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### Assessment of User Satisfaction Following the Transformations Resulting From Encroachment on Social Amenities in Buruburu Estate, Nairobi City County, Kenya



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**ABSTRACT**: Transformations have led to questionable environmental qualities in housing neighbourhoods. Urban areas in Africa, and Kenya in particular are faced with an increased growth of planned settlements transforming into unplanned housing units. Most researches on housing transformations have concentrated on the dwelling units but little has been done on other aspects such as social amenities. The study therefore draws attention to this neglected aspect of transformation in housing and the reactions of dwellers towards the same. Buru Buru in Nairobi city formed the location of the empirical study. The study assessed user satisfaction following transformations of social amenities in Buruburu Estate, Nairobi City County. Data was collected using interview schedules from respondents drawn from residents and architects responsible for the transformation. Qualitative and quantitative data that used various techniques including structured interviews, digital photography and analyses of archival drawings and satellite maps were analysed using both qualitative and quantitative techniques. The findings showed that the user were very unsatisfied with the different social amenities in the estate. The conclusion was that social amenities should be developed at the beginning of the scheme. The study recommends inclusion of a possible model and clarification on the roles that professionals, developers and authorities need to play in any housing development in order to mitigate the phenomenon. (213 Words)

KEY WORDS: Transformation, Encroachment, Social Amenities, User Satisfaction

#### **1.0 INTRODUCTION**

#### 1.1 Background

Shelter being a human need is viewed as an important component of adequate standard of living in the Universal Declaration of Human Rights of 1948 and reaffirmed by subsequent international instruments. The right to adequate housing is therefore a universal right, recognized at the international level and in more than one hundred national constitutions throughout the world (Fatoye & Odusami, 2009). In Kenya, housing is captured in both the Vision 2030 and Constitution where access to adequate housing is one of the Constitutional Rights.

Housing in urban areas should no longer be about physical shelter and stock deficits normally represented in statistics but a matter of formation of livable environments and homes. However, large scale housing deficiencies and poor social and residential environments in forms of slums and squalors characterize most urban centers in the emerging nations of Africa, Asia and Latin America (Jiboye, 2004). Transformations that are carried out in residential neighbourhoods are the main reason adduced to these deficiencies.

In spite of several controls, the planned residential areas of Nairobi city have experienced transformations in land use patterns. Today, Kenya faces an increasing growth of planned settlements transforming to unplanned ones in her urban centers. These transformations, researches indicate, have been fueled by economic, social and physical factors. This scenario can be observed everywhere including the well-known informal settlements for the lowest income earners and also in housing estates for other income profiles.

In Nairobi, the residential zone that was set apart from the colonial days to house Africans was located on the East side of the city, today commonly known as Eastlands. The area is home for a number of estates, including Buru Buru, housing both low and middle income groups. According to Makachia (2010), Buru Buru was earmarked for the then emerging middle-income group and adopted the mortgage housing financing delivery strategy. This was a departure from the Rental and the Tenant Purchase housing finance models that were popular in urban housing delivery then.

The earlier approaches involved huge state subsidies and over time had proved economically unsustainable. The government only offered guarantees for offshore funding in this new approach (Anyamba, 2006) and left the bulk of housing development to the private sector through mortgage loans that were to be paid in 15 to 25 years.

#### **1.2 Statement of the Problem**

The last planned phase of Buru Buru estate was completed and houses occupied 1983. Since then, mushrooming of unplanned structures have transformed the estate into a mixed use neighbourhood with the number of commercial activities rising on undefined spatial distribution. These activities are gradually taking over the areas initially designated for social amenities and congestion is unavoidable in this area unless controlled which can lead to health risks. Open spaces designated for recreation have been used for the unplanned structures because the developers view them as 'wasted' land to be utilized in building. The existing need for housing offers a ready market to any additional housing units and so such a space become the first target for any economic gain. Sheuya (2004) notes that the continued transformations of land uses which are triggered by the need for economic gains and which are not guided by statutory urban planning regulations may lead to densification and congestion The study therefore sought to assess user satisfaction following transformations of social amenities in Buruburu Estate, Nairobi City County,

#### 1.3 Objective of the Study

The study sought to assess user satisfaction following transformations resulting from encroachment on social amenities in Buruburu Estate, Nairobi City County, Kenya.

### 2.0 LITERATURE REVIEW

Satisfaction is a measure of the difference between the actual and expected performance of products or services in meeting users' needs and expectations from the users' or consumers' perspective during or after a consumption experience. According to the expectancy-disconfirmation theory, which most studies on satisfaction draw on, this means that if the performance of a product or service meets users' or customers' needs and expectations, the user or customer is said to be satisfied with the product and/or service, and vice versa (Oliver, 1981; Parker and Mathews, 2001). Housing satisfaction is an expression of the degree of content that a given housing situation provides to an individual or the gap that exists between residential needs and aspirations, and the current residential context.

Measures of residents' satisfaction with their living environments have a great potential of providing a useful and socially acceptable criterion for evaluating housing. In addition, they are useful in assessing the importance of various components of housing in meeting their satisfaction. According to Francescato, Weidemann, Anderson and Chenoweth (1979), people's satisfaction with where they live is sufficient in itself to merit examination.

### 3.0 CHAPTER THREE: RESEARCH METHODOLOGY

The research design constitutes the blueprint for the collection, analysis and interpretation of data and requires a choice of research strategy (Yin, 1984). The case study research strategy was used in conducting the current study because the research sought to understand 'why' and 'how' transformations of social amenities occur in a formally designed housing estate in an urban area. Yin (2002) defines case study as an empirical inquiry that seeks to understand a contemporary phenomenon in its real life context, especially when the boundaries between phenomenon and context are not evidently clear and in which multiple sources of evidence are used. Choice of design was informed by the assertions of Bell (1993) who avers that, the design use to enables in-depth understanding of the phenomenon with fewer subjects, is more cost effective and saves time.

Nairobi was considered an appropriate area for this particular study because it is the capital city of Kenya, the largest urban center and is considered the most urbanizing city in the country.

The selection of Buru Buru estate as the study area was motivated by the fact that transformation, the phenomenon in focus of the study, is highly manifested. Although the estate was planned and designed using relevant regulations the current scenario stands in contrast. Informality has set in where developments do not respect the regulations that are laid out. It was designed to house middle class group and as part of the design considerations for such a group were the public open spaces that were provided in accordance to the regulations. The current scenario is that there is no available public open space for the residents with all of them being changed into private properties.

The study concentrated on phase III which was considered as appropriate since it was the center of the development; two phases were developed before it and two others after. Most of the social amenities were also located around this phase making it rich in terms of information. Phase III was developed from 1977 to 1978. It has a total of 887 housing units and 24 clusters with each cluster having approximately 36 housing units.

Various methods of collecting empirical data were utilized so as to take advantage of each one of them. Table 1 summarizes the methods of data collection and recording..

|             | LEVEL 1: UNIT SURVEY                             | LEVEL 2: NEIGH-BORHOOD<br>SURVEY                                      |
|-------------|--|---|
| Description | Use of case study typologies                     | Use of reconnaissance surveys   |
| Tools       | Satellite maps, Time series aerial photographs   | Satellite maps, Consultants' drawings                                 |
| Data type   | Detailed study of typologies                     | Evidence of land use transformation                                   |
| Sources     | satellite images, Time series aerial photographs | Archives, satellite images, aerial photos,<br>Government publications |
|             | aerial photographs                               | Government publication  |

#### Table 1: Methods of data collection and recording

The researcher studied Satellite maps, aerial photographs and consultants' drawings. They shed light on the social amenities that the designer had incorporated in the design and the transformations that had emerged. It was from this review that an understanding was gained on the kind of residential environment in terms of social amenities that designers of Buru-Buru estate had envisioned and what it had changed to be.

Data collection included use of observations and interviews. Observation technique was used in data collection to compare the original drawing with the current use of space in terms of activities, displays and the built forms. This incorporated both the physical observation for documentation of the existing situation and mapping the transformations through identifying the key changes. The use of observation that exploited digital photography and sketches freed the respondents from answering interview questions relating to observable facts of transformation.

The interviewees were selected from residents of Buru Buru estate who had lived there for over twenty years. These were, in most cases, people who had witnessed the transformations as they unfolded and had a lot of qualitative data at their disposal. They were perceived as being well conversant with Buru Buru having been there for quite a long time and therefore were most resourceful. Selection of respondents was through snowballing technique whereby, through referrals which started with the cluster/court chairperson or the gate keeper, appropriate respondents were identified.

The data collection tools included structured and open ended items. The closed ended questions with fixed responses would be followed by open ended items where respondents were allowed to provide further information for clarification. The responses were recorded as field work notes. The structured interview allowed collection of qualitative data. This was turned into quantitative data and analyzed through spreadsheets as Kvale (1996) advises.

Interviews were carried out in each of the 24 clusters where one respondent was interviewed. The interviews were carried out on consecutive weekends when the respondents were likely to be in their houses. The respondents also included architects who were involved in the design of the estate. These were useful in giving information on the original design ideas and intentions. In total two respondents were interviewed. The architects were considered key informants, knowledgeable enough to unveil information that led to further probing and questioning of the stated study aspects. Patton (1987) states that key informants are respondents who are knowledgeable, articulate and with deep insights that assist the researcher in understanding what is happening.

#### 4.0 DISCUSSION OF FINDINGS

The study categorized social amenities into; public open spaces, education facilities, religious facilities, healthcare facilities, entertainment facilities, sport facilities and childcare facilities. Interview guides and observation checklists were used to assess the overall level of satisfaction with the social amenities in the study area.

#### 4.1 Public open space

Respondents were asked to indicate if they were satisfied with the available open spaces in the estate. Figure 4.1 summarizes the findings.

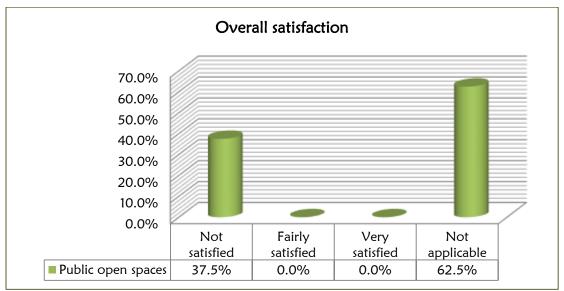


Figure 3.1: Satisfaction with public open space

From Fig. 4.1, most of the respondents (62.5%) selected not applicable suggesting that they had no idea of any open space in the neighbourhood. At least 37.5% indicated that they were not satisfied with the public open space. Response to the open ended items indicated that the public open spaces had been irregularly allocated to individuals and therefore became private. Some respondents claimed that they woke up one day to find multi-storey buildings construction underway on what was initially public open space. Many lamented the lack of public open space which denies them the chance to socialize. Public open spaces had been used as dumping sites before the irregular allocation were done. older residents in the estate were still able to identify some of the open spaces that the public could access although they now belonged to a private school.

Respondents were further asked to state their satisfaction with three specific aspects of the public space namely; access, location and physical condition of the facilities. Figure 4.2 summarizes the findings.

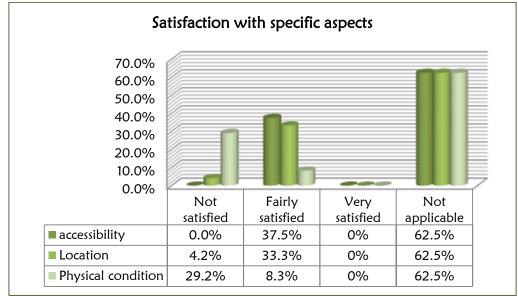


Figure 3.2 : Satisfaction with specific aspects of public open space

From Fig 4.2, majority of respondents (62.5%) could not comment on the three aspects because, they were not aware of existence of open spaces in the estate. There were at least 37.5% respondents who said they were fairly satisfied with the level of accessibility; 33.3% fairly satisfied with the location; while 29.2% were clearly not satisfied with the physical condition of the facilities.

### 4.2 Education facilities

Respondents were asked to state their overall satisfaction with the education facilities in the estate. The responses are given in Figure 4.3.

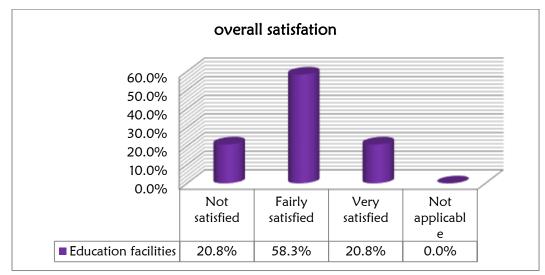


Figure 3.3: Satisfaction with education facilities

Figure 4.3 shows that, more than half of the respondents (58.3%) were fairly satisfied with education facilities and 20.8% being very satisfied. From qualitative data, respondents observed that both private and public primary and secondary schools were distributed in all the phases. Concerns were however raised on the lack of college level of education facilities.

Still on education facilities, respondents were asked to indicate their level of satisfaction with three key aspects on the facilities; access, location and physical condition. Figure 4.4 summarizes the analyzed data.

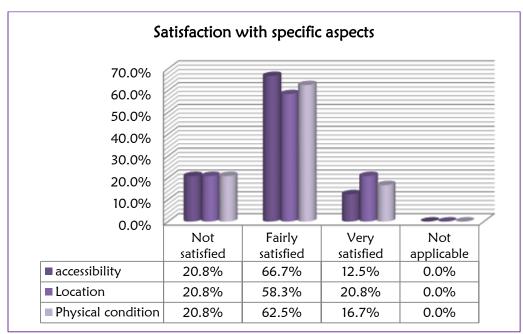


Figure 3.4: 1Satisfaction with specific aspects education facilities

\From Fig. 4.4, most of the respondents were fairly satisfied with all the three aspects of education facilities which included accessibility, location and physical condition. Accessibility however was had the highest (66.7%) responses among the three aspects.

### 4.3 Religious facilities

The level of satisfaction with the religious facilities in the estate was also assessed. Figure 4.5 summarizes the findings.

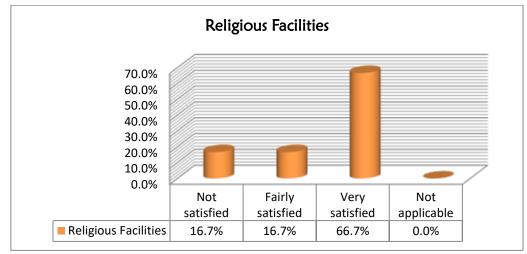


Figure 3.5: Satisfaction with religious facilities

Figure 4.5 shows that majority of the respondents (66.7) were very satisfied with religious facilities. One of the respondents said that the facilities were everywhere one passed indicating that they were numerous in number. The few (16.7%) that were not satisfied were of the opinion that the religious facilities were mostly Christian based with other religions not included. Respondents were further asked to indicate their satisfaction in line with the three specific aspects namely; access, location and physical condition. Their responses are summarized in figure 4.6.

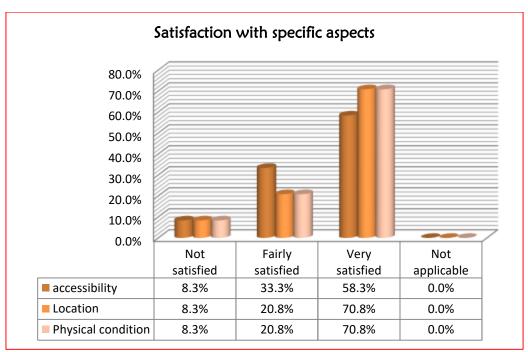


Figure 3.6: Satisfaction with specific aspects of religious facilities

Data from Fig. 4.6 shows that more than half of the respondents were very satisfied with the accessibility (58.3%), location (70.8%) and physical condition (70.8%) of the religious facilities while 8.3% who were not satisfied with any of the aspects.

### 4.4 Healthcare facilities

The question of the overall satisfaction with the healthcare facilities was posed to the respondents. Figure 4.7 summarizes the data.



Figure 3.7: Satisfaction with healthcare facilities

From Fig. 4.7, most residents of Buruburu (62.5%) respondents were not satisfied with the health care facilities while a few (8.3%) were very satisfied. The question of what was most dissatisfying was posed to the respondents. Results are presented in Figure 4.8.

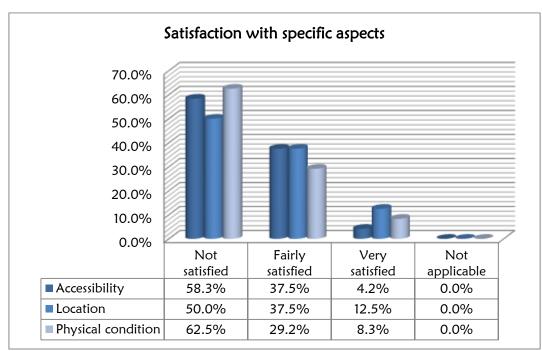


Figure 3.8: Satisfaction with specific aspects of healthcare facilities

Figure 4.8 shows that the residents were most dissatisfied with the physical condition (62.5%) followed by accessibility at 58.3%. at least half (50.0%) were not satisfied with the location of the facilities.

### 4.5 Entertainment facilities

The study respondents were asked to rate their satisfaction with the entertainment facilities in the estate. Figure 4.9 summarizes the results.

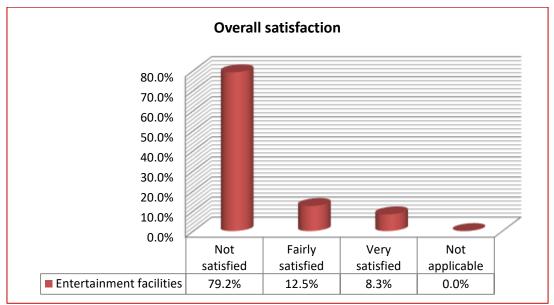


Figure 3.9: Satisfaction with entertainment facilities

Results from Fig. 4.9 show that majority of the residents (79.2%) were not satisfied with the entertainment facilities in the neighbourhood. There was however paltry 8.3% of the respondents who very satisfied. From qualitative date, most respondents lamented lack of such facilities in the estate. To clarify on this data, the respondents were asked how satisfied they were with accessibility, location and physical condition of the entertainment facilities. Figure 4.10 summarizes the results.

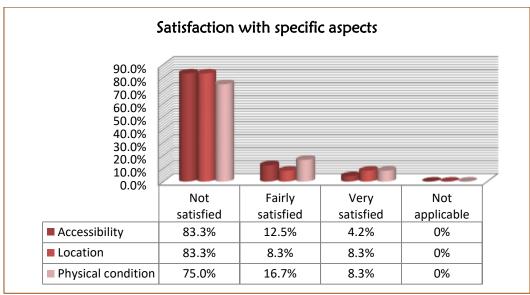


Figure 3.10: Satisfaction with specific aspects of entertainment facilities

The findings from Fig. 4.10 depict high levels of dissatisfaction with the three aspects with accessibility and location tying at 83.3% and physical condition being not satisfactory at 75.0%. It is notable that, 8.3% of the respondents were very satisfied with the location and physical condition of the facilities while 4.2% were very satisfied with the accessibility of the facilities.

### 4.6 Sports facilities

The study finally sought to establish the residents' overall satisfaction with the sports facilities in the estate. Findings are given in Figure 4.11.

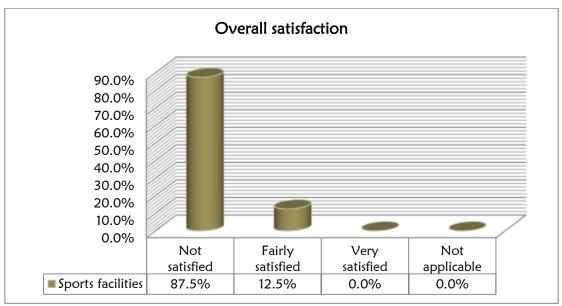


Figure 3.11: Satisfaction with sport facilities

In response to the question of how satisfied the residents were with sports facilities, almost all (87.5%) the residents were not satisfied (Fig.4.11). When the study probed further during interviews, it was established that most respondents felt that they lacked the facilities required. Others added that most of the available facilities were located in school with only a few in the residential areas. They were very particular about lack of soccer fields.

The study further sought clarification on the aspects of location, access and physical condition of the sports facilities. Figure 4.12 summarizes the data.

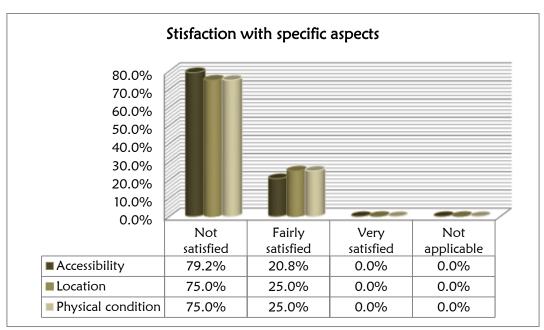


Figure 3.12: Satisfaction with specific aspects of sport facilities

From Figure 4.12, at least 79.2% of the respondents were not satisfied with the accessibility of the sports facilities while 75.0% were not satisfied with the location and physical condition of the facilities.

### 4.7 Childcare facilities

The study sought to establish the respondents' overall satisfaction with childcare facilities. The findings are summarized in figure 4.13..

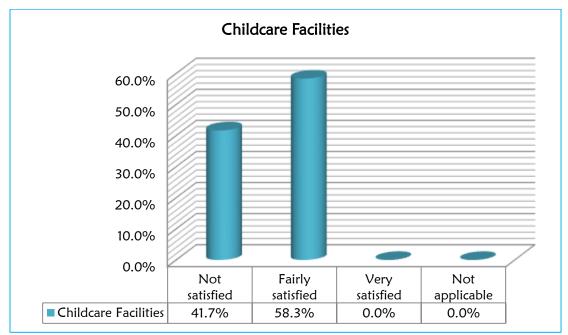


Figure 3.13: Satisfaction with childcare facilities

The findings in Fig. 4.13 show that 58.3% of Buru Buru residents were fairly satisfied with childcare facilities in the neighbourhood while 41.7% were not satisfied. Data on the satisfaction in relation to the key aspects is given in Figure 4.14.

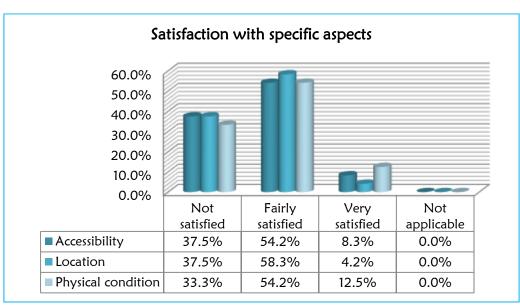


Figure 3.14: Satisfaction with specific aspects of childcare facilities

Figure 4.14 shows that majority of the respondents were fairly satisfied with the childcare facilities with 58.3% showing fair satisfaction with the location of the facilities while accessibility and physical condition tied at 54.2% .From interviews, the study established that the childcare facilities were housed within the residential buildings in the clusters. This means that some residents had converted their residential homes to childcare facilities.

### 5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Summary of Findings

**5.1.1:** Not satisfied: Sports facilities recorded the highest number (87.5%) of respondent being not satisfied and none of them was very satisfied. During the design of Buru Buru, there were no specific sports facilities that were planned for. Similarly, entertainment facilities were also not satisfying to the residents of Buru Buru as 79.2% of the responents were not satisfied. Most of the respondents (62.5%) were also not satisfied with healthcare facilities as well. Satisfaction with public open space was quite unique

with 62.5% of the respondents not applying to them. The rest (37.5%) of the respondent were not satisfied. In other words all (100.0%) the respondents to whom it applied to were not satisfied.

**5.1.2:** Fairly satisfied: Childcare facilities were faily satisfying to the residents as 58.3% of the respondent idicated so though not very satisfying as none gave this response

**5.1.3:** Very satisfied: In response to how satisfied the users were with the different categories of social amenities, religious facilities registered the greatest number (66.7%) of interviewees who were very satisfied. In additional 16.7% of were fairly satisfied with the facilities. Education facilities also recorded high numbers of respondents with satisfaction with 21% of the repondents being very satisfied and 58% fairly satisfied.

#### **5.2** Conclusions

The social amenities that had undergone disappearance, appearance and shrink type of transformation indicated low levels of satisfaction. The reasons for this sccenario was that they were either missing, appeared in areas that were not suitable for them since they were not originally allocated for, or the land use was not sufficient for them. Those social amenities that had undergone growth transformation recorded high levels of satisfaction as opposed to their counterparts.

#### 5.3 Recommendations

The study avers that there is need for developers to be guided by set out laws and regulations and therefore makes the following recommendations for developers, professionals and authorities at both neighbourhood and typological levels:

### 5.3.1 Neighbourhood level

Proposed model of Buru Buru: The following is a proposed model for Buru Buru estate.

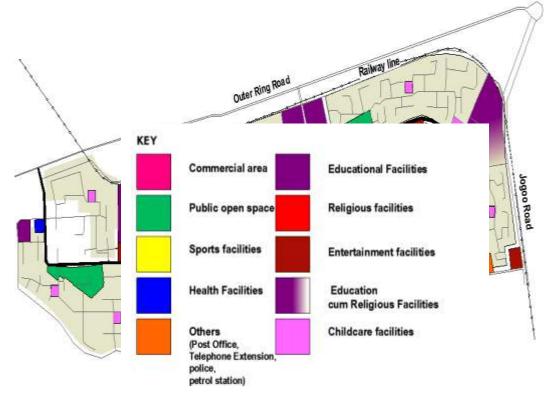


Figure 0.1: Proposed model of Buru Buru estate Source: Overlaid MMI drawing

**Professionals**: The design of social amenities in a residential neighbourhood like Buru Buru requires an understanding of the different categories of these facilities. It is expedient that all the land use categories are allocated for during the planning and design stage without leaving anything to chance. This will cater for any eventuality where a certain category is missing and ad hoc decisions have to be made since this will affect all the surrounding uses. Moreover such allocations end up bringing conflicts and this should be taken care of at the design stage. In a scenario where the development is done and a certain category was left out, chances are transformations will occur in other land uses in order to accommodate what needs to be accommodated and this affects the satisfaction of the users.

All land uses should be clear on what category they belong. Any allocation of land use to an unidentified use only creates suspicion and attracts any private developer depending on the location. This then creates a gap between the anticipated use and the emergent use since there was lack of clarity. Moreover, such allocation can be taken over by any other allocation thus creating a scenario where some categories are more whereas others are inadequate.

**Developers:** Any development that conforms to the laid out laws and regulations need to be completed as designed by the professionals. All categories of social amenities should be developed as the residential units are developed for use by the residents. Failure to develop social amenities so as to wait for a later date will only give room to transformations that may not be regulated and unsatisfactory to the users.

Authorities: Developments need to conform to the laid out regulation and the authorities should see to it that they conform. Illegal and irregular allocation of public open space to private developers need to be discouraged as well as allowing change in land use even in the face of possible conflicts with other land uses. The public open spaces that are now under private individuals/entities should be reprocessed by the city council to serve the purposes that they were designed for. The designer definitely through the guidance of regulations allocated such spaces for the common good of the whole neighbourhood. The issue of economic gain of a few becoming a priority over the people is something to be concerned about.

### 5.3.2 Typological level

**Professionals:** Architectural plans for the different typologies should be provided at design stage if the vision of the neighbourhood as designed will be maintained. This will hinder any opportunity for transformations that can negatively affect the users. When provision of architectural plans is not done, it means that they can be provided by other individuals who may not have the same vision. Professionals therefore should advice the client on the need to have the wholesome design in place from the onset.

**Developers:** Residents' satisfaction from the onset is key to any development to both the developer and the user and therefore should be provided at the onset through the social amenities. Every typology as designed by the professionals should be developed and not left out to some other people who may be willing to develop them in the future. The architectural designs for the typologies need to be provided together with the others at design stage and developers need to prepare for that.

**Authorities:** As part of the regulations, authorities should ensure that the architectural drawings that are presented for such a development include all the designs of the different typologies. Architectural drawings for each typology should be submitted for any approvals to be done for residential houses.

#### 5.4 Areas of Further Research

Since this study dwelt on social amenities in a mortgage housing scheme, other researches could look into site and service and starter units. The concentration was on social amenities but further researches could look into other areas of residential neighbourhood that contribute to the overall satisfaction of the end-users.

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