

# Understanding Development Control Challenges in The City-Periphery:

## *A Case Study of the Nairobi-Kiambu Development Corridor*

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### Abstract

*The development of the city-periphery is an inevitable consequence of urbanization in many developing countries, and acts as exit points for residents relocating from dense urban built areas, and entry points for rural migrants into towns. The key challenge is the inability of planning authorities to manage this dynamism in an integrative manner. Investors and land owners require to be abreast with the planning guidelines applicable in the area. The objective of this paper, therefore, is to articulate the challenges therein in managing the city-periphery development and to recommend for effective mechanisms to manage further growth and development. For purposes of this research paper, a sample of 134 respondents, drawn from the five neighborhoods located within the Nairobi-Kiambu development corridor was the source of primary data. Participant observation, focus group discussions and key informant interviews were the methods for collection of primary data. Key findings reveal the limited link between land owners and planning authorities and there are existing opportunities for development control since residents have knowledge and understanding on planning regulations. The research paper recommends that more resources be directed to research and planning that will guide the growth dynamics in city periphery.*

**Keywords:** Corridor, Development control, Planning, Planning regulations, Rural-urban fringes.

### INTRODUCTION

One of the most distinctive features of urbanization in developing countries is the indeterminate rural-urban fringe that surrounds the major cities and secondary towns. The growth of the fringe is often driven by market forces, rather than, regulation, which have shaped its character. Land is valued by its residential potential rather than agricultural worth, meaning that land value is linked to the profit that would be realized should the property become developed. Rapid population growth in large cities usually promotes the densification of less developed areas and expansion at the urban fringe, largely following either price constraints or the preferences of households acting within the housing market. It is here where multiple actors emerge with sometimes vastly differing perspectives on how land should (or should not) be used (Cash, 2014).

The tremendous growth of towns into their hinterlands, and the consequent spatial, social and land use transformations provide for a case that it

is not enough to classify urban and rural areas or their communities and territories, merely on the basis of physical boundaries (Adell, 1999). The periphery of the city as spaces are the product of the interaction of state intervention and policies on one hand, and the action and practices of the inhabitants on the other as evident in the everyday use and appropriation of spaces, land, housing strategies and self-building practices. In Kenya specifically, there is an obvious ambiguity in the locus of responsibility for fringe planning; the responsibility seems to lie somewhere between the state and the local government. Despite the tremendous transformations of the periphery that call for special recognition, understanding and planning, often the most common inference is either rural or urban such that planning ideas and policy instruments are non-applicable.

The term, city-periphery, is sometimes defined in terms of a city sprawl. Although there are many definitions of sprawl, a central component of most definitions is that sprawl is the spreading

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out of a city and its suburbs over more and more rural land, on the periphery of an urban area (Tofowomo, 2008). This involves the conversion of open space (rural land) into built-up, developed land over time. From the standpoint of urban planning institutions, the style of that conversion can sometimes be more important than the amount of the conversion and hence the emphasis on the qualitative attributes of sprawl such as attractiveness, pedestrian-friendliness and compactness. Land conversion is best reflected by the land use and existence of livelihoods. For planning to be effective, it must recognize the fact that periphery or fringe livelihoods can best be understood if we take account of, and examine, the locally specific contexts in which they occur.

Development control as a tool in planning forms an integral part of the planning practice. It is the mechanism by which planning authorities intervene to regulate the use and development of land, therefore implementing local and national planning policies. More often, development control is perceived negatively by developers and landowners since it imposes restrictions on use of land. Development control tools include, plans of conservation and development, subdivision control and zoning regulations, change of user, transfer of development rights, and the extension of leases. To researchers, development control encompasses the two elements of making plans - sets of agendas, policies, designs and strategies for physical development and urban development regulations that are binding rules concerning 'what is built, where it is built, and when and how it is built' (Kaiser et al., 1995). This research paper explores the perception and knowledge of development instruments, and therefore policy directions and local interventions applicable in the management of the corridor.

## THEORY

The rural-urban fringe presents a landscape where the formerly distinctive attributes of rural and urban become increasingly blurred. In terms of the physical fabric, this is evident from the expansion of metropolitan areas; while at a functional level, it is seen in the spatial intrusion of urban activities into rural areas; whereas in family and household terms, it is viewed from the diversification of

livelihoods and the increasing movement of people between the urban and rural fringe areas. The real challenge is evident when one is interpreting and accommodating these dynamics into the domain of planning. A number of challenges arise from the land use planning; firstly, rural-urban fringes are determined by two major factors namely: the administrative boundaries and the difference in intensity of the built up (formal planned) areas. In Kenya, the planning agencies are extremely fragmented and exhibit little interest or willingness to accommodate the fringes through planning. The resultant ambiguities in the administrative boundaries enables residents to take advantage and develop their spaces in an uncoordinated fashion hence the development is mixed land use, and without planning guidance results in incompatibility of land uses. Secondly, most fringe growth and functionality transcends administrative boundaries, bringing into fore the authorities with their varied interests, priorities and resource base. Thirdly, prospective land developers, businesses and communities fail to anticipate the results of development because they lack information on potential or approved development plans (where they exist) for the surrounding developments. Where property owners intend to plan or to seek planning guidance, the development control frameworks within which developments can proceed are lacking. Whereas the capacity of most planning authorities is weak, information dissemination channels greatly inhibit any meaningful collaboration with property owners and prospective developers and this compounds the planning challenges in the rural-urban fringe.

One of the most widely applied theory is the rational planning theory, which is both normative as it describes a certain format for making planning decisions, and descriptive, as it describes the steps that planning processes follow (Kaiser et al., 1995). On the other hand, strategic planning is a procedural theory that allows for more comprehensive analysis by focusing only on selected critical issues. It relies on rational models of accessing the environment and developing actions arising out of the analysis. In Africa, however, historical and religious rather than geographical factors determine the urban structure of many cities with the most dominant feature being the presence of old and dilapidated

residential areas within the centre, while low income settlements are located on the outskirts of the cities. The mixed land use and income structure of residents in the rural-urban fringes pose new challenges for planning in many of these cities; as people create the spaces they inhabit and draw their character from them, thus the need for understanding the livelihoods.

There are many definitions of an urban sprawl, and a central component of most of these definitions is that a sprawl is unguided and unregulated development without regard to the desired future states of rural areas or cities. This involves the conversion of rural land into built-up, developed land over time. According to Agbonta and Olowoporoku (2017), in the developing world most land users in their quest for development carried out their activities without recourse to planning agencies for planning approval thereby contravening the existing laws that guide development. Aguilar and Ward (2003) discuss two forms of peri-urban development; firstly, urban corridors which are lineal developments that may concentrate a predominance of different activities along the way, i.e., corporate developments, industrial parks, residential areas, with varying density from very compact areas to low-urban density with rural landscape in the middle. Second, urban sub-centres in the periphery that may be consolidating traditional towns once dominated by agricultural activities, or the result of new (low-income) residential developments in metropolitan municipalities of rapid growth, incorporated into the wider metropolitan complex for the first time.

Researchers in planning define development control as a physical planning instrument which generally involves the regulation, restraining and keeping in order or checking material change to land (Vivan et al., 2013; Adeleye and Olayiwola, 2006). In many countries, the precursor to planning laws is the building code and as with other planning laws, the contents of the Kenyan building code were 'copied' from the British planning and housing domain. The building codes stipulated guidelines for minimum distances between buildings, number of windows to enable sunlight penetration, size of a housing unit, maximum building heights and fire escapes, and sewerage disposal facilities. Subsequently, town

planning laws were imported from Britain, albeit to address different social-cultural and economic circumstances. Most of these laws were adopted by independent governments and have been difficult to shake off despite their inability to guide the rather complex and evolving urban landscape. In Kenya, the building laws, planning laws, development control instruments - even the recently enacted ones- borrow heavily from the British planning traditions. The post-colonial period encountered weak macro-economic performance especially during the 1970s and 1980s, urban infrastructure suffered because of the continued reliance on colonial urban planning regulations, by-laws, architectural styles, and housing standards. Ideally, these colonial instruments needed modifications in order to suit the new urban socio-economic realities such as rapid urbanization (Oyugi and K'Akumu, 2007). Instead, post-independence urban managers were slow to make the necessary changes out of fear that they would be undermining the perception of 'modern development' of the cities and national development; thus, the sorry state of cities and urban areas in Kenya.

In Nairobi, rapid land use/cover changes have taken place over the last 40 years (Mundia and Aniya, 2006). Urbanization has resulted in the loss of a significant amount of forest and other natural vegetation cover and has led to other land use changes. Due to the lack of appropriate land-use planning in form zoning and uncoordinated subdivision schemes, poor enforcement mechanisms, including limited political will, there is evidently a rampant urban growth sprawl and the massive disappearance of natural vegetation cover leading to environmental degradation within the city and its environs. Urban sprawl, characterized by random and unplanned growth, has led to loss of forested and fertile agricultural land and has caused fragmentation, degradation and isolation of the remaining natural areas (Mundia and Aniya, 2006).

Development control as a tool for city management ensures that the continual growth and management of a city can be such as exhibiting orderliness, improved city image, health and aesthetics. Development has a set of instruments to steer or control urban and rural development

or conservation. Such instruments often include statutory plans (in most countries), zoning by-laws (in the USA and Canada), subdivision or platting controls, powers to secure land or financing for public services, and the control of development by means of permits, building codes and housing codes (Alterman, 2013).

The concept of development control encompasses two terms, 'development' and 'control'. In Kenyan planning terms, this term is defined by the Physical Planning Act Cap 286 as,

*The making of any material change in the use or density of any buildings or land or the subdivision of any land which for the purpose of this Act is classified as Class "A" development; and (b) the erection of such buildings or works and the carrying out of such building operations...is classified as Class "B" development (GOK, 1996).*

The discussion on the concerns of land use changes, and therefore planning, begins with some confusion on definitions and the use of terms. For example, researchers have argued in reference to this zone as to whether it is rural-urban fringes or urban-rural fringes (Scott et al., 2013). Further, Scott et al. (2013) argues that the use of either term denotes a perception of the space and how it is used. For instance, reference to rural-urban fringes is a challenge to the urban-centric values that portray the fringes as a transition zone; whereas the rural-centric perspective denotes an area with new opportunities for natural based assets including growing food and developing bio-energy. Scott et al. (2013) refer to the latter observation that, urban planners portend urban development as the highest and best use of non-urban land. The challenge in the definitions and perspectives of use has therefore resulted in disintegrated policy and decision making, despite the dynamic identity and character of the fringes.

Scott et al. (2013) refers to the messy and complex spaces of the rural-urban fringe as being clearly problematic for plan making and plan implementation. At the same time, Scott et al. (2013) contend that the correct governance structures can provide important opportunities for innovation. What is clear is that fringes reflect the socio-economic choices of individual households'

capacities and commitments and thus are largely divorced from the normative urban land use planning models.

## RESEARCH METHODS

Research design involves a number of steps as follows: analysis of the study site including description of the neighbourhoods and justification of the choice; data collection including tools that guided the research during collection and analysis of data and the establishment of the chain of evidence that links the research questions to the data and to the final conclusions; data analysis of the study findings that involves examining and classifying the collected data, in order to check the validity of the initial propositions of the study; and finally drawing the conclusions and recommendations.

The unit of analysis for the study was the household. The concept of household was applied to all residential units occupied by members of a family or relation of persons who occupy a housing unit. On the other hand, a housing unit is a house, an apartment, a group of rooms, or a single room that is occupied (or if vacant is intended for occupancy) as separate living quarters.

Population describes all the elements that meet the criteria for inclusion in the study and further define eligibility criteria as a list of characteristics that are required for the membership in the target population. The criteria for inclusion in this study were: i) land owners and residents in the prescribed corridor, ii) institutions responsible for land administration and management, planning and sales, and iii) business-owners residing in the corridor. **Table 1** shows the distribution of the sample, as drawn from the target neighbourhoods.

Purposive sampling was applied. Neighbourhoods located along Kiambu road and Thika highway were purposively selected as they depicted the intended character of sprawl. The neighborhood is an important structuring element as it has social and economic functions including the development of social capital, facilitation of social integration into the larger society and economic production. Three neighbourhoods were selected from Nairobi

City County and two neighbourhoods were selected from Kiambu County as shown in **Figure 1**. The study was carried out in the residential neighbourhoods of Kiamumbi and Thindigwa (in Kiambu County) and Roysambu, Njathaini and Kamuthi (in Nairobi County). The physical limit and scope of the study area is indicated in **Figure 2**, in the two counties of Kiambu and Nairobi. These neighbourhoods were chosen due to the immense expansion of residential developments and the

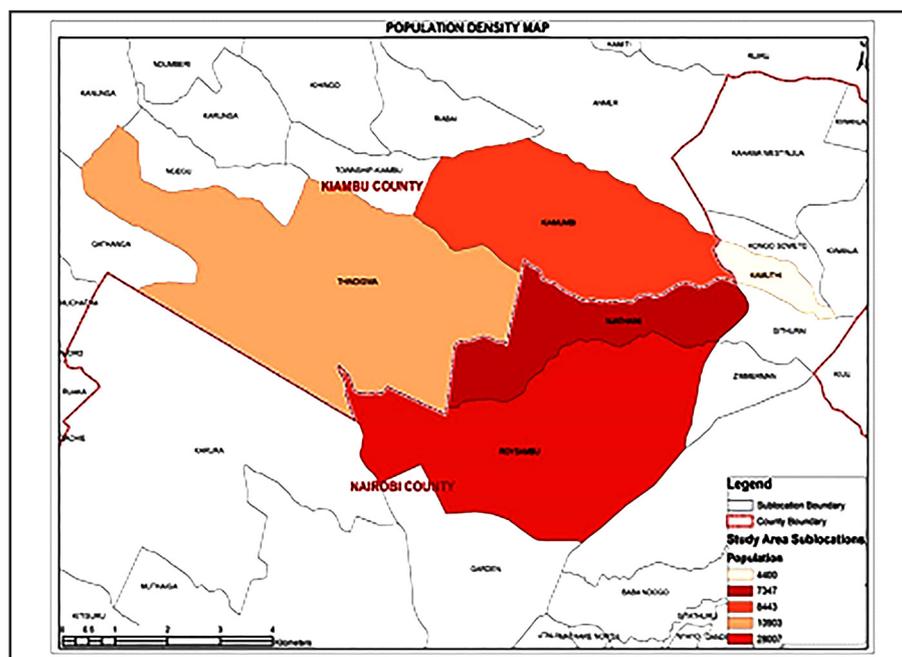
sequential support services such as institutional and commercial nodes.

The highway is a major artery of the Northern Corridor to the north of the country. The study has included activities on Thika highway, particularly the section from Githurai to Ruiru, as data was informed by ongoing research work on planning and civic engagement.

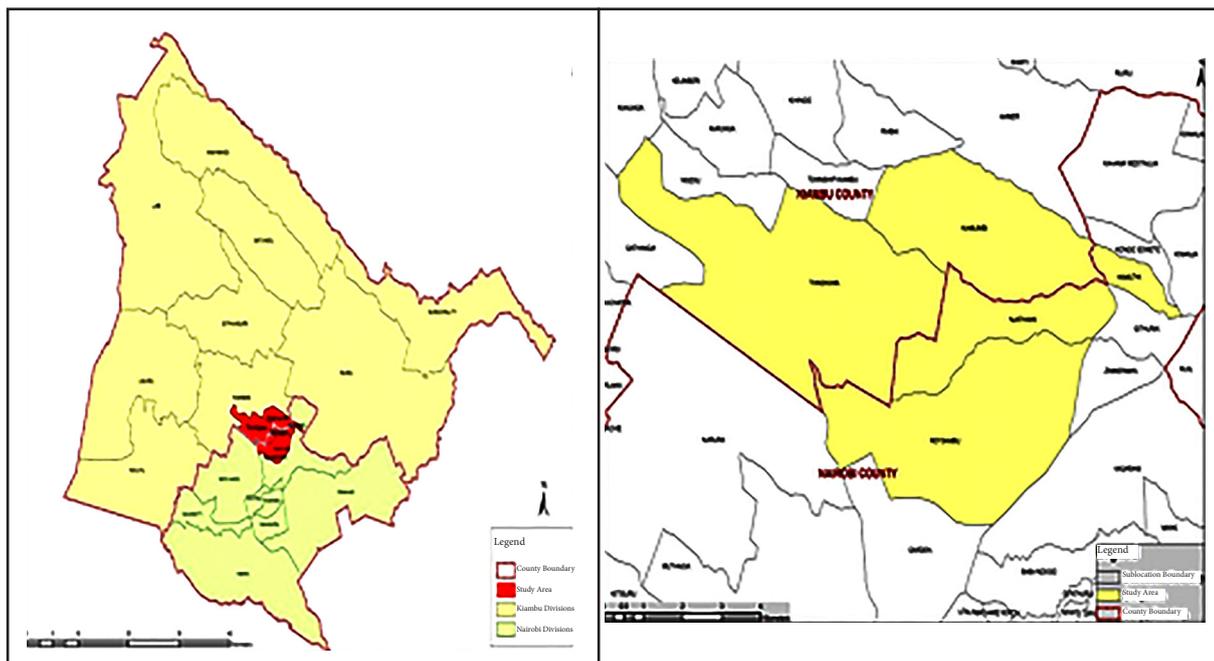
**TABLE 1:** The population size, sampled households and target population/households

Rural/Urban fringe	Sub-locations	Total population	H/Hs in the EAs	Sample H/Hs	Actual number of respondents
Nairobi neighbourhoods	Njatha-ini	4,425	1,516	30	30
	Roysambu	10,579	3,494	30	26
	Kamuthi	2,268	640	30	25
Kiambu Neighbourhoods	Thindigua	7,705	2,282	30	28
	Kiamumbi	3,593	1,024	30	25
<b>Totals</b>		<b>27,930</b>	<b>8,892</b>	<b>150</b>	<b>134</b>

Source: KNBS 2009



**FIGURE 1**  
 Administrative locations of Kiambu and Nairobi  
 Source: KNBS, 1999



**FIGURE 2**

The county and local context of the study area

Source: Survey of Kenya 2012

Household survey questionnaires and key informant interview schedules were the key tools used for primary data collection. Participant observation was used to enable the researcher create a rapport and ease communication with respondents.

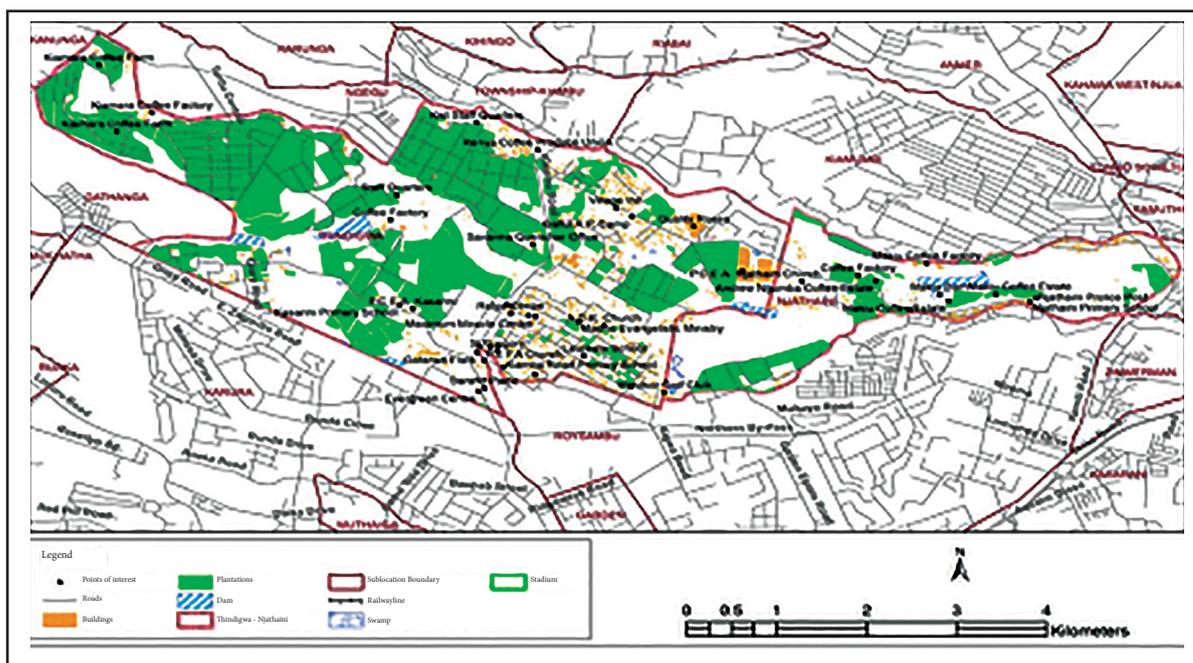
Although numerals are typically associated with quantitative means of data collection and analysis, numbers and figures were used to provide frequency counts to generate meaning, and as a tool for identifying the patterns in the data, and to test the study's interpretations and conclusions. The unit of analysis for the quantitative general survey data was the household.

## RESULTS AND DISCUSSION

### Social-economic-spatial characteristics

The peri-urban zone can be broadly characterized as a mosaic of different land uses, inhabited by communities of different economic status, in a state of rapid change without the requisite infrastructure and a deteriorating environment. It is a transition zone that is entirely rural at one end and urban at the other. Large scale undeveloped farms are evident along the road that transverses the area and

connects it to Kiambu and Kamiti Roads. There is evidence of subdivisions, and an improved road system which may be the precursor to residential developments. The existing coffee estates and horticultural farms could act as a buffer to further land subdivisions and conversions, although, with prerequisite benefits to the owners. This is evident in the Thindigua and Njathaini zones as shown in **Figure 3**. The landscape, however, has changed overtime, with intensive subdivision and change of user. The construction of the Northern by-pass, linking the area with Thome estate, Kahawa West and Ruiru has further exacerbated the land use changes. At the junction of the by-pass and Kigwa Road, is the Windsor estate, a high-income residential development that is part of Windsor Golf and Country Club. The Four Ways Junction is an upcoming multi-family, middle-income residential development, at the junction of Kiambu Road and the Northern Bypass. Other conspicuous residential/commercial developments are located along Kiambu road, especially from the Northern by-pass junction and stretching to Kiambu town. Roysambu is the most densely built neighbourhood in the study area. Planned residential neighbourhoods in this zone include Duduville, a middle class residential estate developed by employees of the International Centre for Insect Physiology and Ecology (ICIPE)



**FIGURE 3**  
 Land use in the Thindigwa and Njathaini neighbourhoods  
 Source: Survey of Kenya 2012

and Safari Park View, along Mirema drive.

The expansion of the Nairobi-Thika Highway and the Northern by-pass (linked to the area through Mirema Drive) is expected to spur even more growth (Plate 1). The expansion of the Nairobi-Thika Highway has resulted in a redefinition of the (in)famous Roysambu roundabout, not only easing the traffic flows but also creating opportunities for residential and commercial development. Further north, the area has experienced massive residential developments, with some abutting the busy highway.



**PLATE 1**  
 Multi dwelling residential developments at Wendani  
 Source: Fieldwork 2019

### Interest versus policy

Kaiser et al. (1995) contend that human ecology theories assume that over time as the market changes, resulting from the construction of new highways, it produces demographic changes as well as changes in land regulations. Rudel (2009) also confirms the argument saying that, as land use changes repeatedly on different parcels of land, such change gradually alters the configuration of interest and this change in interest causes a change in policy. Varied interests and aspirations on use of the land has resulted in conflicts. This was reported in Thindigwa where conflict over land use has arisen between the new landowners who prefer to invest in single family controlled residential developments, and the older settlers who prefer multi-family residential developments (GOK, 2008). The latter's preferences are driven by the need to cash in on the rents expected from the influx of people into the fringes of Nairobi, while the former's interests are influenced by a desire to own homes away, but, in close proximity to the city. Although the Nairobi suburbs do not resemble the affluence found in America or Europe, in the study area, seldom does one experience aging or dilapidated rural dwellings because African periphery settlements are relatively new (since the 1980s).

The Public Health Act, Cap 242 (GOK, 2012b) deals with pollution related to health, specifically, section 130 provides the Minister for Health with the possibility to prohibit the erection of, for instance, stables, cattle-kraals [or] pig-sties and the deposit of any manure likely to entail risk of harmful pollution. This Act, dating from the colonial era, forbids agricultural activities within the boundaries of urban centres, possibly because it does not fit within the western perception of what constitutes urban (e.g. the city-is-beautiful idea) and apparently it results in all kinds of environmental hazards (Foeken, 2006). As peri-urban land is lost to residential development, the potential for peri-urban subsistence farming and the cultivation of high value produce is also lost. The Act, section 157(1) empowers the Minister for Health to prohibit cultivation or irrigation within and around townships on the basis of poor management of waste and its potential as a source of unhygienic surroundings and breeding grounds for disease carrying vectors, as a key factor in outlawing the practice. Since parcels of land in the fringes are generally small and also because land is expected to be used for residential purposes, the waste from domestic animals is often considered a nuisance.

Liquid waste from domestic sewage as a valuable commodity in the peri-urban environment has been reported in a number of Nairobi fringes where it is mainly used for irrigation. Liquid waste is also used to generate biogas and fertilizer for field crops and fishponds. However, the health hazards associated with such waste include spread of many communicable diseases. Composting organic waste for use as manure has the positive health benefit of sanitising the heat destruction of pathogens. However, this is only successful if high temperature composting is used or waste is stored for periods, of about one year, but there is a risk of introducing unacceptable concentrations of heavy metals into the food chain.

**Plates 2(a), (b), and (c)** reveal the evidence of the discarded waste either ready for use or waste that has reached its final destination. Note how close the door is to the rear, depicted in the **Plate 2(a)**. It is evident that urban agriculture is a major source of income to supplement livelihood at the fringes and therefore it becomes a major issue in

sustainable land use from the perspective of the natural and built environment. Therefore, there is need to design innovative approaches to enable farmers to reap more benefits from the same. This includes better mechanisms to intensify the agricultural activities and at the same time address waste products deposit and recycling of waste.



**PLATE 2(a)**  
 Animal waste near the door  
 Source: Fieldwork 2009



**PLATE 2(b)**  
 Dairy farming in Roysambu (behind Pan Africa Christian University)  
 Source: Fieldwork 2009



**PLATE 2(c)**  
 Animal waste at Kiamumbi  
 Source: Fieldwork 2009

**Non-farm economic activities**

A dominant feature found on the peri-urban landscape is mixed land use and mixed densities. Whereas some residents move to the urban fringes in order to optimize their land use through home ownership, others move in order to diversify their incomes through the construction of rental houses. Non-farm activities take various forms as indicated by data from the study area. These include residential developments, small service industries, shopping activities and community services (including schools, clinics and pharmacies). Thus, the inhabitants of the fringes derive their living from multiple livelihood strategies and they are not therefore a homogeneous group in terms of capital asset ownership (McGregor et al., 2006). Multi-family residential/commercial developments have been a common sight in Roysambu area. This phenomenon is evident in all the other neighbourhoods, except for Njathaini. **Plates 3 and 4** illustrate the types of residential developments found in Roysambu and Githurai neighbourhoods. Note the high rise buildings and the clean footpaths on the right juxtaposed with informal businesses.

These multiple livelihood strategies are necessary for analysis as they provide a good glimpse of un-coordinated use of land. At Roysambu, a majority of such developments are found along Lumumba Drive. Indeed, a major shopping mall, Thika Road Mall (TRM), has been constructed near the Thika Highway and Kamiti road intersection;



**PLATE 3**  
 Informal activities at Roysambu neighbourhoods  
 Source: Fieldwork 2019



**PLATE 4**  
 Mixed use activities at Githurai neighbourhoods  
 Source: Fieldwork 2019

this landmark development has drastically transformed the neighbourhood and its environs.

Residential development is the major land use competing for space at the city periphery. Due to reduced incomes from agriculture, land owners have converted their land into residential uses. In response to the question why respondents settled in the area, 62.8 percent of the respondents indicated that they bought land in the study area, 16.8 percent indicated that they were employed around the area, 16.1 percent had inherited land, while 2.9 percent had settled to run business. Unfortunately, these residential developments depict no uniform character or typology; sometimes comprising the levels and access to crucial basic services such as water and sanitation.

**Residents' perception on regulations for land use**

Development control is a function of the county governments, as stipulated in the Physical Planning Act, 1996 (since repealed) and the County Government Act, 2012 (GOK, 2012). According to a majority of the former local authorities, facets of development control include approvals of subdivision schemes, extension of user rights and leases, approval of building plans and adherence to non-interference in the road reserves. Along with this, it is the onus of county governments to ensure the preservation of spaces for public use and utilities, and non-encroachment on fragile areas, as provided for by development plans. Where

and when development control instruments are not effectively applied, the outcome is land use conflicts. Secondly, the neighbourhoods suffer from narrow roads, particularly in Ngomongo, a fact overlooked during the preparation of subdivision plans, which did not envisage the city's urbanization trends and the expected increased population. Except for Thindigwa, there is no evidence of physical plans guiding development. It is therefore a matter of the developer muddling through as they align their developments with the overall development expectations.

38 percent of those interviewed said that their building plans are approved by the regulatory authorities, 18.3 percent said they had safeguarded the way leaves/road reserves adjacent to their properties, 12.6 percent have developed their land according to stipulated use, 1.9 percent pay the land rates and 3.0 percent have land ownership documents (Table 2). This information is crucial as an indication that there is potential for fostering partnerships with statutory authorities in order to achieve the ideals of spatial order and sustainable development. According to the study, a high number of respondents, i.e., 44.4 percent said that the planning and statutory development requirements were expensive and lengthy, and 7.4 percent cited corruption in government offices. A surprisingly 22.2 percent were unaware of any planning regulations and have had no *raison d'être*

to seek such information.

Many households in the peri-urban areas are subsidizing their demands for food by engaging in gardening activities. Many urban researchers have observed that owing to declining real income for both rural and urban households, urban agriculture has been exploding in several countries including Kenya, Uganda, Togo, Sierra Leone and Nigeria, primarily because it enables the most vulnerable urban residents to cope (Kombe, 2003; Foeken and Owuor, 2000; Chukuenzi and Ezedinma, 1999). It is also true that there have been land use conflicts arising from waste management. Indeed, in the study area, it was noted that animal rearing poses a challenge of waste disposal whereby residents dispose of the wastes on the road reserves, due to the small sizes of land parcels; therefore, waste begins occupying precious space.

## CONCLUSION

The research paper sought to establish whether and in what ways fringe residents know and adhere to development control regulations. There is no doubt that households locate at the fringes so as to take advantage of relaxed regulations and therefore engage in land use practices that are acceptable. In reference to this research paper, the tools of control: land ownership documents, approved building plans, awareness of planning

TABLE 2: Respondents perception of development control/planning regulations

Response	Frequency	Percentage
Seek assistance from planning authorities/ land officers/engineers	28.7	21.4
Commercial use is not allowed/no kiosks	13.4	10
Not to build on the road reserve	5.9	4.4
Not supposed to grab land/observe the beacon	4	3
It is residential area. no shanties, no kiosks, no high rise	4	3
Approval plans/observing roads before construction	39.9	29.8
No blocking storm drains	2.6	1.9
Proof of land ownership/Title Deed/Allotment letter	5.1	3.9
Payment of land taxes	2.6	1.9
No answer	14	10.4
Not applicable	13.8	10.3
<b>Total</b>	<b>134</b>	<b>100</b>

Source: Fieldwork 2019

regulations, and, adherence to planning/zoning requirements, are the parameters used to measure the level of compliance or adherence to development control ideals.

i. The apparent situation is one of haphazard development and unsustainable land uses, evident from the poor spatial order and incompatibility of land uses. There is limited surveillance on adherence to planning guidelines. The processes in the approval of development plans is expensive and lengthy. Land owners prefer to locate to the peri-urban areas in search of cheaper land and take advantage of the lax punishment for non-adherence to regulations.

ii. There is a clear and strong relationship between the use of land, standards of living and perceptions of development control, i.e., residents who have title deeds and have buildings plans and have adhered to planning regulations have enhanced livelihoods.

iii. The plans and policies that provide the framework within which the development control process take place are borrowed from the British system and for them to be effective, they need to be negotiated by all actors due to the changing economic and social landscape at the periphery including the need to carry out urban agriculture. In the absence of this framework and guidance, certain questions arise such as: how can applications for development permission be assessed? and, what criteria is used to determine whether a development proposal is compatible with nearby activity/land uses, or is located on an appropriate site or includes the necessary facilities to support the proposed development.

iv. Finally, the Nairobi/Kiambu corridor presents a rural-urban fringe exhibiting rapid land use changes; basically, due to the proximity of both zones, historical factors that encouraged private land ownership and the subsequent possibilities of enhanced economic returns from land. More importantly, the belt is not just viewed as a marker of the city edge but rather, as a translation of the significant demographic changes and economic structuring. By investigating status of development control on the Kiambu-Nairobi corridor, the research paper envisaged to fill the above gaps viz a viz the need to generate information for use by policy makers, planning authorities and land owners to ensure sustainable land use.

## RECOMMENDATIONS

The study concludes with the following recommendations. One, the corridor is one of the most active periphery zones of the City of Nairobi, abetted by the expansion of the main Nairobi-Thika Highway and the completion of the Northern and Eastern bypasses. For investments thereon to contribute to the overall city and metropolitan development, the county government of Kiambu should prepare a comprehensive participatory physical development plan. This will ensure co-ordinated and harmonious development and at the same time take advantage of the existent transport system. The capacity of the planning department requires to be enhanced to cope with developments in terms of consistent surveillance, and provide support to land owners in order to ensure adherence to planning and development guidelines. Effective implementation of the plan is feasible only with intensive and deliberate consultations among all the stakeholders, that is institutions and residents. However, it is expected that the evolving governance structure in planning mainstream consultative processes, as provided for by the County Government Act 2012 (GOK, 2012a) and the Constitution of Kenya 2010 (GOK, 2010), amongst other laws, will provide for mandatory stakeholder consultation in development processes.

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