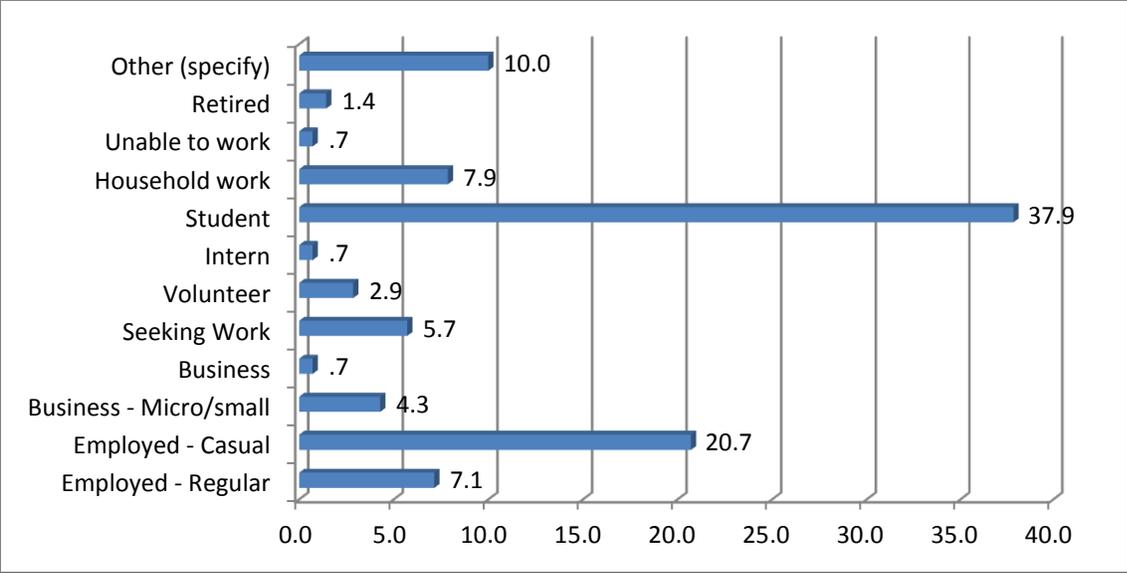
As reflected in the pyramid above the female members of this community who are above 40 years are fewer compared to the male counterparts of the same age category.

From the chart below, it is evident that most of the residents i.e. 27.1 percent and 27.9 percent have attained a level of education of primary and secondary education respectively. Only a paltry 3.6 percent have attained university education.



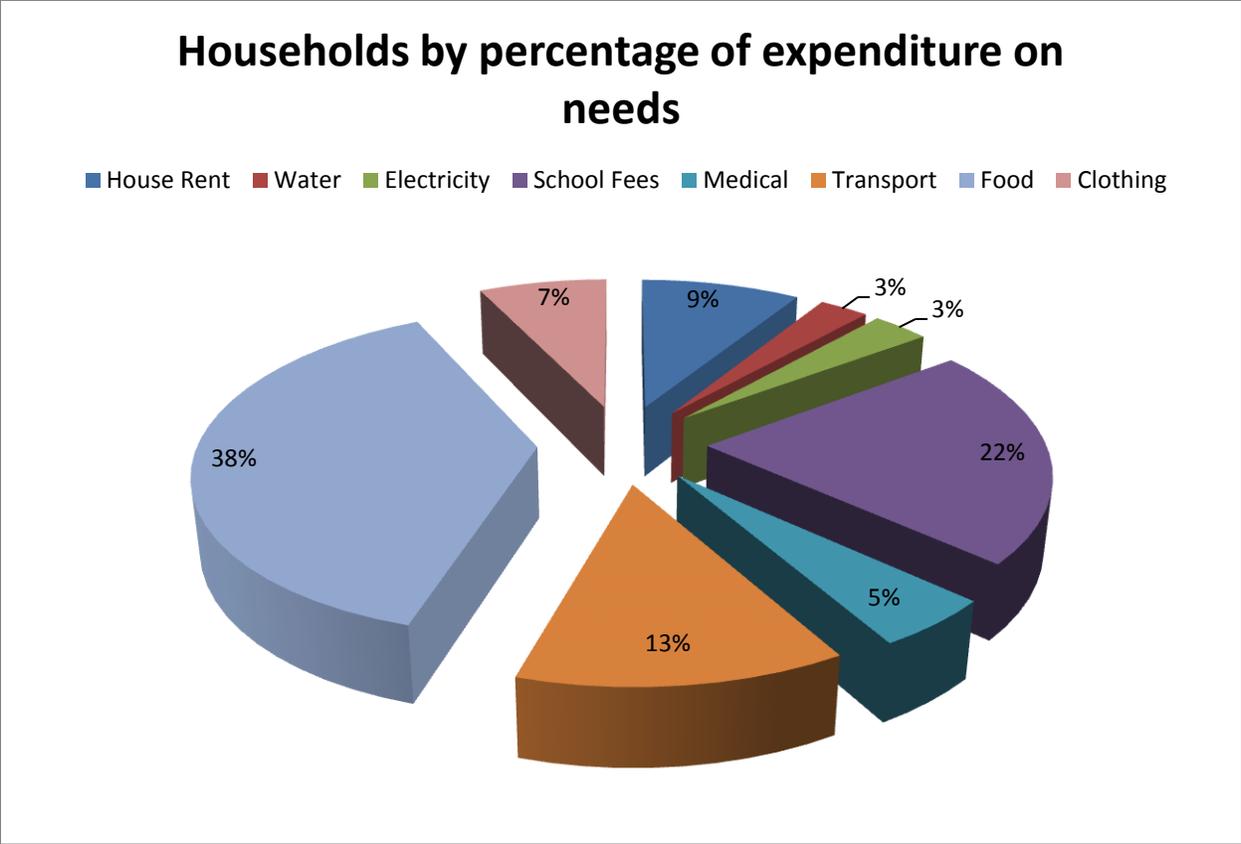
**Figure 4.2: Proportion of Households by education levels attained**

Regarding the employment status of these residents, a majority (20.7 percent) of the economically active are casual labourers. This viewed against the fact that a majority of this population is lacking in skills and education is explainable. Only a paltry 7.1 percent are on regular employment.



**Figure 4.3: Proportion of households by economic activity**

The results indicate that food is the single most conspicuous expenditure item consuming 38 percent of the monthly expenditure of the tenants of Kibera Decanting Site. This is followed closely with expenditure on school fees which accounts for 22 percent of their monthly expenditures. Of significance is the low percentage of 9 percent accounting for housing expenditure. This is even a more emphatic confirmation that the rents payable are highly subsidized.



**Figure 4.4: Households by percentage expenditure on basic needs**

## 4.2 Tenant Satisfaction

This research was structures to assess tenant satisfaction with various aspects their living environment including building features, building quality, neighbourhood factors as well as rent management elements.

### 4.2.1 Satisfaction with Building Features

Table 4.1 below shows mean score of tenant satisfaction towards building features at the Decanting Site. Mean score of tenant satisfaction towards building features was between 2.2 (quality of Doors) and 3.7 (location) at a scale of 1 – 5. The higher the mean score of tenant satisfaction towards building features, the higher is the level of tenant satisfaction towards the building features of the buildings they occupy. The physical characteristics of housing influence the level of resident satisfaction towards their housing (Ginsberg & Churchman, 1984).

Analysis shows that most of the aspects of building features of the decanting site covered achieved high tenant satisfactions mean score value except door quality.

Table 4.1: Mean Satisfaction – Building features

	Building Features								Overall Mean Satisfaction Score
	Space	Location	Facilities	Room sizes	Quality of doors	Quality of floors	Electrical fittings	Plumbing fittings	
Mean Satisfaction Score	3.5	3.7	3.1	2.8	3.2	2.2	3.2	2.8	3.1

From the analysis of this study, the overall satisfaction score for building features stood at 3.1 which connotes somewhat an above middle ground score meaning that the tenants are to a large extent satisfied with the building features at the decanting site.

#### 4.2.2 Satisfaction with building quality

Based on results of analysis on tenant satisfaction in relation to building quality found that the lowest mean score value was the quality of space for airing cloths (2.6). The highest score was for ventilation and lighting at 3.7 and 3.6 respectively. During the questionnaire study, the researcher found that most lighting provided at building corridors were not functioning.

Apart from the three elements discussed above, Table 4.2 below shows a high overall mean score of tenant satisfaction towards building quality of 3.2.

Table 4.2: Mean satisfaction – Building Quality

Building Quality						Overall Mean Satisfaction Score
	Lighting	Ventilation	Paintwork	Design	Space for airing cloths	
Mean Satisfaction Score	3.6	3.7	3.0	3.3	2.6	3.2

#### 4.2.3 Satisfaction with Neighbourhood

Cleanliness and hygiene in public housing often become the bone of contention among residents of such housing units. Findings obtained through this study indicated that tenant satisfaction towards children playing spaces achieved the lowest mean score value at 2.3. Cleanliness of corridors, stair cases and public areas on the one side and waste management on the other side registered a fairly low score of 2.6 and 2.7 respectively. Tenants’ lackadaisical attitude towards caring for hygiene and their mentality of expecting someone else to clean up after them contributed to the bulk of the problem. This was because the researcher found that regular garbage collection is being carried out by the Decanting Site Community. Tenant perception towards their public housing surrounding area security also scored a low mean value of 2.6. The study’s findings echoed those found by Mohit et al., (2010) and Parkes et al., (2002) that indicated that most respondents in their study areas were not very satisfied with the security and crime prevention features in their neighbourhoods. Table 4.3 below confirms that on the overall the satisfaction rating of 2.7 for neighbourhood factors was lower than the other elements of tenant satisfaction in this public housing facility.

Table 4.3: Mean Satisfaction – Neighbourhood factors

	Neighbourhood Factors										
	Recreation Facilities	Business spaces	parking	Waste Management	Cleanliness of corridors, staircases and public areas	lawns and outdoor areas	Security	Neighbour	Children playing space	Communal meeting space	Overall Mean Satisfaction Score
Mean Satisfaction Score	2.4	2.5	3.1	2.7	2.6	3.1	2.6	3.3	2.3	2.4	2.7

#### 4.2.4 Satisfaction with management systems

Management systems in public housing facilities have a great bearing on the relationship between tenants and landlord and thus satisfaction of the tenants. From the results of this study, this is perhaps one of the elements of public housing that has recorded the highest satisfaction rates for most of the ten factors covered in this study with the exception of response to maintenance needs which scored 2.9. This is characteristic of public housing systems in most countries where the response to maintenance requests is never quite satisfactory.

Table 4.4 Mean Satisfaction – Management Factors

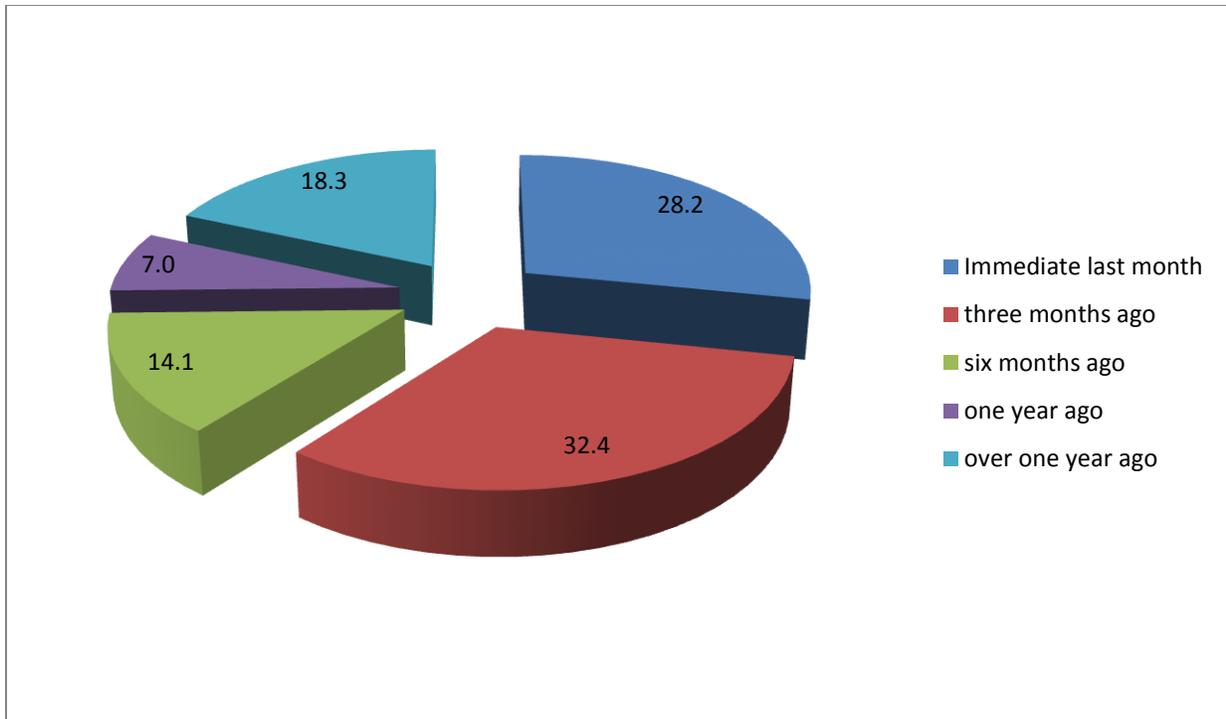
Management Factors	Mean Satisfaction Score
Location of estate office	3.5
facilities at the estate office	3.2
response to maintenance needs	2.9

Management Factors	Mean Satisfaction Score
estate office staff	3.9
ministry staff	3.7
mode of rent payment	3.7
mode of payment of bills water and electricity	3.7
terms of tenancy	3.8
allocation procedures and processes	3.4
rent collection dates	3.8
Overall Mean Satisfaction Score	3.6

### 4.3 Rent Arrears

From the study it is evident that the rents of Kshs 2100 for a two bedroom unit per month charged at this decanting site is far below the market rents around this area which stands at Kshs 35,000 per month.

One of the main objectives of this study is to establish the extent of rent areas in this public housing facility. The first front of establishing this fact from the research design is from the perspective of the tenants themselves. From the results of this study, only 28 percent of the tenants indicated to be up to date in rent payment while a staggering 72 percent confessed to be in arrears. It is noteworthy as depicted in the chart below that out of those in arrears, 25% are in arrears by one year and over.



**Figure 4.5: Proportion of Households by rent payment status**

This fact is further reinforced from the perspective of the management i.e. estate office at the site which is responsible for collecting rent among other estate management duties as well as the settlement executive committee members.

An assessment of the dynamics of this decanting site reveals that the monthly rent collection should ideally be on average Kshs 1,245,300 per month as is reflected in table 4.5 below. Further scrutiny revealed that the average monthly rent collection is in the range of Kshs 600,000. This is an indicator of the extent of the rent arrears phenomenon on this public housing facility.

**Table 4.5: Tabulation of receivable rent**

Block	Number of Units in Block	Rent Payable per Month per Unit	Rent Receivable per month from Block

Block	Number of Units in Block	Rent Payable per Month per Unit	Rent Receivable per month from Block
A	40	2,100	84,000
B	40	2,100	84,000
C	40	2,100	84,000
D	40	2,100	84,000
E	20	2,100	42,000
F	20	2,100	42,000
G	37	2,100	77,700
H	24	2,100	50,400
J	40	2,100	84,000
K	40	2,100	84,000
L	40	2,100	84,000
M	20	2,100	42,000
N	40	2,100	84,000
P	52	2,100	109,200
Q	40	2,100	84,000
R	20	2,100	42,000
S	40	2,100	84,000
RECEIVABLE RENT PER MONTH			1,245,300

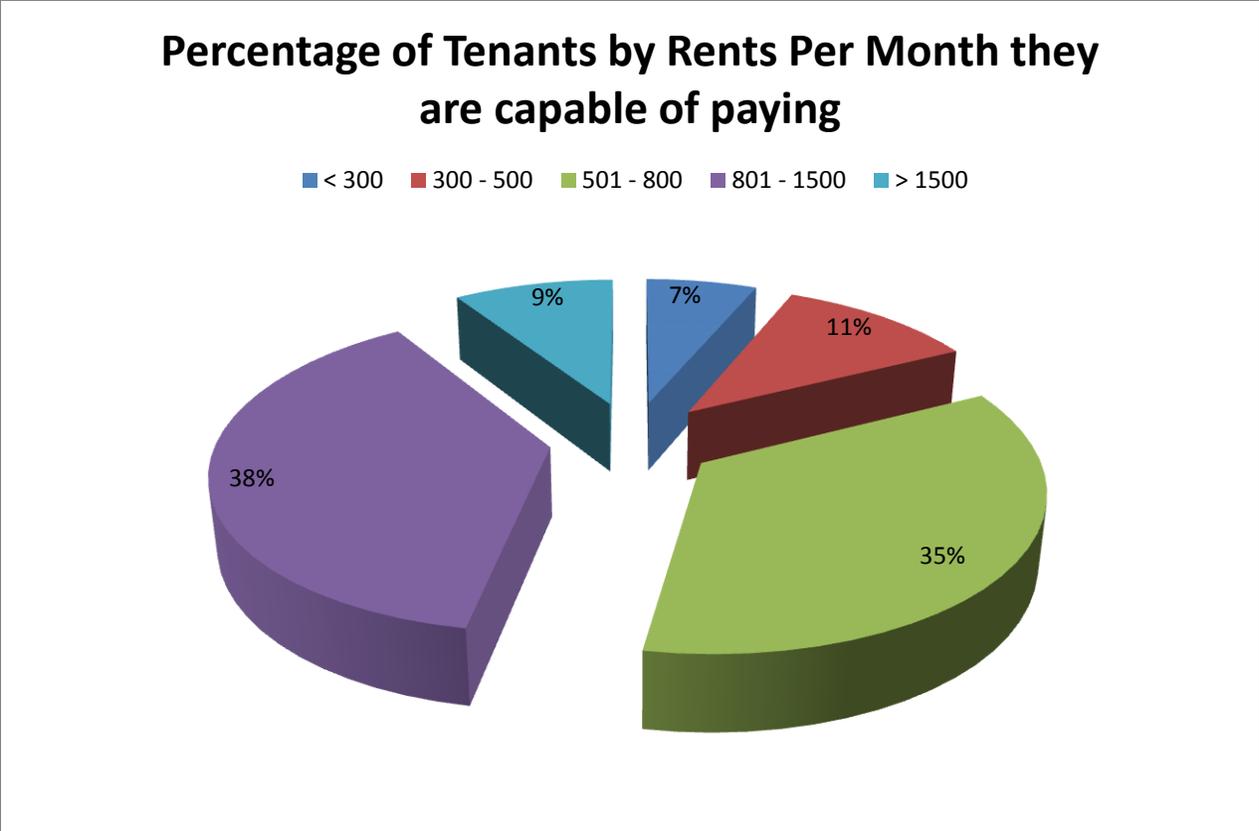
Although the record management systems are being established, these records in their current state point to total accumulated rent arrears of over Kshs 14,000,000. Noting that the decanting Site was first occupied four years ago i.e. 2009, it is worrisome since this may indicate that in another 5 years, the arrears

may have expanded to limits beyond the current state if no drastic measures are taken to address the root causes of this arrears.

The detailed intensity of the phenomenon of rent arrears is more revealing when examined at household level. The study established that there are tenants who are in arrears to the tune of Kshs 56,000 which heavily weighs down on the tenants and in some exceptional instances lead to eviction.

It should be noted that while in general practice in estate management, eviction or recovery of rent areas through established procedures is not an exception, this type of settlement cannot be handled in the normal way due to political volatility associated with such settlements especially viewed against the responsibility of Government to facilitate access to decent housing to even those without incomes.

An interesting revelation from the study is that the rents payable seem to be within the capabilities of the tenants as evidenced by the fact that 73 percent of the tenants indicated that they are comfortable with paying rents between Kshs 500 and 1,500 which compares well with the rents charged which range from Kshs 700 to 2,100.



**Figure 4.6: Proportion of households by the rents per month they deem capable to pay**

This viewed against the fact that an overwhelming 100 percent of the tenants interviewed in this study preferred monthly rent payment cycle as is currently encouraged.

**4.4 Analysis of Relationship between Rent Arrears and Tenant Satisfaction Factor**

To answer the research question of whether rent arrears are related to tenant satisfaction factor in Kibera Decanting Site which is a public housing facility, a logistic regression analysis method has been used in this study. Since the dependent variables for this research are dichotomy data, the logistic regression

binary analysis method has been identified as the most suitable method to be used (Wood, 2006). Analysis on the relationship between rent arrears and tenant satisfaction has been based on the information obtained from Section B and C of the household questionnaires for this study. This analysis covers the relationship between tenant satisfaction towards building features, building, environmental or neighbourhood qualities and the housing management aspects; and the nature of their relationships to rent arrears.

The dependent variable for this study is whether or not the tenants have incurred rent arrears. On the other hand, independent variables are tenant satisfaction towards building features; building, environmental or neighbourhood qualities and the housing management aspects. The dependent variable, rent arrears, is divided into two categories namely: those in arrears and those who are up to date in their rent payment.

Results of the logistic regression analysis were divided into two steps which are: (a) Step 0 (null model) and (b) Step 1 (Block 1: Model with predictor). Table 4.2 shows 71.8 percent of cases have faced rent arrears. The Omnibus test as shown in Table 4.4 illustrates integration of the models formed where its value was 0.026 which means that  $p < 0.001$ . The Omnibus test is also known as the compatibility test. The Hosmer and Lemeshow test (Table 4.6) shows an insignificant Chi Square with an insignificant level  $p < 0.05$ . These findings shows compatibility between the model and the data collected in this study (Tabachnick & S.Fidell, 2001). Table 4.5 shows the value of R to the power of two Cox and Snell is 0.036, meaning only 3.6 percent improvements for the model with predictor as compared with the null model.

Table: 4.6: Analysis Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	165.470 <sup>a</sup>	.024	.034

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Table 4.7: Contingency Table for Hosmer and Lemeshow Test

	Arrears = 1.00		Not in Arrears = 2.00		Total
	Observed	Expected	Observed	Expected	
Step 1 1	231	231.000	91	91.000	322

Table 4.8: Classification Table

	Observed	Predicted		
		Arrears		Percentage Correct
		1.00	2.00	
Step 1	Arrears 1.00	231	0	100.0
	2.00	91	0	.0
	Overall Percentage			71.8

a. The cut value is .500

Results of the logistic regression analysis show that on the whole, tenant satisfaction towards the housing aspects building quality, building features, management as well as neighbourhood factors are not directly related to the prevailing rent arrears problem in the Kibera Decanting Site.

The other step in establishing this correlation was to generate the overall satisfaction mean score for each sampled household. From the scale of 1 to 5 where 1 denotes extremely dissatisfied while 5 denotes very satisfied, it was

determined that a mean score of over 2.5 will be construed to indicate overall satisfaction while a score of less than or equal to 2.5 mean dissatisfaction. In applying this to the data it turned out that a whopping 96.5 percent of the respondents recorded an overall satisfaction of more than 2.5 score.

The next step was to correlate those satisfied and the results of those in arrears as depicted in section C of the household questionnaire through cross tabulation. This analysis indicates that out of the 96.5 percent who are satisfied, a significant 68.3 percent are in arrears. This result indicates that there is no direct relationship between rent arrears and tenant satisfaction in the Kibera Decanting Site public housing facility.

Although this result also disapproves the hypothesis, it should however be interpreted within the context of the study area and its residents. Given that the residents of the decanting site were relocated from very extreme living conditions in the adjacent Kibera Informal Settlement, their stay at the Decanting Site almost personifies a shift from total want to provision which may have contributed to the general higher satisfaction scorecard. For instance where this community lived previously, they didn't have decent and functional toilets within reasonable distance from the household, a shift to an environment where a flush toilet is provided within the dwelling is such a climb up the ladder that one is tempted to ignore minor issues that may set in dissatisfaction.

#### **4.5 Testing of Hypothesis**

In this study, the hypothesis on the onset was that “tenant dissatisfaction is the main cause of rent arrears in public housing”. To test this hypothesis, the study the null and alternative hypotheses are thus

$H_0 : \mu$  there is a direct relationship between tenant satisfaction and rent arrears

$H_1 : \mu$  there is no significant relationship between tenant satisfaction and rent arrears

The hypothesis has then been subjected to bivariate correlations test in SPSS which yielded the following results

Table 4.9: Bivariate Correlations output

		Arrears	Overall satisfaction
Arrears	Pearson Correlation	1	-.120
	Sig. (2-tailed)		.156
	N	322	322
Overall satisfaction	Pearson Correlation	-.120	1
	Sig. (2-tailed)	.156	
	N	322	322

From these results, the correlation index for the relationship between rent arrears and tenant satisfaction is -0.120 which effectively indicate that there is no significant relationship between rent arrears and tenant satisfaction.

## **Chapter 5: Conclusions and Recommendations**

### **5.1 Summary of Findings**

On the whole, this study has found that Kibera Decanting Site public housing tenants are satisfied with the building characteristics and conditions, building quality, building features and the public housing management. However, there are a few variables showing tenant dissatisfaction towards their housing for example children's playing space (mean value 2.3); Cleanliness of corridors, stair cases and public areas (mean value 2.6) and Space for airing cloths (mean value 2.6), surrounding area security (mean value 2.6), quality of floors (mean value 2.2) and actions taken by the management on complaints filed by tenants (mean value 2.64).

On the overall out of the 33 variables that were gauged for satisfaction under the four clusters (i.e. building features, building quality, neighbourhood factors and management factors), it is the above four variable which registered a mean satisfaction score of less than 2.5. This thus means that 12 percent of these variables returned a dissatisfaction verdict. While this is not very significant on the overall, it is nonetheless important to note that these variables are critical for vibrant and sustainable neighbourhoods. This study did not however the relative significance of these four variables for which the tenants were dissatisfied.

It is therefore crucial that the management pay attention to the few areas which elicit dissatisfaction among their tenants based on the attributes discussed in the foregoing. High tenant satisfaction towards their housing will indirectly increase the overall quality of life. Good management and maintenance of public housing portrays a positive image of public management especially in the public sector

and will simultaneously eradicate any negative connotations often labeled on public housing managements.

Results of the logistic regression analysis show that on the whole, tenant satisfaction towards the housing aspects is not related to the prevailing rent arrears problem. However, only aspects of building quality and neighbourhood have a significant relationship in this study. The contradictory relationship between aspects of building quality and rent arrears ( $B = -.551$ ) explained that good building quality will reduce the rent arrears problem faced by the housing management. Meanwhile, a positive relationship ( $B = 0.725$ ) between neighbourhood qualities and rent arrears shows good neighbourliness could create a negative culture if no harsh action is taken by the housing management on errant tenants.

On the overall the key findings from this study are:-

- There is indeed a significant problem of rent arrears standing at over Kshs 14,000,000 which given the relative short stint of occupancy of the facility of 4 years may balloon as the occupancy period prolongs if immediate and decisive measure are not put in place to reverse the situation
- A staggering 72 percent confessed to be in arrears and out of those in arrears, 25% are in arrears by one year and over.
- A majority of the tenants (over 70%) reported to be comfortable paying rents between Kshs 500 to 1500 hundred per month which compares well with the rents that are charged at the decanting site
- In this settlement, there was established that there is no relationship between rent arrears and tenant satisfaction as demonstrated with an insignificant Chi Square with an insignificant level of  $p < 0.05$ .
- On the overall out of the 33 variables gauged for satisfaction under the four clusters (i.e. building features, building quality, neighbourhood

factors and management factors) only four registered a mean satisfaction score of less than 2.5. This thus means that 12 percent of these variables returned a dissatisfaction verdict.

## **5.2 Conclusion**

The challenge of managing public housing especially improving rent collections while improving tenant satisfaction continue to confront most public housing agencies. A comprehensive rent assessment, collection and management system which is alive to the needs of the tenants is essential for sustainable public housing programmes.

Since rental public housing is a service to a community mainly financed for public resources, tenant satisfaction is a vital tool for continuously assessing and improving the performance of the provider of the service which in this case is rental housing. Although as a measure it has acknowledged short comings, it is none the less the most realistic avenue to ensuring sustainable access to decent and affordable housing. As with all products, it is widely accepted that acceptance of the product by a consumer yields more effortless payments. This is therefore the basis of the hypothesis of this study that “tenant satisfaction is the main course of rent arrears”

Although this study did not directly find the relationship between tenant satisfaction and rent arrears, other studies have established this link and therefore efforts should be put in place by public housing providers to improve tenant satisfaction within their jurisdiction. The study however unequivocally establishes a significant incidence of rent arrears in the settlement.

The study therefore makes several recommendations on strategic rent management system in public housing and identifies the areas for further research. A critical area recommended for further research is the relationship - if any - between length of occupancy of a facility and satisfaction. This may explain

the departure from the norm from previous studies that have linked satisfaction and rent arrears.

### **5.3 Recommendations**

Rent assessment, collection and accounting especially in public housing is a very intricate affair with potential social, economic and political undertones and therefore incidences of rent arrears is inevitable. Public housing providers should therefore regularly review their approach to and management of rent arrears, develop a strategy for managing arrears and periodically assess how performance can be improved. Such strategies should be proactive well thought out, inclusive and disseminated. According to the Department of the Environment and Local Government and The City and County Managers Association of Ireland, a good practice in strategic rent management system should cover and address the following issues:

- The management structure of the rents service this should clearly indicate who is responsible for receiving and determining reports of any difficulty of paying, collection, and assessment of tenant affairs
- The criteria for assessing rent levels
- The methods used for the collection of rents which may vary from payment to designated bank accounts, cash MPESA etc.
- Procedures for the accounting and monitoring of rent receipts
- Strategies for preventing the accumulation of rent arrears
- Procedures for the recovery of rent arrears
- Procedures for assessing customer satisfaction with the service
- Procedures for addressing customer complaints
- Procedures for monitoring the performance of the service

Based on the above guidelines therefore one the following are some of the specific recommendations for improving rent collection at the Kibera decanting site

- Streamlining the roaster of tenants including rent payment records and tenant socio-economic profile. This is critical to facilitate periodic reallocation when necessary, tracking of payments and early interventions to avoid ballooning arrears at the individual level.
- Instituting a tenant driven peer mechanism which works with the community to shame tenant who deliberately refuse to pay and also persuade such tenants to voluntarily seek alternative accommodation elsewhere
- Establish a transparent profiling of tenants who are genuinely not in a position to pay rent either due to shocks such as death in the household, prolonged sickness, abrupt discontinuation form employment etc.) or outright lack of income streams and institute mechanisms for facilitating such households to participate in “sweat for rent” initiatives within the community which may involve such tenants working within the community for some periods in areas such as waste management, cleaning, etc.
- Clearly and unequivocally stipulating displaying and disseminating the consequences of refusing to pay rent and accompanying this with firm legal mechanisms for enforcement of relevant laws and regulations.
- Intensify efforts towards improving tenant satisfaction especially streamlining response to tenant requests as other studies has proven that satisfaction factor also influences the prevailing rent arrears problem in public housing even if it doesn’t wholly account for the rent arrears

More importantly since settlement in or neighbouring informal settlements such as this one tend to be hotbeds of politics, it is critical that the political players and

opinion shapers are constantly engaged to ensure they understand and own the rent collection and management processes and procedure to limit political influences and group psychic that can impact negatively on improvement of rent collection.

#### **5.4 Areas for further research**

While this study has not established a direct relationship between rent arrears and tenant satisfaction, there are other studies (Salleh et al 2011) which have established a relationship between these two factors. However, it may be necessary to further address the significance of the period of stay in a neighbourhood and tenant satisfaction. This study could not establish this linkage since all the tenants at the decanting site relocated at the same time. In this regard there may be need to establish if tenants are likely to be satisfied say in their first 5 years in a housing facility than they would be in say 20 years of occupying the same housing facility. Another area that requires further research is the instituting of criteria for establishing which variable of measuring satisfaction has the greatest significance. This may facilitate weighting of the variables before determining the overall satisfaction levels. In brief the following areas may need further research:-

- The relationship between length of post occupancy period and tenant satisfaction
- Basis for establishing which variable of measuring tenant satisfaction should be accorded higher weight.
- The influence of the deplorable state of immediate past living environment compared to an improved living environment on satisfaction in current accommodation

## References

- Basorun J.O. and Fadairo G.(2012) “ Government Challenges in Housing the Urban Poor in Ado-Ekiti, Nigeria” *Journal of Sustainable Society Vol. 1, No. 2, 2012, 31-35*
- Berkoz, Turk L, Kellekci ÖL (2009). "Environmental Quality and User Satisfaction in Mass Housing Areas: The Case of Istanbul." *Euro .Plan. Stud.*, 17(1): 161-174.
- C. Peter Rydell (1970) “Factors affecting maintenance and operating costs in federal housing projects” The New York City Rand Institute
- Drakakis-Smith, D. (2000). *Third World Cities*, Second Edition. London: Routledge.
- Furbey, R. & Goodchild, B. (1986) ‘Method and methodology in housing user research’ *Housing Studies* Vol 1(3) pp166–181
- Hal Pawson & Filip Sosenko (2009), “Assessing Resident Satisfaction” Heriot-Watt University *and* Ipsos MORI
- Hegedus, J., & Mark, K. (1994). “Tenant satisfaction with public housing management: Budapest in transition” *Housing Studies*, Vol 9(3), 315.
- Heriot-Watt University and Ipsos MORI (2009) *Tenant Perspectives on Social Landlord Services*, London: Tenant Services Authority <http://www.tenantservicesauthority.org/server/show/ConWebDoc.19412>
- Kangjuan LV, Juan WANG2, Wei LV, “Study on the Residents Satisfaction Degree in the Urban and Rural Fringe in China—Based on Structural Equation Model”, *Journal of Cambridge Studies* vol.5, no.2-3, 2010.
- Mehdi Sam, Muhammad Fauzi Bin Hj Mohd Zain and Omidreza Saadatian (2012) “Residential satisfaction and construction” *Scientific Research and Essays* Vol. 7(15), pp. 1556-1563.
- Mohd. Isa Hj. Bakar, Haron Din, Chan Huan Chiang and Kamarudin Ngah (1990). *Projek Impak Pembangunan Tanjung Tokong 1990 - Pembangunan Perumahan dan Persekitaran*, Universiti Sains Malaysia: Pusat Penyelidikan Dasar.
- Mohd. Zulfa Awang (2000). *Kajian Kepuasan Penghuni dan Persekitarannya; Kajian Kes: Taman Perumahan Permin Jaya, Cendering, Kuala Terengganu*. Thesis

Ijazah Sarjana Sains (Perumahan), Universiti Sains Malaysia: Pusat Pengajian Perumahan, Bangunan dan Perancangan.

Mohit MA, Ibrahim M, Rashid YR (2010). "Assessment of Residential Satisfaction in Newly Designed Public Low-Cost Housing in Kuala Lumpur, Malaysia." *Habitat Int.*, 34(1): 18-27.

Mwangi I. K (1997). "The nature of rental housing in Kenya" *Environment and Urbanization*, Vol. 9, No. 2, International Institute for Environment and Development

Oliver, R.L. (1989). Processing of the Satisfaction Response in Consumption: A suggested Framework and Research Propositions, *Journal of Satisfaction, Dissatisfaction and Complaining Behavior*, Vol. 2: 1-16.

Oxley, M. E Smith, J. (1996). *Housing Policy and Rented Housing in Europe*. London, E & FN Spon

Pollitt (1988) p78 – cited in Conway, M. & Knox, C. (1990) 'Measuring housing effectiveness: a case study in customer evaluation' *Housing Studies* Vol 5(4) pp. 257–272

Salleh AG (2008). "Neighborhood Factors in Private Low-Cost Housing in Malaysia." *Habitat Int.*, 32(4): 485-493.

Salleh N A, Johari N, & Yusof N A (2008) "Rent Arrears and their Implications in Public Housing" 2nd International Conference on Built Environment in Developing Countries (ICBEDC 2008) Penang, Malaysia

Satsangi, M. & Kearns, A. (1992) 'The use and interpretation of tenant satisfaction surveys in British social housing', *Environment and Planning C: Government and Policy* Vol 10 (3) pp317 – 331

Sekaran, U. (2003) "Research Methods for Business: A skill-building approach" 14<sup>th</sup> Ed, New York: John Willey and Sons Inc.

Van Vliet, W. (1990) (ed.) *International Handbook of Housing Policies and Practices*, Westport, CT: Greenwood Press.

Vincent Lane (1995) "Best Management Practices in U.S Public Housing" *Housing Policy Debate*, Volume 6- Issue 4. Fannie Mae

Yeh, S.H.K. and Statistics and Research Department Housing and Development Board (1972). *Homes for the People: A Study of Tenants' Views on Public Housing in Singapore*. University of Singapore: Economic Research Center.

[http://books.google.co.ke/books?id=nWgtYOmfnFIC&pg=PT17&lpg=PT17&dq=loans+owed+by+local+authorities+to+NHC+-+kenya&source=bl&ots=jIno5boHbq&sig=wcRA4sBPSGIkf2tkTDjt7RAWfSg&hl=en&sa=X&ei=M\\_1PUZ7WEYHLhAeF2oDoCQ&ved=0CEMQ6AEwBA](http://books.google.co.ke/books?id=nWgtYOmfnFIC&pg=PT17&lpg=PT17&dq=loans+owed+by+local+authorities+to+NHC+-+kenya&source=bl&ots=jIno5boHbq&sig=wcRA4sBPSGIkf2tkTDjt7RAWfSg&hl=en&sa=X&ei=M_1PUZ7WEYHLhAeF2oDoCQ&ved=0CEMQ6AEwBA) ).



H9		H10		H11	H12		
Space Occupied - How much space in number of rooms does this household occupy		On what floor is your dwelling located		When did you move into this neighbourhood	House Details		
One room	1	Ground	1		Block	House No.	Door No.
Two rooms	2	1st Floor	2				
Three rooms	3	2nd Floor	3				
		3rd Floor	4				

SECTION B : SATISFACTION ASSESSMENT - Building Features																			
B1		B2		B3		B4		B5		B6		B7		B8		B9		B10	
Space		Location		Facilities		Room sizes		quality of doors		quality of floors		electrical fittings		plumbing fittings		Location		Location	
Very Dissat	1	Very Dissatisfied	1	Very Dissat	1	Very Dissat	1	Very Dissatis	1	Very Dissat	1	Very Dissat	1	Very Dissatisfied	1	Very Dissat	1	Very Dissat	1
Dissatisfied	2	Dissatisfied	2	Dissatisfied	2	Dissatisfied	2	Dissatisfied	2	Dissatisfied	2	Dissatisfied	2	Dissatisfied	2	Dissatisfied	2	Dissatisfied	2
Not Sure	3	Not Sure	3	Not Sure	3	Not Sure	3	Not Sure	3	Not Sure	3	Not Sure	3	Not Sure	3	Not Sure	3	Not Sure	3
Satisfied	4	Satisfied	4	Satisfied	4	Satisfied	4	Satisfied	4	Satisfied	4	Satisfied	4	Satisfied	4	Satisfied	4	Satisfied	4
Very Satisfie	5	Very Satisfied	5	Very Satisfie	5	Very Satis	5	Very Satisfied	5	Very Satisfie	5	Very Satisfie	5	Very Satisfied	5	Very Satisfie	5	Very Satisfie	5

SECTION B: SATISFACTION ASSESSMENT - Building Quality											
B11	B12	B13	B14	B15	B16	B17	B18	B19	B20		
Lighting	Ventilation	Paintwork	Design	Space for airing cloths	Location	Location	Location	Location	Location		
Very Dissat	Very Dissatisfied	Very Dissat	Very Dissat	Very Dissat	Very Dissat	Very Dissat	Very Dissat	Very Dissatisfied	Very Dissat	Very Dissat	Very Dissat
1	1	1	1	1	1	1	1	1	1	1	1
Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied
2	2	2	2	2	2	2	2	2	2	2	2
Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure
3	3	3	3	3	3	3	3	3	3	3	3
Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied
4	4	4	4	4	4	4	4	4	4	4	4
Very Satisfie	Very Satisfied	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfied	Very Satisfie	Very Satisfie	Very Satisfie
5	5	5	5	5	5	5	5	5	5	5	5

SECTION B : SATISFACTION ASSESSMENT - Neighbourhood Factors											
B21	B22	B23	B24	B25	B26	B27	B28	B29	B30		
Recreation Facilities	Business spaces	parking	Waste Management	Cleanliness of corridors, stair cases and public areas	lawns and outdoor areas	Security	Neighbour	Children playing space	Communal meeting space		
Very Dissat	Very Dissatisfied	Very Dissat	Very Dissat	Very Dissat	Very Dissat	Very Dissat	Very Dissatisfied	Very Dissat	Very Dissat	Very Dissat	Very Dissat
1	1	1	1	1	1	1	1	1	1	1	1
Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied
2	2	2	2	2	2	2	2	2	2	2	2
Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure
3	3	3	3	3	3	3	3	3	3	3	3
Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied
4	4	4	4	4	4	4	4	4	4	4	4
Very Satisfie	Very Satisfied	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfied	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfie
5	5	5	5	5	5	5	5	5	5	5	5

SECTION B : SATISFACTION ASSESSMENT - Management factors											
B31	B32	B33	B34	B35	B36	B37	B38	B39	B40		
Location of estate office	facilities at the estate office	responses to maintenance needs	estate office staff	ministry staff	mode of rent payment	mode of payment of bills water and electricity	terms of tenancy	allocation procedures and processes	rent collection dates		
Very Dissat	Very Dissatisfied	Very Dissat	Very Dissat	Very Dissat	Very Dissat	Very Dissat	Very Dissatisfied	Very Dissat	Very Dissat	Very Dissat	Very Dissat
1	1	1	1	1	1	1	1	1	1	1	1
Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied	Dissatisfied
2	2	2	2	2	2	2	2	2	2	2	2
Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure	Not Sure
3	3	3	3	3	3	3	3	3	3	3	3
Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied
4	4	4	4	4	4	4	4	4	4	4	4
Very Satisfie	Very Satisfied	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfied	Very Satisfie	Very Satisfie	Very Satisfie	Very Satisfie
5	5	5	5	5	5	5	5	5	5	5	5

**SECTION C : RENT ARREARS AND PAYMENT CAPABILITIES**

C1		C2		C3		C4		C5		C6	
How much rent in Kshs per month are you capable of paying		What is the latest month for which you last paid rent		Which interval of rent payment do you prefer		What is your average monthly income in Kshs		what is your pay cycle		mode of rent payment	
< 300	1	Immediate last month	1	Monthly	1	< 1000	1	Daily	1	Very Dissati	1
300 - 500	2	three months ago	2	Weekly	2	1000 - 300	2	Weekly	2	Dissatisfied	2
501 - 800	3	six months ago	3	Daily	3	3001 - 500	3	Monthly	3	Not Sure	3
801 - 1500	4	one year ago	4			5001 - 800	4	No order	4	Satisfied	4
> 1500	5	over one year ago	5			> 8000	5			Very Satisfie	5

## Appendix 2: Management Questionnaire

1	In your view, is there a serious rent arrears problem in this site?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>				
2	If Yes, Can you quantify the rent arrears(e.g. as a percentage of amount or what is expected)	<input type="text"/>							
3	In your view, what are the likely causes of the rent arrears in this site?	Poor collection mode		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		Inability of tenants to pay		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		Refusal of tenants to pay		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		Inconsistent income of tenants		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		dissatisfaction of tenants with the services		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		innappropriate methods of collection		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		poor record keeping		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		laxity in ensuring payment		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		incitement/external/ political factors		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		Other factors(please state)							
4	In your view, has the Management attempted to address this problem?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>				
5	If yes, which actions have been taken to reduce the rent arrears	improve collection systems		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		review rent levels		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		improve services and satisfaction		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		improve records		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		introduce flexible payment modes		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		
		tighten enforcment		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>		

		addressed the external afctors	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Other factors(please state)		-----		
				-----		
				-----		
				-----		
6	In your view, do you think the tenants are satisfied by your services with regard to the following	Rent Collection system	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Response to repairs and maitenance	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Allocation proceedures	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Waste management	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Cleaning and lawn mawing	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Space provided	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Services(Electericity, Water etc)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Rent levels	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Determination of disputes	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

### Appendix 3: Community Leadership Questionnaire

1	In your view, is there a serious rent arrears problem in this site?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>				
2	If Yes, Can you quantify the rent arrears(e.g. as a percentage of amount or what is expected)	<input type="text"/>							
3	In your view, what are the likely causes of the rent arrears in this site?	Poor collection mode				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Inability of tenants to pay				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Refusal of tenants to pay				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Inconsistent income of tenants				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		dissatisfaction of tenants with the services				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		inappropriate methods of collection				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		poor record keeping				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		laxity in ensuring payment				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		incitement/external/ political factors				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Other factors(please state)							
4	In your view, has the Management attempted to address this problem?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>				
5	If yes, which actions have been taken to reduce the rent arrears	improve collection systems				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		review rent levels				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		improve services and satisfaction				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		improve records				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		introduce flexible payment modes				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		tighten enforcement				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

		addressed the external afctors		Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Other factors(please state)			-----		
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	6	In your view, do you think the tenants are satisfied by your services with regard to the following	Rent Collection system	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
			Response to repairs and maitenance	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
			Allocation procedures	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
			Waste management	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
			Cleaning and lawn mawing	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
			Space provided	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
			Services(Electricity, Water etc)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
			Rent levels	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
			Determination of disputes	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>