

**Identifying Alternative Instruments for Delivering Affordable Well-
Located Urban Residential Land to Reverse the Growth of Informal
Settlements in Durban.**

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Development Studies, Faculty of Humanities, University of KwaZulu-Natal

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Durban

As the candidate's supervisor I agree to the submission of this thesis.

Signed:

DECLARATION

I Calvin Nengomasha declare that:

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DEDICATION

This thesis is dedicated to the LORD JESUS CHRIST.

ACKNOWLEDGEMENT

I give my deepest gratitude to Jesus Christ, my Lord and Saviour for the life, good health, wisdom and strength He granted me to complete this work.

I deeply appreciate my supervisor, Dr P. Adebayo for her scholarly guidance. She made herself fully available to me and was especially interested not only in the successful completion of the work, but also in my general progress.

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ABSTRACT

Land affordability is an issue at the centre of the housing affordability debate and research in many developing countries. However, in South Africa, research on land affordability and its associated limitations on housing affordability is scarce. The severe shortage of affordable urban residential land (AURL) is largely responsible for the ever increasing growth of informal settlements in South Africa. Public policymakers consider the low-income housing problem as a supply-side issue and for two decades they have neglected demand-side challenges that limit housing affordability. Hence, the tendency of the ANC-government to prioritise public support towards the quantitative production of low-income housing through supply-side instruments continues even though housing delivery has failed to keep pace with demand. In this context, the issue of housing affordability is a relevant topic of research and policy owing to the negative effects of post-1996 land, housing and finance policies on low-income housing development.

This thesis sets out to deepen understanding of the linkages between the land pricing system that influence access, use and ownership of urban land and the unconventional system the urban poor use to gain access to housing in South Africa. This is because the shortage of AURL increases insurgency in land 'acquisition' and housing development. The thesis explores these issues through the case of eThekweni Municipality.

Two arguments premise this thesis; one argument posits that urban land affordability challenges persist in South Africa largely as a result of the pricing mechanism of the market that fails to price urban land in response to demand. The second argument is that the persistence of inequity in the ownership of land since colonialism into the present time has produced reinforced inequity in access and use of urban land. Inequalities in income and landownership have invariably resulted in limited housing affordability. As such the study sought to answer this major question: If the ULM is inelastic to demand, what strategies could help ameliorate the shortage of AURL and reverse the growth of informal settlements in eThekweni municipality?

In a bid to unravel the linkage between the land pricing system and the nature, causes, extent and dimensions of low-income housing shortage, the study's main focus is on the linkages between income, land value, land-use and landownership and how they subsequently contribute to housing affordability. The study employed both qualitative and quantitative methods using a questionnaire, semi-structured interviews and observations as key research tools to collect data. Data was collected from households in three study sites in eThekweni municipality through stratified random sampling. These selected study sites provided cross-cutting perspectives, which enabled the extrapolation of key results at both city and national levels. Based on a review of the literature on urban land markets and

informal settlements, the study drew on a combination of theories, including liberalism, market failure, relative deprivation, democracy, equity, utilitarianism, communitarianism and cooperative game. These helped in the analysis and informed the data collection approaches. In addition, they assisted in the development of appropriate explanations of the linkage between the land pricing system and inequity and informal settlement. In drawing conclusions, they were useful in unravelling the relationships between the shortage of AURL and informal settlements.

Analysis of the results indicate that low-income households that earn between R38,400 and R76,800 annually can afford a mortgage for a house costing R140,000 if interest rates are kept below 8 per cent. The study devised a mechanism that sets the price of urban residential land in proportion to household income. In order to effectively deal with the housing affordability problem, the state is required to rescale the mechanism for pricing urban land in inner-city areas at a benchmark of 0.09 per cent of household income. Vacant land in inner-city areas should be reserved only for low-income housing and the prices for land in such areas must be set using this benchmark. The study concludes that the application of this mechanism in inner-city areas could be strengthened with the use of zoning and land-use by-laws. Further research is needed to devise an algorithm that can be used to calculate the price of urban land.

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LIST OF ACRONYMS

ABSA	African Bank of South Africa
ANC	African National Congress
AURL	Affordable Urban Residential Land
BAAB	Bantu Affairs Administration Board
BNG	Breaking New Ground
CAHF	Centre for Affordable Housing Finance
CBD	Central Business District
CBO	Community Based Organisation
DOHS	Department of Human Settlements
EFF	Economic Freedom Front
FEDUP	Federation of Urban Poor
KZN	KwaZulu-Natal
NEDBANK	National Economic Development Bank
NGO	Non-Governmental Organisation
NHFC	National Housing Finance Corporation
SAIRR	South African Institute of Race Relations
SDI	Slum Dwellers International
ULM	Urban Land Market

1 CHAPTER ONE: INTRODUCTION AND RESEARCH METHODOLOGY

1.1 Introduction

The world is in the urban millennium (Berner, 2007) and has become a 'planet of slums' (Davis, 2006). The complex phenomenon of informal settlements is therefore not peculiar to South Africa only, but is dominant in large parts of cities in all developing countries. In these countries, it is estimated that during this decade, low-income housing delivery will not keep pace with rapid urbanisation, which is occurring at an estimated 4 per cent per annum (UN-Habitat, 2016). Thus, the shortage of affordable urban residential land¹ (AURL) for low-income housing is spurring the growth of informal settlements in most urban areas. As a result, in 2016 informal settlements sheltered about 79 per cent of the urban population in developing countries, and the majority of this population, constituting about 61 per cent, was in Africa (*ibid*). Informal settlements are rapidly growing as a result of housing policies which often fail to serve the poor, ineffectual urban settlement planning, scarce financial and administration resources, land price speculation, private and public hoarding of urban land and slow delivery of AURL (Abdelhalim, 2010).

Millions of poor city residents without shelter often end up in highly dense, under-served and polluted informal settlements that are often in hazardous locations (Tunas & Peresthu, 2010; Berner, 2007). Such precarious living conditions expose most residents of these settlements to exploitation by land barons and harassment or brutal eviction by the police (*ibid*). Town planners are convinced that informal settlements will continue to mushroom as long as the poor fail to access AURL for low-income housing. Prior to acknowledging this reality, informal settlements were vilified by town planners as an urban blight distorting the ordered physical structure of cities and a challenge to tenure rights, infrastructure provision, economic growth and development, human health and the environment. However, the sterling works of John F.C. Turner (1972) and Hernando de Soto (1977) provided a point of departure from the view of housing as a physical product judged on its material quality and quantity. Turner *et al* view housing as an asset that is a vehicle for personal fulfilment and one that provides access to the community, facilitates livelihoods, has material value and utility in its location and physical form and has financial and emotional value. Hence, Turner urges that informal settlements be viewed not as symptoms of social illness but as a triumph of 'self-help' and an opportunity by the poor to gain a footing in the urban economy (Alexander, 2012). Based on these views, informal settlements are understood as a normal phenomenon that accompanies rapid urbanisation, where

¹ In this study, land was considered affordable if it was for sale or rental at a price below the market levels and was also located in strategic areas of the city, close to employment opportunities and transport routes, had infrastructure services, and was not polluted or prone to environmental hazards.

the housing market cannot cope with the huge demand and urgent need for low-income housing by the urban poor (Abdelhalim, 2010). Although these settlements are tolerated by urban local authorities, they are an indicator of a crisis in housing. In South Africa, this crisis is reflected by the severe housing stress that the urban majority face; most are trapped in informal settlements and marginalised from the formal urban economy.

Urban South Africa presents a very contradictory image to the outside world. One of its paradoxes is that it represents the speculative character of capital accumulation, yet it has one of the highest levels of inequality in urban landownership, housing opportunities and income (Bond, 2007). The extremely high levels of inequality resulted from historical land dispossession, residential and economic segregation during colonisation, segregation and apartheid. Before 1986, the machinations of the state systematically denied Africans the right to reside or the right to own land, housing and businesses in the city (Dewar, 1999; Lemon, 1991). Most urban Africans, who are predominantly poor, were left with no choice other than to seek shelter in informal settlements. During segregation and apartheid, the state was reluctant to provide urban African workers with adequate housing, arguing that their squalor mattered little, for they were required by law to return to their idyllic rural homes (Maylam, 1995). Thus, the legacy of colonisation, segregation and apartheid left the majority of urban Africans unable to access AURL and low-income housing in post-1994 South Africa. Hence, democratic South Africa remains foreign to the image of the 'rainbow nation' where people of different socio-economic backgrounds are given equal opportunities to access urban land, housing and employment. The urban poor's struggle for economic emancipation and egalitarian distribution and ownership of urban land and housing resources has been on-going for decades without a solution. It appears the urban poor's struggle to overcome their lack of access to urban land and housing resources is a function of income limitations and segregation in urban land and housing markets. The barriers in the markets for labour, finance, land and housing that limit access by the poor are a legacy of historical state sanctioned segregation. A brief historical review of the distribution of landownership can help explain how these barriers are driving the growth of informal settlements in post-apartheid South Africa.

1.2 The Legacy of Unjust Land Ownership in South Africa

Any understanding of the form under which informal settlements present themselves, of the forces that lie behind their current dynamics or what could shape their future must begin with a study of their conditions of emergence. In South African cities, the growth of informal settlements is spurred by land inequalities that result from the historical large-scale land dispossessions that occurred during the colonial period and systematic segregation during apartheid. Consequently, the distribution of

land based on race tends to mirror the social, political and economic structures formulated during colonisation, segregation and apartheid. As a result, the discriminatory policies for land that were enacted prior to 1994 increased the shortage of land among Africans, Indians and Coloureds (AIC) and created unique circumstances of people in need of urban residential land. During apartheid, Africans who occupied the bottom rung of the social ladder were the most negatively affected by land, economic, education and employment policies that permanently guaranteed endemic poverty and severe housing stress among Africans.

Land administration legislation² enacted in 1913 and 1936 reserved 87 per cent (273,428,571 acres) of the nation's land for whites, coloureds and Indians; whites were the largest beneficiaries of the most productive and strategically located land (Urban LandMark, 2007b). The Acts had by 1966 only reserved 7 per cent (22 million acres) of the nation's land for Africans³ even though they constituted 69 per cent (6,596,597 people) of the national population⁴ (Feinberg, 1993; Cole, 1966). The Group Areas Act No.41 of 1950 reserved certain spaces for specific racial groups and allowed the forced removal of AIC people on a massive scale from areas 'reserved' for the white population, leaving about 3.5 million AIC people suffering from landlessness, insecurity and poverty (Urban LandMark, 2007b; Daniel et al, 2003; Fourie, 2000). Apartheid legislation⁵ denied Africans tenure rights to land and fixed-property outside of the disenfranchised native reserves (Hall, 2004; Dewar, 1999; Kirk, 1983), which forced most of them to live in shanty and overcrowded Bantustans or townships on the urban fringes (Mabin, 1991; Davies, 1981). As a result, by 1904 only 124,000 Africans⁶ owned 2,104,300 acres of land under freehold tenure (Feinberg, 1993).

The abolition of some apartheid laws particularly influx laws brought an influx of Africans from native reserves into the city in search of better economic opportunities and livelihood. However, Africans continued to be marginalised from urban land and housing markets and the reluctance of the state to

² Land administration laws enacted in the segregation period were the Natives Land Act No.27 of 1913; Bantu Trust and Land Act No.18 of 1936.

³ The nation's land reserved for Whites, Coloureds and Indians was held under freehold tenure while land reserved for Africans was held under communal tenure in native reserves.

⁴ The census data of 1936 indicate that Whites, Africans, Coloureds and Indians accounted for 2,003,334 (21%); 6,596,597 (69%); 769,142 (8%); and 219,691 (2%) people respectively (Cole, 1966). However, official statistics collected in the Apartheid era, from 1970 to 1991, were uneven, unreliable, and grossly underestimated the number of people living in cities as they only enumerated the white, coloured and Indian populations and excluded the majority Africans living in homelands (Khalfani *et al*, 2005).

⁵ The colonial and apartheid state machinations enacted repressive laws such as the: Recognition of Townships Law (1894), Land Act (1913), Public Health Act (1919), Natives (Urban Areas) Act (1923), Native Administration Act (1927), Slum Clearance Act (1934), Land Act (1936), Native (Urban Areas) Consolidation Act (1945), Group Areas Act (1950), Population Registration Act (1950), Bantu Authority Act (1951), Native Laws Amendment Act (1952), Black Homeland Citizenship Act (1971), Community Council Act (1977), Bantu Laws Amendment Act (1978) entrenched segregation of races and seriously restricted the rights of blacks to own land and housing in South Africa (Mabin, 1991).

⁶ The census data of 1904 indicate that Whites, Africans, Coloureds and Indians accounted for 1,117,234 (22%), 3,490,291 (67%), 444,991 (9%), and 122,311 (2%) respectively (Cole, 1966).

provide public housing despite the fact that the majority poor could not afford, created serious housing shortages. As a result, most Africans sought alternative shelter in informal settlements on the urban fringes, but these were demolished by the state with enormous brutality (Davis, 2006; Mabin, 1989).

The abolition of Apartheid placed the state under considerable pressure to provide housing opportunities to urban African immigrants who were previously marginalised in the urban context. However, efforts by the post-apartheid state to deliver low-income housing are failing to keep pace with the rapid rate of African urbanisation. Attempts by the state to expropriate privately owned land for low-income housing are hampered by a constitutionally sanctioned 'property clause'⁷ that protects property rights that existed pre-1994 (Hendricks & Ntsebeza, 2000). Hence, the post-1994 land policy prescribes a market-led land exchange system, which unfortunately continues to exclude people with low earnings and small savings who cannot afford to borrow funds to purchase urban residential land (Huchzermeyer, 2001). Hence, by 2011 about 67 per cent of national land was held under freehold tenure by whites, who constitute 8 per cent of the population, and about 13 per cent of the remainder was held mostly under communal tenure by Africans who constitute 81 per cent of the population (StatsSA, 2011). According to Fourie (2000), such lopsided land holding represents the largest ratio in the world of discriminatory landownership, either between races or between the rich and poor. Inequalities in landownership that results from the apartheid urban space economy force the poor to access the city illegally. Such a complex problem requires careful contemplation prior to prescribing solutions.

1.3 Problem Statement

In South Africa, just like in many developing countries, the tradition of liberal legalism dominates land and housing law; it controls the exchange, development and occupation of land. The liberal land legislation created a post-apartheid city that largely consists of a set of privately owned plots of land on which housing development is largely decided by market forces at the expense of the poor. If one considers land tenure, infrastructure requirements and building standards as benchmarks for decent housing, one finds that 23 per cent (5,667,200 people) of the urban population is living in illegal shelter (Brown-Luthango, 2010; Misselhorn, 2010). The shortage of low-income housing forces the urban poor to step outside the law and invade urban land to gain access to housing (Fernandes & Varley, 1998). Informal 'acquisition' of urban land by the poor reflects their frustration with the urban land

⁷ The provision of the property clause (Section 28) in the Constitution guaranteed everyone's right to acquire and hold tenure in land. Expropriation of any rights in urban land was only permitted for public purposes, but subject to the payment of agreed, just and equitable compensation after taking into account the land's intended use, its history of acquisition, its market value and its perceived value by those whose interests are affected (Republic of South Africa, 2006).

management system that is failing to provide them with access to AURL or enable the state to compulsorily acquire urban land for low-income housing. The fact that the urban poor continue to find pockets of urban land to squat on indicates that urban land for low-income housing is in fact available but is too expensive for them to purchase and secure formal tenure. If affordable urban land is not in short supply, then the means by which it is allocated to the poor becomes crucial for one to understand the distribution of low-income housing opportunities in the city. The land crisis arises from the liberal land law whose ideological reliance upon a single, unitary conception of property rights often hinders the state from imposing conditions on the economic exploitation of urban land in the interest of the majority who are poor. As a result, urban land ownership is not legitimised by democratic principles where the welfare of the majority who are poor takes precedence over the rent-seeking interests of the minority, who are rich. It is the researcher's view that the reluctance of policy makers to change the ineffectual land legislation brings about the 'anarchy', illegality and social consequences of informal settlements.

In South African cities, housing development by the private sector usually targets high-and-middle-income groups with regular incomes, at the expense of the poor. As a result, low-income households often end up trapped in squalid housing that lacks basic services (Durand-Lasserve & Selod, 2007). Some of these households are forced to invade urban land and establish informal settlements in the shrewd expectation that either the state would later upgrade and formalise these settlements or they would gain swift access to land at a low-cost. However on the one hand, such an informal way of land acquisition, subdivision and use, usually undermines tenure rights and knocks down land values. On the other hand, it entraps the land invaders in a situation of endemic poverty because without title to land and housing, residents of informal settlements cannot secure credit from banks or add value to their housing.

The fact that the poor actively resort to informal land 'acquisition' solutions reflects their frustration with the slow delivery of AURL for developing different low-income housing tenure options. Most researchers speculate greatly on inefficiencies of the urban land market (ULM) and although they agree on the diagnosis of formal market failure they disagree on the potential remedies (Berner, 2007). Even efforts initiated by the World Bank as far back as 1992 to use the supply-side and demand-side instruments⁸ of the housing market failed to facilitate low-income housing production and consumption. As a result, the World Bank initiative failed to provide the urban poor with access to

⁸ The supply-side instruments introduced 'sites-and-services' schemes, regulatory framework, aimed at removing oligopolistic and monopolistic tendencies of the construction industry; and the demand-side instruments provided secure tenure, developed a mortgage finance sector, and designed carefully targeted subsidies.

AURL and low-income housing, and policy-makers are unsure of how to address this issue without unsettling fixed-property markets and investor confidence.

Land and housing strategies that were adopted between 1994 and 2004 and intended to facilitate the delivery of urban residential land and enable the housing market to curb the rapid growth of informal settlements were ineffective. It seems the rapid growth of these settlements and the poor housing conditions in South African cities are indicative of market failure in matching demand and supply of urban land and housing for households who earn below R3,500 per month. Although the housing shortage in eThekweni municipality is not unusual relative to other cities, it is extreme. In 2011, informal settlements⁹ in eThekweni¹⁰ sheltered about 885,913 people in a metropolitan of 3.5 million people (StatsSA, 2011).

According to Lefebvre (1968) the urban poor's lack of access to urban residential land prevents them from asserting their 'right to the city'. The incentives that are intended to enable the private sector to deliver AURL are largely failing to produce a significant increase of low-income housing supply (Berner, 2007). As a result, every move and countermove by the urban poor to reside on urban land they attribute to be in a strategic location is contested by private landowners who insist that the poor pay market rates for land and housing. Regrettably, private landownership is used as a principal instrument of accumulation and concentration of wealth at the expense of the majority who are poor; if unchecked, it remains a major obstacle in the delivery of affordable urban land and housing.

In South Africa, informal settlements are seen as detrimental to orderly urban development and planning. However since 2004, informal settlements are recognised as the only form of shelter the poor can afford, and thus a solution rather than a problem (Breaking New Ground, 2004). Even though local authorities accept these settlements as a form of shelter, informal dwellings cannot be used as collateral to unlock opportunities for wealth creation (*ibid*). Their image as informal, however, belies the tremendous economic value they represent and the indispensable role they play in the urban economy (Berner, 2007). According to de Soto (1990) precarious shanty homes are essentially economic assets, 'dead capital', that should be revived by regularisation and turned into a form of capital so people could use it to access formal credit, create surplus value in the homes and business,

⁹ The number of people living in informal settlements was not accurate since the 1996 and 2001 census failed to differentiate between shacks on serviced sites and those on informally occupied land (Huchzermeyer, 2011). According to Tissington (2011) empirical evidence shows that informal dwelling counts done by housing officials (aerial surveys supplemented by ground surveys) are more reliable, and sometimes the discrepancy can be as high as 45 per cent between Stats SA and municipal department figures. This was due to the fact that often the number of shacks was used as the basis for counting, and not the number of sub-households which might reside in a single shack.

¹⁰ The population of eThekweni was estimated at 3.1 million people in 2001 and 3.5 million people in 2011 while the housing backlog stood at 1,016,596 in 2001 and 1,016,596 in 2011 (StatsSA, 2011; 2001; Department of Housing, 2004).

and thus reinvigorate the overall urban economy¹¹. Regularisation of these settlements could allow the urban poor to experience upward mobility on the housing-property ladder. If upgrading could unlock their dormant economic value, why are municipalities not regularising these settlements *en masse*? Could it be that municipalities lack the financial, technical and human resources to implement upgrading strategies? Maybe they are not aware of empirical evidence on the effectiveness of upgrading interventions to inform their housing strategy? Such interventions are noted by Lemon (2000) for improving the physical structure of informal settlements, which subsequently make a significant contribution to the urban economy.

In South Africa, efforts to upgrade informal settlements following the adoption of the Informal Settlement Upgrading Programme in 2004 are fraught with problems. Housing specialists have limited empirical evidence on urban poverty, household income, household size and composition and the living conditions in informal settlements. They also have limited knowledge of the intricate ways used by the urban poor to 'purchase' urban land from land barons. As a result, housing specialists fail to understand the nature and dynamism of informal settlements, which results in *ad hoc* planning of upgrading programmes or failure to deliver urban residential land in strategic locations. The Housing Policy (1996) considers urban land for low-income housing to be in a strategic location if it is in inner-city areas close to job opportunities and amenities. The continuous growth of informal settlements serves to reinforce awareness that alternative urban land management approaches are needed in South African cities, where the gap between low-income housing demand and its provision is the greatest.

The limited success of the housing strategies adopted post-1994 is mainly a result of the limitations of the neo-liberal land law. The law fails to curb speculative landholding by the wealthy minority or address the political economy of urban shelter development that deny the poor 'the right to the city'. High land prices and construction costs discourage the private sector from developing low-income housing unless the state provides affordable land¹². Moreover, urban land has increasingly become a commodity to be bought and sold to the highest bidder and since private landowners induce the market by limiting land supply, the prohibitive costs dissuade the state from purchasing land for low-income housing. If attempts by the state to provide AURL to the urban poor since 1994 have failed, maybe alternative approaches can be attempted. The alternative strategies could deliver urban land in sufficient quantities and with sufficient speed to meet the scale of low-income housing need in

¹¹ Informal activities provide cheap services such as gardening, car-washing, vehicle and other repairs, decorating, carpentry, and construction for the urban middle classes; in many cities they also include manufacturing activities which, because of their unregulated nature, operate cheaply and often provide inexpensive inputs to larger capitalist firms in the formal sector (Lemon, 2000).

¹² This land could be public land, expropriated private land, purchased land on urban fringes, and regularised land occupied by existing informal settlements.

South African cities. This study attempted to provide an alternative solution to the shortage of AURL and housing by devising a mechanism that could deliver urban land in strategic areas at prices that are based on the income of poor households. To achieve this aim, the research focusses on the following objectives.

1.4 Research Objectives

The objectives of this study are based on the background to the research problem and the statement of the problem concerning the shortage of AURL in eThekweni municipality. The study is based on the premise that the widespread distribution of informal settlements is influenced by a shortage of AURL and various interrelated historical, political, social and economic factors. Thus, for the distribution of land and housing to be equitable, fair and just, the price-setting mechanism of the market needs to take cognisance of these factors and how they limit housing affordability.

The main objective of this study is to develop an alternative mechanism of delivering affordable urban land to enable low-income housing development in strategic areas or inner-city areas and reverse the growth of informal settlements in South Africa generally and eThekweni municipality specifically. Flowing out of this, the sub-objectives of this study are to:

1. Establish the nature of the relationship between land prices and methods used by the urban poor to access, trade and retain land for housing development;
2. Assess the approaches used to deliver AURL in developing countries and link them to low-income housing development and draw lessons that could inform AURL delivery strategies in South Africa;
3. Determine the extent to which urban land prices, household income and non-housing expenditure influence housing affordability and residential location decisions by low-income households in the study area;
4. Collect data on households in informal settlements concerning household demographic and socio-economic compositions, and housing conditions that could inform an appropriate strategy to deliver more affordable land for low-income housing;
5. Develop a pricing mechanism for assembling AURL in the study area, based on household income for the development of a mix of low-income housing tenure options where the dominant tenure would be determined by the location of the planning site in the city; and
6. Demonstrate how the pricing and delivery mechanisms of affordable urban residential land could be implemented to alleviate the shortage of AURL in South Africa in general and eThekweni municipality specifically.

1.5 Key Research Question

Given the high levels of poverty and the limitations of urban land delivery mechanisms in meeting the demand for land to house the poor, the study addresses the following research question:

If the ULM is inelastic to demand, what strategies could help ameliorate the shortage of AURL and reverse the growth of informal settlements in eThekweni municipality?

1.5.1 Subsidiary Questions

1. What is the nature of the relationship between land prices and methods used by the urban poor to access, trade and retain land for housing development?
2. How can the shortage of AURL in South Africa be undone without the urban poor using informal processes to 'acquire' and subdivide residential land?
3. To what extent, and in what ways, might land prices, household income and non-housing expenditure influence housing affordability among low-income households in the study area?
4. To what extent, and in what ways, might the delivery of AURL in strategic locations help create a mix of low-income housing tenure options with the predominant tenure determined by the location of the site?
5. What strategies are utilised to deliver AURL in developing countries for the development of low-income housing and how relevant are they to the South African context? and
6. What planning, financial and administrative strategies could support and strengthen implementation of the proposed alternative mechanism for delivering AURL in the study area?

1.6 Hypothesis

The study tests a set of interlinked hypotheses throughout the thesis:

1. Pricing residential land in inner-city areas at a benchmark of 0.09 per cent of monthly household income ranging between R3,500 and R7,500 can improve overall housing affordability in eThekweni municipality.
2. Setting mortgage interest for residential land in inner-city areas at a rate below 10 per cent can facilitate land acquisition by low-income earners in eThekweni municipality.

The above mentioned hypotheses were tested using a qualitative and quantitative methodology through a review of literature and an empirical investigation.

1.7 Justification of Study

The delivery of AURL for low-income housing is frustratingly slow as the market allocates urban land to those who can afford to pay the highest price. Even though land is a unique and vital commodity for housing production, its exchange and allocation is controlled by individuals and firms who have a

monopoly on landholding. These individuals and firms conduct land transactions in a market that is inefficient to deliver AURL in the foreseeable future (Jenkins, 2001; UN-Habitat, 1976; Zetter, 1974). With a focus on eThekweni municipality, the study interrogates how the governance of the ULM is changing in relation to the changing economic, social and political situation in South Africa and whether the said changes are influencing the delivery of AURL in strategic locations. In relation to the operations of the ULM, the study investigates the land pricing mechanism, the quality and location of land supplied for low-income housing, the land development process and the role of the state, buyers and sellers in shaping fixed-property relations in urban areas of South Africa.

The land and housing strategies adopted post-1994 to ameliorate severe housing stress have so far failed to deliver AURL and low-income housing in livelihoods-accessible locations. Inconsistent formulation or malaligned policies for housing, land and finance have hampered the delivery of AURL in strategic inner-city locations¹³ with enormous economic and social benefits. Since these policies contradict each other in their social redistributive and neo-liberal agendas, the development of low-income housing in strategic inner-city areas identified for social and economic integration of the poor in the city is frustratingly slow (McGaffin & Kihato, 2013). The identified zones are underutilised because the land and economic policies tend to undermine social redistribution of land for low-income housing in these zones. Hence, this research attempts to come up with a strategy to assemble AURL at scale in strategic locations for developing low-cost housing with different tenure options. These locations are considered strategic because they have enormous economic and social benefits that could help the poor survive the harsh urban setting.

Most studies on informal settlements including those conducted by Lall *et al* (2009), Durand-Lasserve and Selod (2007), Urban LandMark (2007a), and Oberlander (1985) tend to focus largely on how such settlements undermine tenure rights, infrastructure provision and economic growth but focus less on how speculative landholding contributes to the growth of these settlements. The nature of the relationship between severe housing stress and the shortage of AURL is seldom explored in-depth either by housing policy makers or housing intellectuals. Although the literature on low-income housing in South Africa documents the estimated number and size of households that are resident in informal settlements and the intervention strategies that are intended to upgrade these settlements, few scholars go beyond the factual reporting of household living conditions. Consequently, the

¹³ Inner-city areas are ideal to locate low-income housing for reasons grounded in spatial economics. Low-income housing is most needed in areas where access to employment opportunities, transport and urban opportunities, and facilities are greatest but formal housing is both scarce and dear relative to wage levels of the majority poor.

housing literature has insufficient analysis of the causal connections between severe housing stress and the shortage of AURL.

Much has been written about the problems residents of informal settlements face, but few studies have provided a strategy that could address the problems in the neo-liberal context. As a result, town planners are not sure how to change the land administration system to suit the payment capabilities of the urban poor. Urban municipalities in South Africa lack information on land tenure, land value and taxation and land-use to support the delivery of AURL. The problem is also partly a result of a notable lack of academic research on the distribution of urban land ownership among the different income, racial and ethnic groups (Garba & Al-Mubaiyedh, 1999). To address this knowledge gap, this research surveys households that reside in informal settlements to establish firstly, the household size, composition, level of income and income portfolio and occupancy rate. Secondly, this research establishes the price residents of informal settlements are able and willing to pay for urban land. The information gathered from the household survey is used to develop a pricing mechanism that could deliver AURL at scale.

The lack of complete urban land registers and socio-economic data on low-income households contributes to the design of ill-conceived urban land policy strategies that failed to deliver AURL. Hence, this research studies informal settlements and efforts to contain them in relation to the ULM, as these settlements are a rare vantage point from which to observe how the poor cope with the shortage of AURL. The research findings could be used by policymakers to review mechanisms through which urban land is supplied, valued, financed and sold in the ULM that appears to be dysfunctional. In an attempt to find a solution to the shortage of AURL without unsettling the market, this study combines two antagonistic paradigms of neo-liberalism and social redistribution in the formulation of a pricing mechanism that could deliver AURL at scale.

The pricing mechanism could resolve affordability challenges that low-income households are facing and avert land invasions that undermine the interests of landowners. The mechanism could price urban land at levels that are affordable to the urban poor and which offer a fair payment to the landowner. This mechanism could guide negotiations for the purchase of urban land in strategic locations or inner-city areas earmarked for low-income housing that speculative landowners are reluctant to sell at a price below market levels. The envisaged model could create a mix of housing tenure options with the dominant tenure determined by the location of the planning site in the city. The debate on the urban land crisis in post-apartheid South Africa has been ongoing for more than two decades but a strategy has not been devised that could hasten the pace of delivering AURL. Perhaps this mechanism could deliver AURL for low-income housing to the majority who are poor.

Hence, this research seeks to devise an alternative approach that could deliver AURL and curb the growth of informal settlements. This study uses the following method of enquiry to find information that could be useful in formulating this strategy.

1.8 Research Methodology

The study used the grounded theory method to formulate a research strategy that addressed the research questions outlined in section 1.3. Answers to these questions are backed by empirical evidence obtained using a household questionnaire, semi-structured interviews, observation and a review of existing research material and literature. Johnson and Christensen (2012) are of the view that using a combination of these research tools when collecting data is an excellent way to conduct high-quality research because their complementary strengths overcome the weaknesses of individual tools.

The fieldwork used a 'dialectic' approach to formulate a land delivery strategy that combined two antagonistic paradigms of neo-liberalism and social redistribution to address a dysfunctional ULM that appeared to limit access to AURL for low-income housing. The neo-liberal paradigm guides the operations of the ULM and the social redistributive paradigm advocates for equitable ownership and control of urban land resources. This 'dialectic' approach allowed the research much latitude for ingenuity appropriate to the investigation of a dysfunctional urban land market that has failed to deliver AURL for low-income housing and reverse the growth of informal settlements.

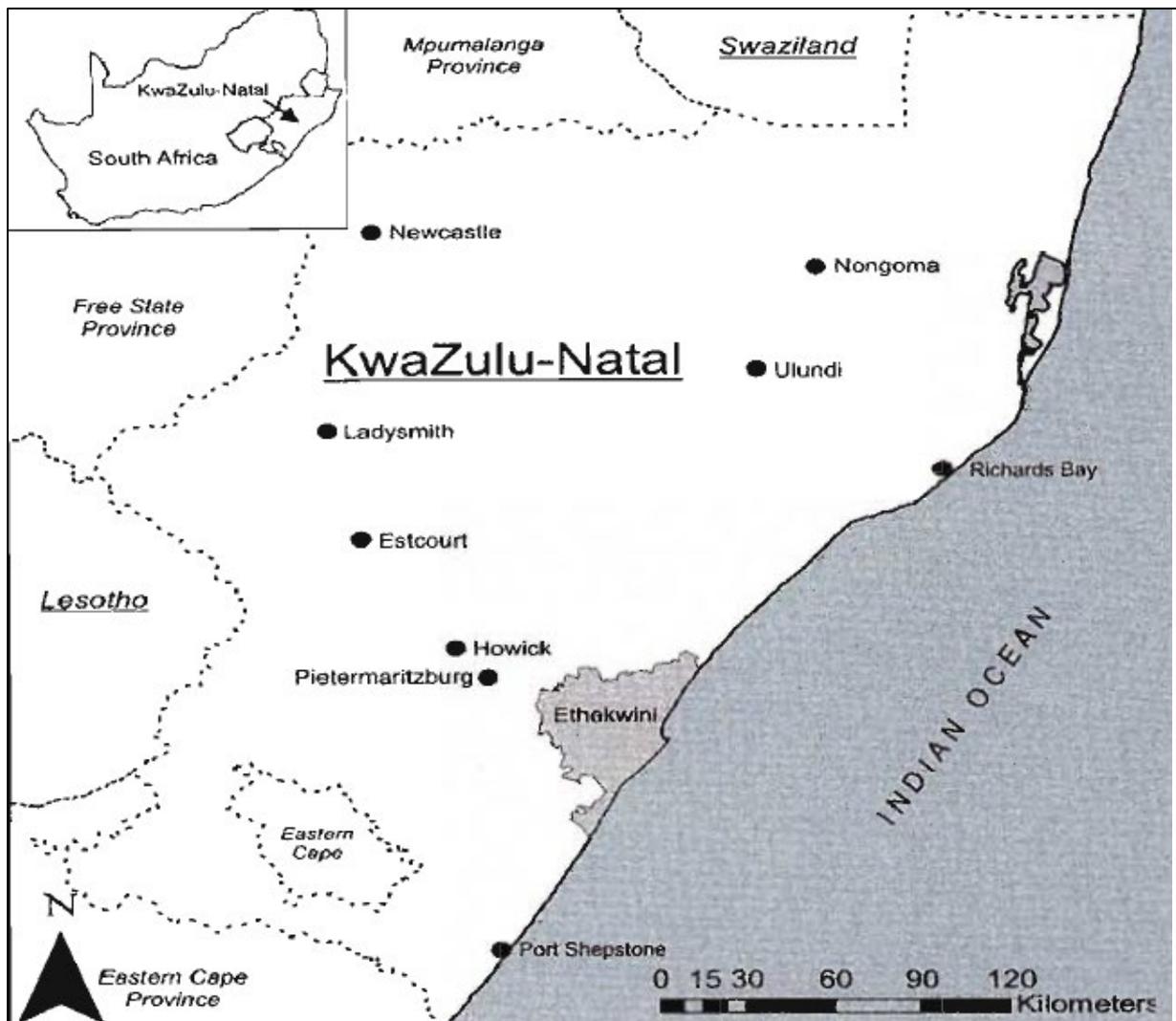
1.8.1 Selection of Case Study

Ethekwini metropolitan was chosen as a location to gather primary data because, at the time of the research, it was the biggest local authority in KwaZulu-Natal (KZN) province (eThekweni Municipality, 2018) where the most repressive policy of urban residential segregation was pioneered and eventually became the model for the national policy of urban residential segregation (Lemon, 1991; Swanson, 1983). Thus, the human settlements that resulted from the KZN experiment constitute significant grounds for investigating salient aspects of urban land tenure arrangements and land-use, the system of documentation that enhances security of tenure and the likely impacts these might have on low-income households that lack shelter. Furthermore, at the time of the research, eThekweni had the largest number of people living in informal settlements in South Africa (eThekweni Municipality, 2018), so it was interesting to see what impact alternative strategies of delivering AURL could have on alleviating the housing crisis.

1.8.1.1 Background to the Case Study

Ethekwini is a coastal metropolitan within the province of KZN on the east coast of South Africa (see Map 1.1 on page 13). The metropolitan covers 2,297km², only 1.4 per cent of the total area of KZN (Richards et al, 2007; StatsSA, 2006). Only 35 per cent of the metropolitan area is urban where 80 per cent of the population resides (Neville Bews & Associates, 2008). The metropolitan has a population of 3.8 million people, about 34 per cent of the population of KZN (eThekweni Municipality, 2018). In South Africa, eThekweni has the 2nd highest population density of 1,640 people per square kilometre (SAIRR, 2011). Ethekweni Municipality (2018) estimates its housing backlog at about 387,000 households; 82 per cent of these households exist in informal settlements and backyard shacks in overcrowded townships.

Map 1.1 Location of eThekweni municipality in KwaZulu-Natal province, South Africa



Source: University of KwaZulu-Natal (2007 cited in Adebayo, 2008:19)

The metropolitan has the 2nd largest industrial hub after Johannesburg (Richards *et al*, 2007) and the 3rd largest economy after Johannesburg and Cape Town, which is very active to relatively large

numbers of local and international migrants seeking employment opportunities. Unfortunately, the majority of low-income households live in abject poverty, trapped in informal settlements close to industrial and commercial centres in the municipality (Breetze, 2009). The shortage of low-income housing is widespread across urban South Africa but it is worse in eThekweni where the shortage of AURL is more pronounced. Land in the municipality is predominantly held under freehold tenure, and housing developers struggle to gain access to land for low-income housing. The terrain in the metropolitan, which consists of rolling hills and valleys, renders most of the land unsuitable or too expensive for low-income housing development. As a result, Moyo (2000) attributes the high level of severe housing stress to the shortage of AURL. The challenges of securing AURL are revealed in the selected field sites.

1.8.2 Data Collection Methods

To conduct research on the causal relationship between the ULM and informal settlements is time consuming and complex and requires the use of multiple methods to collect data. Creswell (2014) is of the view that the mixed method integrates the components of qualitative and quantitative methods that complement each other when combined and allow for a more complete analysis of the research problem.

1.8.2.1 Secondary Data

The collection of existing data is the foundation of this study. A series of existing data from a variety of sources is analysed in order to assess the historical distribution of landholding, arrangements for land exchange and the operations of the ULM that contribute to the growth of informal settlements. Secondary data is used to provide a background to the research questions and to provide useful input into the composition of field instruments. Secondary data on specific themes on the ULM in South Africa is scarce, therefore, the research relies on a few sources of published literature to structure the main arguments forming the basis of this study, formulate the research design and research strategy and corroborate the research findings. The study collects secondary data through the extensive reading of relevant:

- international and local literature on the ULM and informal settlements,
- national and local government records, documents and statutes on low-income housing,
- record of legal cases on disputes associated with urban land tenure decided by the High Court of South Africa that are kept on the website of the Southern African Legal Information Institute,
- official documents such as annual reports, minutes of community meetings, published articles, public and political speeches,

- newspaper articles, educational journals and magazines, minutes of community meetings, personal files and annual reports that are written and photographed by private organisations,
- videos of news programs, documentaries and public debates that are recorded by public or private organisations, and
- archived research data that is kept by research-related organisations such as census data, valuation data on land and housing, data on education, employment, income and living conditions of households in informal settlements and other relevant and comparative data.

Secondary data is national in character, but the study focuses more on collecting data from organisations based in the cities of Cape Town, Durban, Johannesburg, Port Elizabeth, East London and Pretoria. In general, most of the available data on the delivery of urban residential land and low-income housing is based on the experience of these cities.

Secondary research is conducted to gather data on architectural designs and construction techniques that residents of informal settlements often use to build their housing. Such data provides information about the physical structure of the house such as building materials, size of rooms, reticulated infrastructure services, circulation movement and the health environment in these settlements. This data is extremely useful in understanding how residents of these settlements design, build and maintain their housing in response to the economic challenges they face.

1.8.2.2 Primary Data Collection

Primary data was collected directly from professionals working in the land and housing sectors through semi-structured interviews. Data was also collected directly from residents of informal settlements in eThekweni municipality using a household questionnaire, as well as through observation of the living conditions in these settlements. The study collected data from the residents of informal settlements and professionals working in the land and housing sectors because of their strong local knowledge which was useful in the verification of existing data (Karanja, 2010).

1.8.2.2.1 Sampling for Household Survey

The target population and survey population for this study was the 238 638 households residing in informal settlements of eThekweni Municipality in the year 2017 (eThekweni Municipality, 2018). The design of sampling frame for the study is a two stage stratified sample design. The first stage involves the selection of a field site based on the sampling technique and procedure specified in section 1.7.1.2.1.1, while the second stage involved the selection of the sample size. The population living in informal settlements is large and widely distributed geographically across the municipality and the study cannot cover all of them due to constraints of budget and time. Therefore, a sample of the population is selected for the household survey. However, necessary procedures are adopted to

ensure that the sample is appropriate and representative of the population living in informal settlements specifically in eThekweni and South Africa generally. The sampling technique and procedure used in this study is explained below.

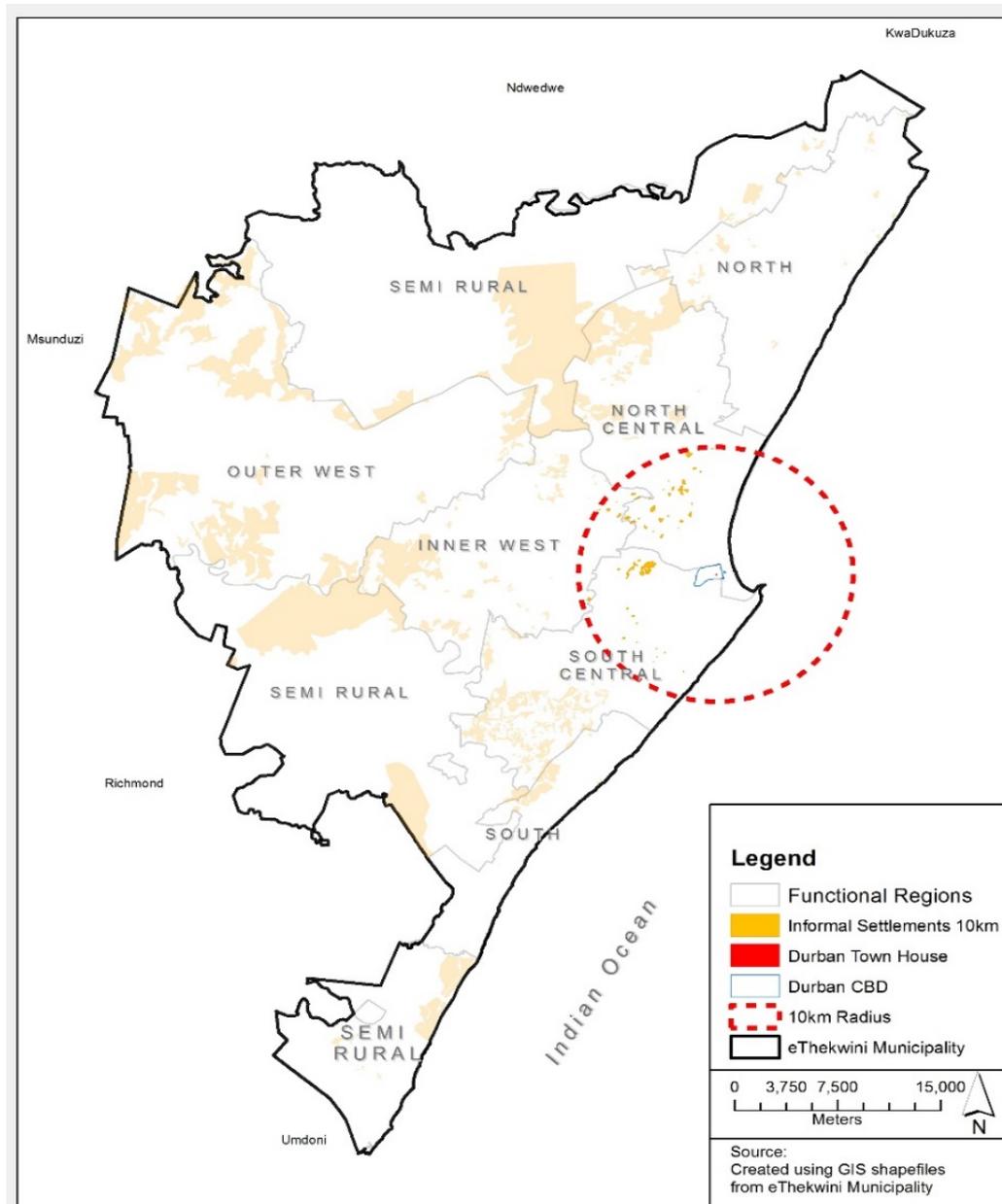
1.8.2.2.1.1 Sampling Technique and Procedure

In designing the sampling procedure for the survey, the study considers the need for an efficient spread of the sample and an even distribution of the survey. As stated in section 1.7.1.2.1, the distribution of the target population necessitates that the survey covers the six administrative regions in the metropolitan, namely the North, North-Central, South-Central, South, Inner-West and Outer-West functional regions. Treating each of the administrative regions as a separate stratum is essential in the study to ensure a fair representation of the different segments of the population in informal settlements. However, the study considered that low-income households often prefer to reside in inner-city locations for reasons grounded in spatial economics; it is ideal for these households to locate in inner-city areas where access to employment opportunities, transport and urban opportunities and facilities are greatest. Hence, the selection of field sites is based on their location in inner-city areas, which are areas located within a 10km radius from the Durban City Hall as shown on Map 1.2 on page 17. Thus, the study chose informal settlements that are located in the North-Central, South-Central and Inner-West functional regions. They also have to be located within the inner-city areas in eThekweni municipality, as shown on Map 1.2, that have already been identified as ideal for the development of low-income housing and integration of these households in inner-city areas.

Having considered all the relevant factors involved in the research design, the researcher chooses the stratified random sampling with optimum allocation of samples as the sampling design. Unfortunately, informal settlements in the North, South and Outer-West regions cannot meet the selection criteria because they are located outside of restructuring zones in eThekweni municipality and beyond the stipulated distance of 10km from the Durban City Hall. Hence, the population is stratified into three based on the administrative regions in the municipality, each region representing a stratum. Accordingly, the strata are the North-Central administrative region, the South-Central administrative region and the South administrative region. From each region, the study selected one informal settlement for the survey. Constraints of budget and time meant that the selection has to be limited to three sites. Consideration is also given to choosing sites that are relatively convenient to access and on a plot of land that is on stable ground and not environmentally sensitive. Consideration is further given to sites that are recorded on eThekweni municipality's register of informal settlements and targeted by the municipality for '*in-situ*' upgrade. Hence, the eThekweni Municipality GIS database on 539 informal settlements helps narrow down the selection to a few possible sites. Consideration is lastly given to sites that are located close to economic opportunities and reticulated infrastructure

services. On this basis, the three field sites are chosen after verifying the accuracy of the GIS database by consulting key stakeholders highlighted in section 1.7.2.2.2 that are involved in low-income housing development and upgrading of informal settlements in eThekweni Municipality.

Map 1.2 Informal Settlements within the 10km Radius from the Durban City Hall



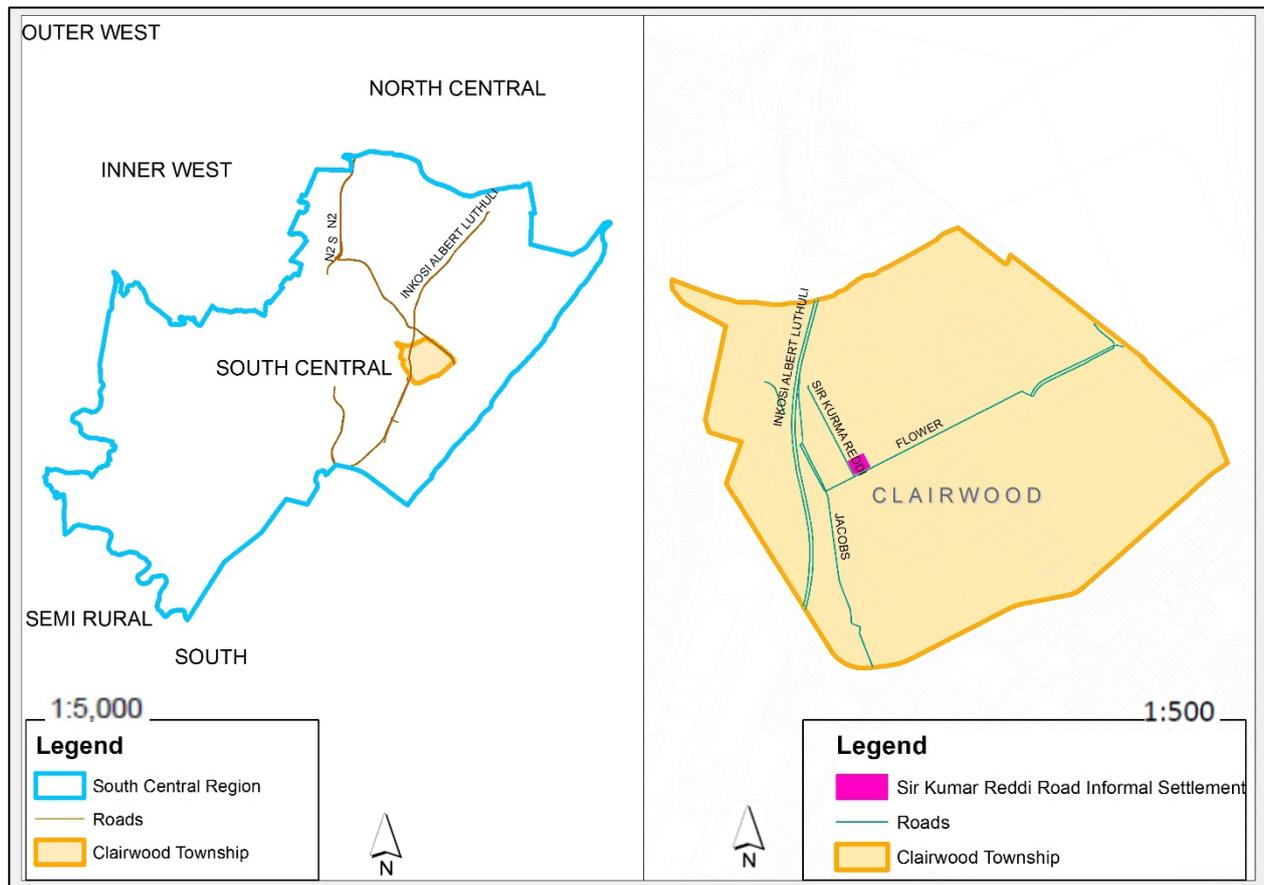
Source: Created by Author from eThekweni Municipality GIS database (2016)

The selected field sites are as follows:

- Sir Kumar Reddi Road informal settlement is located in Clairwood Township of Ward 32, about 8km to the south-west of the Durban City Hall as shown on Map 1.3 on page 18 (eThekweni Municipality, 2013). The settlement has about 65 households who occupy 0.19ha of a plot reserved for commercial use (*ibid*). About 6.4 per cent of the residents are employed and about

10.4 per cent are job seekers and 25.5 per cent of the households have inconsistent income (*ibid*). At the time of study, the settlement had existed on the site for more than 10 years (*ibid*).

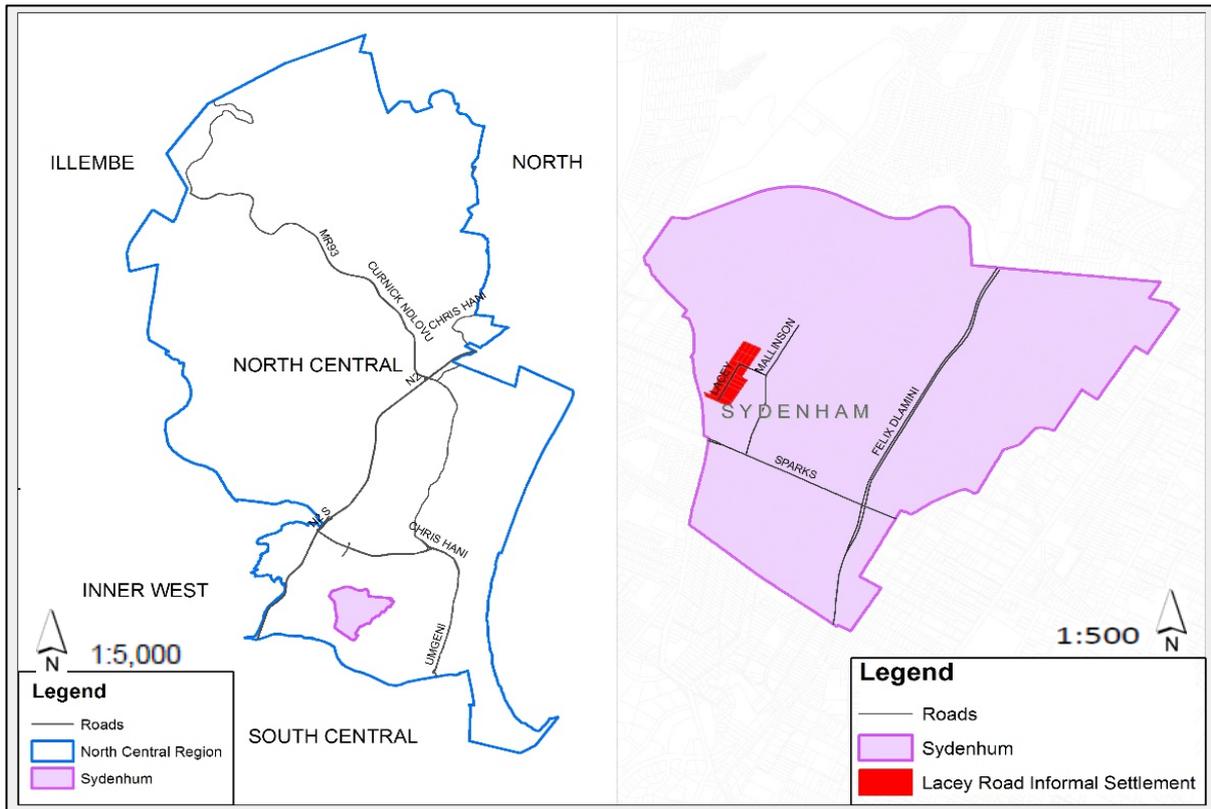
Map 1.3 Location of Sir Kumar Reddi Road informal settlement in Clairwood Township, Durban



Source: Created by Author from eThekweni Municipality GIS database (2016)

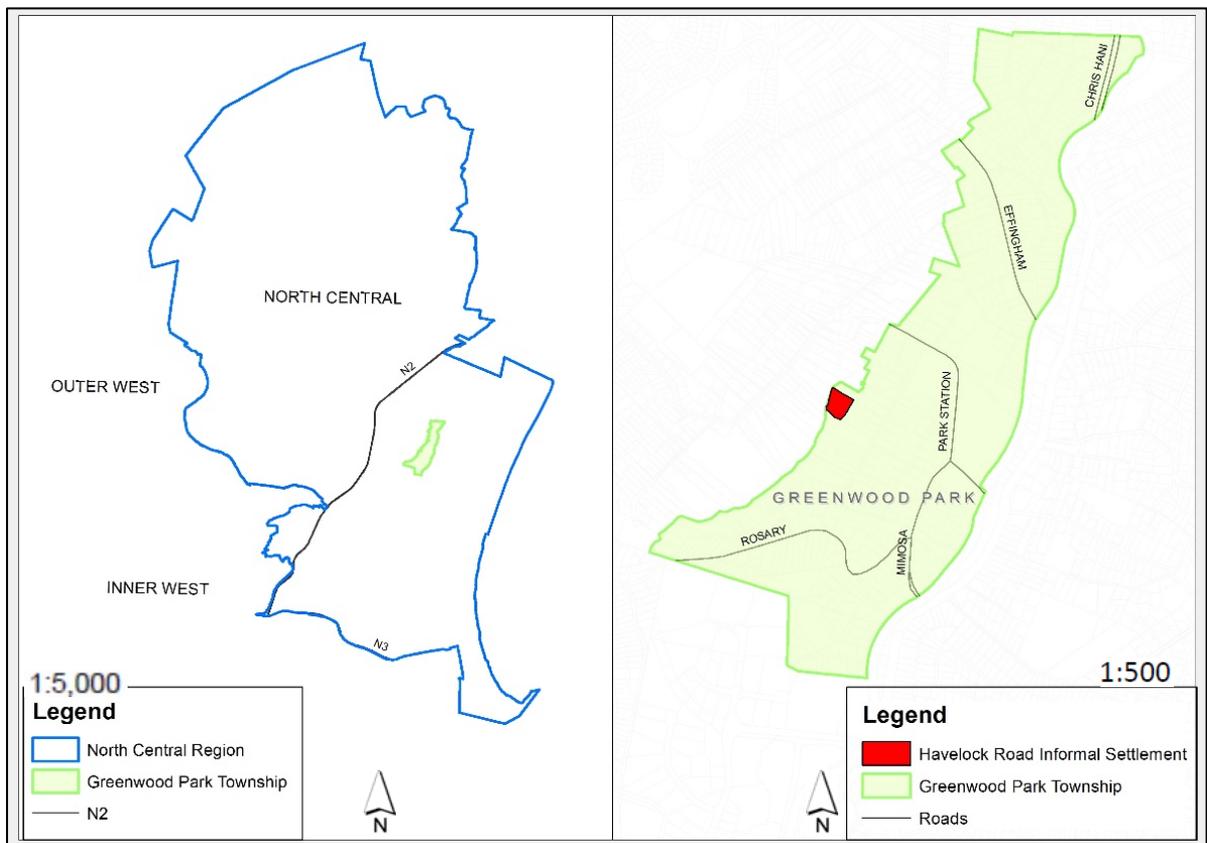
- Lacey Road informal settlement is located in Sydenham Township of Ward 31, approximately 5km to the north-west of the Durban City Hall as shown on Map 1.4 on page 19 (eThekweni Municipality, 2013). The settlement has 181 households who occupy about 2.37ha of a plot reserved for education use (*ibid*). About 6.1 per cent of the residents are employed, 20 per cent are job seekers and 30 per cent of the households have inconsistent income (*ibid*). At the time of research, the settlement had existed on the site for more than 15 years (*ibid*).
- Havelock Road informal settlement is located in Greenwood Park Township of Ward 34, approximately 8km to the north of the Durban City Hall as shown on Map 1.5 on page 19 (eThekweni Municipality, 2013). The settlement has about 227 households who occupy 0.53ha of a plot reserved for a neighbourhood park. About 2.4 per cent of the residents are employed and about 35.4 per cent are job seekers and about 60.5 per cent of the households have inconsistent income. At the time of the study, the settlement had existed on the site for 30 years (*ibid*).

Map 1.4 Location of Lacey Road informal settlement in Sydenham Township, Durban



Source: Created by Author from eThekweni Municipality GIS database (2016)

Map 1.5 Location of Havelock Road informal settlement in Greenwood Park Township, Durban



Source: Created by Author from eThekweni Municipality GIS database (2016)

Once the field sites are chosen the respective Ward Councillors and community leaders were consulted with the intention to obtain research permission, an introduction to the community and to gain insight into the community dynamics. The community leaders recommended possible ways of conducting the enumerations safely and conveniently in these volatile communities. During reconnaissance visits to the various possible field sites, the researcher made contacts with community leaders and the three sites that were eventually chosen have leaders that are highly accessible, flexible and willing to help the researcher investigate and understand land and housing dynamics from the context of the poor.

1.8.2.2.1.2 Sample Size Determination

The study applied the Taro Yamane formula to determine an appropriate sample size. This formula is given as:

$$n = \frac{N}{1 + N(e)^2}$$

Where n = sample size required

N = the population size

e = the level of precision or margin of sampling error

Thus in 2017, the sample size for the estimated population of 238,638 households living in informal settlement of eThekweni Municipality at a margin of error of 5 per cent was:

$$\begin{aligned} n &= \frac{238\ 638}{1 + 238\ 638 (0.05)^2} \\ &= 399.3 \end{aligned}$$

Therefore, a minimum sample size of 400 households living in informal settlements of eThekweni Municipality was required for the survey for a maximum sampling error of 5 per cent. The researcher managed to enumerate 423 households in three informal settlements located along Sir Kumar Reddi Road (Clairwood Township), Havelock Road (Greenwood Park Township) and Lacey Road (Sydenham Township). According to eThekweni Municipality (2013) about 473 households were residing in these settlements in the year 2012. The researcher tried to enumerate all households in these settlements; when the targeted respondents were absent on the first visit, a second or third call-back was conducted to reduce non-response bias that might occur by including the differential characteristics of absent members of the frame (Czuprynski, 2000; Gendall & Davis, 1993; Dunkelberg & Day, 1973).

Each point on the dwelling frame was assigned only to a dwelling structure because the informal settlement had no clearly demarcated plots. In some cases a point had more than one household associated with it and these were recorded separately. The dwelling units were selected using the systematic sampling technique; dwelling units were chosen at a fixed interval from a list provided by the Municipality, starting from a randomly determined point. This technique ensured the spread of the sampled units on the ground.

1.8.2.2.2 Research Tools for Collecting Primary Data

1.8.2.2.2.1 Questionnaire

The study used a questionnaire to gather data on low-income households that is needed for the formulation of a mechanism that could deliver AURL. The questionnaire, appended in Appendix 1, used only close-ended questions to gather data on inhabitants of selected informal settlements relating to their demographic composition, household size and density, migration, health, level of education, type of employment, household income and expenditure, housing occupancy rate, building materials, size of rooms and dwelling, access to reticulated infrastructure services and price of land. The questionnaire was administered by research assistants to gain the highest response rate from respondents, while allowing the assistants the chance to clarify questions that may not have been clear to the respondent. Respondents who are literate were allowed to self-administer the questionnaire to make it easier for the study to question a large number of people. In a survey, a questionnaire is suitable when results are intended to be generalised to a wider urban population residing in informal settlements across South Africa.

1.8.2.2.2.2 Semi-Structured Interviews

The study used semi-structured interviews to gather data from key informants working for local and provincial governments, property development firms, Non-Governmental Organisations and private firms that are involved in low-income housing development and upgrading of informal settlements in eThekweni Municipality. The roles of these informants in the study area shape their understanding and interpretation of the shortage of AURL and low-income housing, which gives them significant knowledge and information about low-income housing and informal settlements the study needs to devise a mechanism that could deliver AURL. The list of experts and information obtained from them is shown in Table 1.1 on page 22. The study used semi-structured interview schedules, appended in Appendix 2 on page 226, to collect data from the different key informants.

The use of semi-structured interviews afforded the researcher flexibility in the questioning process, determine the wording of the questions, clarify key terms of questions that were unclear and change the order in which the questions are presented (Nachmias & Nachmias, 1996). This flexibility

Table 1.1 Key informants and their roles, data sources and methods of interrogation used in the study

Informant	Role in the Municipality	Information Solicitation Tool	Information Sought
Housing Planner: KZN Provincial Department of Human Settlements	Administers the low-income housing programme; provides subsidies for low-income housing development; partakes in policy and legislative review	Interview with Housing Planner; department website and annual reports	- Interaction between forms of public housing support and land policy; - Adequacy of the housing subsidy; - Adequacy of the budget allocated for upgrading informal settlements and 'sites-and-services' projects; - Qualitative and quantitative aspects of public housing delivery in peripheral locations; - Overall costs of low-income housing development such as land, construction, reticulated infrastructure services;
Housing Planner: eThekweni Municipality: Human settlements unit	Oversees informal settlements upgrading programme; facilitates and funds the development of low-income housing using the national housing subsidy; undertakes remedial programs such as title deeds and retrofit of reticulated infrastructure services	Interview with Housing Planner; municipal website and annual reports	- Achievements in assembling AURL for low-income housing development; - Achievements in upgrading informal settlements and alleviating housing and reticulated infrastructure services backlogs; - Achievements in lowering standards of settlement establishment; - Barriers, challenges and opportunities in providing security of tenure; - Challenges faced in delivering AURL, low-income housing development and upgrading of informal settlements; - Strategies planned to increase the supply of AURL in strategic locations;
Town Planner: eThekweni Municipality: Planning unit	Oversees the development planning and management process for industrial, commercial and residential development; Processes subdivision and consolidation applications; Administers development control; Carries out and comments on planning research, planning legislation, planning policy and standards;	Interview with Town Planner; municipal website and annual reports	- Accuracy of urban land registers and land information; - Recognition of a continuum of land rights; mechanisms for recognition of non-documented land rights; - Achievements in allocating land rights to residents of informal settlements; - Contextual appropriateness of restrictions on urban land-use rights, ownership and transferability;
Senior Researcher: Urban LandMark	Research organisation that focuses on urban land markets in South Africa	Interview with Research Specialist on land issues	- Appropriateness of standards and procedures of settlement establishment; - Appropriateness of land assembly and allocation practices; efficiency of land-use planning and control, land management practices and land taxation practices; - Level of support for pricing urban land based on income of low-income households; - Barriers, challenges and opportunities in providing security of tenure; - Planned changes in land administration that could ensure that processes of land rights' recognition, land-use planning and land taxation aid the delivery of AURL; - Strategies planned to increase the supply of AURL in strategic locations; - Clarity of organisational mandates; meaningful incorporation of equity goals in land allocation;
Civil Engineer: eThekweni Municipality: Engineering unit	Design, develop, improve and maintain municipal infrastructure services; Facilitates residents with access to municipal infrastructure services; The provision of an appropriate and cost effective map and land information database and surveying service.	Interview with Civil Engineer; municipal website and annual reports	- Transparency of land-use restrictions; - Level of enforcement and control on land subdivision and land development practices; - Extent of support for land expropriation for low-income housing development; - incidence of expropriation and transparency of expropriation procedures;
Conveyancer: Deeds Registry	Oversees any cadastral survey and registration of any land rights in the Deeds Registry; prepares survey diagrams and general plans that are critical documents in the land registration process.	Interview with Conveyancer	- Achievements in alleviating reticulated infrastructure services backlogs in informal settlements; - Adequacy of the budget allocated for 'sites-and-services' projects and upgrading reticulated infrastructure services in informal settlements;
Property Valuer: eThekweni Municipality Rates and Valuation Unit	Oversees Rating and Valuation of fixed-properties; prepares and maintains the General Valuation Roll for rating purposes	Interview with Property Valuer; municipal GIS database	- Completeness and reliability of cadastral registry records and information; - Accuracy of deed mapping; - Relevant private encumbrances;
Property Valuer: Knight Frank	Provides valuation services for fixed-property	Interview with Property Valuer	- Relevancy of public restrictions; searchability of registry; - Accessibility of registry records; timely response to requests.
Service Delivery Manager: eThekweni Municipality: Trading Services Unit	Facilitates the delivery of municipal services such as Electricity, Water and Sanitation, Cleansing and Solid Waste	Interview with Service Delivery Manager	- Transparency of land valuations; - Accuracy of land valuation registers and land information;
Economic planner: eThekweni Municipality: Economic Development Unit	Undertakes economic planning and facilitates economic development	Interview with Economic Planner; municipal website and annual reports	- Cost-effectiveness of providing municipal services in informal settlements; - Achievements in providing municipal services in informal settlements;
Town Planner: Iyer Planning Consultants	Private consultants on town planning and urban design issues	interview with Town Planner	- Efficiency of property tax in the delivery of urban land; - Achievements in enabling the urban poor to harness the asset value of their housing and reduce economic segregation.
Housing Specialist: FEDUP	Offers technical support and organises residents of informal settlements to start community-led savings schemes, building brigades, acquire land	Interview with Housing Specialist; FEDUP website and annual reports	- Accuracy of urban land registers and land information; - Contextual appropriateness of restrictions on urban land-use rights, ownership and transferability; - Transparency of land-use restrictions;
Housing Specialist: Slum Dwellers International (SDI)	Offers technical support to residents of informal settlements in negotiations with public officials	Interview with Housing Specialist; SDI Alliance website and annual reports	- Effectiveness of community-led savings schemes, land acquisition schemes, community-led housing development and informal settlement upgrading; - Level of technical support for community savings groups and homeless people's federations;
Housing Specialist: People's Dialogue	Consolidates informal savings schemes with bridging loans from uTshani Fund to finance self-built housing programmes	Interview with Housing Specialist	- Adequacy of bridging finance loans for community-led house construction and land acquisition
Mortgage Originator Manager: National Housing Finance Corporation (NHFC)	Provides wholesale and retail finance to private and public entities; guarantor in low-middle-income housing finance market; involved in policy development	Interview with Mortgage Originator Manager; NHFC website and annual reports	- Contextual appropriateness of mortgage lending practices towards low-income households; - Achievements in mortgage lending to low-income households;
Credit Manager: ABSA	Provides short-medium-term retail finance for housing development	Interview with Credit Manager	- Challenges faced in providing mortgages to low-income households; - Level of mortgage default among low-income households;
Loan Officer: uTshani Fund	Provides bridging finance loans for community-led building brigades, land acquisition, and incremental upgrading of informal settlement.	Interview with Loan Officer	- Adequacy of bridging finance loans for community-led house construction, land acquisition, and incremental informal settlement upgrading; - Level of support for the People's Housing Process (PHP); - Achievements in supporting community-led saving schemes;
Project Manager: Tongaat Hulets	A private developer of fixed-property and major landowner in KZN	Interview with Project Manager	- Mechanisms for increasing the supply of AURL for low-income housing;
Property Agent: Wakefields	Facilitates the sale and leasing of land and housing in KZN	Interview with Property Agent	- Previous land and housing sales in the area - How much similar land and housing is selling for - Land and housing currently on the market

Source: Author's own creation

established a friendly rapport with the interviewee and gave the interviewer control over the interview situation to allow the respondents to answer certain questions before they were asked subsequent questions (*ibid*). Such flexibility also allowed the researcher to probe the interviewee for clarity and additional information on certain responses that were unclear. The study also used these interviews as follow-up to validate the data gathered using the questionnaire.

1.8.2.2.3 Observation

The researcher conducted the first reconnaissance observations by visiting in February 2013 to delineate the selected informal settlements in the study area. Another observatory visit was conducted in June 2017 two months before the collection of household data from residents of the selected informal settlements to monitor any signs of 'new' encroachments by new or existing residents in the area. During these visits, the researcher played the role of a complete observer and did not inform the residents of his visit. The researcher wanted to be unobtrusive and not raise any suspicions or lose the trust of the community if they knew they were being observed. Trust and rapport with residents of the informal settlements being studied are essential if validated data is to be obtained (Johnson & Christensen, 2012). In these settlements, researchers are generally viewed with suspicion; they often make promises to gain permission to conduct research but the promises are never kept (*ibid*). Researchers often promise residents of these settlements that their participation in the research would improve their housing situation but the shelter challenges they face remain unsolved.

A further observation visit was conducted to derive the value of land occupied by the selected informal settlements. The study derives the land value using the 'residual' method that Britton *et al* (1989) considers appropriate for valuing land with existing buildings targeted for demolition and redevelopment. The method works on the premise that the price which the buyer could pay for land is the surplus after deducting all development costs from proceeds of sale such as costs of construction, costs of purchase and sale, cost of finance and allowance for profit (*ibid*). Therefore, the residual method is appropriate for valuing land with unplanned high density settlements consisting of units built with impermanent construction materials or without occupancy or construction permits. This study acknowledges the difficulty of valuing land by direct comparison with other land parcels of similar size when that land is informally settled on, and there is insufficient evidence of sales by owners of land that has been illegally occupied for more than five years. Hence, this research uses this somewhat subjective and derivative method of land valuation to ascertain the price a 'potential buyer' could pay for the land. The land value is used to model an appropriate mechanism for delivering AURL for low-income housing.

1.8.3 Data Analysis

The method the study applies in processing the data it gathers depends on whether the data is quantitative or qualitative in nature. The study analyses the data collected using 2011 as the base year. The year 2011 is chosen as it is the last year a census was conducted in South Africa. The data collected using semi-structured interviews is processed for analysis using the key themes listed below. Data collected using the questionnaire is processed using the following method. Firstly, each questionnaire is perused, question by question, to check for any missing or incorrect data, ensure that all answers are legitimate and to eliminate questionnaires that are totally unusable or unacceptable (Runcie, 1980). The researcher assigned a unique code to each questionnaire so that if errors are identified during the data capturing and analysis process, a comparison can be made between the questionnaire and the coded data captured in the SPSS software spread sheet. Secondly, each answer is assigned a numerical code based on a coding guide prepared prior to data capturing. Each questionnaire is double-checked for any coding errors (such as assigning a wrong code to an answer) to minimise the number of errors that are carried through into the analysis of the data (*ibid*). Data processing and capturing occurred concurrently with fieldwork, enabling queries to be sent back to the field for verification. Thirdly, after the coding errors are rectified, the appropriate codes are transferred to a spread sheet that makes the data more amenable to analysis. At this point SPSS statistical software is used to analyse the captured data. The overall analytical method applied in this study to interpret data gathered from the household survey and semi-structured interviews is based on the following key themes and sub-themes shown in Table 1.2.

Table 1.2 Key Research Themes and Sub-Themes

Key research themes	Sub-themes	
Household income and expenditure	- Employment type - Source of finance	- Level of education
Household size and composition	- Dependency ratio	
Housing costs	- Cash outgoings covering cost of housing	- Physical upkeep
Housing location	- Transportation costs - Mode of transport	- Migration - Proximity to work places
Housing quality	- Size of rooms and dwellings - Room density - Occupation norm	- Building design and materials - Reticulated infrastructure services - Physical adequacy
Tenure arrangements	- Allocation of rights to land	- Transfer of land rights through sale, lease, loan, gift or inheritance
Land value	- monopoly, economic and speculative rent	

Source: Author's own creation

1.9 Concept Definition

The definition of terms such as informal settlement, affordable urban land and low-income housing vary widely from country to country. Hence, it is necessary for the researcher to ascribe the following

working definitions to important concepts in this study, which are subsequently elaborated and discussed in detail in the conceptual framework.

1.9.1 Informal Settlement

The definition of informal settlements varies widely from country to country but a common confusion with the term is its use in reference to the physical and socio-economic conditions that delineate the character of these settlements. In this study, the term is used to refer to the legal position of a settlement. Thus, a settlement is considered to be informal if the land it occupies is 'acquired and subdivided' according to a set of rules and processes that are not entirely legal or is allocated formally but the housing is constructed outside the rules and processes of township establishment (Barry, 1999).

1.9.2 Affordable Urban Residential Land

The term 'affordable' is defined by the Oxford English Dictionary (2016) as the cost of a commodity measured relative to the amount that the purchaser is able to pay. Historical observation of lending practices of financial institutions appears to indicate that a general stipulation that monthly repayments on a loan for the purchase of urban land should not exceed the 30 per cent benchmark of any household income scale in order to leave a household with sufficient income to meet other basic needs (Burke, 2004; Linneman & Megbolugbe, 1992). In this study, urban residential land is considered affordable if it is available in strategic locations for purchase or rent at a price that does not exceed the 30 per cent benchmark of any household income scale.

1.9.3 Low-income Housing

Low-income housing is generally provided at low-cost or 'break-even' cost that is below the market levels (Disney, 2007). Low-income housing includes public housing or intermediate housing for sale and rent that is provided by public or private developers at a cost that is below 30 per cent of the annual income of a low-income household (Linneman & Megbolugbe, 1992; Mayo *et al*, 1986). In South Africa, the Housing White Paper (1996) defines low-income housing as subsidised housing for low-income households who earn an income up to R7,500 per month. In the context of this study, low-income housing is considered to include the above-referred housing options together with a wider range of housing options that fail to meet minimum standards of settlement establishment.

1.9.4 Urban Land Market

The urban land market is considered an imaginary place where rights to utilise urban land are exchanged at a price that those who seek land are willing to pay and those who own land are willing to sell the land commodity (Kalima & Cloete, 2010; Baken, 2003; Kironde, 2000). According to Lall *et*

al (2009) this market is self-organised and highly dynamic, but does not 'supply' urban land in quantities that equal the quantity of land demanded at the lowest possible prices. In such a market, land automatically transfers to the highest bidder whose willingness to pay reflects his ability to generate the greatest utility or profit from its use.

1.10 Chapter Summary

The urban population that resides in informal settlements is growing rapidly as AURL and low-income housing delivery have not kept pace with rapid urbanisation and population growth (UN-Habitat, 2001). This chapter explains briefly how informal settlements results from a shortage of AURL, private hoarding of land for speculative reasons and limited financial resources available to poor households. A detailed discussion in Chapters 3, 4, and 5 elucidates on the forces that drive the growth of informal settlements and makes the causal connection between informal settlements and the ULM. To build a basis for a central argument on this connection, this study formulates a conceptual and theoretical framework that exposes the inefficiencies of the ULM and valorises strategies used by the urban poor to gain access to housing. This framework is presented in Chapter 2.

2 CHAPTER TWO: THE DEBATE ON FORMAL VERSUS NON-FORMAL HOUSING PROVISION

2.1 Introduction

The foregoing chapter established, briefly, how urban South Africa continues to manifest the historical inequality of race and income in its distribution of landownership and homeownership. This is reflected in the shortage of affordable urban residential land (AURL) and low-income housing and reinforced by the rapid growth of informal settlements. Informal settlement in South Africa is understood within the context of underlying implications of historical land dispossessions and segregation from housing and employment opportunities. Thus, these settlements are essentially a physical expression of the need to access AURL in strategic locations close to employment opportunities. The discussion on the shortage of AURL and low-income housing and the resulting informal settlements requires dealing with some fundamental normative issues including fairness, justice and rights. Hence, this chapter vindicates approaches used by the poor to 'acquire' urban land and develop housing by themselves using their own savings, labour and building materials they can afford. The chapter also explores the traits of formal housing that make it susceptible to market failure and the traits of informal settlements that make them unacceptable for human habitation. A discussion of these issues is important for one to understand options that may improve housing affordability. At a conceptual level, the shortage of AURL and its associated challenge of informal settlement are traced to competing paradigms of delivery, that is, formal versus non-formal mechanisms of urban land and housing delivery. This study intends to contribute to this debate from the housing affordability perspective, with respect to the South African context. The inquiry into housing affordability in the low-income segment of the market seeks to ascertain the price for urban land that is right, fair and just. Hence, the beginning of this chapter focusses on the main argument regarding issues of housing affordability, inefficiency of the market and unfair distribution of land and housing resources.

2.2 Central Argument

This chapter addresses two specific themes that intersect decisively at various points in this thesis. The first theme focuses on the processes used to exchange urban land and how they are an expression of the ability to afford. The theme also focuses on the residential location decisions made by individual low-income households and how these decisions are an expression of the ability of these households to afford urban residential land. The logic of these decisions is directly linked to the rent-seeking behaviour of monopoly landowners. The urban poor persistently invade urban land to circumvent the market system that allocate urban land based on the ability to afford. Thus, persistent calls for the

redistribution of urban land are legitimate and inspire anarchist behaviour in housing development. The second theme, therefore, focuses on the development of informal settlements by the urban poor in response to the shortage of AURL and low-income housing. As these two themes intersect, a conceptualisation of informal settlement emerges as the composite reflection of an artificial shortage of AURL induced by the speculative behaviour of monopolistic landowners. It is regrettable that mainstream approaches adopted by the government to resolve the shortage of AURL tend to focus more on the supply-side issues at the expense of demand-side challenges. These approaches fail to remove barriers in the urban land market that hinder the delivery of AURL and low-income housing. The argument by Davis (2006) and Lall *et al* (2009) that informal settlements result from inefficiency in the land and housing markets creates room for this research to make a comprehensive assessment of the above-mentioned themes. As a result, the two themes engender a wide debate on the shortage of AURL and low-income housing and this chapter captures and elaborates on some of the main axis of this debate.

The main argument of this debate is presented in a framework that delineates popular and scholarly opinions on urban land and housing markets and shows how these opinions continue to shape low-income housing policy. It also refutes the tradition of liberal legalism that dominates land transactions on the basis that this tradition is unsuitable for just allocation of urban land and housing. By way of conclusion, this framework attempts to:

- account for the shortage of AURL for low-income housing and the associated challenges of informal settlement,
- advance a number of propositions that may lead to an alternative approach for analysing the pricing mechanism for urban land, and
- advance a number of propositions that may lead to an understanding of the contemporary problems associated with the shortage of AURL.

The analytical propositions advanced in this approach, though explicitly oriented to urban land and housing markets in South African cities, could apply equally well to cities of developing countries that are experiencing rapid urbanisation, rapid population growth, extreme poverty and a shortage of AURL and low-income housing. These challenges prompt the urban poor to physically express their frustration with the slow pace that AURL and low-income housing are delivered.

2.3 The Shortage of Affordable Urban Land and Housing

The questions on urban land and housing raised by the urban poor originate from inefficiencies of the capitalist system of production, exchange and consumption of urban land and housing resources. These questions are understood from an affordability perspective. The urban poor query the unfair

distribution of landownership that results in the shortage of AURL for low-income housing. These questions are demonstrated through a set of integrated facets in the ways private firms, landowners and households subdivide, allocate and exchange urban land in the market. The questions are also demonstrated through the way acts of insurgency and anarchy by the urban poor undermine the system of land administration. Thus, the urban poor rightfully question how they could gain access to low-income housing and have the 'right to the city' if they are increasingly alienated from access to AURL. While these questions challenge the logic of market-led land exchange, they also address themselves to the unequal distribution of landownership and housing resources. From this perspective, the 'unequal city' becomes considerably more than a *locale* in which contested and unresolved landownership is evident. The city became an arena where capitalist urbanisation and accumulation greatly disadvantages the urban poor. Since the advent of democracy in South Africa, the debate on inequalities in landownership and homeownership and attempts to resolve them via market instruments has failed to generate viable solutions (Moyo, 2001). Despite a broad consensus that a major shortage of AURL exists in the country, a solution to the problem remains elusive. The explanation for the failure to resolve the problem is that the majority who are poor are marginalised from the land debate and groups that accept and advocate for market-based methods of urban land delivery are given room to make their argument. The post-1994 land reforms remain centred on the principle of paying compensation determined by the market even though the price is beyond what the majority who seek land or the state can afford. Hence, it is essential for this study to clarify why the 'liberal' market continues to have a prominent role in the allocation and exchange of urban land even when it marginalises the urban poor. The study demonstrates from various positions how 'liberal' markets marginalise the urban poor from land and housing opportunities.

2.4 Understanding the Market

2.4.1 The Theory of Liberal Markets

The theory of 'liberalism' was coined by Adam Smith in 1776 via his seminal work titled 'The Wealth of Nations'. Smith believed that important aspects of society should be determined by the market where all members of society are interactively involved in producing an outcome. He viewed the market as good, sacrosanct and the best platform to distribute land, housing and income. Smith is of the view that interactive market transactions legitimise the distribution of land, housing and income, and thus, he rejects the idea of social redistribution or any 'interference in the market' by the state. His argument is often used to oppose any form of public intervention in the operations of the market on the basis that the distribution of ownership, pricing and exchange of land and housing commodities in a market should occur unfettered. Smith argues that the market produces the best 'distributive outcome' and thus, land and housing transactions should only take place in a market which maximises

the gains of each transaction. Hence, he argues that any attempt to substitute the market with any form of social redistribution is wrong.

Smith contends that moral values should not guide transactions of goods in the market even in the context where an individual profits but by the loss and immiseration of others. In agreement with Smith, Mises claims that one person's gain always implies another person's loss especially in the case of enormous economic benefits accrued as the result of plunder and pillage in wartime. In their view, both the dispossessor and the dispossessed have equal rights and whoever needs any goods should seek for them in the market. Hence, in the specific context of South Africa where most landholding is a result of dispossession through colonial conquest, the views of Smith and Mises are used by supporters of the market to oppose the expropriation of urban land without compensation arguing that it 'violates the liberty' of war victors. Hence, supporters of the market reject any claims for moral justice that could justify the exchange of land outside the market.

Even though Smith assumes that there is equality among participants in a liberal society, he also agrees there is inequality of endowment. In other words, he agrees competition in the market is good even if it is on unequal terms. Hence, inequalities of landholding are 'normal' and eventually market forces would ensure supply meets demand. However, in the unique context of the land market, the forces of supply and demand demonstrate that they are unable to supply urban land at a price that those seeking land are willing to pay and those owning land are willing to sell (Kalima & Cloete, 2010; Baken, 2003; Kironde, 2000). This contradicts Smith's view that the ULM is self-organising, highly dynamic and can supply land in quantities that equal the quantity of land demanded at the lowest possible prices. In reality, a plot of land is transferred to the highest bidder.

Smith assumes that the ULM is perfect and has identical suppliers and consumers, homogenous land parcels, buyers and sellers who attach identical values and utility to land, and buyers with complete knowledge of market conditions. In reality, the ULM is imperfect due to the distinctive nature of land as an economic good. Firstly, unlike other economic goods, the price of land is completely derived from the value of or the use of land (Baken, 2003). Secondly, land supply is fixed or completely inelastic as land cannot be created or destroyed (Doebele, 1978). Once a piece of land is built upon, it cannot easily be recovered without increasing financial and time costs to the development. Thirdly, unlike other movable goods, land is not exchangeable as each land parcel is unique and immobile and does not have a homogenous price (Baken, 2003). Prices are location-bound, primarily determined by the demand for land in certain areas, and only indirectly by the availability and demand for land in the entire city (Doebele, 1978; Darin-Drabkin, 1977). Fourthly, unlike other commodities whose quality depreciates over time, land cannot physically depreciate over time even though its acquired qualities,

such as services and location advantages, can change (Doebele, 1978). Fifthly, apart from being used for production and housing purposes, land is a vehicle for storing wealth. Hence, owners of land in certain desired places can withhold land from the market expecting that prices would increase with demand. As a result, the price mechanism loses its stabilising function as increasing land prices would reduce land supply as speculative landowners hold onto land anticipating super-normal profits from further price hikes. Sixthly, the construction industry is slow to respond to change in demand and buyers and sellers are different and have imperfect knowledge of market conditions and transactions as information is not easily accessible (Kironde, 2000). These market imperfections impair the efficient pricing and allocation of urban residential land.

The market imperfections alluded to above led to the subsequent modification of the ideas of Smith by Alexander Rüstow in 1938. Rüstow's neo-liberal ideas advocate for the elimination of price controls, deregulation of financial, land and housing markets and reduction of the role of the state in favour of an increased role of the private-sector in land and housing delivery (Boas & Gans-Morse, 2009; Lofchie, 1997). From the 1970s, his ideas are used by supporters of the market to justify and unapologetically implement neo-liberal housing policies that 'liberated' the process of land delivery and housing development to become largely the responsibility of the private sector (Steger, 2010). As a result, the market has triumphed, became more far-reaching and has opened up and connected land, housing and financial markets worldwide (Chase-Dunn, 2010; Clark 1997). The market is also managing to influence a global convergence of politics, economic practices and culture around dominant market values.

Nevertheless, the liberalism theory as modified by Rüstow has shortfalls that are more evident in the South African context. One of the main shortcomings is that its dominant cultural values that have been imported through tenure systems, building standards and architecture are imposed over local tenure systems and traditions of settlement establishment without consideration of the local context. As a result, local municipalities have given the market a *carte blanche* role in the delivery of urban land, housing and reticulated infrastructure services (Andersen, 2002; Andersen & van Kempen, 2001; Sassen, 1991). This transformation shifts focus away from urban welfare-oriented issues as a consequence of inviting profit-seeking firms and rich individuals into politics (Andersen, 2002). The city is thus transforming according to the needs of the rich at the expense of low-income households. The result is that in South Africa cities the allocation of land and housing resources becomes highly unequal. The city becomes physically segregated with the rich living in lavish mansions on huge estates while the poor are crammed in informal settlements; an observation that Sassen (1991) and

Mollenkopf and Castells (1991) document in the 'dual city thesis'¹⁴. Andersen (2002) makes a similar observation, noting that informal settlements are increasingly developing side-by-side or around affluent townships in many cities. By placing the interests of entrepreneurs above the social contract, liberalism fails to address the marginalisation of a large number of the urban poor from the market, which results in massive inequalities of landholding, housing and income in South African cities (Sassen, 1991). Even though Smith and Rüstow contend that the private-sector is more capable of delivering urban land and housing than the public-sector (Peterson *et al*, 1991), Jenkins (2001) is of the view that the market cannot deliver AURL in this millennium. Such criticism is expressed in the theory of market-failure discussed in section 2.3.2. Liberalism may be useful in justifying the operations of the ULM, but it cannot provide a framework that can aid the delivery of AURL at scale. Thus, Stiglitz (2008) argues that the notion that the free market leads to efficient allocation of resources has no theoretical justification as the conditions under which that statement is true are not satisfied. The government may never alleviate the low-income housing crisis unless it actively confronts and resets the price-setting mechanism of the market to accommodate the urban poor. Hence, this study tries to resolve the shortage of AURL through a mechanism that could price urban land based on the incomes of low-income households.

2.4.2 The Theory of Market Failure

The theory of market failure was proposed by Henry Sidgwick in 1873 to highlight the need for the government to actively intervene in the allocation of resources by the market. He argues that the government is more suited to provide land and housing opportunities than the market because the way the market allocates resources based on ability to afford is highly inefficient and results in inequalities of ownership. Hence, he argues that the state should protect the urban poor from market failure and correct market imperfections by creating conditions and regulatory processes that guarantee the best allocation of scarce resources in society. Sidgwick argues that in the land market or housing market there is no perfect competition as these markets rarely operate within ideal conditions of perfect competition (Marlow, 1995; Arrow & Debreu, 1954). He argues that market failure is principally caused by the speculative behaviour of rent-seeking actors whose lack of cooperation and accountability creates housing affordability constraints in the market. Sidgwick also contends that market failure results from a monopoly of landownership, immature markets, externalities and imperfect information. This situation justifies the need for public intervention in the market to mediate, remedy or enhance cooperative behaviour among actors within the housing sector (Hertog, 2003; Mackaay, 1999; Hägg, 1997).

¹⁴ The 'dual city thesis' by Manuel Castells contends that the neo-liberal economic agenda has resulted in spatial and structural polarisation in urban areas that subsequently created different forms of housing provisions and insecure and low paid jobs (Holt-Jensen, 2008).

According to Sidgwick, the market is not the only mechanism that ensures optimal and efficient allocation of land and housing resources. Thus, legislative and administrative incentives or restraints on the speculative behaviour of market actors and unfair business practices are viewed as a regulatory instrument to correct imperfect competition, unbalanced market operation, immature markets and undesirable market outcomes (Hertog, 2003). The ideas advanced by Sidgwick help this study in the design of the mechanism that could deliver AURL for low-income housing. However, supporters of the market hold public intervention in the housing market in dim view, arguing that it only favours the interests of the urban poor, interferes with market mechanisms and inadvertently causes housing shortages and housing price inflation (Hantke-Domas, 2003; Peltzman, 1989). However, the negative and pessimistic view of regulation is contested by Becker (1986, 1983) who argues that even though public intervention brings unintended housing shortages and price hikes the government is justified to correct market failure. The argument Sidgwick advances justifies the role of the state in correcting market failure, particularly in the low-income segment of the market which consists of poor households who are experiencing the greatest relative deprivation. The relative deprivation this segment of the population experiences has important consequences associated with the invasion and 'clandestine subdivision' of urban land. A discussion of the theory of relative deprivation helps elucidate the processes that lead to insurgency and anarchist actions that the urban poor use to access land.

2.4.3 The Theory of Relative Deprivation

The theory of relative deprivation was expounded by Walter G. Runciman in 1966 to explain the causes of political and social discontent. Runciman asserts that people demand for distributive justice as a result of changes in their material condition relative to the circumstances of those with whom they compare themselves (Runciman, 1966). Thus, according to Deutsch (2000), Sweeny *et al* (1990) and Crosby (1976) a sense of injustice is aroused when individuals feel dissatisfied and resentful about the outcome of resource distribution when:

- there is a discrepancy between the outcome they want and what they receive,
- by comparison they see that another person has more than they have,
- past experience leads them to expect more than they have,
- future expectancies for achieving better outcomes are low,
- they really feel they deserved or are entitled to more, and
- they absolve themselves of personal responsibility for the lack of better outcomes.

Although Runciman defines relative deprivation as discussed above, his view of the theory excludes common-sense notions of envy, greed or lust (Webber, 2007). His argument inexorably connects issues of distributive justice to social concerns such as systemic poverty, racism, affirmative action and

social exclusion. Thus, the discontent that arises from relative deprivation is used to explain the seductive quality of risk-taking behaviour, the demand for equality and the energy and expressivity of land invasion and informal settlement.

One can therefore infer from a social deprivation perspective that societies in which resources are distributed unfairly could become quite susceptible to social unrest and instability which serves to limit growth, development and the well-being of individual members of society. No society can be just if it has different grades of citizenship where people of particular race, ethnicity or income group are subjected to arbitrary or unnecessary suffering, exploitation, abuse, oppression, prejudice and discrimination (Jost & Kay, 2010). In South Africa, for example, Apartheid created an elaborate system of differentiated citizenship where somebody's rank in the social, economic and political pecking order shows a strong tendency to easily access urban land and housing resources for persons who occupy a higher position.

The fact that persons who occupy low positions on the pecking order are denied opportunities to housing highlights symptoms of social injustice. In such a situation, redistribution of benefits relieves tension and bring stability in society. The theory of relative deprivation points out the symptoms of socio-economic deprivation but cannot highlight how resources, benefits and burdens could be distributed fairly to avoid equity discrepancy, social unrest and instability. This gap is covered by the theory of equity in an attempt to grapple with the challenge of how best to develop a fair and just distributive system. However, the arguments Runciman advances justify the role of the state in correcting market failure, particularly in the low-income segment of the market and helps elucidate the distinct nature of housing as both an economic good and a social good.

2.4.4 The Distinct Nature of Housing

Perhaps the root of the difference in views on liberalism, market failure and deprivation can be discerned in attitudes to the very nature of housing. Booth (1978) contends that residents perceived housing to be a symbol of social status, a place of refuge and expressive of territoriality that only a minority of households enjoy. Private and public housing developers on the other hand appear to regard housing in two rather different ways. In the public sector, housing provision is viewed as a service targeting certain quantifiable needs of the urban poor. In the private sector, however, the preoccupation is on providing a commodity that can be purchased, sold, changed and renewed like other goods on the market (*ibid*). Whether developers view housing as a commodity or a service, the fact still remains that it is exchanged in a market that segregates the urban poor. In an attempt to fend-off opposition to government intervention in the housing market, it is important to point out the characteristics of housing as a product that make it unique from other goods on the market. The

distinctive nature of housing makes it susceptible to market imperfections that price housing at levels unaffordable to low-income households.

Access to housing by low-income households is hindered by imperfections of the land and housing markets. The imperfections of the land market are influenced by unique characteristics of land; it is fixed in supply and location, price is determined by land-use, appreciate value in time and stores wealth. The imperfections of the housing market are influenced by traits of the housing product that impair the efficiency of the price mechanism of the market (Lansley, 1979). The characteristics of housing are discussed briefly to motivate for the need for public intervention. Housing is not a standardised product; it varies in size and number of rooms, age and physical condition, quality of building materials and amenities, location and tenure arrangements depending on the diverse needs of its inhabitants. As a result, the housing market in South African cities, as is the case elsewhere, is developing into a complex mosaic of diverse housing sub-markets. Thus, unlike many consumption goods, there is no homogenous housing market. As a result, it is difficult for the housing market to supply low-income housing at an output that matched demand.

Housing is a distinctively durable product that lasts much longer than other consumer goods. Although houses vary in construction quality, the average life span of an average house ranges between 60 years and 100 years or even longer if it is adequately maintained (Lansley, 1979). The fact that a house is also tied to land means that it often increases rather than depreciates in value over time. Thus, a house represents a means of storing wealth as a hedge against inflation.

Housing is a very expensive product that requires a huge capital outlay unlike other consumer goods. In most cases, it is difficult to purchase housing using household income or household savings because housing costs consume the largest portion of the budget of a low-income household (Stone, 1993). Thus, housing consumers largely rely on mortgage finance and their chance of securing a loan is closely tied to the availability of adequate and affordable housing finance in the finance market. Any increase in the cost of borrowing finance often make it difficult for low-income households to access the housing market. Hence, public intervention in the housing market is imperative to ameliorate the shortage of low-income housing.

The consumption of housing involves relatively high transaction cost unlike other consumer goods. For instance, the transaction costs that a person incurs when he buys, renovates and sells a house covers professional and advertising fees charged when purchasing and selling a house, planning inspection fees, and emotional and spiritual attachment to the house and neighbourhood. The price of the house and these additional costs slows down the response of housing consumers to changes in market conditions (Lansley, 1979).

The inelasticity of supply hinders the proper functioning of the housing market. The supply of housing responds slowly to changes in the determinants of demand (Lansley, 1979). Housing production time is far longer than that for most other consumer goods due to a lengthy design process, delays in obtaining approvals and complexities of layout and building form that extends the duration of completing projects (Booth, 1978). This upsets the equilibrium in the market especially in situations where the overall demand for low-income housing keep on growing. Thus, a key reason for public intervention in low-income housing delivery is largely to ensure that available resources are directed to increase the supply of housing rather than increasing rents or land prices (Hills, 2001).

Housing is a product that is purchased as a complete dwelling unit, not as a 'shopping basket' of separately selected items – rooms, facilities, amenities, location – in the way that food and clothing are purchased. This makes housing acquisition a unique experience for any household. Unlike food that is perishable, housing is not purchased anew regularly and frequently and once a household occupies a particular dwelling it is hard to alter the amount and type of housing services consumed (Stone, 1993). The bulkiness of housing, its immobility and attachment to land means that when people obtain housing they are not just purchasing the services of the dwelling, but the advantages and disadvantages of the location such as its physical characteristics, neighbours, accessibility, municipal services and so forth.

The attributes of housing discussed above make it a unique and complex product and process that is susceptible to market imperfections more than any consumer good. As a result, the housing market is susceptible to failure, which justifies government intervention as argued by the theory of market failure. However, the state is limited in its capacity to intervene and deliver low-income housing opportunities. The government often fails to address the supply-side and demand-side challenges of the low-income housing market to broaden locational choice, comfort, convenience and safety of low-income households (Grigsby & Bourassa, 2004). Choice is, however, far more restricted in the housing market than in other consumer markets; consumers get less variations in different price levels in choosing a house than they would in choosing a car. Moreover location is often critical for intending purchasers and the problem of finding adequate housing in a strategic location at an affordable price often results in there being no choice at all. Therefore, low-income households react to inequitable allocation of housing by abandoning the market in preference of alternative mechanisms of allocation.

2.5 Confronting the Market System

The system that is used to allocate urban land and housing in the market based on the ability to afford is challenged by the urban poor because it alienates them from opportunities to access urban land. Strategies that have been proposed by most governments so far focus on supply-side issues that

contribute to the shortage of AURL, but they pay little attention to demand-side issues and practical solutions that could enable the urban poor to access land and housing without support. Out of frustration, the urban poor are forced to access urban land through ways that are outside the market or the law.

2.5.1 Individual Reactions to Unjust Distribution

Stacy J. Adams (1963) contends that under inequitable housing conditions individuals experience distress that motivates them to restore equity by 'acquiring' residential plots through invading land and building their own housing using household resources, technologies and building materials they can afford. She also contends that these individuals, as a result, challenge the official view of housing as a physical structure with the counterview of housing as a symbol of its function. The reactions of the urban poor are intended to restore psychological equity and actual equity; their actions are motivated from a variety of perspectives informed by being in a position where they feel alienated, experience differentiated citizenship and lack the 'right to the city'.

Adams is of the view that the urban poor feel alienated from the land market because of their limited ability to afford. She contends that their lack of access to land and housing leaves them marginalised, isolated and without a sense of attachment and belonging to a particular place (Seeman, 1959). The Oxford English Dictionary defines the state of 'alienation' as resulting from 'the action of estranging; the action of taking anything from its owner; the state of being held by other than the proper owner' (Aarts *et al*, 2014). Carl Marx (1842) contends that the urban poor feel alienated from the means of production and their demand for equitable resource allocation is intended to alleviate deprivations, deficiencies and losses they face in the market (Finifter, 1972). This study addresses the concerns of the urban poor who are alienated from the market by developing a pricing mechanism that could deliver AURL in strategic locations.

According to Marx, exploitation of labourers in the production system leaves them in a state of 'powerlessness', which promotes class struggle, poverty and segregation in society (Mouton, 1996; Brown, 1986; Finifter, 1972). Adam Smith and Alexander Rüstow refute that the market exploits poor labourers, yet they fail to explain why the market offers low wages and poor working conditions that enslave the majority of labourers. Supporters of the ideas of Smith and Rüstow argue that benefits from production are shared in proportion to the level of individual contribution. However, Marx refutes this argument pointing out that the majority of labourers who contribute more to the actual production process are paid less and at a diminishing marginal return to labour input and disproportionately to the benefits employers receive. According to Marx, the urban poor feel frustrated because of the discrepancy between the *de jure* ownership of land they may expect and

the *de facto* ownership they have. As a result, Seeman (1959) argues that the urban poor experience their alienation from land and housing markets because of the nature of their alienation and its intensity. Seeman contends that the urban poor's expectancy for control of land resources shapes their judgment of this situation against some moral standard of fairness. He concludes that their limited affordability puts them in a state of 'powerlessness' in which they cannot access housing on the market.

According to Seeman (1959) and Stroup (1961) the state of 'powerlessness' eventually leads to 'normlessness' where the perception that socially unacceptable behaviour is necessary for the urban poor to access land and housing resources. According to Merton (1949), the alienated make 'adaptations' to methods of land acquisition that deviated from the accepted process of land acquisition. Stroup contends that the market system prescribes ways of exchanging land and housing resources that are not congruent with the urban poor's level of affordability. In such a situation, Merton argues, normlessness becomes the norm and lends cultural legitimacy to land invasion and informal settlement such that they are typically preferred to institutionally prescribed methods of land acquisition and settlement establishment. Holston (2009) argues that the use of anarchist or insurgency methods to gain access to land and housing are staged by the urban poor as a declaration of citizenship and a claim of the 'right to the city'. To prevent anarchist ways of land acquisition and housing development, this study seeks to develop a mechanism of pricing urban land based on a benchmark of the income of poor households to unlock the delivery of AURL.

2.5.1.1 Insurgency Citizenship

Since colonisation in African, Latin America and South-east Asia, the urban poor who constitute the majority challenge the official view of 'citizenship' on the basis that historical land claims and restitution of their land rights are not considered in the multifarious ways through which citizenship is formulated, understood and experienced (Koh, 2015; Staeheli, 2011; Shapiro, 2000). Their conception of citizenship is supported in literature and discussed in relation to the three interrelated concepts of identity, membership and rights (Koh, 2015).

Isin and Turner (2002) define citizenship as a membership with boundaries based on race, ethnicity, gender, occupation and level of education that specifies who is included or excluded. Citizenship as a membership with boundaries constitutes what Holston (2009) refers to as 'differentiated citizenship'. Holston notes that the regime of 'differentiated citizenship' is formulated using these social qualifications to organise and regulate the distribution of inequalities and political rights. 'Differentiated citizenship' creates a gradation of rights in which most rights are available to and exercised only as the privilege of particular citizens of particular social categories. This system is

universally inclusive in membership but exclusive in the way rights to urban land, housing and economic opportunities are granted. Hence, Staeheli *et al* (2012) contends that this system of 'differentiated citizenship' grants the urban poor a legal-political status devoid of rights and entitlements to access land and housing opportunities on unequal terms. Hence, Koh (2015), Bauder (2014), Leuchter (2014) and Ho (2009) agree with Staeheli that citizenship is never granted, but is a lived experience, understood, enacted and claimed by people through social practices and political action as they pursue afforded opportunities.

'Differentiated citizenship' has created segregated cities that render the urban poor as second class citizens. Hence, the 'segregated city' becomes a battle ground between forces of exploitation and the urban poor who try to organise and protect themselves from market forces, exploitation and domination. In this tussle, the urban poor claim their right to AURL through actions that Holston (2009) refers to as 'insurgent citizenship'. He argues that the urban poor are in conflict with the market as the principle of equity collides with prejudice over the market mechanism that is used to price and distribute urban land, housing and economic opportunities. Moyo (2000) is of the view that the market has denied the urban poor the right to land and housing, an observation validated by the shortage of AURL and low-income housing. Informal settlements are proof that the urban poor are physically contesting their exclusion from the market by confronting the unfair process of land allocation and claiming an alternative formulation of citizenship based on equality of opportunity. In making this point, Moyo believes the urban poor are demanding a democratic and fair distribution of landholding. It is the researcher's personal opinion that the government is leading from behind and failing to deliver AURL for low-income housing. Hence, this study proposes a mechanism of pricing urban land that could deliver AURL in strategic areas and reverse the growth of informal settlement.

The actions of the urban poor that are driven by insurgency such as land invasion and informal settlement advances their claim of citizenship that empowers the right to 'self-help' housing. According to Holston (2009) these processes constitute an urban citizenship concerned with granting the urban poor the 'right to the city' through the delivery of AURL and reticulated infrastructure services for low-income housing. The protection from arbitrary eviction that is secured through tenure regularisation further enhances the 'right to the city' for low-income households. After considering all these formulations, Isin and Turner (2002) concludes that citizenship is the depth of identity and belonging expressed by the urban poor through their claim to the 'right to the city'.

2.5.1.2 Demanding the 'Right to the City'

The concept 'right to the city' was coined by Henri Lefebvre (1967) in his incitement to change the urban environment by renewing the right to urban life (Harvey, 2013; Holston, 2009). The ideas of

Lefebvre advances in his claim for the 'right to the city' are crucial for this study to understand why the urban poor demand access to AURL as a way to establish a footing in the city. The demand for the 'right to the city' by the urban poor motivates this study to model a mechanism that could deliver AURL and help the urban poor establish a permanent presence in the city. Lefebvre understands the 'right to the city' as a claim by the working-class to a presence in the city that legitimates their appropriation of urban spaces and their refusal to be excluded from the city. Lefebvre understands this right as ultimately formulated on a working-class notion of needs that articulates a specific set of claims, powers and obligations that are not sanctioned in law.

The 'right to the city' that Lefebvre asserts is both a 'cry for help' and a demand for sustenance by the urban poor in desperate circumstances (Harvey, 2013). The 'cry' is a response to the despair that flows from the glum desperation of marginalisation, lack of shelter, increasing unemployment, gentrification and displacement, criminalisation of the poor and neglect in the soulless townships that eventually become sites of roiling unrest (*ibid*). The struggle for access to AURL exposes the failure of the ULM to keep pace with the 'urban revolution' that has overwhelmed primarily cities of South Africa such as Johannesburg, Cape Town and Durban since Lefebvre wrote. As a result, an insurgent notion of the 'right to the city' emerges among the urban poor who claim their right to housing by appropriating urban land through invasion and encroachment and demanding tenure regularisation. The urban poor articulate this seizure as a way to actualise the right to inhabit the city. Such actions by the urban poor convinced Harvey (2008) that their demand for the 'right to the city' demonstrates the need to democratise the distribution of land and housing resources. In a similar vein, Marcuse (2009) views the demand for the 'right to the city' as a class struggle to psychologically and physically assert the reinvention of the city to suit people's aspirations. In this regard, Marcuse (2009) and Iveson (2013) are of the view that the alienated urban poor asserts their 'right to the city' by taking an active role in the politics of urban transformation. These scholars concur with Lefebvre (1996) that the claim for the 'right to the city' reframes the decision-making process towards a radical form of empowerment that furthers the interests of all urban residents.

The legacy of Lefebvre inspires the formation of powerful urban social movements that are reportedly active in dozens of cities around the world. The urban social movements that are particularly linked to housing, such as housing federations, invest significant political energy to promote and protect the urban poor's right to housing and articulate the reasons behind the notion of 'insurgent citizenship' (Harvey, 2013). All these movements are birthed from the strange collision of ideas behind neo-liberalism and democratisation of resource allocation that this study uses to challenge mainstream ideas on the allocation of urban land in the market that hinder the delivery of AURL for low-income housing. Through these social movements the urban poor are expressing their frustration with limited

access to AURL in the market and justify why they resort to anarchist strategies of land invasion and construction to access housing.

2.5.1.3 Embracing Anarchism

According to Sebastien Faure (1934), the urban poor become ‘anarchists’ as they ‘fight’ against authority to address persistent inequalities in society. Anarchism offers the urban poor a platform through which they express discontent with their lack of access to AURL for low-income housing. The anarchist approaches they use to ‘acquire’ urban land and build shelter are in violation or ignorant of the law (Hirshleifer, 1995; Mercer, 1995; Milner, 1991; Woodcock, 1962). Anarchism allows the urban poor to freely express their criticism of existing mechanisms of land allocation that are used by the rich minority to dominate, exploit and enslave the urban poor majority (Woodcock, 1962).

According to Woodcock (1962) proponents of the idea of anarchism are of the view that ‘clandestine acquisition’ of urban land through invasion and ‘quiet encroachment’ ultimately lead to a democratic distribution of urban land. Moyo (2000) considers such spontaneous and non-violent methods of accessing land as a physical expression of the urban poor’s frustration with the inability of the market to deliver AURL. Proudhon (1840) refers to such anarchist behaviour as the associative tendencies of people in similarly deprived circumstances. He justifies the actions of the urban poor as a fair, just and relevant demand for equality that offers some form of restitution considering that private landholding is a result of a form of ‘theft’ by the rich minority. He further argues that no matter how benevolent the intentions of allocating land in the market were, they fail to create the conditions under which the poor can gain access to AURL. Hence, the urban poor can only establish a presence on the land ‘acquired’ through land invasion by building their own housing without state approval and support. This ‘self-help’ housing approach adopted by the urban poor motivates this study to model a land delivery mechanism that supports ‘self-help’ through the delivery of AURL.

2.5.1.4 Informal Settlement by the Urban Poor

The anarchist methods of land ‘acquisition’ discussed above are conducted without an agreement of sale with the landowner or permission to occupy the land from the government (Srinivas, 2005; Pugh, 2000). Most of the urban land that is ‘acquired’ and occupied without permits also fails to meet legally-specified regulations of land subdivision and zoning. As a result, the settlements the urban poor establish in violation of these regulations are cramped together and constructed at exceptionally high density with irregular layouts and no privacy or room for circulatory movements (UN-Habitat, 2003a). The lack of security of tenure denies residents of informal settlements the opportunity to ‘unlock’ potential wealth embedded in housing through the use of land as collateral (Woodruff, 2001; de Soto, 2000; Mayo *et al*, 1986). Unfortunately, the ‘clandestine subdivision’ and occupation of urban land

without any legal claims to the land parcel on which the settlement is built exposes the housing to a very high risk of demolition by local authorities (Srinivas, 2005; Durand-Lasserve & Royston, 2002).

The high level of uncertainty associated with the risk of demolition presents residents of informal settlements with no incentives to invest in the physical structure of their housing (Handzic, 2009). As a result, the dwellings the inhabitants build cannot adequately protect them from weather elements or provide physical security (Bratt *et al*, 2006) or connect them to reticulated drinking water, sewerage and electricity (Davis 2006; Lai, 1995). The urban poor minimise the risk of financial loss by building impermanent structures that are easy to disassemble in the event that they have to relocate to some other place. Hence, the urban poor personally build their dwellings using unconventional building techniques and cheap poor quality construction materials such as crude brick, cardboard, recycled plastic, scrap metal and scrap wood that local authorities consider to be sub-standard (Wekesa *et al*, 2011; Davis 2006).

Informal settlements cannot exist if the supply of AURL is efficient and equitable (Adler, 1995). Hardoy and Satterthwaite (1989) and Murphy (1993) argue that the shortage of AURL is a stumbling block in the development of low-income housing. Any attempt at regularisation of land tenure becomes a very controversial issue in South Africa, particularly in settlements that are established through land invasion and 'clandestine subdivisions'. Considering the scale of informal settlement in the last 20 years, one cannot be faulted for expecting the government to effectively promote 'aided self-help' housing through the allocation of AURL to the urban poor. Instead the state opts to promote 'self-help' housing through the delivery of serviced sites without taking into consideration that prime urban land in strategic locations is priced beyond what the urban poor or the state can afford. The government has failed to align land prices with the inconsistent incomes of the urban poor. Even though the government and multilateral agencies provide financial loans to assist these households purchase serviced sites, such support has failed to deliver AURL and enable the incremental housing process (Bredenoord & van Lindert, 2010). Such failure can be attributed to the decision by the state and donor agencies to limit financial support for land acquisition due to fiscal challenges and the need to reduce the risk of loan default (UN-Habitat, 2005a; Pugh, 2001; Harris, 1998). While the delivery of AURL is recognised as important, it is not seen as an essential precondition of successful incremental housing development where urban residential land is delivered at a price within the budget of a low-income household.

The limited financial support cannot spread the benefits of access to AURL widely and thinly to cover the huge number of the urban poor who need housing support (Adebayo, 2012). Thus, donor agencies encourage self-sufficiency among the urban poor if incremental, 'self-managed' construction is to

deliver low-income housing at minimal cost or without the use of subsidies (Bredenoord & van Lindert, 2010; Sengupta, 2010; Davis, 2006; Pugh, 2000, 1994; Harris, 1998; Seabrook, 1996). The World Bank argued that the loans had to be financially viable and affordable for beneficiaries to repay loans and for lenders to recover the loans to allow replication (Bredenoord & van Lindert, 2010; Pugh, 2000). Inadvertently, this lending strategy effectively priced the urban poor out of the market for 'self-help' loans (Datta & Jones, 1999). However, the urban poor mobilise and organise themselves to form community-based organisations through which they pool financial and human resources to build formal housing without state or donor support. The funds they pool from individual household contributions are used to initiate the incremental housing process that starts with land regularisation and carries on with planning, design and construction of communal infrastructure services and housing in accordance with standards of settlement establishment (Joshi & Khan, 2010; Sirivardana & Lankatilleke, 1988). However, such incremental housing construction without subsidy support can only succeed if AURL is delivered at scale to the urban poor. Hence, this study proposes a mechanism, mentioned earlier, that could deliver AURL for low-income housing.

The research uses the key arguments and ideas expressed by various scholars to formulate the motivation for the proposed pricing mechanism that could deliver AURL to the urban poor. The key arguments that various scholars express to justify the insurgent, anarchist and 'self-help' strategies the urban poor use to access urban residential land are supported by theories of Democracy, Relative Deprivation, Equity, Utilitarianism, Communitarianism and 'Cooperative' Game. The arguments of these scholars express the need to democratise the market system and allow the majority to decide and formulate democratic land and housing policies that deliver AURL for low-income housing.

2.6 Democratising the Market System

2.6.1 The Theory of Democracy

The theory of democracy was propounded by Crawford B. Macpherson in 1973 as a critique of the way the market is formulated on the assumptions of private ownership and maximisation of individual satisfaction. He criticises the way the market operates and distorts the democratic allocation of resources to all members of society. He is of the view that all members of society have a 'right not to be excluded' from owning fixed-property. He suggests that in a democratic society, there is every possibility to share resources in pursuit of equity and to maximise individual satisfaction. He believes that the urban land crisis could be resolved if collective interests replace individual interests in land and land-related resources. In other words he argues that private ownership of most of the land by a few corporates and rich individuals should be redistributed to achieve private ownership by the

majority who are poor. The argument that he advances is that democracy is consistent with freedom, natural justice, and access to economic and housing opportunities.

In the particular case of South Africa, his views on resource allocation are, unfortunately, at odds with the system of land allocation. In a democracy, the views of the majority are the ones that matter even if they are only concerned with what is produced, by whom, and by what means. Regrettably, the desires of the majority, who unfortunately are poor, are not reflected in decisions on the ownership and control of land and land-related resources, therefore, their access to land and housing resources is curtailed. The will of the minority is nonetheless coercive and is imposed on the 'real will of the majority' by the dictatorship of big-business and monopoly landowners. The best outcome one could hope for is not a complete resolution of the land crisis, but rather a correct balance between the competing land right claims of the majority natives who are predominantly poor and monopoly landowning corporates.

In response to some of these specific shortcomings the theory of democracy was modified by Raymond Aron in 1972 to advance the idea that democratic allocation of resources should be based on the notion of 'rights as claims' as opposed to 'rights as liberties'. Aron is not worried about whether a right to housing and protection from eviction should be incorporated into legislation, but is concerned about whether it should be considered a basic or fundamental right that should be considered a normative foundation for the constitution (Balibar, 2008). He anticipates that the democratic allocation of land resources can, in theory, lead to equitable distribution of housing resources. He argues that the urban poor remain disenfranchised and unable to sustain social welfare and therefore challenge the market system that keeps them in a state of relative deprivation. Thus, governments everywhere often fail to maintain social stability as the urban poor demand a fair allocation of resources. The notion of 'rights as claims' arises out of the need for distributive justice. Unfortunately, the theory of democracy cannot explain why the majority are not in possession of most of the land or in control of the system of land allocation, but remain under the tyranny of a minority. A discussion of the theory of relative deprivation helps elucidate the processes that lead to insurgency and anarchist actions that the urban poor use to access land.

2.6.2 The Theory of Equity

The theory of equity was propounded by John S. Adams in 1963 to advocate for fairness in the distribution of resources and opportunities essential for human development among different individuals and groups in accordance with some allocation principle, procedure, norms and rules (Jost & Kay, 2010). Adams' demand for equity arises from the relative deprivation in the allocation of resources and opportunities that the majority in society experience. He argues that the standard for

a just apportionment is equality in the distribution of land that can allocate land parcels of the same size to all beneficiaries and rectification that can restore land rights of the dispossessed to the position they were in before the infringement. However, Adams contends that acts of redistribution or restitution should be proportional and 'law-abiding' to prevent acts of vengeance or 'vigilante justice' (Deutsch, 1975; Lerner, 1974). He opposes acts of self-interest that place communal interests at a disadvantage. He argues that 'justice for oneself' and 'justice for the other' should be evenly balanced. Although he equates justice with action taken to achieve social equity in a law-abiding manner, he recognises that the degree of impartiality required by the law leads to pervasive outcomes if particular circumstances are ignored (Jost & Kay, 2010). Hence, Adams is of the view that rational individuals who act under a 'veil of ignorance' and violate the law to achieve equity in distribution are justified to do so if the laws of the state are unjust (Frankena, 1962). For example, the urban poor build informal settlements not as a strategy to mask anarchism, but are making a rational response to a shortage of AURL and low-income housing on the market.

Adams' idea of allocating resources based on the principle of equality is criticised by John Rawls (1971), Melvin J. Lerner (1974), Robert Nozick (1974) and Morton Deutsch (1975) on the basis that equity is not the only principle of distributive justice. They criticise the norm of equal allocation arguing that it is difficult to achieve perfect equality. They argue that if the equality principle is adopted in distributing resources among all persons, each person would get an equal amount of the resources. However, the problem of fairness arises as individuals with significant differences in needs receive an equal share, which results in an unequal distributive outcome. A general principle of distributive justice stipulates that in the allocation of benefits and burdens, people who are equal in relevant ways should receive equal benefits and burdens, and people who are unequal in relevant ways should receive benefits and burdens in proportion to their inequality. In other words, if household income is used as a benchmark for resource allocation all persons would be rewarded in proportion of their income, but it would become unjust for persons with unequal income to be treated equally or persons with the same income to be treated unequally. Hence, scholars subsequently modified Adams' ideas, arguing that only equality, equity or fair exchange, fair allocation in proportion to needs, fair procedures of exchange and just compensation should be the primary principles of justice guiding distribution that most effectively help society to reach a fair distribution of resources.

The principle of equity or fair exchange was advanced by Lerner in 1974 and if it is adopted in distributing resources among all persons, each person would get a share that is in proportion to the individual's contribution to production. A person who makes a greater contribution to production would receive a greater share irrespective of needs. This consideration raises two problems: it does not match resources allocated to satisfy current needs and also reinforces and perpetuates inequality

within society. The rich who arguably make limited labour contribution to the production process always receive the greatest share of benefits while the poor who make the greatest labour contribution receive less. Lerner is not really bothered that some have less than others but that some have less than what is necessary to meet their basic needs (Frankfurt, 1987). However, Deutsch (1975) disagrees with the notion of distributing resources purely based on equity arguing that it would cause social disharmony. He argues that the equity principle should be emphasised only in situations in which economic productivity is the main goal.

The principle of fair allocation in proportion to needs propounded by Lerner (1974) argues that a combination of the norms of equality and needs in the allocation of resource appear far more appropriate to achieve distributive justice. If the principle of fair allocation in proportion to needs is applied in the distribution of resources among all persons, each person would get an amount of the resources according to basic and essential needs of the person (Maiese, 2003b). In this case an equal distributive outcome would result as a person with greater needs would receive more. However, this consideration raises a problem of production-allocation mismatch by ignoring differences in effort contributed during production. It also raises a problem of distinguishing between real needs and manifested needs. Despite these shortcomings, Burke (1981) underscores the importance of looking beyond existing needs to what is causing the need. She argues that inequality in the distribution of resources results from particular social and economic structures.

The principle of fair procedures of exchange propounded by John Rawls in 1971 and Robert Nozick in 1974 puts more emphasis on the procedure of distribution, the resultant outcomes and the pattern of the distribution mechanism (Jost & Kay, 2010). They contend that what matters are the rules followed in determining that distribution. They also argue that in a society where rational individuals have conflicting or competing interests, people tend to rely on formal rules to arrive at the fairest allocation of resources. Nozick insists that the aim of distributive justice is not to achieve any particular outcome of distribution, but rather to ensure a fair process of exchange. He argues that if the principle of fair procedures of exchange is applied in the distribution of resources, actors involved in the exchange and allocation of the resource are more concerned with the fairness of the mechanisms or procedures used (Cook & Hegtvedt, 1983). Despite what might be perceived as a fair or just distribution of outcomes, the procedures by which the distribution is arrived at could be defined as unjust or illegitimate. Conversely, what participants consider a fair and unbiased procedure could result in a distribution of outcomes that some would consider inequitable or unjust. Some scholars are mindful that an unjust procedure in the distribution of resources could result in fair outcomes just as a fair procedure could produce unjust outcomes. However, other scholars contend that both process and outcome matter in any consideration for distributive justice, arguing that the processes

of distribution must be fair in order for people to feel that they have received a fair outcome (Maiese, 2003). However, what actually constitutes a fair share and who deserves what share remains very contentious in most societies that are internally divided.

The principle of just compensation was propounded by Morton Deutsch in 1975 who argues that in the distribution of resources actors are sometimes concerned with the fairness of the level of compensation for victimisation (Cook & Hegtvedt, 1983). Hogan and Emler (1981) argue that retribution is the most fundamental principle of social life as it tries to match the allocated punishments with the crime. Therefore, the victims who seek just compensation pose some very serious questions on whether the land policy is just or fair when it requires the dispossessed to pay compensation to the dispossessor to reclaim possession of their land. Rawls argues that what makes a distribution just is the final outcome that allocates resources more fairly and to the advantage of everyone.

All the five principles of distributive justice have considerable limitations and are often in tension with one another. Regardless of which principle of distribution is adopted, Rawls argues the outcome can be considered unfair or unjust if it fails to improve the housing conditions of the poorest members of society. Rawls makes this argument in support of public intervention in resource allocation, arguing that such intervention is a political obligation that, through the coercive use of state power, can create a condition of perfect equality. Hence, the following section focuses on the theory of utilitarianism that proposes to resolve unfair distribution of resources to maximise the well-being of the majority in society.

2.6.3 The Theory of Utilitarianism

The theory of utilitarianism was propounded by John S. Mill in 1973 under the assumption that the most just outcome or procedure of distribution is whatever results in the greatest well-being of the majority. He argues that the distribution of resources should achieve social and economic equality; reduce the lack of the poor without impoverishing the rich (Campbell, 2001). In this case, Mill is of the view that the interests of the majority should transcend individual interest by tacking action that sacrifices individual interests to preserve the interests of the majority. He criticises the liberal view that only the individual can define personal interest, arguing that the liberal view implies that the government cannot be guaranteed to always act in the interest of the majority of its citizens (Campbell & Marshall, 2002). Therefore, Mill argues that public intervention and regulation is necessary to mediate between various different individual interests and protect the interests of the majority. He is of the opinion that it is wise for the state to persuade and coerce the individual to act in the interest of the majority, because individuals always prefer to act in accordance to self-regarding interest if

their behaviour is not regulated. Mill expects the state to regulate certain practices and activities for the benefit of the majority of people even when such regulation fails to conform to common practices or trends (Cunningham, 2002).

Supporters of utilitarianism are of the view that economic systems should reduce resource inequality between the rich and the poor that often results in class warfare or hostile relations. For instance, these supporters argue that resource inequality could be reduced by promoting greater equality of income. They also argue that certain goods are of less value to someone who already owns a lot of these goods, than to those who have few of such goods. For instance, one extra dollar means much less to a millionaire than to a beggar; a beggar derives more happiness with an extra dollar in his purse than the millionaire. Based on this premise, one can argue that the loss of happiness of the rich is much smaller than the gain of happiness of the poor, if some reasonable amount of goods are taken from the rich and given to the poor. This argument suggests that redistribution of resources based on principles of rights, equality and human dignity increases general access to resources by the urban poor. Hence, the luxuries enjoyed by the rich are much less important to their well-being than the necessities that can be enjoyed by the poor if that wealth is shared.

The theory of utilitarianism is criticised for not highlighting what the ideal rights are that maximise access to resources (Cunningham, 2002). However, to relate this principle to housing, this study argues that the maximisation of the utility households derive from access to land and housing is morally important and is a means of climbing the property ladder. It is indeed desirable for the state to intervene in the land market and deliver AURL for low-income housing, provided such intervention would not as a consequence decrease the housing conditions of anybody else or result in a situation where losses are greater than gains. In this regard, access to AURL minimises the shortage of low-income housing by guaranteeing the right to adequate shelter. The right to adequate shelter requires the redistribution of AURL in a way that supports 'self-help' housing by the urban majority who are poor. However, the utilitarian theory fails to indicate how members of society can cooperate to redistribute urban land and housing resources to those who face housing affordability challenges, but this gap is covered by the theories of communitarianism and cooperative game.

2.6.4 The Theory of Communitarianism

The humanitarian movement which seeks to provide housing for-all-by-all has its roots deeply embedded in communitarianism. This theory postulates that an awareness of social disparities growing out of economic inequality and racial discrimination has seen the national government bear responsibility for tending to those of limited means (Bennett, 1998). This theory challenges society to protect the urban poor against the excesses of the market by supporting them to gain access to shelter

(Marshall, 1948). Communitarianism informs government's social duty to fund low-income housing for those who cannot afford to buy or rent shelter at open-market rates.

This influence is evident in the post-war years in Europe, from 1945-1975 when social balance and social justice in society had to be achieved through social reconstruction and redistribution of housing after most houses were completely destroyed or damaged by war, leaving most people without shelter. However, by 1980, the social redistributive paradigm of the post-war years had mostly lost its credibility as the focus of housing strategies shifted from public intervention to market enablement. Hence, the spotlight increasingly focused on reducing public financial support for low-income housing in favour of market-based solutions. This presents a new challenge that Communitarianism never anticipated. This theory only acknowledges the roots of public housing, but fails to give a theoretical framework to analyse how the poor can gain access to land and housing resources in a market-led housing sector. Communitarianism fails to indicate what mechanisms can deliver low-income housing in strategic locations of the city. Besides people in a community do not often cooperate for mutual gain, but rather compete trying to outmanoeuvre their opponents. Such competition often leads to win-lose or lose-lose outcomes. In the end, their losses are greater than if they cooperated. To cover this theoretical gap, this research uses the theory of cooperative game as the foundation on which the landowner and land invaders could bargain and collaborate for mutual benefit to avail more AURL for low-income housing without unsettling the ULM.

2.6.5 The theory of Cooperative Game

The theory of cooperative game was propounded by John Nash in 1953 to provide major insight into pioneering game theory propounded by von Neumann and Morgenstern in 1944. Game theory lays the foundation for precise and sensible mathematical forecasting of real real-estate trends and how consumers determine the strategies and make choices that are necessary to achieve the maximum possible utility or the highest payoff from the ownership or sale of goods and services. The results of a person's choices with regard to the price of goods and services determines the person's ability to achieve their desired utility in a way that is inevitably intertwined with the choices of the others. Hence, the theory merges the ideas of utility (a measure of value or what a person wants) and strategy (how to get what that person wants). These ideas lay the foundation for game theory but the proposition by Nash (1950) known as the 'Bargaining Problem' revolutionised game theory and brought it to prominence in economic analysis.

Von Neumann and Morgenstern postulate that in a zero-sum two-person transaction for fixed-property, individuals adopt a strategy that maximise their gain and minimise their loss. However, Nash argues that a zero-sum two-person game cannot give a fair result to the loser. Instead, he argues that

unlike the two-person zero-sum game, in which the loser loses what the winner wins, the ‘bargaining problem’ can best serve both parties if they compromise to reach a win-win solution. Nash argues that the goal is for all players to do the best they can, but not necessarily at the expense of the others. A two-person bargaining situation involves two individuals who share some common concerns and have the opportunity to collaborate for mutual benefit in more than one way. In a bad bargain, one player takes no action without the consent of the other player, which can affect the well-being of the other player. In a good bargain, both players achieve mutual benefit, but the dilemma is to find which way maximises the benefit or utility for both players.

When bargaining over a possible exchange of interests or rights in land and land-related resources, the two players (current and potential users) assess the values of the profitability or utility derived from its use differently. To the speculative landowner, a commercial land-use seems more valuable (derive more profit) than (low-income) residential land-use, while the land-seeker ranks the utility of the land as more valuable (for it provides personal fulfilment, access to community and facilitates livelihoods). Nash shows how to consider such valuations and compute each player’s gain in utility for various exchanges and provides a mathematical map for finding the equilibrium point that gives maximum utility to both players. When equilibrium is reached in a game, nobody has any incentive to change strategies since all the players are satisfied with the strategy they have adopted, for no other strategy would do better (as long as nobody else changes strategies). The theory is useful as it guides the bargaining process to determine the value of land occupied by informal settlements. The bargaining process is aided by the pricing mechanism that could deliver AURL. The bargaining process averts major challenges in the negotiation for an affordable price for land occupied by informal settlements. The study contends that the bargaining solution proposed by Nash could work if a new pricing mechanism for urban land is formulated and strengthened by zoning regulations and land taxation instruments.

2.7 Financial Mechanism for Delivering Affordable Urban Land

This study criticises, on the one hand, the way the ULM excludes those who cannot afford from accessing land in strategic locations while on the other hand, it cannot embrace the anarchists and extra-legal mechanisms the urban poor use to gain access to urban land for housing. Instead, the research proposes a mechanism that could deliver AURL for low-income housing. This mechanism is designed to avert major challenges in reconciling the interests of the landowner with those of land invaders and simultaneously, in theory, deliver AURL at scale for low-income housing. The conceptual and theoretical framework discussed above lays the groundwork for this mechanism as it combines two antagonistic paradigms of neo-liberalism and social redistribution that guide, respectively, the operations of the ULM and advocate for equitable ownership of urban land resources in an attempt

to address a dysfunctional ULM that appears to limit access to AURL for the majority poor. The envisaged model could guide public sector involvement in the ULM by evaluating the mechanisms through which urban land is supplied, valued, financed and sold for housing development. The pricing mechanism could guide negotiations for land exchange in green-field sites earmarked for low-income housing that landowners are reluctant to release on the market for speculative reasons. The envisaged model seeks to create a mix of housing tenure options where the dominant tenure is determined by the location of the planning site in the city. This mechanism could deliver AURL at scale in South African cities where the debate on the shortage of AURL has been on-going for more than two decades without devising a strategy to resolve the problem.

2.8 Determinants of Housing Affordability

The ability of a household to pay for housing is affected by two factors that are concerned with the cost of features of the house and the socio-economic character of the target household (Kamete, 2001). The cost of features of the house that affects affordability include the sum of the cost of land, infrastructure and construction, plus the cost of finance if a housing loan is used (Al-Abed, 2014; Kamete, 2001; Renaud, 1987). The cost of land is considerably dependent upon location in relation to its proximity to centres of employment and commerce, amenities and recreation (Kamete, 2001). The cost of land is also dependent on the attractiveness of the plot in terms of its accessibility to arterial routes of transport, safety, aesthetics and physical condition (*ibid*). The cost of reticulated infrastructure services per unit depends upon layout efficiency and plot size; a higher density of development drastically reduces the cost of reticulated infrastructure services per unit. Large plot sizes reduce layout efficiency as they cost more to develop than smaller plots.

The socio-economic circumstances of the target households affect housing affordability in two ways. The social character of the target households determines their willingness to pay, whereas the economic character of the target households determines their ability to pay (Kamete, 2001). Kamete considers the economic character of the target households to be very important as it determines their ability to pay. The economic character of the household is determined by employment opportunities, level of occupation and incomes and expenditure patterns (*ibid*). Kamete (2001) considered the social character of the target households to be very important in determining, to a large extent, the behaviour and housing consumption patterns of the group. The social character of the target households is determined by household sizes, family structures, needs, customs, aspirations and priorities (*ibid*). However, the researcher is aware of an intricate network of influences between social and economic characteristics of low-income households and how each character affects the other.

There is a strong association between the social and economic characteristics of a low-income household. Poverty levels among these households tend to increase significantly in step with an increase in household size. Low-income households are nearly twice as likely as middle-income households to cut or skip meals or cannot afford food, half again as likely to miss rent or utility payments and twice as likely to lack health insurance or put off needed medical care as middle-income households due to financial hardship (Acs & Nichols, 2006). However, these households are more likely to have many members as a source of labour for the various livelihood survival strategies the household undertakes. The level of affordability is assessed using a combination of the measures that the study discusses in the following section.

2.9 Approaches to Measuring Housing Affordability

Meanings ascribed to the term affordability influence the approaches used for measurement. Different scholars ascribe different meanings to the term affordability based on the variables being considered. The majority of scholars widely view affordability as a comparison of monthly household income to monthly mortgage repayments and maintenance cost (Kamete, 2001). A large majority of these scholars believe that the proportion of household income spent on non-housing costs normally affects the resultant share of income available for housing (Whitehead *et al*, 2009; Sumka, 1987). Both these views that shape the income-expenditure approach are strongly based on the belief that effective-demand for housing or housing need backed by the ability to pay indicates the level of affordability (Kamete, 2001). Other scholars define housing affordability in relation to the location and quality of housing. Proponents of this approach place more emphasis on the qualitative dimensions of housing, arguing that they are a more accurate measure of affordability. In this study, both views are considered in the assessment of housing affordability with the intention to inform the mechanism the study proposes that could deliver AURL for low-income housing.

The income-expenditure approach uses two measures to assess the level of affordability. Firstly, this approach uses the ratio measure that is often expressed as a price-to-income ratio or rent-to-income ratio. Traditionally, an assessment of housing affordability that uses the ratio measure is based on a proportion of monthly household income to monthly housing costs. Generally, the ratio measure assumes that a household that pays above 30 per cent of its monthly household income for housing has an affordability problem and needs some type of housing assistance (Al-Abed, 2014; Mulliner *et al*, 2013; UN-HABITAT, 2011c; You, 2007; Kutty, 2005; Kamete, 2001; Freeman *et al*, 1997). UNCHS (2001b) is of the view that countries that experience particularly high house price-to-income ratios are typically those where land prices and construction costs are high.

Secondly, the income-expenditure approach uses the residual measure to reflect household spending priorities (Pendakur 2001; Miron 1984). The residual measure uses detailed household expenditure data to assess housing affordability (Luffman, 2006). Generally, the residual measure assumes that a household that spends a third of its income on housing would spend about a third of its income on food and the remaining third on clothing, education, health care, child care, transportation and other goods (Yang & Shen, 2008; Kutty, 2005). The measure assumes that a household that pays above 30 per cent of its monthly household income for housing struggles to meet basic non-housing needs and has an affordability problem (Stone, 1993). In other words, Stone argues that the maximum amount available to spend on housing is the disposable income of the household minus the cost of a minimum adequate level of non-housing consumption. If a household pays more for housing than the Consumer Price Index, it is shelter poor. This measure therefore focuses on the residual income that remains after housing costs have been met.

The income-based measures alluded to above are the most commonly used and internationally recognised methods of measuring housing affordability because they are easy to compute as they only rely on a few, usually easily accessible variables. Nevertheless, this simplicity is precisely what limits their effectiveness because they exclude a number of factors that affect housing affordability and the household situation. The shortfalls of these measures are associated with their over-reliance on income (Mattingly & Morrissey, 2014; Mulliner & Maliene, 2012). In particular, the ratio measure fails to account for differences in housing costs that are the result of the condition and location of housing and perceived higher neighbourhood quality (Bogdon & Can, 1997). The most notable flaw that Rakodi and Mutizwa-Mangiza (1989) highlight is that the ratio measure assumes homogeneity among low-income households and pays no attention to the socio-economic character of the target households and the cost of features of the house, which are discussed in section 2.7. In general, income-based measures fail to account for the trade-offs that households make to lower housing costs such as transportation, access to public services, health and safety. These measures also fail to recognise the trade-offs between low-income housing in the inner-city and the urban periphery; just because a household has a low-cost dwelling does not necessarily mean it is in a convenient location when trade-offs are considered. Hence, Rowley and Ong (2012) and Bogdon and Can (1997) note that housing affordability should consider housing quality and location trade-offs and additional monetary and socio-economic costs that may be imposed on households as a result of such trade-offs. As a result, Rakodi and Mutizwa-Mangiza (1989:26) suggest that affordability assessment should also consider the ability of households to mobilise their own resources, supplementary resources from the extended family and financial credit.

The qualitative measure of housing affordability is essentially concerned with the quality of housing and its appropriateness to the inhabitants (Fisher *et al*, 2009; Gabriel *et al*, 2005). The measure considers economic, environmental, spatial, social and physical health concerns of low-income households. Emphasis is placed on the locational value of urban residential land derived from its proximity to urban infrastructure services, transport, centres of employment and commercial markets, educational facilities, etc. Govender *et al* (2011) and Wekesa *et al* (2011) note that urban land and housing can be considered affordable if it is well-located and adequate in quality such that it facilitates access to housing opportunities by the urban poor. Bratt *et al* (2006) claims that where the urban poor reside plays a critical role in fixing their position in the city and in society. Low-income housing built in strategic locations acts as a platform for dignity and self-respect, a base for hope and improvement. According to Dewar (1999), the urban poor are not amenable to reside in public housing in a poor location and would prefer to reside in informal settlements whose strategic location has locational value that cannot be quantified. Hence, low-income households make trade-offs between the housing they desire and what they can afford to pay.

The discussion above highlights the difficulty of trying to address all concerns related to affordability within one simple measure. Haffner and Heylen (2011) and McCord *et al* (2011) note that it is difficult, perhaps impossible, to measure housing affordability using just one concept, measure or definition. Accordingly, to gain a better measure of housing affordability among low-income households, this study considers a method of assessment that addresses both income-expenditure issues related to housing costs and qualitative issues related to housing adequacy, physical quality, location, appropriateness and access to infrastructure services.

2.10 The Framework for Assessing Land Affordability

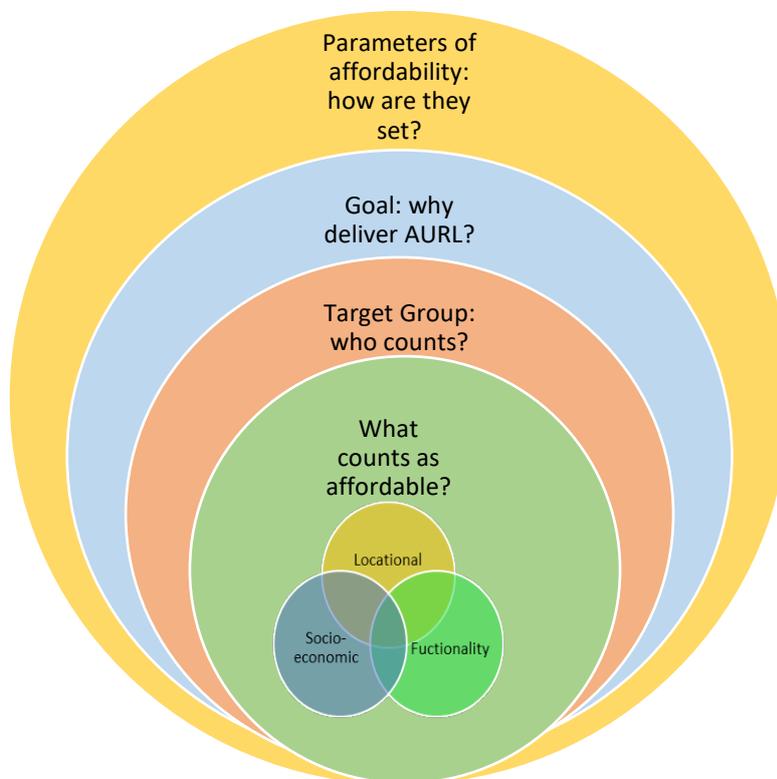
The discussion presented in section 2.8 reviewed the key elements of distributive justice that are significant for the assessment of equitable allocation, procedure of allocation and context in which that allocation is conducted. Drawing on these ideas, this study formulates an analytical framework to assess housing affordability. This framework cannot by itself account for the causes of limited affordability and inequality of landownership, but aspires to lay the essential foundation for causal inquiry that could account for how housing affordability is limited by a shortage of AURL. The core considerations of what counts as affordable to low-income households is depicted in the core of Figure 2.1 as the first parameter of the framework. Together, these three considerations delimit and characterise the concept of affordability as explicitly and implicitly defined in section 2.8 in answering the question: what counts as affordable? However, as discussed in section 2.6, until the questions that frame the equity problem are also answered, any analysis of affordability or distributive outcome is

incomplete. The framework, therefore, includes three additional concentric parameters of meta-affordability:

- Who is considered in the assessment of affordability?
- The goal of delivering AURL (why) and
- How are the parameters (what, who, why) of affordability determined?

The framework allows for context-specific parameters to be generated, adopted and modified to enable the delivery of AURL. Under ideal conditions these choices are made through a process of cooperation by all affected parties.

Figure 2.1 The Affordability Framework



Source: Author's own creation

2.10.1 What Counts as Affordable?

2.10.1.1 The Location of Housing

The price of a house, which is determined by its location, the structural quality, reticulated infrastructure services and amenities tends to influence the extent to which the inhabitant is able to afford the house (Dicken & Lloyd, 1990). According to McCann (1993) the aspect of locating low-income housing in relation to other human activities is key to making such housing affordable. Without exception, the consequences of peripheral location of low-income housing is the reduction in opportunities for employment, income generation and investment in housing improvement. The

guiding principle in setting location up as a precondition of housing affordability must therefore lie in the determination of whether the location chosen can secure livelihood opportunities, without inconveniencing the beneficiaries.

Studies by Payne (1977) of urban settlements in India reveal that only residents who are less locationally dependent are able to live in residential areas where they incur higher transportation costs. For low-income households however, the ability to afford housing rests critically on location, because location impacts on access to reticulated infrastructure services, amenities, transportation, building materials and markets. In large-scale low-income housing schemes, as in the cases of Dakar (Senegal), Dar es Salaam (Tanzania), Harare (Zimbabwe), Lusaka (Zambia), Manila (Philippines), Mumbai (India) and Nairobi (Kenya), major locational problems are common and a source of much hidden non-housing expenses (Campbell, 1990; Keare & Parris, 1982; Harris, 1972). As a result of this pressure, most beneficiaries sell-out or rent to middle-income groups eager to alleviate their own housing problems (Berner, 2000; O'Hare *et al.*, 1998). A study by Boudreaux (2008) in Johannesburg reveals that beneficiaries of free public housing often abandon the units because they are located in peripheral locations far from job opportunities. According to Landman and Napier (2010) the construction cost of the house is only a part of the overall housing costs, which include transportation cost and time cost of commuting. The location of housing in relation to public transportation inevitably becomes crucial to affordability considerations linked to journey-to-work/home costs. According to McCann (1993) transportation has influence, negative or positive, on the locational decisions of individual households. It is for this reason that, in this study, housing location is treated as a subsystem of the housing affordability system.

The importance of transportation cost as a determinant of housing affordability, residential location and housing choice is underestimated by housing developers who build low-income housing in inconvenient locations on the urban periphery (Landman & Napier, 2010; Crankshaw & Parnell, 1996). Low-income households make personal choices regarding residential location based on proximity to jobs, amenities and public transportation trade-offs. The concept of trade-offs between transportation accessibility and other housing and location characteristics is not new. 'Bid-rent' economics are based on the intuitive concept that the residential location choices of individuals are based on a trade-off between the increasing unit prices of housing and land and decreasing costs of commuting to work that are associated with living in inner-city locations close to employment opportunities. Low-income households tend to squat on high-priced urban land to reduce transportation costs associated with traveling over long distances to and from work.

More recently, there have been two distinct studies that have examined the trade-offs between transportation access and other factors. Studies by Boyce *et al* (1972), Dornbusch (1976) and Lerman *et al* (1977) that explored the impact of public transportation on housing prices in Philadelphia, San Francisco and Washington, respectively, generally concluded that transportation has a small but statistically significant impact on the prices paid for housing. Other studies by Mayo (1973), Friedman (1975), Lerman (1975) and Pollakowski (1975) that examined the impact of socio-economic factors and the level of public services on the actual location decisions of households provide evidence for several conclusions:

- The levels of household expenditures on amenities are less important factors in location choice for most households than is transportation accessibility to work.
- The effect of transportation access on location choice decisions is overshadowed by household income and size considerations.

More recently, studies of low-income housing development by Booth (1978) and Sweeney *et al* (1990) found the impact of transportation on housing satisfaction to be lower than expected, indicating that the role of transportation in determining residential location choices is underestimated.

Most of the previous studies on residential location analysis by Friedman (1975), McCann (1993) and Braubach and Fairburn (2010) often represent transportation services by measures of travel distance without measurement of wait time, out-of-pocket costs and probable mode choice. Proximity to work opportunities is an important factor the urban poor consider when choosing where to live; they often choose a place either within walking distance to reduce commuting costs or within a reasonable commuting distance by public transport. They often try to minimise the length of time it takes shuttling back and forth to work. The urban poor tend to reside in places where the highest concentration of employment opportunities are located.

Strategic locations that the urban poor consider affordable for establishing a place of residence are largely selected based on a few key factors including accessibility and amenities. In terms of accessibility, low-income households look for sites that are situated near major routes. Commuting to and from work is a big part of many people's day, so a location with easy access will be more desirable than one that is far from the most accessible transportation routes. A great location should also include important amenities such as shops, schools and clinics. Most people like to reside in places that offer convenient access to amenities. The distance from such amenities plays an important role in convincing low-income households that residing on land in inner-city areas offers convenience, which undoubtedly affects how much one pays for a home. Land is a finite commodity, thus, land in

inner-city areas that is highly in demand tends to have higher prices than land in peripheral areas of the city.

No matter what one earns, living comfortably and within what one can afford is a first concern. Affordability includes more than just housing expenses; consideration should also be given to non-housing expenses. According to Parnell (1996) when low-income households move to informal settlements, they expect their household expenses to drop; they eventually spend a lot less money on housing and non-housing expenses. Because most of these households are employed in menial jobs, their income is often below the poverty datum line. Affordability is always their top priority whenever they think about where they can locate their housing.

2.10.1.2 Functionality of a House

When homeowners design their homes, they build homes that fits their sense of beauty while keeping this balanced with their unique lifestyle and elements of functionality. The design of each home has to be functional, with beautiful furniture and features that offer comfort and convenience of use. However, it can be tricky for the urban poor to find this equilibrium between beauty and functionality. It is not a common practice to build a home that looks beautiful, but does not have the amenities one needs for day-to-day lifestyle or alienates the inhabitant because it lacks a personal touch. Besides transportation cost, however, the size, quality and condition of the house tend to affect the price of housing. Hence, beauty and functionality of a house tend to push prices beyond levels the urban poor can afford. Thus, limited housing affordability among the urban poor tends to compel them to overlook elements of beauty to maximise functionality of a house. Low-income households make trade-offs in housing quality and size to gain access to housing in close proximity to job opportunities and public transportation. In most cases they think of their lifestyles; their economic circumstances are always changing in step with their insecure jobs and uncertain incomes. Hence, their residence in informal settlements becomes transitional as they constantly move and build new homes in step with their changing lifestyles as they get married, have children or change jobs. The decisions they make regarding the location of their housing, its size and quality are considered based on their socio-economic circumstances that limit housing affordability.

2.10.1.3 Socio-Economic Considerations

Previous studies by Reichert (1990) and DeSilva and Elmelech (2012) highlight that demographic factors such as population size, age, gender, race and marital status of household members affect the demand for housing. These studies indicate that if other variables such as income remain constant, the majority of the population would increasingly demand for housing, which tends to increase house prices. Studies by Potepan (1996) and Jud and Winkler (2002) also highlight that income is another

factor affecting demands for housing. An increase in income, which facilitates greater consumption of products and services, positively affects housing demand, (Hou, 2010; Fontenla *et al*, 2009). A consistent income represents the long-term housing purchasing power of a household because the option to buy a house is determined by the consumers' long-term consumption habits and income. Moreover, higher household incomes can lead to higher housing purchasing power, which raises housing demands and subsequently increases housing prices. Furthermore, a relationship exists between the amount of permanent income and consumer education levels (Goodman, 1988). As indicated by previous studies, a greater proportion of highly educated people in the population results in higher local housing prices (Brasington & Hite, 2005; Goodman, 1977). Conversely, an increase in unemployment rate, indicating a decrease in income, lowers housing prices because people reduce their purchasing power and demand for housing, but only if their incomes enabled them to participate in the housing market in the first place.

2.10.2 The Framing of Affordability

2.10.2.1 *The Target Group: Who Counts?*

Defining affordability in terms of the above dimensions alone opens the question: who should be considered in the assessment of affordability? This is a second-order issue that must be specified in order to answer the first-order questions regarding the dimensions of affordability. The question raised above can also be posed in terms of scale: at what social scale should affordability be assessed? The considerations of affordability at different social scales include:

- Individual level by assessing the costs, benefits, risks and opportunities experienced by individuals in society factoring variables like income, housing location and functionality of the house,
- Household level by considering the extent to which households can afford urban land based on household size and income. These variables are known to influence the extent to which different households make residential location decisions and processes they use to establish human settlements, and
- Community level by considering inequalities between high-to-low-income people. Locational conflicts of interest raise equity and affordability questions for policymakers when demands for AURL challenge liberal market values.

2.10.2.2 *Goal of Affordability: Why Deliver AURL?*

It is vital to deliver AURL to increase access to quality, affordable housing that is integrated into the urban economy. The goal of housing affordability is not just a matter of increasing the supply of AURL but includes the development of affordable good quality housing in strategic inner-city areas. Quality

in this study refers to the suitability of the dwelling to meet the specific needs of the household, in terms of size and layout. It also means that the quality of the design and construction of the dwelling and its facilities and services must be of reasonable physical condition offering energy efficiency and privacy. Housing must be integrated into the urban economy through building such housing in suitable locations that enable the household to access employment, shops, schools and community facilities without long trips by car. In addition, the delivery of AURL for low-income housing must enable to development of a variety of housing tenure options to suit different households in different life circumstances.

2.10.2.3 Setting the Parameters of Affordability

In different historical and cultural settings, the parameters of how societies measure affordability are under constant negotiation (Jud & Winkler, 2002). Given the conflicting conceptions of affordability, understanding why the urban poor opt to reside in certain locations is a critical part of the assessment of affordability and the design of a mechanism for delivering AURL.

Designing a pricing mechanism intended to deliver AURL similarly relies upon the prior establishment of the fundamental parameters of affordability – who will define what is affordable, for whom and how? Whether the parameters are set through democratic deliberation or dominant power structures, the affordability framework can be applied as an analytical tool for teasing out underlying assumptions about how the urban poor make locational decisions. Since there is no neutral or context-free way of arriving at a definition of affordability, the framework sets the parameters to evaluate locational decisions based on land value, proximity to jobs, amenities and public transportation system. Hence, land can be deemed affordable if its monthly instalments does not exceed 30 percent benchmark of household income. The housing location is deemed affordable if the distance of the residence from workplaces does not impose a transportation cost-burden exceeding the 20 percent benchmark of household income. These are the parameters this study sets for measuring housing affordability.

2.11 Chapter Summary

The discussion presented in the chapter illustrates how uncertainty over mechanisms of gaining access to urban land and housing resources produce practical conflicts between the rich and poor. Landowners often act in self-interest and they reject any form of redistribution outside the market despite the massive shortage of AURL and low-income housing. Where demands are made for redistributive justice in the allocation of land and housing resources, self-interest plays a part in leading landowners to misconceive their moral duty to fairness. Hence, this research uses scholarly opinions on the failure of markets for urban land and housing to refute the market tradition of

allocating urban land and housing resources based on the ability to afford the highest price as unsuitable for a fair, just and equitable allocation. The discussion presented in the chapter also shows how these opinions continue to shape urban land policy and low-income housing policy in favour of allocating urban land and housing resources in the market. In this regard, the discussion further shows the inadequacies of the neo-liberal theory that guides operations of urban land and housing markets and ultimately advances a number of propositions that led to the development of a pricing mechanism that could deliver AURL for low-income housing. The analytical propositions advanced in this approach, though explicitly oriented to urban land and housing markets in South African cities, could apply equally well to cities of developing countries that experience rapid urbanisation and population growth, extreme income inequality and poverty and whose ULMs are controlled by a minority with a monopoly over landownership.

3 CHAPTER THREE: THE URBAN LAND QUESTION IN SOUTH AFRICA

3.1 Introduction

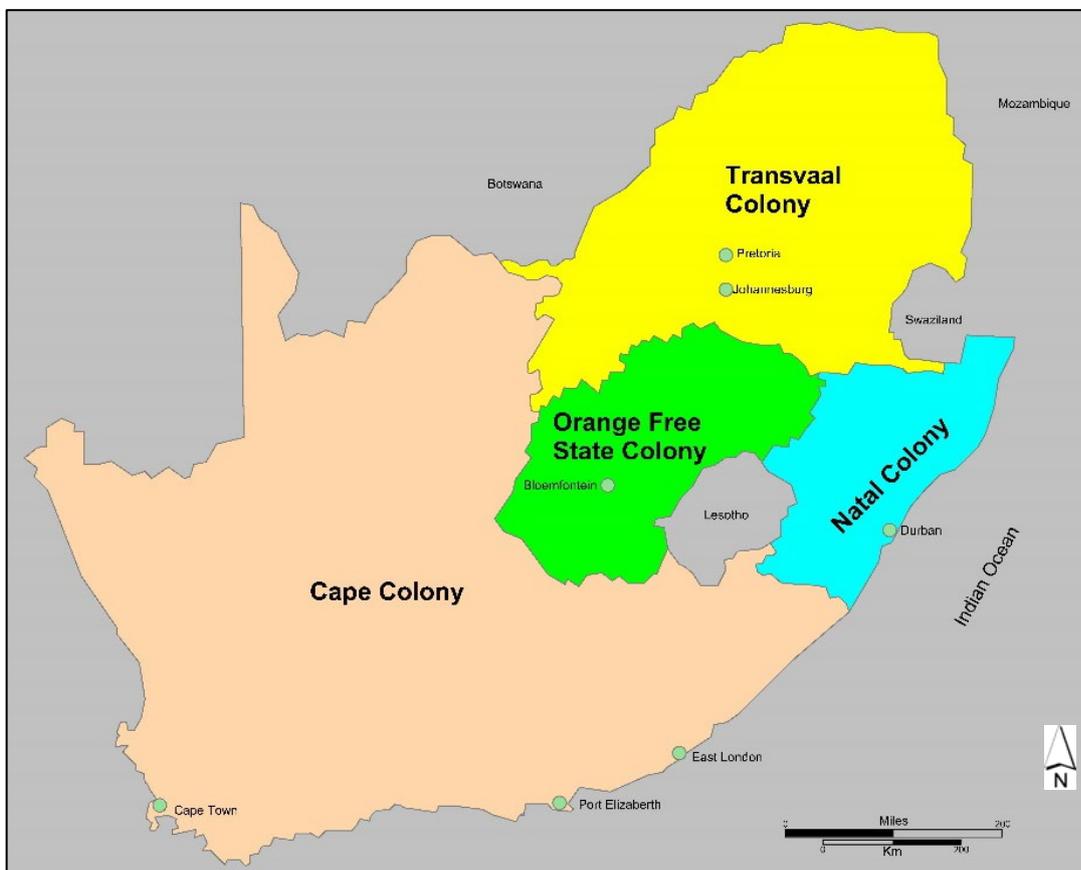
In South Africa, the shortage of affordable urban residential land (AURL) for low-income housing is linked to the growth of informal settlements. Monopoly of landownership by a few individuals and firms denies or limits opportunities for the majority who are poor to own urban land and housing in post-apartheid South Africa. The enormous shortage of AURL for low-income housing among the urban poor, who are predominantly African, is a result of systematic dispossession of land held by Africans and a moratorium that banned Africans from owning urban land that were sanctioned by successive pre-1994 governments. Inextricably linked to this history of dispossession is the second aspect of the land question that focuses on the shortage of AURL in the post-1994 era resulting from segregation in the land market that allocated urban land based on affordability. The majority of urban Africans lack the financial means to gain access to AURL in the post-1994 era and can only seek shelter in informal settlements that are poorly located on under-serviced and polluted land on the side of hills or wetlands. Hence, the supply of AURL for low-income housing is vital in ameliorating the low-income housing crisis in urban South Africa. Efforts by the ANC-government to provide 'sites-and-services' and other forms of 'aided self-help' housing in locations on the urban periphery where under-serviced land is cheap and easy to obtain only help trap the urban poor in locations that are far from economic opportunities (Landman & Napier, 2010; Khan & Ambert, 2003).

In order to understand the root of low-income housing shortage, this study tracks back more than 350 years to the colonial period to identify the origins of the land crisis. The historical narrative concentrates on the machinations by which Africans were dispossessed and deprived of access to urban land. The descriptive account of the urban land question in South Africa covers, firstly, the history of colonial conquest and apartheid dispossession that left about 87 per cent of the land in South Africa under the control of the minority white settlers (Walker, 2005). Urban land dispossession during apartheid resulted in the forced relocation of the African majority, which intensified social dislocation, 'displaced urbanisation' and urban residential segregation. As a result, the land question in urban South Africa is embedded in discourses around the redistribution of land rights, social justice and identity; debates through which various scholars interrogates the relationship between land rights and enhanced livelihoods. However, none of these scholars interrogated the relationship between the shortage of AURL and the growth of informal settlements; a gap in knowledge this research sought to cover. This rendition of the past is presented as a basis for understanding current landholdings and justifying current demands for redistribution of urban landholding. This history helps to explain why it is difficult for the state to alleviate the huge shortage of AURL for low-income housing in South Africa.

3.2 Historical Land Dispossession, 1652-1950

The land crisis in South Africa dates back to the Colonial period, when Dutch merchants led by Jan van Riebeeck of the Dutch East India Company (VOC) occupied Table Bay in 1652 to establish a colony to supply fresh water, fruit, vegetables, wheat and other grains, meat and wine to their naval fleet en-route to southeast Asia (Feinstein, 2005; Thompson, 2001; Lester, 1996; Lemon, 1991). By 1662, European settlers had managed to dispossess land from the Khoisan and changed the nature of land ownership from customary tenure to freehold tenure (Lester, 1996). The VOC gave 'loan farms' in Stellenbosch, Paarl and Franschoek to its former sailors and soldiers (Feinstein, 2005; Thompson, 2001; Keegan, 1996; Lester, 1996) and an expansion of the colonial settlement resulted in dispossession and incorporation of more and more African land into the colony at the expense of the Khoisan, Khoikhoi and Xhosa people (Hebinck, 2013; Thompson, 2001; Lester, 1996). However, further growth of the white settlement in the Cape Colony shown on Figure 3.1 was impeded by low agriculture production and viability linked to insufficient and unreliable rainfall and exploitative market conditions (Feinstein, 2005; Lester, 1996). The limited economic opportunities encouraged Dutch farmers to leave the Colony in search of land and economic opportunity in the northeast of the country (Worden, 2007; Lester, 1996).

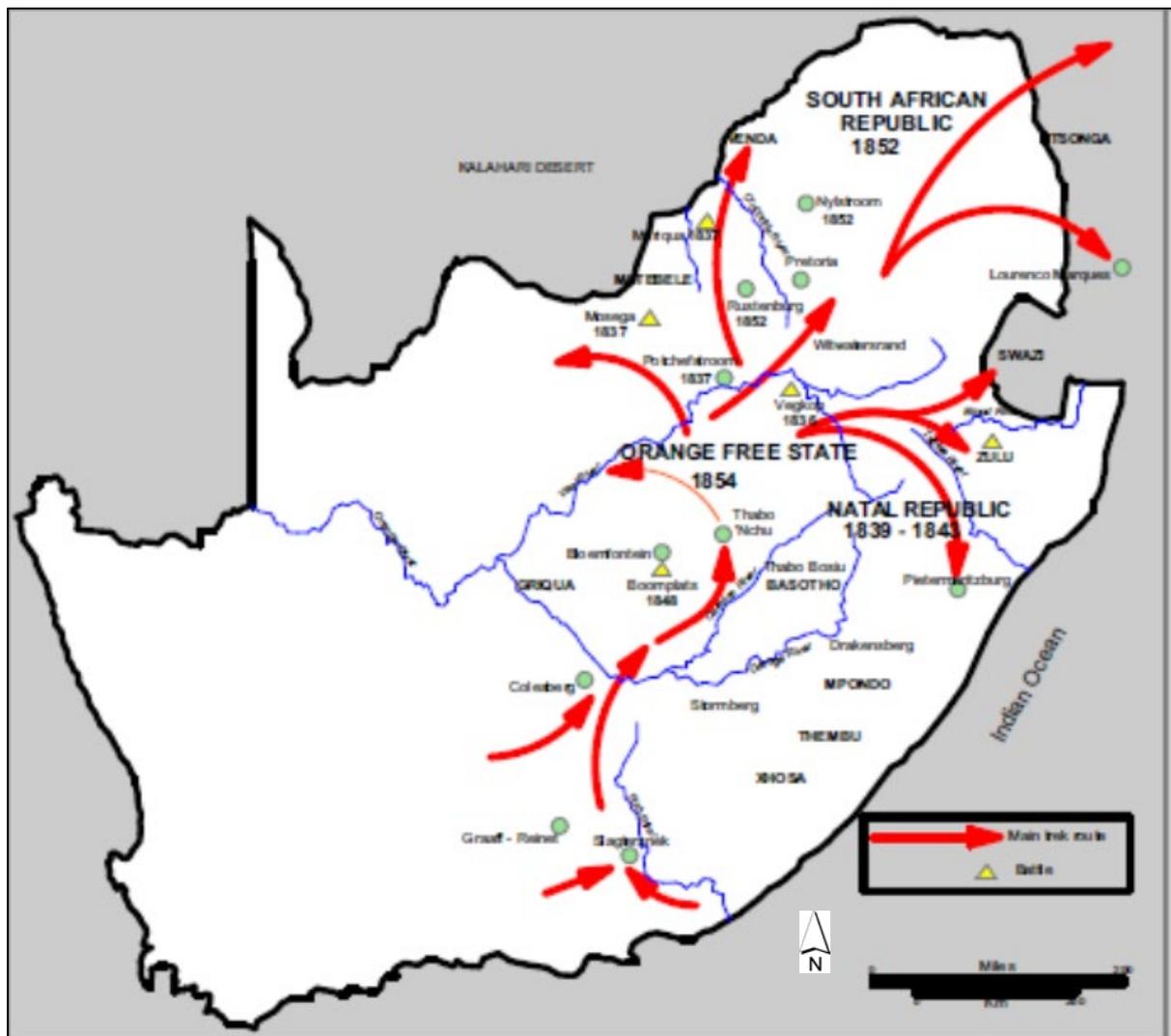
Figure 3.1 The Colonies of South Africa, 1836-1910



Source: Thompson (2001)

Several organised groups of Dutch farmers embarked on the Great Trek (1836-1854) towards the northern interior of the country in search of African land to incorporate under their control (Thompson, 2001). They journeyed inland on the route shown on Figure 3.2, waging wars against Africans to establish white settlements. Some of the trekkers led by Andries Hendrik Potgieter settled on the Highveld while some led by Piet Retief settled in Natal (Feinstein, 2005; Thompson, 2001), where the Zulu Kingdom had been ravaged and weakened by the Mfecane wars (Worden, 2007) and a ferocious civil war and mass emigration that ensued after the assassination of King Shaka (Lester, 1996). According to Lester (1996) most of the political refugees mainly the Ndebele, Nguni, Shangani, Mfengu and Ndwane people settled in the areas shown on Figure 3.3 on page 65. By 1836, the mass emigrations left apparently sparsely populated fertile land in localities on the Highveld beyond the Orange River and below the escarpment south of the Tugela River (Thompson, 2001).

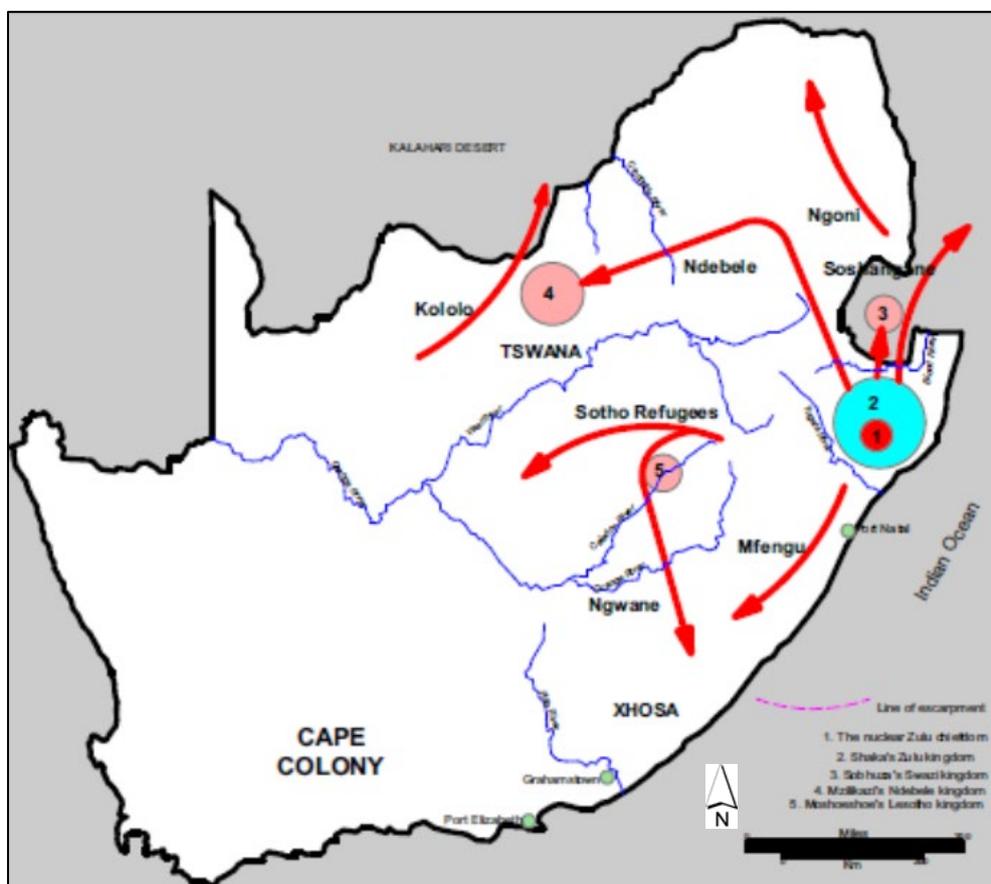
Figure 3.2 The Afrikaner Great Trek, 1836-1854



Source: Lester (1996)

By 1842, the settlers had dispossessed the Zulus of almost all of the fertile land and good pastures between the Tugela and the Mzimkhulu rivers in Natal (Worden, 2007; Thompson, 2001). Some of the settlers went across the Drakensberg to the highveld where they established several distinct settlements in areas that had water, timber and good soil (Worden, 2007; Thompson, 2001; Slater, 1975). Thereafter, land commodification and exchange in the market was established and subsequently widespread speculation in land resulted in a pattern of large-scale land ownership by settlers (Worden, 2007; Slater, 1975). Africans were only allowed to squat on the land as share-crop farmers (Slater, 1975). As a result, most of the land in Natal and Zululand was largely held by a few private firms and individuals as large-scale commercial plantations (Worden, 2007).

Figure 3.3 The Zulu Kingdom of King Shaka and the Mfecane Wars, 1817-1828



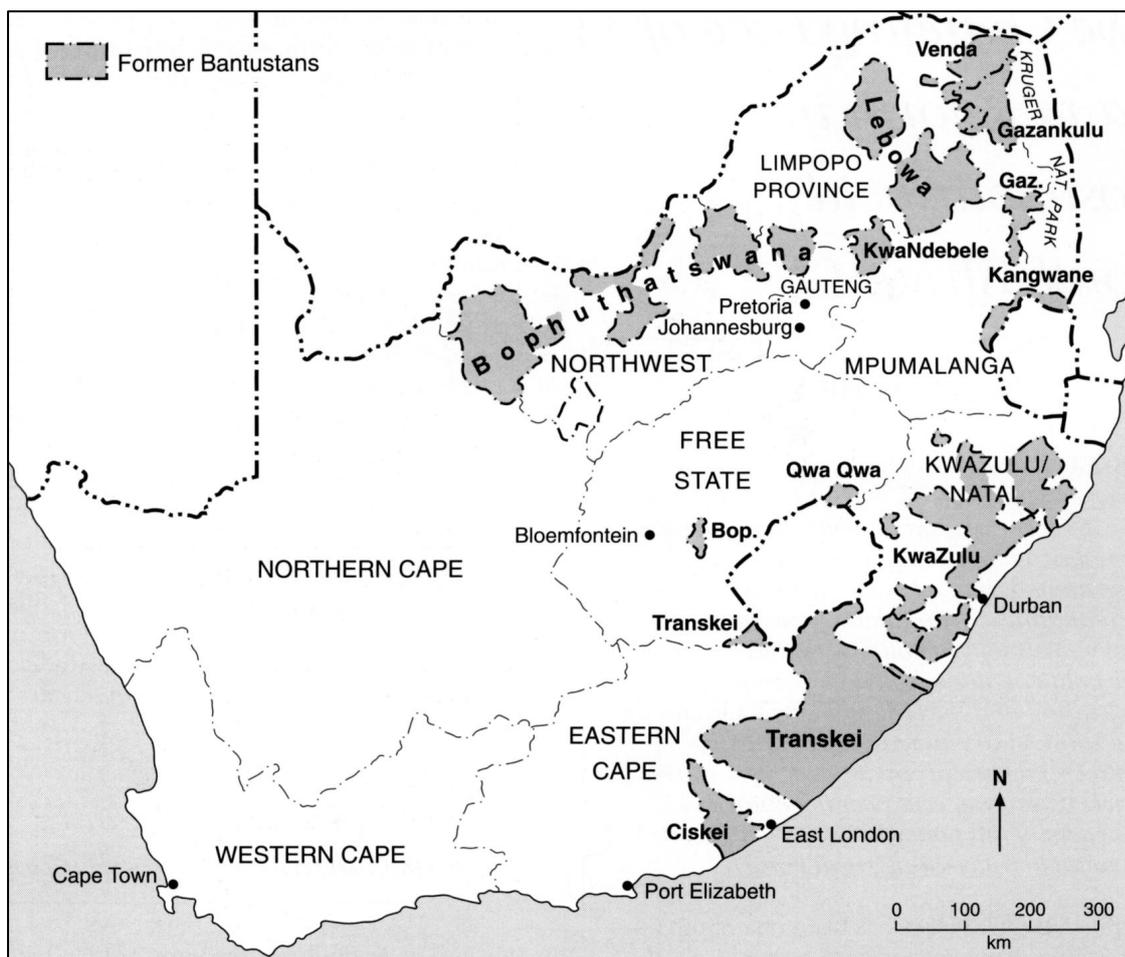
Source: Lester (1996)

The other settler groups led by Potgieter and Pretorius managed to dispossess Africans of their land between the northeast of the Vaal and Limpopo Rivers and established settlements on the escarpment northeast of the Vaal River, the lowlands of the eastern Transvaal and the Limpopo River valley, the western highveld around Potchefstroom, and others settled south of the Vaal River on the highveld grasslands north of East Griqua and the fertile grasslands north of the Caledon River (Thompson, 2001). By 1848, Sir Harry Smith had also dispossessed the Xhosa of their land between the Keiskamma

and Kei Rivers and the entire area between the Orange and Vaal Rivers (Worden, 2007; Thompson, 2001). The continuous process of land dispossession accelerated after the 1870s and reached its climax in 1913 when there was no enforceable African claim to most land in South Africa (Feinstein, 2005; Lester, 1996).

European settlers consolidated the gains of land dispossession through various legislations that protected the disproportionate distribution of land ownership between different racial groups (Andreasson, 2006; Katz, 1997). Africans were allocated very small and unproductive plots of land held under communal tenure in native reserves shown in Figure 3.4 (Binswanger & Deininger, 1996; Keegan, 1996). The Land Act of 1913 legalised colonial land ‘theft’ by settlers and the Land Act of 1936 made it illegal for Africans to acquire or lease any land outside of native reserves (Feinstein, 2005; Napier, 2009; Kirk, 1983). The strategy of dispossession had reduced the land reserved for Africans to a paltry 7.3 per cent of the national land area even though they constituted two-thirds of the population (Feinstein, 2005; Bundy, 1988; Lewis, 1984). Even the Beaumont Commission appointed to identify land Africans could acquire or rent acknowledged that land administration was not

Figure 3.4 Location of Native Reserves in South Africa



Source: Mather (2002:346)

even-handed and the land allocated to Africans was inadequate (*ibid*). As a result, African landholding was begrudgingly increased to 13 per cent of the national land area by the 1936 Act, albeit with land in marginal rocky areas that were unproductive and difficult to develop (Binswanger & Deininger, 1996). The strategy of creating native reserves was never meant to reserve land of adequate proportion and quality for African occupation (Feinstein, 2005). Instead it was designed as a tool of implementing the policy of segregation. In this scheme, Africans were denied the right to occupy land outside of native reserves (Dewar, 1999; Kirk, 1983). However, these resources could no longer sustain the peasantry lifestyle of Africans and most Africans were eventually forced to emigrate to cities where their lack of secure tenure exposed them to the harsh urban environment which left most of them destitute and without shelter (Hebinck, 2013).

The effect of the provision of the 1936 Act and the policy of URS was very far-reaching. The policy of URS used tools such as dubious sanitation concerns and race-based land-use planning to disappropriate urban land from Africans, Indians and Coloureds (AIC) who were resident in locations designated as 'black spots' (Dewar, 1999; Lemon, 1991; Robinson, 1990). Africans and Indians who held legal title to prime urban land in Sophiatown and Newtown (Johannesburg), District Six and Ndabeni (Cape Town), Westville, Sea View, Malvern and Escombe (Durban) and South End (Port Elizabeth) were forcibly removed and relocated on the urban periphery to make way for white townships or business activities (Mather, 2002; Maharaj, 1997; Lester, 1996; Maylam, 1995; Lemon, 1991; Parnell, 1988a). The state together with the manufacturing industry, expropriated urban land occupied by Africans and Indians without paying compensation which resulted in the large-scale loss of fixed-property (Christopher, 1997; Robinson, 1993; Scott, 1992; Parnell, 1988b).

The policy of URS and the 1936 Act marginalised Africans from the land exchange process, whether through the market or otherwise, by removing land from the market that was open to African capital in areas that were outside of native reserves. However, rapid increase in African urbanisation worsened the shortage of AURL for low-income housing which amplified the urban land question. The apartheid-government paid no attention to the shortage of AURL for low-income housing among AIC and the segregated form of the apartheid and post-apartheid residential landscape testified to the preferential allocation of urban land in favour of whites.

3.3 The Urban Land Question

The historical narrative presented above opens the discussion on how ownership of urban land and housing in this country is profoundly structured by violent land dispossession, an exclusionary urban land market and a legislative and political apparatus that make it impossible for the majority non-white population to access AURL for low-income housing (Lester, 1996; Fisher *et al*, 1978; Trapido,

1971). The historical inequality of landholding remains unresolved and the ANC-government struggles to develop a coherent and effective strategy to resolve historical land claims or deliver AURL in ways that strengthen social justice. Urban areas account for 8 per cent of national land¹⁵, but are home to 60 per cent of the national population (SAIRR, 2012). The metropolitans of Johannesburg, Tshwane, Ekurhuleni, eThekweni, Cape Town, Nelson Mandela Bay, Buffalo Bay and Mangaung account for 2 per cent of the national land and shelter 37 per cent of the national population (Walker & Dubb, 2012). The limited amount of urban land exerts severe demand on urban residential land. Therefore, land redistribution becomes particularly urgent considering the millions of urban residents who are trapped in informal settlements. In a country that is scarred by a violent history of land dispossession, race-based land allocation, deep inequalities and persistent poverty, the delivery of AURL remains viscerally compelling (Walker, 2005). Maybe a look at the various contexts that shape the land question can shed light on why the urban land market fails to deliver AURL for low-income housing. The urban land question is expressed through various contexts that are mainly economic, political and administrative.

3.3.1 The Economic Context

The economic dimension of the urban land question is inextricably knotted to the strategy of allocating small plots of land to Africans in native reserves that were subject to high taxes. This strategy also prohibited Africans from private ownership of land and housing or businesses outside the native reserves and restricted accumulation of such opportunities within them (Hebinck, 2013; Kirk, 1983). The motive behind this strategy was to force them off their land, produce dependency and obedience and increase the 'willingness' in Africans to be exploited in factories, mines, commercial farms and domestic quarters (Andreasson, 2006; Katz, 1997; Beinart, 1994; Bundy, 1988; Lipton, 1986; Lewis, 1984). A substantial decline in African farming, overpopulation, depleting natural resources, migration and a vicious cycle of poverty increasingly coerced Africans to enter the urban labour market (Hebinck, 2013; Lemon, 1976). As a result, the urban African population quadrupled from 587,200 in 1921 to 2,329,000 by 1951 (Lemon, 1991; Maylam, 1990). An increase in African urbanisation in the post-1994 era amplifies the demand for urban residential land, but a shortage of AURL forces Africans into backyard shacks and informal settlements.

The dual labour system employed officially during apartheid and unofficially in post-apartheid South Africa advanced economic interests of whites in two ways. Firstly, it encouraged segregation in employment by ensuring that non-white labourers were paid far less than white labourers doing the

¹⁵ In South Africa, about 67 per cent of the national land were held by white commercial farmers, about 10 per cent were owned by the national government with about 7 per cent of this land held in trust as game and nature reservations (DEA, 2012; SAIRR, 2012), 15 per cent were communally held by Africans (DAFF, 2011).

same job (Kirk, 1983). This policy was useful in offering greater job security for poor white workers against increased competition from African workers (Parnell, 1991; Mabin, 1986; Wolpe, 2000). The strategy was to keep African labourers poor, vulnerable, and powerless in salary negotiations, and dependent on the employ of whites. The collaboration of white employers and white labourers effectively closed the doors to the collective bargaining power of AIC workers (Kirk, 1983). Secondly, it advanced economic interests of white merchants, industrialists and landowners and property developers by either coercing Africans, Indians and Coloureds into employment at exploitative pay or prohibiting non-white people from business trading and occupying land on equal terms with whites (Lemon, 1991; Kirk, 1983). The few Africans who qualified for a mortgage and sought financial assistance from the retail financial market were denied financial loans on the basis of whimsical and unwritten regulations. Housing affordability became limited especially among Africans who were the worst affected by this policy. The dual labour system is still being used, unofficially, by businesses in post-apartheid South Africa and it is having serious ramifications on the ability of Africans to purchase land or housing in inner-city areas without public financial support. As a result, most Africans suffer from severe housing stress. The unfortunate economic circumstances that are experienced by the non-white population elevate the urban land question onto the political agenda.

3.3.2 The Political Context

In South Africa, the ownership and exchange of urban land has political implications that are shaped by the way the white minority hold and control the use of the majority of land they 'acquired' through 'agreements', conquests and appropriation (McGaffin & Kihato, 2013). Whites consolidated their control over 'acquired' lands through a political-military apparatus that implemented various legislative, administrative and economic systems designed to deny Africans opportunities to access urban land prior to 1994. From the time the Land Acts of 1913 and 1936 were passed Africans fought for control over urban land and land-related resources, but the redistribution of AURL with secure tenure proved elusive. The post-1994 government prefers to redistribute urban land through a market-led system. The liberal political reforms of the 1990s that were expected to usher in democratic approaches to land policy development and land redistribution are failing to go far enough to benefit the urban majority who are poor (Satterthwaite & Mitlin, 2014; African Union *et al*, 2010). As a result, the land policy that requires that land should be exchanged in the market is increasingly challenged by political parties such as the Economic Freedom Fighters (EFF) who are demanding for the expropriation of land without compensation.

The failure to deliver AURL for low-income housing is fanning anarchist behaviour expressed through land invasions and informal settlements witnessed in urban South Africa. A spike in conflicts arises

between landowners and the urban poor over the latter's lack of access to AURL for low-income housing. The shortage of AURL for low-income housing has a radicalising influence on the urban poor who, through invading and settling illegally on well-located urban land, are increasingly influencing land-use decisions made by local authorities (Foley, 2009). Sometimes the urban poor invade urban land reserved for business activity as a strategy to engage with the government and negotiate for another site (Satterthwaite & Mitlin, 2014). In some cases they settle on urban land of low quality or held by absentee owners where they have a better chance of avoiding eviction (*ibid*). The urban poor use such machinations during election seasons to place the land question on the political agenda in the hope that politicians would tolerate and ratify the 'hostile takeover' and 'clandestine subdivision' of urban land. During these election seasons, the shortcomings of the market-led land reform raised by the urban poor, civic organisations and opposition political parties have initiated a national debate on alternative strategies that could improve the effectiveness of land reform. The political debate on the expropriation of land subject to no compensation explored issues on the constitutional amendments and administrative changes that could be required to aid the delivery of AURL for low-income housing.

3.3.3 The Administrative Context

The acute shortage of AURL for low-income housing is strongly linked in several ways with the poor system of land administration. The shortage of AURL persists as a result of the land administration that fails to manage land distribution, land tenure and land utilisation. The land tenure problem is prevalent in urban South Africa where the system of assigning land rights is insensitive and undemocratic and lacks legitimacy such that it is constantly undermined by informal land 'acquisition' and exchange practices (McGaffin & Kihato, 2013). Such extra-legal practices make it difficult to implement land tenure reform when the legitimacy of the land tenure system is undermined by practices that ignore the rule of law. Informal land 'acquisition' and exchange practices result in the loss of the dimension of tenure conferred by and recorded in the urban land administration system. For example, the confusion that is created in respect of urban land occupied by informal settlements results in unsure title and multi-layers of informal transfers and inheritances based on ownership of doubtful validity (Silas, 1983). The lack of secure tenure increases the threat of eviction and relocation of the squatters. Instead of devising a unified and comprehensive model of urban land management, the state acts as a spectator of land allocation and exchange and decision-making on land-use planning. Informal urban land transactions are an indicator of the shortage of AURL for low-income housing that causes the growth of informal settlements.

The land distribution problem is evident from the highly unequal landholdings that results from land appropriation and the inefficiencies and segregatory tendencies of the urban land market. The majority of urban land in South Africa is in the hands of a few wealthy individuals and private firms who often withhold urban land in strategic locations from the market for speculative reasons. The speculative behaviour of these private individuals and firms who have a monopoly on landownership pushes up urban land prices and denies low-income households the opportunity to access urban land near work opportunities (Payne, 1999).

The behaviour of these private actors leads to the land utilisation problem, that manifest when the urban poor deliberately build settlements on land reserved for commercial, industrial and recreational uses in violation of land-use zoning schemes. In most cases this land utilisation problem arises from the relative lag in the supply of AURL for low-income housing development in strategic locations. The urban land administration system fails to balance the supply of urban land for high-income residential, industrial and commercial uses with the supply of AURL for low-income housing by implementing sensible restrictions on the speculative behaviour of private landowners (Barry & Taylor, 2008; Larson *et al*, 2008).

The urban land administration system fails to address issues of land distribution, land tenure and land utilisation, in part because of inaccurate land registers. The availability of accurate and up-to-date land registers on land tenure, land value, land taxation, land-use and cadastral surveying and mapping is a necessary requirement for effective management of urban land (Dixon-Gough, 2006; Williamson, 2001; Kaufmann, 1999). However, the ANC-government lacks the technical, financial, legal and human resources to generate and maintain land registers needed to support land management, land-use planning and decision-making (Oestereich, 2000; Garba & Al-Mubaiyedh, 1999). The major municipalities of Johannesburg, Cape Town, Mangaung, eThekweni, Tshwane, Ekurhuleni, Nelson Mandela Bay and Buffalo Bay find it very difficult to determine ownership of urban land because the records of land registry they inherited are inadequate, incomplete, outdated and conflictual (Siegel *et al*, 2013). In cases where some urban land parcels are held by a large number of absentee landowners and are occupied by squatters with adverse possession rights, it proves difficult to summarily regularise such tenure without an up-to-date land register. As a result, most urban municipalities find it very difficult to properly understand the nature of their land problem to devise an effective strategy to deliver AURL for low-income housing. In many cases, the outcome of such shortage causes an increase in the growth of informal settlements in strategic locations of the city.

In South Africa, land legislation lacks a provision that authorises urban municipalities to acquire information on registered land tenure, land value, land taxation and land-use that can support the

delivery of AURL. Most urban municipalities have incomplete data of land transactions and little is known in detail about the distribution of landownership among the different groups of income, gender, race and ethnicity. The problem is partly responsible for the information gap that limits the debate on ways of addressing land inequalities outside the market. A lack of such information hampers the effective formulation of a land policy that could deliver AURL for low-income housing. Hence, municipal officials are completely unequipped to identify who owns land of what size, value and use in their jurisdiction quickly and accurately. Although public agencies collect some data on the use, development and ownership of urban land, most of this data is collected in a fragmented and *ad hoc* manner and when it does get published it is in anecdotal form and not of much use. The situation is made worse by the municipal tradition of confidentiality over urban land ownership and exchange.

Land redistribution remains a challenge since agencies responsible for land administration are reluctant to restructure their systems that control land registration, land-use and land development in ways that are flexible to the needs of the urban majority who are poor. Usually several agencies oversee these different aspects of land management, but their lack of coordination and cooperation and lack of adequately trained human resources hinders the delivery of AURL (Siegel *et al*, 2013; Barry & Taylor, 2008; Larson *et al*, 2008). Their lack of coordination and cooperation often stymies attempts to regularise urban land occupied by informal settlements (Siegel *et al*, 2013). Hence, the inefficiency of the land administration system frustrates the urban poor, compelling them to access urban land through anarchist land invasions that deepen rather than diminish land conflicts.

The way the urban land administration system is structured lacks an understanding and appreciation of the factors that inhibit the participation of the urban poor in the urban land market. Tenure legalisation and the subsequent commodification of land exchange result in price increases and high land taxes and registration fees (Napier, 2013; Gilbert A.G, 2002). These financial burdens price urban land beyond levels the urban poor can afford and the majority are pushed out of the urban land market. The need to reduce transaction costs can never be overemphasised if urban municipalities are to deliver AURL for low-income housing. Only holding a legal land title aids access to urban land, but should not be the only avenue through which the urban poor could access low-income housing. Unfortunately, the land administration system focuses less on strengthening *de facto* security of tenure even though perceived security of tenure drives private sector investment in low-income housing development. The system only provides security of tenure to owners that acquire urban land through the market.

3.4 Land Allocation in the Market

The land policy adopted since 1654 by successive pre-1994 governments has managed to constrain access to AURL for low-income housing in the post-apartheid era (Hebinck, 2013). This policy played a crucial role in giving whites and their businesses a monopoly over the ownership and use of urban land and land-related resources by limiting the ability of Africans to access land, housing and jobs in urban areas. As a result, Africans were left with a relatively short experience of direct participation in the market. Thus in the post-1994 era, land transactions in the market are based on a set of unequal relationships between land seekers and landowners due to inequality of income and limited knowledge of how the land administration system operates. The limited ability of low-income households to afford land at the prices set by the urban land market leaves most of them trapped in informal shelter. The urban land market presents a roadblock to possible solutions that might deliver land at a price below the levels set by the market. The state is reluctant to address demand-side challenges with any form of public intervention for fear of provoking a short-term distortion of the market (Napier, 2009).

3.4.1 The Affordability Problem

South Africa stands out as one of the many African nations that rely almost completely on the market mechanism to set the price and supply urban land for housing. The mechanisms the market uses to price and supply urban land are not flexible to accommodate inconsistent incomes and the incremental approach that the poor use to build their housing. The root of the land affordability problem is the failure of the market to deliver urban land at prices the urban poor can afford. Delivery of AURL has not reached the scale necessary to make significant progress in reversing the growth of informal settlements. This creates pervasive conflict over urban land in strategic locations close to employment opportunities and also calls into serious question claims that land allocation in the market, is relatively open, negotiable and adaptive (Peters, 2004; Amanor 2001). Instead, Peters and Amanor argue that market mechanisms used to price and allocate urban land are exclusive and inefficient and the market cannot be relied upon to make judgements about fairness and equity. Nevertheless, inequalities in landownership between the rich white minority and the poor African majority expose the shortcomings of market-led land redistribution in a society where the majority cannot afford the price set by the market (Peters, 2004).

The ability of a low-income household to purchase a plot of land is affected by the purchase cost and the ability to finance the purchase. The purchase cost depends on the land price, transaction costs and infrastructure costs and the ability to finance the purchase depends on the level of income, finance down-payment requirements, interest rates and the loan repayment period. Low-income

households lack the ability to afford urban residential land at prices set by the market and thus they cannot stimulate the urban land market to deliver urban land to this segment of the market. As a result, landowners appear to withhold the supply of urban land to low-income households. The limited incomes of these households exposes them to one or both of the following outcomes. The household either pays a large proportion of its income towards housing and not enough money is left to meet non-housing need adequately (Stone, 2004), or the household pays a small proportion of its income towards housing and is exposed to unsatisfactory and squalid housing conditions, sharing shelter with individuals and families in backyard shacks and informal settlements. These outcomes prove that the majority of low-income households cannot afford urban land at the prices set exclusively by the market.

The ANC-government has responded to the shortage of AURL in two ways. Firstly, it repealed apartheid land laws that banned Africans from owning land. Secondly, it has attempted to address the supply-side constraints of the market but has failed to change the institutional arrangements that are responsible for creating conditions that limit the ability of low-income households to purchase urban land without state support. At the same time, low-income households have few alternative ways to access urban land and housing since public financial support is limited and the state only provides partial support to cover as many beneficiaries as possible. Hence, the prices for urban land in strategic locations set by the market hampers the ability of low-income households or the state to purchase land for low-income housing development. Private landowners expect adequate compensation, but the government has a limited budget to effectively deliver urban land for low-income housing.

The approach to deliver urban land via the market has not scaled up delivery or making sense economically or politically. The reason for this failure lies in two fundamental realities of urban land; it is immobile and durable and prices of urban land in strategic locations close to employment opportunities and amenities often increases faster than incomes of the urban poor. These two aspects of urban land create a web of disincentives that frequently make it impossible to build political consensus at the local level to effectively expropriate urban land for low-income housing, subject to low or no compensation. The most critical aspect of the land affordability problem is that it is out of the main stream of current public discussions on land expropriation. While few, if any, would argue that AURL is less essential than education, employment or health care, the extent of the shortage of AURL for low-income housing is still ignored by policymakers in the current debate on the expropriation of urban land without compensation. This debate has been placed high on the political agenda as a result of public calls by the EFF for mass mobilisation and invasion of vacant urban land.

3.4.1.1 Clandestine Acquisition of Urban Land

Most low-income households rely on 'clandestine acquisition' and subdivision of urban land to access shelter in areas located close to employment opportunities, public transport and amenities. The parcels of urban land these households settle on are in hazardous areas such as sites on mountain slopes, riverbanks, flood plains, railway setbacks, servitudes of utility services, waste dumps and heavily polluted disused mining dumps that put their occupants at physical and health risk. The urban poor shun most suitable vacant sites that are valued at a high price because landowners would use all means available to immediately evict unwanted occupants. In cases where clandestine land occupations cannot be reversed, it often leads to an 'illegal' system of land supply.

The extra-legal subdivision and exchange of urban land which occurs in the informal land market are not controlled and registered by the authorities. The urban poor subsequently build shelter on the 'illegal' acquired sites without permits and the quality of such housing is substandard, which is precisely what makes the shelter affordable to low-income households. The ability of low-income households to circumvent standards of settlement establishment and cut costs helps 'slumlords' to provide plots that are affordable and easily available relative to other housing options (Payne 1989). The occupied land is subdivided 'illegally' and 'sold' for the 'right to squat', but no squatter mistakes this 'right' for a legal title. In this process, some low-income households 'acquire' several plots to lease them out with or without a shack. The first wave of occupants is often organised in a larger group to reduce the vulnerability of the settlement in the critical initial period of land invasion. The price for these plots depends on whether their location is in close proximity to work opportunities and amenities. Although documented data is scattered, it is evident that the informal land market works efficiently to provide affordable plots of land. Regrettably, the housing and economic opportunities that can be potentially unlocked by granting the urban poor AURL with secure tenure are not realised because land administrators are reluctant to ratify processes of informal land acquisition.

3.4.1.2 Impact of Land Cost on Housing Conditions

The unaffordable cost of urban land tends to be overshadowed by the poor quality of housing and living conditions, yet it is the astronomical cost of urban land that creates such housing conditions. The severe cost burdens prevent low-income households from accessing urban land with secure tenure. As a result, these households have to cut housing costs by living in substandard dwellings that are often of a make-shift nature, since they construct the housing using poor technology and methods and cheap readily available building materials of questionable quality and durability (Wekesa *et al*, 2011; UN-Habitat, 2003a). Most of these households are overcrowded in informal settlements that lack reticulated infrastructure services (Srinivas, 2005; UN-Habitat, 2003a). As a result, the units cannot adequately protect their inhabitants from weather elements, provide physical security or

sanitary living conditions (Buhaug & Urdal, 2013; Govender *et al*, 2011; Chaudhuri, 2004). Even though only a brief discussion of the impact of land cost on housing conditions is presented in this subsection, it lays the basis for the argument on the need to expropriate urban land subject to low or no compensation. However, a detailed discussion of the living conditions in informal settlements is presented in Chapter 4.

In order to resolve the problems of land distribution, land tenure and land utilisation, the ANC-government implemented a state sponsored land reform programme in 1996 that is differentiated in three ways. Firstly, land reform sought to restore historical land rights to urban land appropriated for white settlement and business activities. Secondly, land reform sought to address tenure rights of indentured farm labourers and sharecrop farmers with adverse possession rights to land. Thirdly, the reforms were intended to redistribute urban land to the landless. All the reforms are meant to expropriate land with compensation and under the guidelines of a 'willing-seller-willing-buyer' approach.

3.5 Expropriation of Urban Land After 1996

3.5.1 Expropriation with Compensation

In the past two decades, the approach used to expropriate urban land has relied heavily on the payment of compensation to the affected owners. The amount of compensation to be paid is determined in consideration of the market value and current use of the land. However, there is no consensus on the general criteria for fixing the amount of compensation or the methods used to derive the value of compensation for the land identified for expropriation (Lahiff, 2007; 2005). The market-led land reforms face major challenges that arise in part due to disagreements on the market value to be paid as compensation because current landholdings are contested.

The post-1994 land reforms managed to transfer only a limited amount of urban land to Africans. The Land Audit Report (2017) reveals that only 7 per cent of urban land in the country is held by Africans (DoRDLR, 2017) who constitute 62 per cent of the urban population (StatsSA, 2017). Even though land restitution has succeeded in settling all land claims in urban areas (Lahiff & Li, 2012), land redistribution and tenure reform are excruciatingly slow. The unequal landholding among different racial groups remains unresolved and the ANC-government struggles to develop a coherent and effective strategy to redistribute urban land to the millions of urban residents who lack shelter. The state struggles to redistribute urban land in ways that strengthen social justice and reverse race-based land allocation, deep inequalities and persistent poverty. The failure to redistribute urban land at scale to Africans over the past two decades is perceived by Hornby *et al* (2017) as a failure of the 'willing-seller-willing-buyer' approach to land reform.

The market-led approach does not make sense economically and politically and its failure is due to a number of reasons. Firstly, the reform strategies narrowly focus on addressing the supply-side constraints of the market and ignore the financial constraints of the majority of individual households and the state. The prices of urban land in strategic locations often increase faster than incomes of the urban poor and reach levels that are unaffordable. The institutional arrangements that paved the way for land redistribution did not create conditions that enable low-income households to purchase urban land without state support. At the same time, these households have few alternative ways to access urban land since public financial support is limited and has to be spread thinly to cover as many beneficiaries as possible. Secondly, the land redistribution strategy has turned out to be a half-hearted attempt to implement the social redistributive resolutions enshrined in the Freedom Charter. The ANC-government appears to be reluctant to expropriate urban land without compensation for fear of provoking a market backlash or causing harm to the economy and threatening food security. Such concerns create a web of disincentives that frequently make it impossible to build political consensus at the local level regarding the expropriation of urban land without compensation. Hence, the idea of expropriation without compensation is consistently marginalised from the land reform agenda of the ANC, even though the acute shortage of affordable urban land and the resulting 'clandestine subdivisions' justify an urgent need for new approaches of redistributing urban land (Walker, 2005).

The discontent with market-led land redistribution has, in turn, resulted in a growing erosion of confidence in the ability of the ANC-government to resolve the acute shortage of affordable urban land as a guarantee of political and socio-economic stability (Walker, 2005). The failure to redistribute urban land at a price the urban poor can afford has contributed to an increase in the scale of brazen land invasions, 'clandestine subdivisions' and informal settlement in later years. This physical expression of need for affordable urban land for low-income housing strengthens the current argument for expropriation of urban land without compensation. This argument was placed on the political agenda as a result of public calls by the EFF in 2018 for mass mobilisation and invasion of vacant urban land to compel the government to expropriate land without compensation. This call by the EFF initiated a national debate on the expropriation of urban land without compensation. The political debate on the expropriation of land subject to no compensation explored issues on the constitutional amendments and administrative changes that could be required to aid the delivery of AURL for low-income housing.

3.5.2 Expropriation without Compensation

3.5.2.1 *The 2018 Constitutional Review*

On 27 February 2018, the legislative and executive branches of the Republic of South Africa made a landmark decision to review Section 25 of the Constitution to expropriate urban land without compensation (Parliament Deb 27 February 2018). In his State of the Nation Address, President Cyril Ramaphosa said expropriation of land without compensation must be done in a manner that posed no harm to the economy and improved food security (Parliament Deb 16 February 2018). The exact meaning and mechanics of how this could be done or what land could be targeted for expropriation is yet to be clarified. The president's statement appears to suggest that expropriation of land without compensation maintains a bias towards agrarian reform. While few, if any, would not criticise the ANC-government for waiting almost eight months after the resolution on expropriation of land without compensation was taken to outline the direction the policy review process would take, the president has not explicitly stated what vacant urban land is to be expropriated for low-income housing purposes, despite widespread anxiety over policy uncertainty.

The lack of clarity in this policy review process has stirred a heated national debate on expropriation as political parties, civic society, citizens, white farmers and business leaders anticipate either meaningful land reform or the collapse of the market economy. The national debate has brought to prominence different arguments on the expropriation of urban land without compensation. These arguments use current socio-economic conditions to advance different options on the expropriation of urban land. In particular, business leaders and landowners prefer to maintain the policy on expropriation of urban land subject to market compensation while those without land propose expropriation without compensation. The divergence in the proposals indicates that the argument on the expropriation of urban land without compensation is understood from two different contexts. Firstly, the institutional setting on which expropriation is being discussed by the legislature, NGOs and CBOs centres on the democratic allocation of rights to land. Secondly, the substantive issues on human rights, social justice and economic development around which expropriation is being discussed seek to implement land reforms that are socially credible and economically empower the poor. More importantly, the legislative changes to allow the expropriation of urban land without compensation are being debated in three main contexts:

- As a constitutional issue seeking a balance between public and private interests,
- The impact of tenure security on housing and economic development, and
- As a right to housing issue in relation to human rights and social justice.

The proposed legislative changes to allow the expropriation of urban land without compensation are driven by mounting social resistance to compensate beneficiaries of pre-1994 land dispossession, increasing land invasions and social resistance to market-led land redistribution. The issue that prompts social mobilisation against market-led land redistribution is the always unresolved historical claims to land. Motivations for expropriation without compensation are often driven, firstly, by reasons associated with affordability challenges, which unfortunately are ignored in the main stream of current discussions on land expropriation. Secondly, they are driven by the argument that historical tenure rights that Africans lost through colonial dispossession have to be recognised and restored before beneficiaries of land dispossession could make any claim for compensation. These two reasons create a wide rift between the landowners and the land-seekers who cannot agree on the market value of compensation for land identified for expropriation.

Failure to redistribute urban land at a price that is affordable to the urban poor has, in turn, resulted in a growing erosion of confidence in the ability of the state to resolve historical land claims as a guarantee of political and economic stability (Walker, 2005). Even though land redistribution is excruciatingly slow, the constraints imposed by the 'Property Clause' enshrined in the Bill of Rights have ensured that the urban land question remains a nagging issue of major political and socio-economic concern.

In hindsight, the drafters of the 1996 Constitution should have paid heed to the warning by Judge Didcott in 1988 that:

"...a Bill of Rights cannot afford... to protect private property with such zeal that [it] entrenches privilege. A major problem which any future South African government is bound to face will be the problem of poverty, of its alleviation and the need for the country's wealth to be shared more equitably... Should a bill of rights obstruct the government of the day when that direction is taken, should it make the urgent task of social or economic reform impossible or difficult to undertake, we shall have on our hands a crisis of the first order..." (GSA, 1996).

The warning of Judge Didcott was meant to remind leaders who were involved in the negotiation for the 1996 Constitution that the 'Bill of Rights' had to address the historical legacy of dispossession. Even though political, traditional and business leaders of this country recognised the fact that the land question was at the heart of endemic poverty and inequalities in South Africa, they reached a settlement that protected land rights of the dispossessor at the expense of the dispossessed (Cousins, 2013; Hall, 2010; Lahiff, 2007). Section 25 of the Constitution seeks to strike a balance between the historical claims of the dispossessed and the need to respect land tenure rights in a market-led economic dispensation. In general, Section 25 stipulates that land redistribution is to be guided by the 'willing buyer, willing seller' tenet. The irony of this unjust compromise is that the majority of South Africans are poor and unable to participate in an open market. Consequently, Section 25 is criticised by Hall (2010) as a restrictive clause in the Constitution that makes land redistribution impossible.

However, other scholars disagree with this interpretation of Section 25 on the basis that it is a conservative interpretation of the Constitution.

The Constitutional Court appears to affirm these sentiments in the matter between *Haffejee v eThekweni Municipality* (case CCT 110/10), when it held that the interpretation of Section 25 must promote human dignity, equality and protect the right to hold fixed-property. Provisions 4 to 9 of Section 25 underline the need for redressing and transforming the legacy of grossly unequal distribution of urban land in this country. The historical claims that are ignored by the property clause should be remembered and, thus, the individual right to private property is not absolute but subject to societal considerations (CCSA, 2011).

Section 25(7) legalises colonial land dispossession and protects land held by whites from restitution by stipulating that a *“person or community dispossessed of property after 19 June 1913 as result of past racially discriminatory laws or practices is entitled, to the extent provided by an Act of Parliament, either to restitution of that property or to equitable redress”* (GSA, 1996). Section 25(3)(e) allows the state to expropriate urban land under two conditions: paying just compensation and for the purpose of satisfying public interest. However, the public interest clause is then an important limit to the exercise of the expropriation power. Clearly, the difficulty that arises in relation to the redistribution of urban land stem from the interpretation of Section 25 that is implicit in protecting property rights while also explicitly empowering the state to expropriate urban land subject to compensation (Hall, 2004). Nonetheless, Section 25(5) enjoins the state to take reasonable legislative measures to foster conditions that enable citizens to gain access to urban land on an equitable basis (*ibid*). The proposed constitutional changes are intended to strengthen the right to housing for low-income households who are trapped in informal settlements.

3.5.2.2 The Right to Housing

The idea of housing as a right has the potential to change legal doctrines on expropriation in a fundamental way that could deliver AURL for low-income housing. In spite of that potential, the idea of housing as a right has not yet had an impact on the law of expropriation in South Africa. However, the idea of housing as a right has greater influence only in cases of egregious evictions. The dominant idea is that housing is a human right that guarantees human dignity. Despite the fact that the discourse on housing as a right has huge potential consequences for a redefinition of the law of expropriation, it has so far avoided an explicit recognition of such consequences. On the one hand, the discourse on housing as a right entails a systematic condemnation of evictions, but it rarely recognises situations in which evictions have some form of legal validity. This is a serious limit to the doctrine of housing as a right, as it can be hard to accommodate within the ensemble of values that a legal system is meant

to protect – including other human rights that may collide with the right to housing in certain situations, such as environmental rights. Following the notion that housing is a ‘bundle of rights’, the question is how many or which of the sticks in that bundle could be taken by the state in the public interest without generating a right to be compensated for the loss. The government has to consider how it could expropriate different components of the bundle of rights. The use of expropriation subject to no compensation could give the urban poor access to AURL. The urban poor are denied access to urban land because they cannot afford to pay house prices and rents set by the market. Such a strategy has implications on land policy and urban land legislation that has a direct impact on low-income housing delivery.

3.5.3 Policy implications

There are clear indications of growing public support for using the power of expropriation to redistribute urban land without paying compensation. Legal restrictions and limited ability to afford are the main obstacles to redistributing urban land at market costs. Hence, the most important policy implication of demand-side challenges is the need to consider the use of expropriation as an instrument of land policy. However, the consideration to expropriate urban land is not intended to discard the rule of law altogether, the government needs to re-define the conditions under which it expects expropriation could be efficient, equitable, affordable and socially accepted. Thus far, the debate on expropriation takes place in a context that recognises the campaign for the right to access AURL and housing. The current land policy ignores the principles of social justice, fairness and the right to housing in the way it structures the expropriation of urban land subject to compensation. This has economic implications that limit the delivery of AURL for low-income housing. If the current debate to amend Section 25 of the Constitution and the land policy to allow the expropriation of urban land without compensation is to deliver AURL, all these dimensions must be considered. Hence, the reconstruction of expropriation without compensation as a policy instrument has to be part and parcel of both the property regime and land policy in order to address the urban land question.

In 2004, public policymakers identified rapidly increasing and unaffordable urban land prices as the prime basis of the low-income housing crisis in South Africa and this observation still holds true even today. However, rising prices are only symptoms and public interventionist strategies that ignore the underlying causes of price increases can do more harm than good. While in principle the ANC-government has committed itself to taking up a leading role in urban land allocation, in practice its strategies are largely superficial. Indeed its attempt to address the urban land question through land-use planning, ‘sites-and-services’ projects, and expropriation with compensation have failed due to inappropriate and poorly implemented policy instruments (Huchzermeyer, 2004; Mayo & Gross,

1987). Maybe by reviewing strategies used in other countries to assemble urban land, South Africa could learn from their experience as it attempts to devise a strategy that could deliver AURL. Some of the strategies implemented in these countries are presented briefly below.

3.6 Lessons on Affordable Land Delivery: The International Experience

Although all governments in developing countries have adopted some land policy changes and enacted land legislation that affects urban land rights, land taxation, urban land transactions and the size of urban landholdings, the extent to which the changes in legislation have enabled transactions in urban land to become affordable differ very widely. The influence of public and civic intervention on urban land delivery practices has been strong in Brazil, China, India, Indonesia, Japan, Turkey and United States, and to a lesser extent in Cambodia. These countries together provide this study with rich opportunities to learn from the successes and failures of various strategies they have implemented under diverse settings to assemble affordable urban land for low-income housing in inner-city areas. They have used strategies such as land readjustment, transfer of development rights, guided land development, land sharing and community land trusts to assemble land for housing development.

3.6.1 The Land Readjustment Strategy

The shortage of AURL in most developing countries justifies the need for a more efficient strategy of land assembly for low-income housing development. According to the World Bank (2012), Home (2007) and Dharmavaram (2001) the land readjustment strategy has been utilised, with varying degrees of success, to assemble urban land for reticulated infrastructure services, create serviced residential plots, upgrade informal settlements, regularise tenure, optimise land-use through densification and inner-city regeneration in Luanda (Angola), Curitiba and Rio de Janeiro (Brazil), Gujarat (India), Jakarta (Indonesia), Kobe (Japan), Kuala Lumpur (Malaysia), Seoul (South Korea), Taiwan (China), Istanbul (Turkey) and New Jersey (United States). The land readjustment process reshapes and resizes plots by deducting a portion of the land from all landowners who then receive smaller but regular, serviced plots that are of much higher value after the construction of reticulated infrastructure services and public amenities and the completion of re-zoning (Dharmavaram, 2001). The surplus plots created from the readjustment are sold or rented at market prices to recover part or all of the development costs (World Bank, 2012; Dharmavaram, 2001). Land readjustment projects are noted for improving municipal revenue from fixed-property taxes and also for providing plots for residents of informal settlements, potentially at no cost to the municipality (Dharmavaram, 2001). This strategy had, by 2006, been used to assemble 33 per cent of urban land for development projects in Japan (World Bank, 2012; Home, 2007) as it was considered less cumbersome, less time consuming

and less costly compared to conventional land assembly involving eminent domain or compulsory acquisition (Sagalyn, 2001).

The land readjustment strategy has potential for application in several possible situations. Firstly, where low-income housing is to be developed on inner-city land with fragmented ownership. Secondly, where urban land lacks reticulated infrastructure services. Thirdly, where ownership of urban land has been disrupted by civil war or 'clandestine subdivisions'. Fourthly, where public housing is to be developed in inner-city areas, but public funds for compulsory land acquisition are inadequate. Fifthly, where smaller plot sizes or higher densities of development are sought (Home, 2007). For land readjustment to work certain preconditions are necessary, notably an urban land market with standard valuation rules and rapidly increasing urban land values, an enabling legislative framework, accurate and complete cadastral records, a development agency with a public mandate and technical expertise and a willingness by landowners to share the surplus plots with a development agency (*ibid*).

In the land readjustment schemes, local government does not take responsibility for deciding which plots would not be used for public purposes. Instead the municipality acts as the facilitator of a formalised process of cooperation among landowners. The land readjustment strategy's greatest advantage lies in time-based savings (Sagalyn, 2001) precisely because the landowners retain control of the land and participate in the redevelopment process in cooperation with unauthorised occupants, CBOs, private developers and the municipality. However, consensus and cooperation has been a frequent challenge in some land readjustment projects in developing countries with unresolved historical land claims.

Urban land in Luanda (Angola), Curitiba and Rio de Janeiro (Brazil) and Gujarat (India) that is illegally occupied and the object of a development scheme is held by speculative investors and absentee landowners (World Bank, 2012) who lack a long-term interest in developing low-income housing. Conversely, the land is also controlled by unauthorised occupants who actively challenge any eviction and relocation campaigns. The situation is compounded by the fact that public funds for compulsory acquisition of land and provision of reticulated infrastructure services are limited. This situation indicates the first lesson, that every readjustment project should be designed to provide a portion of the surplus plots to unauthorised occupants by allowing stakeholders to reach a consensus through negotiation and cooperation. The successful resolution of the land dispute through land readjustment provides an attractive legal mechanism for land assembly that could be of great benefit to South Africa that is struggling with land invasions, 'clandestine subdivision' and exchange of urban land. Public policymakers in South Africa could learn from countries that have used the land readjustment strategy to effectively rationalise neighbourhood layouts, land-use patterns and land tenure arrangements that

resulted from 'clandestine subdivisions' of urban land. Other lessons these policymakers could learn from the New Jersey experience of land-readjustment is that firstly CBOs can ably assume an active role in managing efficiently the land-readjustment process. Secondly, CBOs can manage this process with greater fairness to fixed-property interests in areas that had run-down fixed-properties owned by speculators (*ibid*). The land-readjustment process achieved some success as a result of the bargaining power offered to low-income residents through community consensus prior to project approval (Dharmavaram, 2001).

The other important lesson of land readjustment schemes was that they demonstrated it was feasible for the municipality to facilitate these schemes to improve the delivery of AURL in Curitiba (Brazil). They demonstrated that land readjustment was feasible by overcoming the barrier to land assembly posed by the absence of a cadastral record and register of land ownership for plots undergoing 'clandestine subdivisions'. The municipality overcame this barrier by obtaining support from 90 per cent of the landowners to implement the schemes and provide plots for public amenities, a planned residential layout, regular plots and land titles to all landowners and unauthorised occupants (World Bank, 2012). These valuable net benefits of the Curitiba schemes could also be achieved in many inner-city areas in South Africa through land readjustment projects. Local public policymakers could also deliver urban land for low-income housing by transferring the right to develop a particular piece of land for non-housing use to a piece of land somewhere else as discussed below.

3.6.2 The Transfer of Development Rights Strategy

The strategy of transferring development rights is designed to overcome perverse economic incentives created by land-use zoning. The transfer of development rights works on the tenet that fixed-property rights can be considered as a 'bundle' of rights such as the right to build, mine or farm that can be bought or sold in the market (Dharmavaram, 2001). The owner of a serviced plot of considerable economic value can trade 'development rights' from a designated 'sending zone' to a buyer, usually a private developer, for use in a designated 'receiving zone' resulting in a 'transfer of development rights' (*ibid*). In effect, the landowner in the sending zone loses his right to develop to others who can use it elsewhere, but is compensated for the development potential of his land at market value or for giving-up his right to develop in that location and opting to develop some land in another location (Lipman & Rajack, 2011; Dharmavaram, 2001).

According to Lipman and Rajack (2011), Renard (2007) and Dharmavaram (2001) the transfer of development rights strategy has been utilised to varying degrees of success in assembling urban residential land in Curitiba, Rio de Janeiro and Sao Paulo (Brazil), Mumbai (India), Manila (Philippines) and Florida (United States). Municipalities and land administration agencies use this mechanism to

relocate existing land-use activities in order to release urban land for other land-uses, especially in circumstances where local authorities lack the funds to pay adequate compensation to the landowner (Pruetz & Standridge, 2008). The relocation occurs to proposed development on urban land in areas where development is to be discouraged or is unsuitable for human settlement, but is channelled to specific locations in another part of the city where such development is desired. While this strategy seldom results in an increase in the supply of urban land, it can scale-up the delivery of urban land for a particular land-use such as affordable housing.

Experience in Brazil and India shows that if the program of transferring development rights is considered by private landowners not in their interests, they will openly oppose it if they are not convinced that the location the municipality plans to relocate them to, is compatible with spatial forms favoured by fixed-property markets (Pruetz & Standridge, 2008). The value of the transfer of development rights must be sufficient to incentivise landowners to sell their land and release it for land-use activities the municipality is actively trying to encourage. Thus, the receiving area for the transferred development rights must be appealing to landowners and developers; it must be in a good location and compatible with land-uses favoured by markets (Lipman & Rajack, 2011). Landowners are more inclined to transfer their development rights to a receiving location when the alternative of developing in the sending location is less attractive due to steep terrain, lack of reticulated infrastructure services, remote location and restrictive zoning regulations (Pruetz & Standridge, 2008).

The transfer of development rights schemes in the United States and India are very complex and challenging to implement. They depend on the demand for developable land and the fluctuating market to determine the compensation to be paid for giving-up development rights (Dharmavaram, 2001). They are complex to implement especially in designating the sending and receiving locations or the procedures of approving and allocating density bonuses (*ibid*). The lesson drawn from this situation is that landowners find it easier or more profitable to use other municipal programs for land assembly instead of transferring development rights. This is vital information that public policymakers in South Africa might need to consider since they need to devise a simple solution to the complicated land question in South Africa or deliver AURL for low-income housing. The lesson from the schemes in Mumbai (India) is that the schemes could increase the overall housing stock firstly, by providing incentives for building at very high density in high-value lands including lands with unauthorised occupants. Secondly, by providing tax rebates and tax deferrals to landowners who were willing to give-up their right to develop high-value lands and develop somewhere else to make the land more accessible to low-income households. Thirdly, by allowing private developers to mortgage development rights certificates to raise development finance instead of relying on organised crime

syndicates for funding (*ibid*). Another strategy the government could also draw lessons from to improve the delivery of urban residential land is through guided land development.

3.6.3 The Guided Land Development Strategy

The experience of many cities in developing countries is that the availability of land for low-income housing is rapidly decreasing (Marulanda & Steinberg, 1991). Guided land development is used by urban municipalities to increase the availability of land for low-income housing and to guide the conversion of privately-owned peri-urban land from agricultural use to urban use (Lipman & Rajack, 2011; Marulanda & Steinberg, 1991). According to Lipman and Rajack (2011) and Marulanda and Steinberg (1991) variations of guided land development have been implemented in Bangkok (Thailand) and Cairo (Egypt) and tried on a limited basis in Konakri (Guinea), Jakarta (Indonesia) and Quito (Ecuador).

The appeal of guided land development to urban municipalities is that it is less costly than compulsory acquisition and landowners contribute towards the cost of land-use conversion in two ways. Firstly, they contribute by donating land for rights of way for roads and reticulated infrastructure services (Lipman & Rajack, 2011; Rais, 1988). Secondly, they contribute by paying betterment levies on land whose value has increased following the provision of reticulated infrastructure services and the conversion from agricultural use to urban use (*ibid*). Individual landowners can then subdivide and install reticulated infrastructure service on their own land and the subsequent increase in land value is considered sufficient compensation for donating their land.

Guided land development is a useful tool for providing a cost-efficient layout for reticulated infrastructure and roads on sparsely developed land in peri-urban areas of cities that are rapidly urbanising and have a rapidly increasing demand for land (Lipman & Rajack, 2011). This strategy provides a pathway for future reticulated infrastructure services to guide anticipated urban development to occur formally and less haphazardly. Subsequently, a financing plan and an implementation plan are drafted for the incremental provision of reticulated infrastructure services in step with increases in population density (Rais, 1988). By planning ahead, municipalities can prepare urban expansion in advance, discouraging settlement in particular locations that are unsuitable for human settlement. Acquiring rights of way for roads and reticulated infrastructure services helps ensure that arterial roads and reticulated infrastructure serving urban neighbourhoods are adequately supplied. Moreover, it makes sense to plan for future investments while urban land prices are still affordable. This strategy is ideal for use in locations where urban development is inevitably expanding into privately owned agricultural land (Marulanda & Steinberg, 1991). By installing reticulated infrastructure services in areas where the municipality considers growth can best be channelled,

guided land development can encourage landowners to realise the increase in land value following its subdivision and servicing by either developing it themselves or selling it to a developer. The strategy requires that agencies responsible for land administration and reticulated infrastructure services provision act in a coordinated manner.

The guided land development schemes in Bangkok (Thailand) and Jakarta (Indonesia) sought to provide urban land for all income groups within one neighbourhood (Marulanda & Steinberg, 1991). The lesson for public policymakers in South Africa is that guided land development allows for a significant degree of cross-subsidy. These policymakers could learn from the projects in Jakarta that supplied large plots along arterial roads to high-income households as a way to generate revenue needed to bring down the price of small plots meant for low-income households. Even though guided land development is best used in peri-urban locations where urban development is expanding onto privately owned agricultural land, the projects in Hyderabad (Pakistan) were discontinued partly because the locations were too far from job opportunities and partly because middle-income households flouted plot allocation procedures for speculative purposes, which resulted in the gentrification of the poor (Lipman & Rajack, 2011). The failure of the Hyderabad projects provides the lesson that any guided land development in South Africa should be designed to assemble land in inner-city areas close to employment opportunities. Just like in Hyderabad, the urban poor in South Africa often abandon free public housing built in peri-urban areas, preferring to move back into informal settlements close to job opportunities. In such circumstances, public policymakers in South Africa could draw lessons from land sharing schemes in Bangkok that have avoided relocating residents of informal settlements from inner-city locations into public housing in peri-urban locations.

3.6.4 The Land Sharing Strategy

Unauthorised occupants can claim a right to 'share' with the landowner a parcel of land they do not own on the basis of two tenets. Firstly, they have a right to live on a piece of land in the city they have lived on for many years. Secondly, they have a share in the increase in value of the land resulting from public investments in reticulated infrastructure services and amenities and private investment by investors other than the landowner (Islam & Sheng, 1989). Thus, society can claim a portion of the increased value in the form of increased fixed-property tax or by a land sharing arrangement between unauthorised occupants and the landowner (*ibid*). The core objective of this strategy is to accommodate commercial development on land occupied by unauthorised occupants, without evicting the occupants who through adverse possession have the right to remain on the land.

According to Rabé (2010; 2005), Islam and Sheng (1989) and Angel and Boonyabanha (1988), land sharing has been utilised with varying levels of success in assembling urban residential land in Phnom

Penh (Cambodia) and Bangkok (Thailand). The pilot projects in Bangkok were a success during the 1970s and 1980s and inspired similar projects in Phnom Penh during the early 2000s (Rabé, 2010). The Bangkok schemes provide vital lessons on land sharing that could inform South African housing practitioners. Before highlighting these lessons, it is important to explain briefly the six preconditions of successful land sharing.

For land sharing to work, parties engaged in a land dispute have to agree to come to a compromise solution. Thus, six preconditions need to be in place for unauthorised occupants and landowners or developers to have an incentive to negotiate an agreement to divide or share a plot of contested urban land. The agreement allows the landowner to regain control of the plot and the right to build on high-value portion of the plot while the unauthorised occupants moved off the high-value portion of the plot and are re-housed on the remaining portion of the same plot in adequate housing with secure tenure (Lipman & Rajack, 2011; Rabé 2005).

Firstly, the situation most conducive to land sharing is a booming fixed-property market in inner-city areas (Rabé, 2010). While evictions of unauthorised occupants typically tend to increase when land values rise, a booming fixed-property market may also push landowners to become amenable to compromise once alternative ways to remove unauthorised occupants from the land have been exhausted (*ibid*). Secondly, a well-established community of unauthorised occupants of a contested land parcel have greater bargaining power against the landowner and developers (*ibid*). The unauthorised occupants would have, over time, acquired the right of adverse possession and built-up political connections or alliances with CBOs, NGOs and human rights groups to avoid eviction. Thirdly, organisation and consensus of this community of occupants allows them to mobilise to resist eviction and counter the threat of eviction by uniting during negotiations with the landowner and developer (Lipman & Rajack, 2011). Fourthly, third-party intermediation by a public agency with an interest in an amicable and fair outcome to the land dispute is a critical prerequisite of a successful land sharing agreement (Rabé, 2010). This agency must broker an agreement that is technically and financially feasible and adequately meets the interests of all parties while enforcing the agreement on all parties. Fifthly, a plot that is to be shared must be of sufficient size to accommodate safely the juxtaposition of residential and commercial land-uses (*ibid*). The new configuration of the shared plot may not re-house all of the unauthorised occupants, but the community must negotiate the criteria on who leaves and who can stay. Sixthly, the new housing is supposed to be financed entirely by private developers through cross-subsidies from commercial activities on the high-value portion of the plot (*ibid*). Each land sharing agreement must be based on site-specific technical considerations and financing mechanisms, which allow low-income households to gain access to land in inner-city areas with secure tenure without the need for a public subsidy (*ibid*).

The lessons that public policymakers in South Africa could learn from the successful land sharing schemes in Bangkok is their ability to bridge the divides between formal and informal settlements and between public and private interests. Land sharing in Bangkok brought a 'win-win-win' solution for unauthorised occupants, the municipality and private landowners or developers (Rabé, 2005). It enabled illegal occupants to remain on occupied land in inner-city areas, residing in free new housing paid for by private developers (Lipman & Rajack, 2011). Public policymakers in South Africa could learn from the Bangkok experience how these schemes created a pathway for unauthorised occupants to obtain secure tenure and alleviate informality in inner-city areas. This experience could also inform public policymakers in South Africa how the principle of cross-subsidisation could be used as an instrument to finance the upgrading of informal settlements. According to Hunter and Posel (2012), municipalities in South Africa struggle to accommodate non-residential development on land in inner-city areas occupied by unauthorised inhabitants. These municipalities could learn from the land sharing schemes in Bangkok how to accommodate commercial development on inner-city land, currently occupied by unauthorised inhabitants, without the need to go through time-consuming and chaotic eviction proceedings.

Public institutions in South Africa such as the Housing Development Agency lack organisational structures that are mature or robust to withstand the external pressure directed at them by municipalities, private developers and unauthorised occupants during the process of land assembly and informal settlement upgrading. Public policymakers in South Africa could learn from the land sharing schemes in Phnom Penh that low-income households will continue to struggle to access AURL, if public institutions fail to develop sufficient and necessary institutional structures and political will that are needed to make land sharing a success. The land sharing schemes in Phnom Penh failed while those in Bangkok were successful because civil society organisations and public organisations such as the National Housing Authority provided the vital institutional framework to support the land sharing efforts (Rabé, 2010).

In South Africa, land assembly via expropriation with compensation is proving to be a challenge because of deadlocks in agreeing on a fair price between private landowners and the government. Thus, public policymakers in South Africa could learn from the land sharing schemes in Bangkok how the municipality or civil society organisations, as mediators between unauthorised occupants and private developers, managed to shape the land sharing outcomes. This form of intermediation experience could be vital in informing South Africa public policymakers how to formulate regulations guiding the selection of beneficiaries of this form of land reform and housing development. According to Aliber and Hall (2012) and Mitlin and Satterthwaite (2004), the process of selecting beneficiaries of land reform or public housing projects is not transparent. In this regard, South Africa could learn from

the Bangkok and Phnom Penh experiences; land sharing in Bangkok was a success because intermediation was impartial and procedures for the selection of beneficiaries were transparent (Rabé, 2010). Land sharing in Phnom Penh failed because intermediation was not impartial and selection of beneficiaries was not transparent; it was undermined by corrupt practices of municipal officials. To reduce corrupt practices, public policymakers in South Africa could draw lessons from community land trust schemes that use non-profit companies to assemble land for housing development.

3.6.5 The Community Land Trust Strategy

According to Davis (2014) a community land trust is a private non-profit company created to acquire and hold urban land for the benefit of individual households who are segregated from the urban residential land market. The land held by the trust is then leased to individual households who purchase houses built on land owned by the trust (Lipman & Rajack, 2011). The lease for the land is usually for 99 years and it can be inherited or mortgaged, which allows households to obtain private finance for construction or improvement of their houses (Davis, 2014). This arrangement makes houses built on land owned by the trust more affordable because individual households purchase only the building and not the land, which often is the most costly component. However, a community land trust usually retains the right to repurchase the house at a price set by a resale formula written into the lease for the land (Lipman & Rajack, 2011). Thus, housing in such estates is kept affordable in perpetuity.

Community land trusts are most widely used in peri-urban areas where individual households struggle to access AURL. This strategy of land assembly has been successfully used in Australia, Belgium, Canada, United Kingdom and United States of America (Thompson, 2015; Davis, 2014), although it has been tried on a limited scale in Kenya and Bolivia (Lipman & Rajack, 2011; Bassett & Jacobs, 1997). Community land trusts are complex and require a robust institutional and legislative framework and trust between trustees and homeowners. Community land trusts are difficult to establish at scale in metropolitans where households are mobile, community interests are diverse and institutional commitment and capacity are often limited (Lipman & Rajack, 2011). Such challenges do not suggest, however, that implementing this strategy of land assembly in South African cities would be futile; rather this strategy should be explored.

The lessons that South Africa could learn from the international experience of land assembly for residential development through community land trusts centre around the effectiveness of grassroots activism as a powerful tool for empowerment of households experiencing shelter poverty. South African could learn how land assembly strategies that emerge from grassroots organising gain easier

acceptance from the community from whom the land trust hopes to draw its beneficiaries from and to whom the land trust hopes to market its residential units. Community land trusts that are driven by grassroots activism are more likely to be sensitive, responsive and accountable to low-income households, who in South Africa constitute the majority of urban residents. Ties to a grassroots constituency lends legitimacy to this strategy of land assembly especially from public and private financial lenders. South Africa could learn from community land trusts in England and United States how connecting with the grassroots from the very beginning can ensure such legitimacy and future funding could inspire land assembly approaches for low-income housing development. As a result, housing developers gain an insight or understanding of the low-income housing market by remaining connected and accountable to their grassroots constituency. They know intimately the households they are trying to serve and the neighbourhoods they are trying to improve.

The strategies used in other countries to assemble AURL in inner-city areas highlight important lessons that the South African government could learn from as it attempts to design a strategy that could deliver AURL for low-income housing. The demand-side and supply-side challenges associated with the urban land market that limit the supply of AURL were discussed in the preceding sections of this chapter and presented in summary below.

3.7 Chapter Summary

The land question in South Africa frequently evokes a great deal of bitterness for Africans who were dispossessed of their land by white settlers. Some of the difficulties in addressing the urban land question were discussed in this chapter, but it is useful to summarise the main issues. The notion that poor Africans, with minimal support from a fiscally constrained state, could buy urban land on the open market is logically flawed and is increasingly discredited in practice. The strategy to redistribute urban land through the market had a disappointing track-record in the first two decades of democracy due to affordability challenges. It is reasonable to conclude that part of the reluctance of the government to use a more liberal interpretation of the Section 25 has to do with established interests in agri-business. Failure to use the constitution to provide access to AURL for low-income housing entrenches inequality of the past and reproduces new forms of inequality, poverty and economic marginalisation.

The discussion presented in this chapter illustrates how uncertainty over mechanisms of gaining access to urban residential land often creates a sharp rift between the interests of landowners and the aspirations of the urban poor whose lack of access to AURL is profound. Landowners often act in self-interest and reject any form of redistributive justice, dispute what principles of justice demand of them to safeguard public welfare against wealth accumulation. Where demands for redistributive

justice of land and housing resources are made, self-interest plays a part in leading landowners to misconceive their moral duty to fairness. This study returns to this challenge in the final chapter of the thesis when the researcher develops an alternative price-setting mechanism for urban land. Huchzermeyer (2004) rightly argues that the shortage of low-income housing and subsequent informal settlement cannot be alleviated unless AURL is made available to the urban poor. As a result, land-use planning as a form of regulation appears to restrict the supply of AURL in locations close to jobs, public facilities and amenities where vacant land is available. A major manifestation of this has been the subdivision of urban land into widespread expanses of vacant land that are being targeted for informal settlement, a theme which is discussed in Chapter 4. Since the 1980s, land and housing policies increasingly favour market-based solutions to shortages of AURL for low-income housing. Frustration with the slow pace of land redistribution results in the spirited debate on the expropriation of urban land with no compensation.

4 CHAPTER FOUR: INFORMAL SETTLEMENTS IN SOUTH AFRICA, 1994-2018

4.1 Introduction

Informal settlements in South Africa are an integral part of the urban landscape because historically they have been the only affordable housing solution available to the urban poor. Low-income households often gain access to shelter by utilising strategies that involve the unlawful occupation of urban land and construction of housing using substandard building materials, clandestine methods of accessing reticulated infrastructure services and legal campaigns against eviction (Huchzermeyer, 2004). Most of these settlements shelter Africans who are disadvantaged by the historic legacy of landownership and residential segregation based on race and income. Africans who come to the city in search of work struggle to find affordable housing and eventually establish informal settlements in pockets of land in inner-city areas considered unsuitable for human settlement. Almost everyone discussing the situation in informal settlements, including residents of such settlements, agree that the residents live in very inhumane and disturbing housing conditions that result in life threatening outcomes such as disease outbreaks, violent crime and other social delinquencies (Hunter & Posel, 2012). The intrinsic characteristics of these settlements make public intervention very difficult. Often, intervention strategies are formulated on the basis of an incomplete understanding of the nature of these settlements. Hence, intervention experience has proven such actions to be injudicious (Roux *et al*, 2009).

Studies by Abbott (2003), Davis (2006) and Andavarapu and Edelman (2013) lead the researcher to conclude that characteristics of informal settlements in Africa, Latin America and south-east Asia are almost universal and informal settlements in South Africa are not different. These settlements are also developing through processes of unauthorised acquisition of land and construction of shelter (Huchzermeyer, 2002). Due to their inherent unauthorised status, informal settlements often severely lack or have low levels of reticulated infrastructure services, solid waste disposal and roads (Huchzemeyer & Karam, 2006; Richardson *et al*, 2007). Water supply and sanitation, for example, may be absent completely, or available from few communal standpipes and communal toilets (Mohamed, 2006). In addition, the informal nature of these settlements deprives the residents their fair share of amenities such as schools, health centres, recreational facilities, etc. Residents of these settlements face high rates of unemployment, poverty and crime and high levels of food insecurity (Huchzemeyer & Karam, 2006; Richardson *et al*, 2007). As a result of limited affordability, their dwellings are built of substandard building materials such as corrugated iron sheets, scrap metal and wooden planks that range in size and quality. The dwellings mostly comprise of a single room in which residents cook, eat,

sleep, wash and live (Lemanski, 2009). Thus, these are expansive settlements of poor quality houses arranged in an irregular fashion with alleys criss-crossing houses.

Informal settlements in South Africa are the consequence of both explicit apartheid-government policy and decades of official indifference. In particular, informal settlements are excluded from planning and budgeting processes of municipalities, which ignores their existence and the dangers they pose to humanity. The physical planning of informal settlements is done entirely by the inhabitants in ways that are highly social, organic, incremental and inclusive in decision-making, which to an outsider would appear as chaotic, unplanned and uncoordinated. However, on closer reflection it becomes evident that elements of physical planning are considered, but not at settlement level (Bolnick, 2000). The size of dwellings in informal settlements across the country varies considerably; some dwellings measure less than 10m² and some are larger than 25m² (*ibid*). The average number of inhabitants per dwelling and the density is quite high and overcrowding is the norm (Roux *et al*, 2009). Even though these settlements present an unpleasant image, their establishment is a direct result of the apartheid legacy of racial segregation in markets for land, housing, labour and finance. Successive pre-1994 governments directly intervened in these markets through legislation that denied Africans the right to urban housing.

4.2 Apartheid Housing Interventions

Public intervention in housing during apartheid created conditions that limited housing affordability among Africans. This study assesses the impact of such public interventions in relation to insensitive housing development that led to the massive shortage of low-income housing and the growth of informal settlements. Firstly, it created appalling conditions in social-rented housing, occupied by migrant single gender labourers. The social-rented units lacked security of tenure as they were built under the assumption that all Africans would return to native reserves after their employment contracts ended. Secondly, it led to forced relocation of African, Coloured and Indian communities from inner-city areas to the urban periphery under the guise of 'slum clearance'. Thirdly, it created low-income townships with row upon row of 'matchbox' houses lacking adequate community and commercial facilities. Fourthly, it devised incremental housing solutions in the late 1980s that were implemented in the early 1990s through 'site-and-services' schemes, which the poor viewed as 'toilets in the veld' (Del Mistro & Hensher, 2009).

The incremental housing approach was in response to the sudden influx of African immigrants into urban areas after the abolition of influx controls. Crankshaw and Hart (1990) contend that the lifting of influx control in 1986 was, in some part, responsible for the influx of African immigrants and the sudden appearance of informal settlements in inner-city areas in the late 1980s. According to the

Urban Foundation (1991) informal settlements grew exponentially fast in the early 1990s as the urban population residing in backyard shacks moved out to establish more informal settlements. This view was supported by a research conducted by Bank and Hobson (1993) in Eastern Cape and by Stevens and Rule (1999) in Gauteng that reports most residents moved into these settlements from backyard shacks in nearby African townships. The apartheid government's response to informal settlements was to adopt a strategy of demolition and clearance of these settlements and relocation of their inhabitants to the urban periphery. In consideration of massive housing shortage, such an attempt to prevent low-income households from establishing informal settlements was futile and akin to trying to sweep back the ocean tide with a broom. Hence, even though informal settlements are tolerated by the post-apartheid government as a form of housing the urban poor can afford, they are still viewed as illegal shelter because of the unconventional processes used in their development. However, the official view of such housing differs from that of inhabitants of such settlements.

4.3 Conflictual Perspectives on Informality

4.3.1 Conventional perspective

Municipal officials consider informal settlements as an unacceptable form of housing because they do not conform to the various dimensions of what a house is and what it does in the formal economy. According to Turok and Borel-Saladin (2016) public policymakers view housing as merely a physical product with immense social value. Generally, their view of a house is that it protects people from weather elements, offers privacy and safety, gives people self-respect, identity and social standing, and is a platform for leisure, family life and social interaction. However, private policymakers such as the World Bank view housing as a multi-dimensional asset with immense economic and social value. They consider housing as an asset for income generation and wealth accumulation and as means of access to employment and social facilities. Besides these aspects of functionality, housing also has place-making abilities that determine the quantity and quality of reticulated infrastructure services and amenities, scale and composition of private investment, liveability, social inclusion or exclusion and community cohesion in a neighbourhood (*ibid*). Even though the construction of housing consumes resources and degrades the environment, it enables labour mobility and workforce productivity, provision of financial and real estate services and consumer spending and saving (*ibid*).

4.3.2 Class-based perspective

The reluctance of public officials to accept informal settlements as a form of housing is supported by property developers and homeowners who are of the view that housing should be developed through the conventional system. According to Oelofse and Dodson (1997) the attitude of homeowners suggests that their resentment toward informal settlements is mainly due to differences of class and

income. According to Saff (1998) homeowners are of the view that it is inappropriate and unacceptable to build informal settlements within or close to middle-to-high-income areas because it would increase crime, decrease property values and cause environmental degradation in those areas. Saff also argues that the concerns of homeowners reflect a desire to maintain many desirable qualities and positive externalities of affluent neighbourhoods that are congruent with their values and socio-economic position. Middle-to-high-income households invest in affluent neighbourhoods in order to reap the economic benefits of a market-oriented system and, therefore, contend that the presence of informal settlements erodes this investment. The process of social distancing, which is directly associated with race and income is prevalent in the segregated cities in South Africa. However, the conventional system of housing development that allocates housing based on ability to afford and usually secures preferential access to high quality neighbourhoods is under threat from non-conventional methods used by the urban poor to access shelter.

4.3.3 Non-conventional perspective

Cheshire *et al* (2014) is of the view that residents of informal settlements make decisions on where to locate their housing based on their need to position themselves in locations close to job opportunities and amenities. They sacrifice their living conditions in the short-term to achieve long-term benefits; they treat these settlements as stepping stones in the expectation of advancement (Turok & Borel-Saladin, 2016). According to Hunter and Posel (2012) informal settlements are considered by the urban poor as a way to reconstitute and re-appropriate urban space to serve human needs not provided for through formal processes. Their shelter, in essence, may be a 'default housing solution' produced using unconventional processes, but it is an expression of current socio-economic conditions. Unconventional processes of housing development used by low-income households may challenge the aspirations of middle-to-high-income households seeking to maximise the value of their property as an investment (Turok & Borel-Saladin, 2016), but low-income households build such settlements for reasons vital to their everyday survival. Even though municipal officials frown upon the existence of these settlements the strong impulse by the officials to eradicate them is unrealistic and likely to cause continued tensions and undermine the livelihoods of low-income households. Hence, the demand by residents of informal settlements to stay where they are takes into consideration the place-based nature of modern urban livelihoods.

The discussion above positions the official view of what housing ought to be in stark contrast to the urban poor's perspective of what housing does. The many different attributes of housing influence the wide differences in opinion especially on the five key features of housing. Firstly, the urban poor and municipal officials disagree on what the physical structure of a house ought to be in terms of its size, durability, internal design, building materials, heating and insulation and amount of outdoor

space. Secondly, they disagree on which mechanisms enable ease of access to affordable housing with flexible tenure arrangements since the urban poor consider rental to be more flexible than ownership. Thirdly, they disagree on whether basic services such as reticulated water and electricity supply and sanitation should be put in place before home construction and occupation. The urban poor need these services but they cannot afford them. Fourthly, the location of housing is contested. The urban poor prefer to be close to jobs and amenities even though such locations may expose them to flooding, fires, landslips and other hazards. Fifthly, municipal officials and the urban poor disagree on what the neighbourhood environment should be in terms of its physical and spatial design and character, density of development and quality of landscaping and public spaces. The official view of what housing ought to be shapes the officials' attitude and reluctance to lower standards of settlement establishment to accommodate informal settlements. It is important for this study to understand the different perspectives on what a house is and does as it seeks to devise a mechanism that could deliver AURL and reverse the growth of informal settlements. In order to devise this mechanism, it is vital for this study to understand what causes the development of informal settlements.

4.4 Causes of Informal Settlement Development

The causes of informal settlement are closely tied to limited housing affordability associated with income poverty, unemployment, unrealistic procedures of settlement establishment, continuously escalating land prices, unfair land allocation practices and inflexible financial systems. Income poverty and underlying national macroeconomic factors, especially wealth distribution and job creation, play a central role in determining the process of informal settlement. Low income presents limited opportunities for the urban poor to afford housing or to meet basic non-housing needs. Hunter and Posel (2012) assessed the urban poor's ability to afford owning or renting a house on the market relative to their level of income and conclude that the urban poor reside in these settlements out of necessity. According to Hunter and Posel the urban poor choose to reside in these settlements where they can fix their position in the city at extremely low financial cost. They incur relatively low cost for: a plot of land, reticulated infrastructure services, building materials and labour; purchasing, renting and maintaining a house; and commuting to-and-from work. Thus, spending a small portion of their income on housing allows these households to meet basic non-housing needs. Hence, they consider well-located sites as having locational value that cannot be quantified.

The urban poor's need for housing in a specific location close to work is more important than residing in housing at the urban periphery (Landman & Napier, 2010; Crankshaw & Parnell, 1996). Within the city, the high costs of transportation make trips to-and-from work extremely expensive especially for poor households in precarious work who reside in peripheral locations of the city. Moreover, gaining work as a casual employee in domestic quarters, manufacturing and construction industry, or

collecting and selling scrap requires the urban poor to be located in particular inner-city areas. In the context of a very limited supply of low-income housing and high transport costs, residents of informal settlements are justified to locate their housing in pockets of urban land nearby employment opportunities.

Although most residents of informal settlements are poor, poverty is not the sole cause of informal settlement. Ethnographic data indicates that the level of absolute poverty has decreased while informality has grown (Boudreaux, 2008), suggesting that other factors may also be responsible. Davis (2006) and Berner (2007) suggest a combination of factors contribute to informal development including unfair land allocation, obsolete registration practices, unrealistic standards and lengthy procedures of settlement establishment, inflexible financial obligations and inefficient conflict resolution mechanisms.

There is a common perception among those involved in the land dialogue that land allocation, tenure and use are fundamental to solving the problems of informal settlements. They argue that mechanisms of land allocation are highly unfair to the poor because they segregate those who cannot afford from accessing housing opportunities. Land ownership is fundamental to accessing housing, and its lack prevents the poor from accessing low-income housing. In South Africa, the land challenge is complex; historical land claims remain unresolved because the land policy requires that land should be exchanged in the market, yet the majority of South Africans are poor.

A major constraint on low-income housing development is the continuous escalation of land prices. Land speculation plays an influential role in increasing the market price of land. Market-led delivery of land and housing in inner-city areas is characterised by prices that are high relative to incomes. In the absence of significant public subsidies, private developers are traditionally reluctant to develop housing for the low-income segment of the market (Savage, 2014). The increases in the price of urban land and construction costs causes a large increase in the prices of dwelling units. Most households have very low incomes to allow them to afford housing built by private developers. One consequence of land price escalation is that the market forces out those who are unable to pay, thus making room for the acquisition and development of urban land outside the law. Informal land exchanges and unauthorised construction are widespread and reflect the inability of local authorities to deliver AURL for low-income housing in inner-city areas (Mohamed, 2006). Land is allocated by land barons to individuals either verbally or with a false title. None of these processes accord with the provisions of South African land law, but they are practised with little challenge. Such a system of informal allocation provides the poor with no legal means of accessing housing. As a result, most low-income earners who

are not able to afford the price of housing on the market resort to establishing settlements in pockets of land in the inner-city that lack reticulated infrastructure services and amenities (Lemanski, 2009).

Local authorities have traditionally underfunded reticulated infrastructure services in areas settled by low-income groups. The resulting lack of affordable serviced urban land has the effect of creating more informality especially when municipalities struggle to integrate land, housing and finance policies to deliver AURL for low-income housing. Compounding the situation is the inability of local authorities to convince low-income communities to pay for the provision of reticulated infrastructure services. According to Bradlow *et al* (2011) these communities expect the local government to provide reticulated infrastructure services for free, and thus, abscond the financial responsibility of paying for utilities by residing in informal settlements.

To its credit, the ANC-government has one of the best public housing delivery records in the world (Hunter & Posel, 2012). While its achievement is notable, the scale of low-income housing need remains far greater than the rate of delivery, thus, the growth of informal settlements keep increasing rapidly. As shown in Tables 4.1 and 4.2, the total number of households in informal dwellings is far larger than the relative increase in the number of households overall. In the same period, the percentage of households in informal dwellings doubled from approximately 7.5 per cent of all households to nearly 15 per cent between 1996 and 2006 (*ibid*). Based on this evidence, one can conclude that the scale of informal settlement outpaced the scale of public housing delivery. The reasons for this trend could be linked to rapid urbanisation and a limited housing subsidy.

Table 4.1 The Percentage of Households in Informal Settlements, 1996-2015

Number of Households (millions)									Percentage of Households in Informal Settlements								
1995	1997	1999	2001	2004	2006	2009	2011	2015	1995	1997	1999	2001	2004	2006	2009	2011	2015
7.69	7.82	8.97	9.82	11.0	11.4	11.5	11.6	11.7	8.8	13.6	14.8	14.6	17.0	16.5	17.3	18.2	18.9

Source: StatsSA (2017)

Table 4.2 Growth of Informal Settlements in Major Cities, 1996–2011

City	Human Population				Percentage of Population in informal settlements			
	1996	2001	2011	2015	1996	2001	2011	2015
Johannesburg	2 497 947	3 075 659	3 898 741	4 919 607	19.4	18.3	17.6	14.0
Ethekewini	2 343 597	2 701 885	2 354 116	3 476 907	20.9	18.1	15.8	12.1
Cape Town	2 461 034	2 743 130	3 309 388	3 977 150	18.1	17	20.6	13.9
Ekurhuleni	1 925 280	2 381 005	2 720 806	3 353 395	25.7	25.5	21.7	15.0
Tshwane	1 658 495	1 996 634	2 270 985	3 245 902	20.3	22.1	18.2	13.7
Nelson Mandela Bay	928 868	966 073	1 021 998	1 256 723	26.4	19.3	12	5.9
Buffalo City	575 331	622 646	508 618	790 412	25.3	25.3	22.4	20.2
Mangaung	547 500	595 761	589 931	780 103	23.4	20.2	14.2	10.9
Msunduzi	370 441	417 564	358 080	579 082	0.9	14.6	8.4	7.3
Total	13 308 493	15 500 357	17 032 663	22 379 281	21.1	20	18.1	13.3

Source: StatsSA (2017)

The limited housing subsidy provided by the state cannot keep pace with the continuous escalation of prices of land in inner-city areas; the delivery of public housing becomes limited yet demand is very high (Hunter & Posel, 2012). Therefore, the quantitative and qualitative dimensions of housing demand have not been met, thus, reinforcing socio-spatial segregation. The inconvenience that public housing imposes on the poor due to its limited size and poor location is forcing the beneficiaries to abandon such housing and seek shelter in informal settlements (Turok & Borel-Saladin, 2016; Savage, 2014; Bradlow *et al*, 2011). According to Wakely and Riley (2011) similar observations have been made in cities as far-flung as Nairobi (Kenya), Phnom Penh (Cambodia) and Ahmedabad (India) and the inhabitants of these settlements are reported to experience powerlessness.

Powerlessness unveils opportunities for political exploitation of the urban poor by politicians and bribe-seeking public officials in their daily struggle to access housing and avoid eviction (Mitlin & Satterthwaite, 2004). Shortage of AURL and low-income housing is enormous and politicians who are able to influence the allocation of public housing to their supporters at the expense of the targeted beneficiaries are increasing the shortage of housing among low-income households, which pushes them to seek shelter in informal settlements (Savage, 2014). In some situations, politicians seem to allow new land invasions by people who promise to reward them through the ballot box. Informal and arbitrary allocation of land by politicians for unauthorised land-use distorts land management systems. The actions of such politicians, in both instances, have a direct impact on the growth of informal settlements.

The complicated situation presented above that is creating such widespread informality is reinforced by the obsolete and contradictory workings of the overall legal and judicial system in South Africa. Local authorities are compounding the situation as their tolerance for violation of laws and the widespread lack of enforcement of laws are contributing to the growth of informality. Their hesitation in taking decisive legislative action especially on the expropriation of land without compensation is prolonging uncertainty as a resolution of the land question or informality has not been reached (Bradlow *et al*, 2011). The current land laws are abetting a pattern of socio-spatial segregation. In order to gain an insight into the informal settlement situation in South Africa, this study assesses their spatial distribution in relation to the urban space economy. It is vital for this study to identify the locations the urban poor settle on in response to affordability challenges. This allows this research to devise a mechanism that could deliver urban land in such locations at price levels that the urban poor can afford.

4.5 Spatial Distribution of Informal Settlements in South Africa

An important pattern of the spatial distribution of informal settlements in major cities is the location of the majority of these settlements at the urban periphery. This is predominantly the pattern for settlements established prior to 1994 in response to the relaxation of influx controls, industrial decentralisation and wanting to reside close to industries located at the urban periphery. By the time the apartheid government relaxed influx control and introduced 'orderly urbanisation' in 1986, rapid and less-than-orderly African urbanisation was already in motion, much of it in sprawling, largely peri-urban informal settlements (Lemanski, 2009). Displacement from surrounding rural areas also played a role in the growth of these settlements at the periphery. Informal settlements developed at the urban periphery as the only housing option available to African labourers seeking to locate close to job opportunities. The apartheid government used financial incentives to influence industries to locate at the urban periphery to stem the flow of African immigrants to the city (Todes, 2000). However, the growth of these settlements at the urban periphery began to slow down in the late 1980s and early 1990s when influx controls and incentives for industries were ended and peri-urban areas began to decline in economic terms. As low waged work became limited in peri-urban areas Africans began to move towards inner-city areas where economic opportunities were greatest. By the early 1990s, informal settlements had mushroomed unabated in areas close to African townships and inner-city areas close to work opportunities as a consequence of the euphoria of independence (Geyer *et al*, 2012). By then informal settlements had become a popular housing option among growing populations of urban Africans particularly in Ekurhuleni, Tshwane, eThekweni, Johannesburg, Cape Town, Nelson Mandela Bay, Buffalo City, Mangaung and Msunduzi (Cross, 2014; StepSA, 2013; Beall *et al*, 2002; Crankshaw *et al*, 2000).

By 1994, between 40 to 60 per cent of the African population in each of the major cities such as Cape Town, Durban, Johannesburg and Port Elizabeth resided in informal settlements, rising to 85 per cent by the late-1990s (Lee, 2005). The rapid increase in informal settlements in the late-1990s was influenced by the availability of vacant land in proximity to workplaces, amenities and major transportation. Unfortunately, most of this vacant land is located in hazardous areas along hillsides, dumpsites, roads and railway margins (as shown in Photographs 4.1-3 on pages 101-2) where the chance for residents to stay without the threat of eviction is high.

The growth of new informal settlements in the post-1994 era is generally a result of three factors. Firstly, these settlements follow historical settlement patterns shaped by an urban space economy defined by race and income. Secondly, the development of informal settlements in close proximity to established industrial areas demonstrates the need for low-income households to locate close to employment opportunities and minimise journey-to-work costs (Geyer *et al*, 2012). The urban poor

Photograph 4.1 Informal settlement on hillsides in Emkhumbane, eThekwini municipality



Source: Author (2018)

Photograph 4.2 Informal settlement on hillsides in Cato Manor, eThekwini Municipality



Source: Author (2018)

Photograph 4.3 Informal settlement at Philippi train station, Cape Town municipality



Source: Lali (05 April 2019)

make such decisions on residential location based on their limited housing affordability. It is therefore important for this study to understand what factors limit housing affordability among low-income households in the study area. This would assist the researcher to design a mechanism that could deliver AURL for low-income housing. Thirdly, apart from seeing housing affordability as an income problem, it can also be viewed as a housing market problem (Smets, 1999). If housing affordability is considered a market problem, it therefore means there is room for public intervention in the direct provision of housing (Linneman & Megbolugbe, 1992). Since 1994, several strategies have been implemented and this study seeks to assess how each of these strategies has enhanced housing affordability among the urban poor.

4.6 Intervention Strategies

Public intervention in low-income housing is being limited by fiscal constraints. The scale of low-income housing need is enormous yet public financial support for public housing is limited. The provincial governments have to spread the subsidies as thinly as possible to cover as many low-income households as possible. Hence, public support to enhance housing affordability in the post-1994 era is only considered to be viable through the incremental housing process. This incremental process of housing development is reliant on the government providing a partial subsidy for a starter house or a

serviced site that the household has to consolidate incrementally using their own resources. The strategies adopted to make housing affordable to low-income groups had tended to focus on three aspects: housing typology, reduction of standards and delivery mechanisms. In most cases, the three are so closely intertwined that they are difficult to separate.

4.6.1 Product-type Strategies

In the period between 1994 and 2014, public housing schemes implemented by the ANC-government were centred on a phased-housing development process. The state adopted this incremental approach to housing development because the limited state budget could not deliver public housing in step with the level of housing need (Marais & Cloete, 2014). Incremental housing is considered an affordable way to rapidly shelter many households at a minimum cost of construction and provision of reticulated infrastructure services. The incremental housing approach offered several housing opportunities that ranged from a vacant serviced plot to a complete starter-house.

4.6.1.1 Starter-House Option

The idea of a starter-house was mooted as a solution offering a quick way to providing housing at scale and at an initial low cost (Hamid & Elhassan, 2014). The delivery of the starter-house is financed solely by the state through a household-based once-off product-linked capital subsidy (Huchzermeyer, 2001). It offers households a modicum of roofed space that they can immediately move into, extend and improve over time (Hamid & Elhassan, 2014). Generally, the starter-house is built as a one bedroom unit with a lounge, kitchen and toilet/bathroom (Goethert, 2010; Wilkinson, 1998). According to the DoHS (1996) the design of the starter-house offers a liveable minimum space, which in future might require an extension to suit the household's need for space. This housing option was designed with a minimal floor space to provide a pathway to homeownership for as many households as possible. Public policymakers were hopeful that low-income households would be amenable to this housing approach because of its use of simple and flexible construction methods and materials that the urban poor can afford (Goethert, 2010; Pandelaki & Shiozaki, 2010). The extension or consolidation of the starter-house is done by individual households using their own income and labour or through building contractors. In terms of quality these dwellings are small, poor and appalling; the townships are badly planned and poorly located at the urban fringes without any attention to layout and density (Bolnick, 2000). As a result, low-income housing is generally built as single story freestanding dwellings separated by narrow corridors that are about a metre wide (*ibid*). Another housing opportunity was presented through the wet-core option.

4.6.1.2 *Wet-core Option*

The wet-core option was conceived as part of the sites-and-services model of low-income housing delivery. The wet-core consists of a complete toilet facility sometimes with the building foundation (Gilbert, 2003). The wet-core units are built adjoining each other to reduce the cost of reticulated infrastructure services (Pottie, 2004). They were conceived as way of providing the minimum amount of state assistance to the urban poor while giving the beneficiaries the freedom to build their own housing incrementally using household income and labour or a building contractor (Satterthwaite & Mitlin, 2014). These schemes were specifically designed as the starting point for '*in-situ*' upgrading of informal settlements (Pottie, 2004). However, the wet-core option was received with less enthusiasm by the beneficiaries who considered them as 'toilets in the veld' (Marais & Krige, 1999). Even though the wet-core option was frowned upon by the beneficiaries, the government presented an additional housing opportunity through the serviced site option.

4.6.1.3 *Serviced Site Option*

The serviced site scheme was also conceived as part of the incremental housing model designed to allow beneficiaries to build their own housing (Goethert, 2010). The scheme often provides a vacant plot of land with secure tenure and minimum reticulated infrastructure services (Pottie, 2004). This option provides serviced plots of land in urban locations at a cost level affordable to the urban poor (Pandelaki & Shiozaki, 2010). Each household is expected to build its own house, often in phases, using household income and labour (Satterthwaite & Mitlin, 2014). The logic behind this is that since complete houses are not affordable, plots serviced with minimal reticulated infrastructure services would suit the financial means of low-income households, thereby eliminating the need for large subsidies. However, public policymakers remained unconvinced that reducing standards for building materials and construction techniques would help stimulate low-income housing construction.

In the 1st decade of democracy, public policymakers remained hopeful that public funding mechanisms and reduced standards of settlement establishment would assist the incremental process of developing low-income housing (Abbott, 2003). Unfortunately, low-income housing delivery mechanisms adopted in the post-1994 housing policy had unintended side-effects that increased shortages of low-income housing and promoted the growth of informal settlements. By 2004, public policymakers realised that the shortages of low-income housing and reticulated infrastructure services were not abating and alternative strategies reflecting local conditions and affordability levels of the public sector and individual low-income households were needed (Del Mistro & Hensher, 2009). Thus, changes to the policy were mooted without much debate with low-income households.

4.6.2 Reduction of Building Standards

The second popular approach aimed at delivering affordable low-income housing is tackling the ambitious and expensive building standards. The minimum building standards for low-income housing adopted post-1994 are proving to be too ambitious and costly even with a substantial capital subsidy (Wilkinson, 1998). In an attempt to address poor building practices, the ANC-government imposed stringent norms and standards to low-income housing development. Construction of low-income housing is undertaken by licensed developers and contractors. In practice this means a larger portion of the subsidy is spent on professional fees, thus, low-income households end up getting smaller houses with reduced reticulated infrastructure services. Unforeseen costs not covered by the subsidy such as geological and technological costs further use a portion of the subsidy and force developers to further use building materials of low quality and intermediate technologies to reduce construction costs (Del Mistro & Hensher, 2009). Furthermore, the housing subsidy no longer covers the cost of purchasing urban land since 2005 and the cost of providing reticulated infrastructure services since 2007. As a result, the costs of land assembly and infrastructure provision are the responsibility of local government. As of 2007 the housing subsidy covers the top structure only. Low-income households are critical of the high minimum standards, emphasising their cost implications. According Wilkinson (1998), the urban poor are of the view that lower standards should be introduced to reduce building costs. As a result, minimum standards for 'sites-and-services' schemes were lowered and a low-income household is allocated a site with a toilet and expected to build its own housing. These units are built by households using their limited income and without technical support, and thus, the quality of the housing is poor.

4.6.3 Housing Delivery Mechanisms

The provincial government is utilising housing delivery mechanisms that are designed to reduce the role of government in housing delivery. Hence, the state is moving away from being the sole provider of public housing in favour of the new strategies which allow the entry of other actors, with roles presumably being allocated to non-profit private developers, households, NGOs and CBOs (Marais & Cloete, 2014). The state provides affordable loans and sometimes on-site building materials stores and technical assistance to low-income households so they can build their own housing (Hunter & Posel, 2012).

4.6.4 Informal Settlement Upgrading

Since 1994, the official response to informal settlement has been a tacit acceptance of these settlements that has followed a trend common to many countries with an initial phase of demolitions, followed by attempts to provide shelter through sites-and-services and upgrading projects financed by the state. In 2004, a housing strategy known as the 'Breaking New Ground' (BNG) acknowledged

that informal settlements have grown significantly since 1994 (BNG, 2004). The BNG strategy is a major departure from the demolition and relocation approach towards the upgrading of informal settlements '*in-situ*' (Huchzermeyer, 2006). This strategy was co-opted into housing policy following the successful implementation of a series of flagship pilot projects (Bolnick, 2000). The strategy seeks to only provide funding for informal settlements that are on land suitable for permanent residential development. The upgrading process is conducted using either one of two approaches: total redevelopment or '*in-situ*' development. Total redevelopment results in the demolition of the informal settlement and relocation of affected households to a site elsewhere (Del Mistro & Hensher, 2009). '*In-situ*' development tries to minimise the extent of disruption to social networks and livelihoods by reducing the number of households that are relocated to a site elsewhere (*ibid*). According to Del Mistro and Hensher (2009) '*in-situ*' upgrading ensures incremental or progressive improvement to low-income housing delivery through the provision of:

1. primary level reticulated infrastructure services targeting basic health needs of a community,
2. intermediate level reticulated infrastructure services that are socially and culturally acceptable,
3. ultimate level reticulated infrastructure services that bring convenience to residents, and
4. housing consolidation.

However, the local government only sanctions progressive improvement if all the intermediary phases of '*in-situ*' upgrading lead to Phase 4 (Marais & Cloete, 2014). However, the process of progressive improvement informal settlements can only succeed if communities willingly participate and take ownership of the '*in-situ*' upgrading project and the local government provides security of tenure or allows providers of reticulated infrastructure services to recover costs.

The process of upgrading classifies informal settlements into three main categories (Misselhorn, 2010). Informal settlements classified as Category A are those for which housing subsidies and infrastructure funding are already approved. Such settlements are either already scheduled for full upgrading with full services, individual tenure, and a top-structure provided or are scheduled for relocation to a suitable site, already acquired. However, this category constitutes a relatively small proportion (about 10 to 15 per cent) of all informal settlements (Misselhorn, 2010). Informal settlements classified as Category B do not warrant immediate relocation because they are not on a geologically hazardous site prone to flooding. Settlements in this category have the potential for full scale upgrading or relocation, but the funding has not yet been approved. These settlements therefore require some form of interim provision of reticulated infrastructure services such as basic water, sanitation and solid waste removal. This category constitutes the majority of informal settlements, about 70 to 80 per cent (*ibid*). There are two possible sub-types within this category. Firstly, informal

settlements with potential for full upgrading in the medium to long term, thus, are upgraded incrementally starting with preliminary planning, land acquisition and provision of reticulated infrastructure services (*ibid*). Secondly, informal settlements that may be difficult or impossible to fully upgrade due to difficult topography or very high settlement densities and result in relocation (*ibid*). Informal settlements classified as Category C are those that are not targeted for upgrading because they expose their inhabitants to high risk from regular flooding, toxic waste exposure and removal for violating land-use zoning. These settlements are often relocated to an alternative site and they constitute a relatively small proportion, (about 10 to 15 per cent), of all informal settlements (*ibid*).

The strategy of upgrading informal settlements '*in-situ*' has not been adequately put into practice to facilitate progressive improvement and consolidation of such housing. This strategy has not been strengthened by the necessary changes in legislation and regulations that could prevent the growth of these settlements nor has there been the requisite political will to adopt alternative approaches that could deliver AURL and reverse the growth of these settlements. For example, the Provincial Government of KZN enacted the Prevention of Illegal Settlement Act of 1998 in an attempt to contain the growth of these settlements once upgrading began. In an effort to enforce this Act, eThekweni Municipality passed a moratorium on the establishment of new or expansion of existing informal settlements and adopted a 'zero tolerance' approach to new land invasions and to any densification and expansion of existing informal settlements. The Act was repealed as it was deemed an unreasonable legislative measure that denied residents of informal settlements the chance to progressive realisation of the right to access adequate housing in accordance with Section 24 of the Constitution. The municipality adopted a 'zero-tolerance' approach towards informal settlements without finding ways of delivering AURL to low-income households with limited or no public financial support. According to the Department of Housing (2004a) the current housing subsidy mechanism is not specifically designed and targeted at informal settlement upgrading.

4.7 The Case Study of eThekweni Municipality

Ethekweni Municipality, along with other metropolitans in the country, presents the most extreme case of residential segregation in the world. The spatial distribution of settlements follows a core periphery structure that almost perfectly correlates with race and income (Davis 2006; Marcuse & van Kempen 2000). As mentioned previously, low-income households who are predominantly African are living in informal settlements located mostly on the urban periphery. Ethekweni Municipality provides an interesting case study for examining the causal relationship between the shortage of AURL and the growth of informal settlements. Land in the municipality is the most expensive to develop in the country due to its hilly terrain and its scenic views make it very attractive to developers and increasing demand tends to push-up land prices (Napier, 2013). Therefore, most low-income households cannot

afford such land without public financial support. However, public funding is severely limited at both the local and national levels, thus, public intervention in low-income housing development is limited. As a result, eThekweni municipality tends to have the highest number of informal settlements in the country (Marais & Cloete, 2014). For analysis of the causal relationship between the shortage of AURL and the growth of informal settlements in South Africa, eThekweni Municipality is the most representative of the three large metropolitans, which include Johannesburg and Cape Town. While a comparison of three metropolitans is valuable, eThekweni Municipality is the best single metropolitan to analyse housing affordability challenges arising from a shortage of AURL. It provides important insight into urban dynamics and various forces that work to constrain spatial, social, and economic change. Ethekeweni is experiencing a decline in manufacturing (Misselhorn, 2008), resulting in reduced low-skill work and exacerbating housing affordability challenges among low-income households.

4.7.1 Historical development of Informal Settlements in eThekweni Municipality

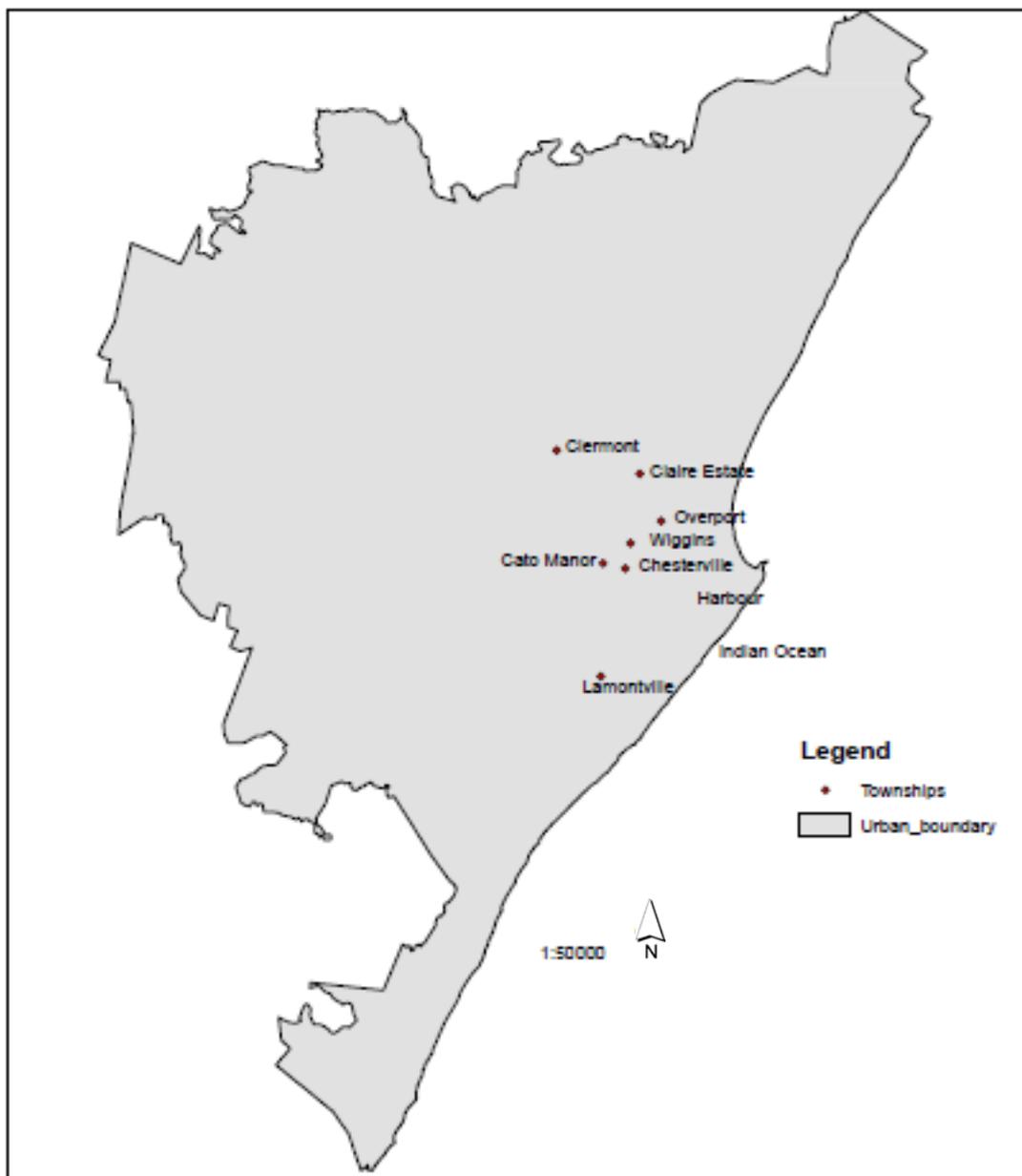
Informal settlements in eThekweni Municipality have a long history dating from the segregation period, with the earliest settlements like Amaoti established before 1913 (Kellett & Napier, 1995) and the more recent being established in the post-1994 era. Earliest settlements were established by communities forcibly relocated by the Union government under the guise of 'sanitation control' (Misselhorn, 2008). Informal settlements were never fully eradicated by the Bantu Affairs Administration Board¹⁶ (BAAB) and grew incrementally over the years as housing conditions in 'African locations' deteriorated under the BAAB regime (Alexander, 2010). As the shortage of African housing grew, rents increased, reticulated infrastructure services remained poor and Africans managed to maintain a precarious foothold in areas near the urban periphery. In the 1960s, a few households managed to escape the attention of public officials in places such as Malukazi and Cato Manor by building their dwellings in small hidden pockets of land. By the 1970s, informal settlements began to grow again mainly in the form of clandestine settlement close to townships (Morris & Hindson, 1997). Most of this settlement occurred on urban land privately owned by Indians and Africans and also on tribal land abutting the townships on the urban periphery (*ibid*).

During the 1980s, several factors encouraged the mushrooming of informal settlements in the city. The urban poor began to increasingly challenge the BAAB, tribal authorities, and private landowners who continued to exercise controls over land allocation on the urban periphery (Morris & Hindson, 1997). The weakening control over vacant urban land by the state, private firms and individuals created room for low-income households moving out of backyard shacks in overcrowded townships and immigrants from rural areas to occupy vacant urban land and establish informal settlements

¹⁶ The Bantu Affairs Administration Board was delegated to administer and control 'African locations' including building housing and control the influx African labourers in urban areas (Grest, 1988).

(Misselhorn, 2008). The scale and pattern of settlement changed in important ways that led to the growing openness of informal settlement. Most of the informal settlement occurred initially via encroachments, although some took the form of organised land invasions, as in the case of infill areas in Umlazi in the mid-1980s (*ibid*). Although most of these settlements were still confined to the urban periphery, the pressure for settlement in vacant land in inner-city areas began to mount from the late 1980s (Morris & Hindson, 1997). According to Misselhorn, informal settlements began to grow everywhere in places such as Cato Manor, Canaan, Chesterville, Wiggins, Overport, Lamontville, Claire Estate and Clermont shown on Map 4.1.

Map 4.1 Areas in eThekweni Municipality experiencing rapid informal settlement in the 1980s



Source: Created by Author from eThekweni Municipality GIS database (2016)

Historically, the threat of removal by the local government has been a major consideration blocking residents of informal settlements from more securely establishing their hold on the land. The threat of removal began to diminish slightly after the abolition of influx control laws in 1986 and more markedly since 1990. The way that the 'group areas' were drawn by the authorities to impose residential segregation had an impact on housing affordability by circumscribing the choice of residential location. Low-income households who are predominantly African were denied the right to reside in inner-city areas close to job opportunities. Hence, the abolition of influx control and slum clearance policies paved the way for these households to establish informal settlements close to employment opportunities (Misselhorn, 2008). In these settlements, almost half of the residents previously lived in backyard shacks in overcrowded low-income townships before moving out into these settlements hoping to eventually access public housing (Morris & Hindson, 1997). The minority of the residents of these settlements were immigrants from rural areas and small towns; the residents consisted of different groupings of ethnicity (Schensul, 2008; Oelofse & Dodson, 1997). The tension created by such diversity fuelled growing violence and instability in informal settlements especially in the late 1980s and early 1990s (Morris & Hindson, 1997).

Research by Hindson *et al* (1997), Morris (1992) and Byerley (1992) on migration patterns within the metropolitan in the late 1980s and early 1990s indicates that a common practice by low-income households to keep 'moving on' from one informal settlement to the next in search of a more strategic location within the city was to escape violence or the threat of violence. In addition to the phenomenon of 'moving on' there were indications that low-income households maintained footholds in a number of locations within the city as fall-back options in the face of insecurity. They also maintained these footholds as a way to gain the capacity to exploit a combinations of cheap housing options close to job opportunities to improve chances of household survival (Morris & Hindson, 1997). The urban poor were constantly moving from the urban periphery to inner-city areas in search of better job opportunities.

Informal settlements that were established post-1994 such as Lacey Road, Mandela and others were formed through similar approaches of land invasion and encroachment used to establish pre-1994 settlements (Marais & Cloete, 2014). Consolidation of the post-1994 settlements is constrained by the 'moving on' phenomenon. Hence, the lack of housing consolidation in the post-1994 settlements led Alan Mabin to conclude that residents of these settlements consider their housing as temporary and a means through which they could gain access to public housing. The prospect of being a potential beneficiary of public housing encourages to urban poor to limit the resources low-income households apportion to consolidate their housing (Kellett & Napier, 1995).

Observation of the physical structure of these settlements reveals a number of common characteristics. The walls and roofs of the dwellings are constructed using corrugated iron sheets, scrap cardboards and scrap metal (Hunter & Posel, 2012). The less permanent construction methods appear to be linked to earlier stages in the settlement process, and more permanent methods are indicative of more stable tenure. However, an observation of older settlements such as Amaoti reveals that more permanent consolidated houses are interspersed with more recent and impermanent dwellings. Newer settlements, on the other hand, such as Bester's Camp, have a more homogenous, though impermanent profile. Most of the earliest settlements moved slowly towards consolidation. The slow pace of consolidation in eThekweni Municipality could be a result of the 'moving on' mentality, lack of secure tenure rights, expectation of getting a free public house, unstable or temporary work opportunities that ensure the urban poor are constantly relocating in search of new jobs.

4.7.2 Factors Impacting on Housing Affordability in eThekweni Municipality

The price of housing is determined by the dual mechanisms of supply and demand while housing affordability is determined by the ability to pay for housing. In the past, research and debates on housing affordability, internationally, have tended to focus on the demand-side of the market focusing primarily on issues of income adequacy and demographic changes in cities that impact on housing need and demand. However, generally in South Africa and specifically in eThekweni Municipality, the focus of the post-1994 housing policy has been on supply-side approaches as the favoured methods of alleviating housing affordability challenges.

Since 2016, there has been a shift in the land-housing debate from focusing on supply-side issues to considering demand-side issues that limit housing affordability, such as the shortage of AURL and high construction costs. The role of local planning regulations that control and manage the availability of urban land for residential development has been particularly targeted in some recent studies. However, the dynamics that determine the price of housing are complex and multifaceted and a range of factors that limit housing affordability among low-income households need to be understood and considered in this study. This would assist the researcher to design a mechanism that could deliver AURL for low-income housing. Thus, the purpose of the following section is to identify the dynamics that could be limiting housing affordability among low-income households in eThekweni Municipality. To this end, these factors have been organised into two sub-groups relating to demand-side and supply-side mechanisms. The supply-side issues include factors that affect the cost of housing provision such as urban land-use barriers, the availability of urban land, reticulated infrastructure services costs, development levies, the cost of construction, property related taxes and land development processes and policies. Demand-side issues focus on household income, population

growth, demographic change, residential location and wider economic factors such as the labour market.

4.7.2.1 *Supply-side Issues*

4.7.2.1.1 Urban Land-Use Barriers

Conditions related to the development of urban land and housing can enable and facilitate or hinder full access to affordable urban land and housing. Public policymakers agree that land-use regulations generally can intentionally or inadvertently raise housing costs and prevent the development of low-income housing. Land-use regulations that impose barriers to housing affordability include zoning regulations, environmental regulations, subdivision regulations, historic preservation regulations, procedures of processing and granting development permits and associated development fees.

Ethekwini Municipality has well developed land-use and spatial plans, but these are not always aligned or implemented and housing development occurs in an *ad hoc* manner (Urban LandMark, 2013). The key challenge lies with enforcing these regulations. The municipality lacks the capacity to enforce land-use regulations. Zoning or land-use decisions fail to satisfactorily strengthen weak or misleading land-use rights and a lack of transparency in implementing these decisions and use rights regulations tend to limit access to affordable housing. Informal settlements within the city remain unregulated and have no formal mechanisms in place for facilitating the land market. There are informal systems for managing land-use in these settlements, but they are not recognised by municipal officials. As a result, the municipality struggles to cope with the increased demand for low-income housing, as informal settlements proliferate. Registered cadastral in the municipality has strict restrictions regarding land-use, ownership and transferability (*ibid*). In the municipality, the registration status of land does not necessarily reflect the rights of the people residing on it. Large tracts of registered urban land are occupied by informal settlements. In these settlements, there is no access to formal title and rights are not formally registered. Security of occupation is often tenuous. Access and retention of informal or undocumented rights often require paying an informal fee to land barons.

Subdivision regulations impose costs of installing roads as well as water, sewer, electricity and gas and telecommunication services (Colwell & Munneke, 1999). The standards of settlement establishment require that housing developers install these services before commencing with construction. The buyer of a subdivided land parcel must pay the transaction costs plus the cost of the subdivision of that land parcel. Landowners and housing developers expect to fully recoup costs of land subdivision and housing development and make economic profits from such transactions, which unfortunately pushes the price of housing beyond what low-income households can afford. Subdivision regulations

also place restrictions on housing supply through limits on density of development and amount of housing units produced.

Environmental regulations and laws restrict housing development on land that is classified as environmentally sensitive even though the status of such land makes it affordable to low-income households. These regulations prohibit housing development on wetlands and land inhabited by endangered species unless costly arrangements are made to preserve them, which pushes the costs of housing development on such land beyond what low-income households can afford. This requirement removes huge parcels of land that could be used for housing development into conservation areas. Environmental regulations also require housing developers to prepare lengthy, costly studies of the possible impacts of their projects on the environment before final approval for a development permit can be granted.

Historic preservation regulations that restrict use of inexpensive construction methods, require costly preservation of structures or facades and require investigations of sites prior to construction generally raise housing development costs beyond levels low-income households can afford. These regulations impose costly fees for studies for social and environmental impacts of development on land with supposed cultural or historic significance that the urban poor cannot afford. Imposition of such requirements often cause lengthy delays in the processing and permitting of housing development. Multiple government and quasi-government agencies with duplicative roles are often involved in this process, which results in lengthy and costly housing development processes.

4.7.2.1.2 Urban Land prices

Land is one of the major factors in the production of housing, and managing land supply is undoubtedly a critical aspect of effective urban planning. Access to land is typically the biggest constraint for housing development and one of the major drivers of the cost of housing. The state is trying to increase the supply of residential land available by facilitating land assembly and low-income housing development at the urban fringes, but this option of supplying land for housing development is expensive with higher infrastructure costs as well as higher transport costs for residents particularly in the face of rising fuel prices. The ability of low-income households to pay for housing depends largely on the costs of urban land and construction. There are several factors that limit the ability of the urban poor to afford housing and these are linked to conditions that influence the supply of housing such as zoning regulations, cumbersome building standards and slow administrative procedures (Hashim, 2010; Renaud, 1987). These conditions restrict the supply of serviced urban land for low-income housing development, thus, the urban poor are forced to compete for urban land at prices that they cannot afford.

4.7.2.2 *Demand-side issues*

4.7.2.2.1 Household Size

An increase in the number of households, in turn, affected by natural increase, immigration and household formation and household size tends to increase the number of households in need of housing. It is important for this study to understand the ideas that previous research on household demographics and composition document especially on how household size tends to impact on household need. This will allow this research to use the empirical evidence presented in Chapter 5 to design a mechanism that could deliver urban land at prices that take into consideration the strain imposed on household income by the size of the household and its non-housing expenditure.

Rapid urbanisation resulting from high rates of net migration and an increase in population of households at formative stage often raise housing demand, and therefore increase the price of housing. Household relationships are more flexible than they have been in the past and single person households are becoming increasingly dominant. Part of the rise in single-person households is associated with the escalating rates of divorce and family dissolution in urban areas. A small average household size creates a risk that the level of low-income housing development fails to keep pace with the level of low-income housing demand in relation to both form and location. Mismatches between what is appropriate and what is available can contribute to affordability pressures if households are unable to choose the type of housing that best suits their current needs (Yates, 2008). This problem is of particular interest in this study; the researcher is interested in finding out how the size of a household impacts on housing affordability among low-income households and whether multi-family household relationships are an indication of housing affordability challenges in the study area. These issues are of particular importance to this study because they assist the researcher in making an assessment of low-income housing demand in the study area. This information would be vital for the design of a mechanism that could deliver AURL for low-income housing. The research findings on these issues are presented in the next chapter.

4.7.2.2.2 Housing Location

Housing is a fundamental human right and is considered as one of the determinants for quality of life. Different locations have varying geological attributes and offer locational advantages that vary significantly. The strength of the associations between housing conditions and residential location also varies significantly. Many studies find a strong link between housing conditions and household income, while the evidence for a link between residential location and housing conditions is much more difficult to establish and tends to be mostly indicative of limited housing affordability.

The ability of a household to afford housing tends to influence the quality of housing that is produced for different segments of the market by housing developers. Thus, the housing market offers a range

of housing constructed with building materials of varying quality. Housing constructed with high quality building materials tends to command high prices on the market. Housing developers seek to maximise their return on such investment by building high quality housing in highly accessible locations close to public services and amenities. Thus, the overall quality of such housing is determined by the quality of its building materials and the value enhancing attributes tied to its location. As a result, these factors tend to influence the price of housing and since houses are often built using different building materials and located in different areas, house prices also tend to differ from place to place. Consequently, residential location becomes directly and indirectly linked with household income and socio-economic status (Braubach & Fairburn, 2010).

Choice of residential location and daily mobility are two dependent variables for the investigation of lifestyles that are linked to each other. This link has not yet been adequately analysed and discussed in the research on housing location in eThekweni Municipality. The demand for a variety of low-income housing options is increasing and low-income households are increasingly demanding choice in the size and location of low-income housing in proximity to job opportunities and amenities. Only recently has the link between choice of residential location and daily mobility been recognised in the research in Johannesburg by Parnell (2002) that concluded that low-income households abandon free public housing developed at the urban periphery because it is far from job opportunities.

4.7.2.2.3 Income Challenges

It is vital for this study to review literature on households income challenges that the urban poor face in order to gauge the price of land and level of reticulated infrastructure services that the urban poor are able to afford and how such information may inform the formulation of the mechanism that could deliver AURL for low-income housing. This information would be used in combination with the empirical evidence presented in Chapter 5 on income challenges faced by low-income households in the study area to help formulate the mechanism that could deliver AURL for low-income housing.

The primary issue limiting affordability on the demand-side of the market is the household's income and existing credit obligations. Across the various sectors of employment, workers in the public and mining sectors are the most affected. According to CAHF (2015) a combined 26 per cent of workers in the public and mining sectors have attachment orders or emolument attachment orders that deduct money from their earnings. The upshot of this for housing is that fewer and fewer households are able to afford adequate housing. Increasing transaction costs lead to an inefficient allocation of urban land for the development of low-income housing, which traps low-income households in inadequate housing.

Labour markets have been deregulated and there is greater reliance on fixed-term contracts, part-time work and a casualised workforce, all of which put the incomes of the working poor at risk. These low paid labourers struggle to keep their temporary jobs as increasingly large distances exist between where they live and work (Yates, 2008). The lack of an adequate and reliable salary limits their ability to afford housing. The housing situation of low-income households could improve if only they could access mortgage finance at affordable terms.

The cost and availability of housing finance and the discriminatory lending practices of retail finance institutions are contributing to increasing housing affordability challenges for low-income households. The lack of mortgage finance is exacerbated by a growing deposit gap. Prices for urban land and housing are surging and it is becoming increasingly difficult for low-income households to save for a deposit considering their meagre household incomes. The speculative behaviour of landowners and housing developers drives their investments in land and housing in the hope of making 'abnormal' profits. Therefore, when conditions of housing finance such as interest rates and amortisation periods present significantly increased borrowing constraints on low-income households they tend to discourage housing developers from participating in the low-income segment of the market. These conditions together with the speculative behaviour of developers tend to create an artificial shortage of low-income housing. Developers tend to develop housing that is most profitable, generally up-market and highly-priced (Hashim, 2010).

The socio-economic circumstances of low-income households defined by household income and household size and needs determine, to a large extent, the spending habits of low-income households in the housing market or their ability to pay. Their spending habits or their ability to pay tend to influence which segments of the housing market are targeted by housing developers and reticulated infrastructure services providers. Low-income households encounter housing affordability challenges especially when they attempt to access reticulated infrastructure services.

Almost all the conventional methods of providing reticulated infrastructure services at full cost recovery face the contradictions between the costs of the service needed, the funding required and the very limited capacity of low-income households to pay (Satterthwaite & Mitlin, 2013). Standards of settlement establishment require reticulated infrastructure services to be installed prior to home construction, which prevents low-income households from accessing adequate shelter. Private providers of reticulated supply of electricity, water and sewer such as Eskom and Umngeni Water only provide minimal services to low-income households and eThekweni Municipality is reluctant to cover the cost of installation and maintenance of these services in settlements where it is difficult to ensure full cost recovery. Hence, the municipality only provides minimal services to informal settlements

using communal water points or toilets (see photograph 4.5) shared by up to 50 households and located 50-100m from each dwelling to limit the financial cost where full cost recovery is difficult (Cunnam & Maharaj, 2000). The government would prefer to deliver full services at full cost recovery but most low-income households would not be able to afford or would be reluctant to pay tariffs, awaiting for free services.

Photograph 4.4 Communal toilets in Lacey Road informal settlement, eThekweni Municipality



Source: Author (2018)

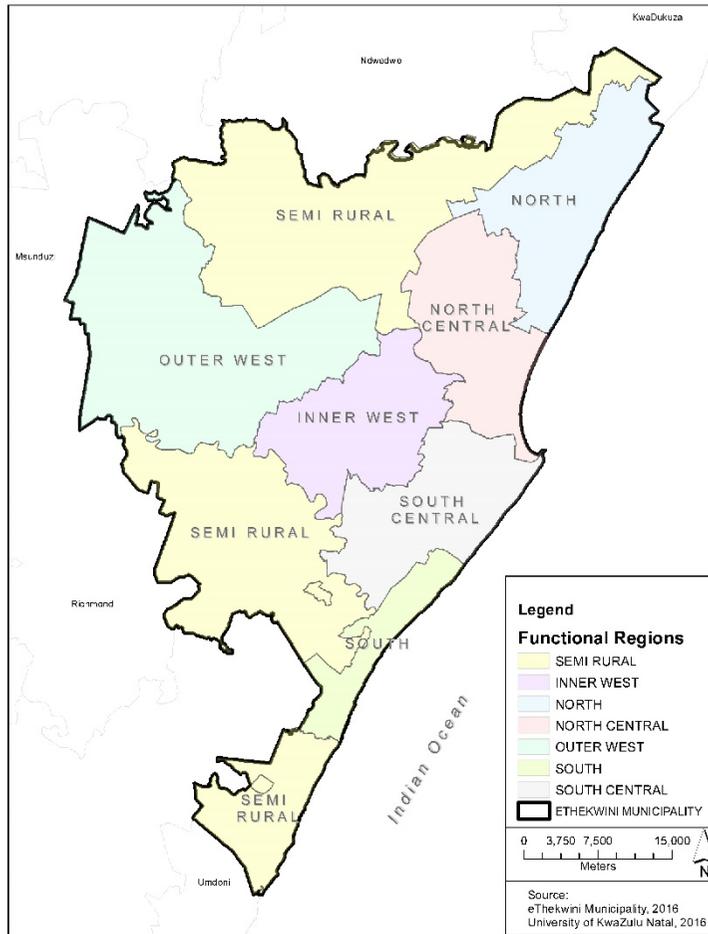
4.7.3 Spatial Distribution of Informal Settlements in eThekweni Municipality

Most of the informal settlement in the metropolitan were established in the late 1980s and early 1990s on tribal land, private land, and state land on the south-eastern and north-eastern outskirts of the municipality (Marais & Cloete, 2014). Most of the informal settlements established post-1994 are in inner-city areas close to townships and employment opportunities (Geyer *et al*, 2012). The distribution of informal settlements in eThekweni Municipality is assessed according to the functional regions shown on Maps 4.2-3 on page 108 in order to understand the nature of their concentration and also for the purposes of a comparative study.

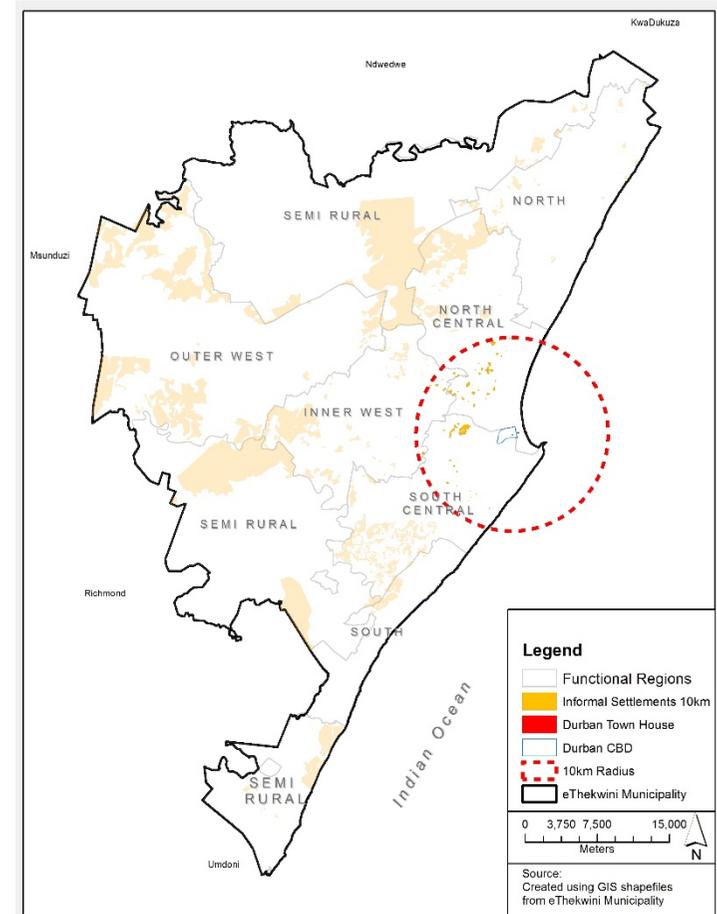
4.7.3.1 Distribution According to Functional Region

Ethekewini municipality has 11 functional regions shown on map 4.2, but the study focuses only on six regions that are urban namely the North, North-Central, South, South-Central, Inner-West and Outer-West. The 2011 Census data in Table 4.3 indicates that 16 per cent of households in the municipality reside in informal settlements that are distributed as shown in map 4.3 (StatsSA, 2012). Ethekewini Municipality (2017) estimates that in 2011 altogether there were 548 informal settlements that

Map 4.2 Administrative Functional Regions of eThekweni Municipality



Map 4.3 Distribution of Informal settlements in eThekweni Municipality, 2016



Source: Created by Author from eThekweni Municipality GIS database (2016)

sheltered about 101,437 households. The distribution of this population according to the wards is shown in Table 4.4 on page 120.

Table 4.3 Distribution of Population in Informal Settlements by Functional Region, 1996-2011.

Functional Region	Population			Percentage of Population in informal settlements		
	1996	2001	2011	1996	2001	2011
Inner-West	385 944	439 815	511 490	18.7	15.7	12.1
Outer-West	233 911	271 866	312 144	39.8	30.0	20.3
North	100 535	126 336	188 585	14.6	13.2	14.0
North-Central	793 274	934 862	1 066 177	22.9	22.2	15.0
South-Central	730 268	823 045	913 031	20.1	22.1	17.6
South	99 666	105 961	129 179	14.9	30.1	27.6
Total	2 343 597	2 701 885	3 120 606	20.9	18.1	15.8

Source: StatsSA (2018)

The South Region has the largest concentration of informal settlements in the metropolitan. It accommodates about 28 per cent of the urban population living in informal settlements as shown in Table 4.3. Most of these settlements are close to Prospecton Industrial Estate. The Outer-West Region has the second largest concentration of informal settlements in the metropolitan. The region shelters about 10 per cent of the total population living in informal settlements. The concentration of informal dwellers is increasing in the Outer-West Region in step with massive construction activities in new high-income townships and commercial centres that offer opportunities of employment. The South-Central Region has the third highest concentration of informal dwellers in the metropolitan constituting about 30 per cent of the urban population living in informal settlements. The region has the highest concentration of commercial, manufacturing and service industrial activities and administrative offices of the metropolis particularly in the CBD, the harbour and surrounding industrial estates in Warwick, Congella, Maydon Wharf, Umbilo, Rosburgh, Bayhead and Jacobs. The North-Central Region has the fourth largest concentration of informal dwellers in the metropolitan constituting about 35 per cent of the urban population living in informal settlements. The Table also shows the Region has a total population of 147,722 persons living in informal settlements close to industrial estates in Phoenix, Springfield and Windermere. The North Region has the fourth largest concentration of informal settlements in the metropolitan. The Table shows that in 1996 the Region had a population of 14 953 persons and by 2011 the population has risen to 389 000 persons. The Inner-West Region has the third highest concentration of informal dwellers in the metropolitan sheltering about 17 per cent of the urban population. The region has no vacant passive open spaces that could provide favourable spaces for informal settlement

Table 4.4 Distribution of Population in Informal Settlements in the North Region, 1996-2011

Region	Ward	Population			Percentage of population in Informal Settlements			Region	Ward	Total Population			Percentage of population in Informal Settlements		
		1996	2001	2011	1996	2001	2011			1996	2001	2011	1996	2001	2011
North	35	24 647	20 832	31 085	4.2	3.6	6.3	South	89	9 591	24 043	31 762	3.0	73.6	53.3
	58	14 405	27 328	37 666	66.8	13.0	15.1		90	43 564	24 433	26 296	7.7	7.3	19.7
	61	32 785	33 982	33 270	8.9	14.3	20.8		93	25 644	33 594	36 025	38.3	31.7	19.8
	62	17 450	24 990	30 598	4.0	26.6	18.8		97	22 727	21 328	25 072	7.2	4.6	14.5
	102	13 125	16 148	41 333	5.2	2.9	9.6		Total	101 526	103 398	119 155	14.9	30.1	27.6
	Total	100 535	126 336	188 585	14.6	13.2	14.0		28	18 291	19 313	23 170	53.4	3.5	20.2
North Central	11	27 614	39 888	48 704	15.6	14.0	5.0	South Central	29	12 743	22 786	33 831	42.6	42.3	17.6
	25	26 464	29 615	39 024	1.6	16.6	33.3		32	16 064	16 820	22 125	1.8	21.2	38.8
	26	24 094	27 106	34 600	1.0	12.3	19.6		33	29 272	29 117	31 928	13.0	4.7	10.2
	27	21 981	23 048	22 973	0.8	5.2	17.2		64	27 045	33 118	35 735	9.5	5.4	3.9
	30	24 052	29 957	37 545	3.7	19.0	12.1		65	39 066	37 655	42 805	1.5	5.1	5.7
	31	35 470	32 048	33 111	1.7	5.6	12.2		66	28 814	32 359	30 855	0.9	3.3	6.7
	34	31 811	35 837	37 213	1.3	28.5	30.4		68	40 879	40 921	39 356	4.3	2.7	5.4
	36	27 835	29 820	31 159	0.5	3.1	4.6		69	34 064	34 461	32 592	3.2	8.1	6.4
	37	21 285	29 750	40 778	97.3	1.2	4.9		70	40 414	39 467	29 978	11.4	4.7	2.1
	38	26 221	33 854	38 952	23.5	66.1	21.2		71	32 003	38 608	36 394	8.8	19.3	17.6
	39	18 477	22 578	24 614	11.2	65.0	39.6		73	34 604	35 152	31 454	12.0	2.7	4.9
	40	28 587	31 935	30 043	19.8	17.2	16.0		74	27 386	23 197	22 879	7.4	22.8	24.3
	41	27 029	31 340	35 332	42.8	27.7	8.5		75	27 732	18 043	21 669	11.4	33.4	20.6
	42	32 291	39 722	38 844	63.9	28.4	8.1		76	7 353	19 084	19 388	219.7	23.9	38.6
	43	32 093	35 079	33 212	29.1	42.2	18.0		77	31 298	41 210	46 048	53.9	59.6	31.7
	45	36 088	38 169	38 693	2.8	22.8	18.8		78	33 048	30 239	28 385	34.1	37.4	20.7
	46	27 827	28 931	29 458	29.8	10.2	13.9		79	26 239	36 655	38 984	45.5	48.0	25.1
	47	32 004	34 005	30 924	1.2	15	3.3		80	30 724	31 092	30 678	36.4	36.6	23.9
	48	25 779	28 178	30 079	0.3	2.7	5.4		81	29 391	27 250	24 682	18.2	29.1	15.2
	49	30 812	30 454	36 168	0.3	1.2	2.5		82	20 377	28 249	29 223	42.5	41.5	23.4
	50	27 584	29 403	28 546	0.4	1.5	1.9		83	33 706	38 008	36 251	16.2	26.8	23.3
	51	31 998	36 497	40 217	0.5	3.3	3.2		85	29 441	31 503	32 111	28.6	16.0	14.7
	52	33 341	35 367	35 294	34.9	1.4	3.1		86	23 667	24 382	34 033	25.0	31.0	10.1
	53	31 481	35 303	35 857	58.9	40.2	22.9		87	21 281	24 334	26 620	17.4	31.2	22.3
	54	27 298	30 113	31 179	49.8	15.3	6.3		88	27 313	30 969	35 549	4.4	19.5	28.1
	55	32 557	43 782	43 056	76.2	27.1	20.4		101	21 684	19 147	25 460	5.6	34.5	33.0
	56	40 889	40 005	42 236	50.9	53.7	28.3		Total	743 899	803 139	842 183	20.1	22.1	17.6
	57	25 119	30 467	35 633	8.8	63.0	40.6		12	33 718	28 045	27 055	24.7	8.6	10.3
Total	808 081	912 251	983 444	22.9	22.2	15.0	13	23 101	32 557	35 708	25.7	13.2	7.0		
Outer-West	01	22 658	28 117	30 819	81.4	69.4	50.5	14	26 149	26 608	26 829	45.9	25.9	13.8	
	04	30 875	35 801	37 964	95.6	52.3	33.9	15	23 256	29 529	39 344	25.9	19.8	11.5	
	05	34 224	35 272	28 601	48.2	27.7	27.4	16	21 420	27 546	36 576	8.4	8.0	9.2	
	06	24 464	31 390	27 805	2.5	11.1	6.1	17	23 570	27 199	36 731	13.0	9.7	6.5	
	09	22 383	26 349	31 923	29.3	18.8	14.1	18	26 449	27 164	28 459	55.8	3.4	6.4	
	10	19 714	18 439	22 249	11.8	8.3	6.6	20	19 425	23 161	23 536	8.6	27.5	9.9	
	19	29 880	32 668	45 521	11.3	24.1	8.8	21	22 318	26 023	26 981	26.3	7.5	7.3	
	91	44 493	35 218	35 257	32.9	11.7	7.0	22	25 246	27 995	25 534	36.1	37.3	29.9	
	103	9 586	22 037	27 782	30.0	43.6	28.9	23	34 994	30 253	30 590	2.8	22.9	31.8	
	Total	238 277	265 291	287 921	39.8	30.0	20.3	24	32 497	37 811	33 455	7.4	7.2	9.0	
Inner-West	63	29 127	30 169	34 023	1.7	6.2	6.2	72	20 976	26 155	39 324	1.3	21.1	11.4	
	72	20 976	26 155	39 324	1.3	21.1	11.4	92	30 902	28 963	27 639	3.3	21.6	16.9	
	92	30 902	28 963	27 639	3.3	21.6	16.9	Total	393 148	429 178	471 784	18.7	15.7	12.1	

Source: Author's own creation using data from StatsSA (2017)

4.7.3.2 *The Study Sites*

The three study sites were selected from Ward 31 in the North-Central region, Ward 32 in the Inner-West region and Ward 34 in the South-Central region based on the sampling procedure discussed in Section 1.7.2.2.1.1. Informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddy Road were chosen respectively from Ward 31 in Sydenham Township, Ward 32 in Greenwood Park Township and Ward 34 in Clairwood Township.

The three study sites were selected in this study to assess the level of housing affordability among low-income households in informal settlements in eThekweni Municipality. To achieve this, a stratified sample of households in informal settlements and professionals working in the land and housing sectors were requested, respectively, to complete a questionnaire and conduct semi-structured interviews, which were then statistically and thematically analysed in Chapter 5. The results of this assessment are also presented in Chapter 5 and used to devise a mechanism that could deliver AURL for low-income housing.

4.8 Chapter Summary

Literature reviewed in this chapter contributes ideas on how the mechanism proposed in this study could be formulated in order to deliver AURL for low-income housing. Research presented in the chapter focuses on the shortage of low-income housing, causes of informal settlement and factors impacting on low-income housing affordability, thus providing only a limited understanding of the extent of economic, spatial and geographic variables that influenced housing affordability amongst households in informal settlements. At the same time, the thesis of this study finds support in findings documented in literature on low-income housing, informal settlements and housing affordability. Past research shows that informal settlements are vital to the overall growth of urban South Africa; they typically represent the only available housing opportunity for low-income households who cannot access shelter through formal channels. However, the discussion in the chapter makes it clear that their potential as a housing solution does not mask the challenges they present that are associated with legal, physical, economic, social and environmental issues.

The research reviewed in this chapter shows that the urban space economy shaped by race also influenced housing affordability. The low-income population comprising largely of African households tend to occupy informal settlements as compared to white, Indian and Coloured South Africans. Studies carried out by Turok and Borel-Saladin (2016), Savage (2014), Satterthwaite and Mitlin (2013), Bradlow *et al* (2011), Braubach and Fairburn (2010), Smets (1999) and Morris and Hindson (1997) found that Africans choose to reside in these settlements due to their lower socio-economic status. Hence, in the next chapter, this study assesses whether variables such as household structure, type of

work, level of education, household income and household expenditure have significant influence on housing affordability in the selected study sites. The study uses these findings to devise a mechanism that could deliver AURL for low-income housing.

5 CHAPTER FIVE: HOUSING AFFORDABILITY IN THE STUDY SITES

5.1 Introduction

In this chapter, the results of an empirical analysis of informal settlements in the selected case study area of eThekweni Municipality are presented, using 2011 as the base year. The year 2011 is chosen as it is the last year a census was conducted in South Africa. Thus, it provides a platform for monitoring the growth, patterns and trends of informal settlement development in South Africa generally and in eThekweni Municipality specifically. As noted earlier in section 1.7 of Chapter one, which explained the methodology adopted by this research study, eThekweni Municipality is made up of six urban functional regions which accommodate the majority of households living in informal settlements. The majority of low-income households are trapped in these settlements as a result of historical and current socio-economic and political forces that shape the formation and distribution patterns of these settlements. The level of housing stress low-income households face in the selected study sites in Wards 31, 32 and 34 represents the housing situation in eThekweni Municipality. All these settlements highlight the inefficiencies of the urban space economy and the segregation of poor Africans in the urban land and housing markets.

The main objective of this chapter is to present empirical evidence to support the argument for an alternative mechanism of pricing urban land to enhance housing affordability among low-income households. In an attempt to achieve this overall objective, the interlinked hypotheses advanced at the beginning of this study, which state that (i) pricing residential land in inner-city areas at a benchmark of 0.09 per cent of monthly household income ranging between R3,500 and R7,500 can improve overall housing affordability in eThekweni municipality and (ii) setting mortgage interest for residential land in inner-city areas at a rate below 10 per cent can facilitate land acquisition by households earning a monthly income ranging between R3,500 and R7,500 in eThekweni municipality, is also tested.

The chapter is based on primary data sources with the unit of analysis being eThekweni Municipality – further disaggregated into functional regions and wards in accordance with the Local Government: Municipal Demarcation Act of 1998. Primary data needed for measuring housing affordability among low-income households is drawn from a variety of sources. Data on urban land value is drawn from the 2011 Land Valuation Register of eThekweni Municipality. Data on household income, household size, housing location, tenure arrangements and housing quality, which is also needed for measuring housing affordability in informal settlements is based on the household survey conducted by the researcher in December 2016. In-depth semi-structured interviews were conducted with various key informants in the case study area, who in most instances are professionals in the public and private

sectors and representatives of Community Based Organisations involved in urban land management and low-income housing development. The knowledge and expertise of these actors brings valuable insight that complements household survey data in the analysis. The key issues discussed during the interviews help to develop the pricing mechanism that could deliver affordable urban residential land (AURL) for low-income housing development.

The results of the study are presented and analysed using the most important themes that address the key research question. In order to assess housing affordability among households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road, the researcher uses themes that outline the relationship between household income and urban land value, tenure arrangements, housing location, housing quality and household size. From these themes an argument is constructed citing the housing affordability challenges that are responsible for the continued growth of informal settlements to motivate for an alternative mechanism of delivering urban land at prices the urban poor can afford. These themes are associated with the shortage of AURL and are instrumental in informing the recommendations proposed in Chapter 6.

5.2 Assessing Housing Affordability

5.2.1 Affordability and Household Size

A number of general tendencies were discerned from the demographic data of households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road. The results shown in Table 5.1 indicate that the racial composition of the population in these settlements was 100 per cent African. The informants from eThekweni Municipality, FEDUP and SDI concurred with these results and also indicated that was a legacy of the enforced disadvantage of Africans during apartheid. The distribution of the population in these settlements is shown in the Table by five-year age groups according to gender and informal settlement. The results in the Table also show that the 423 households successfully surveyed were composed of 1287 persons. About 589 persons were men who represented 46 per cent of the population, and 698 persons were women, representing 54 per cent. The results further indicate that about 64 per cent of the population was below the age of 30 years.

A comparison of the population distribution in the three study sites shown in Table 5.2 reveal that 48 per cent of the population below the age of 30 years resided in the informal settlement on Lacey Road. On this basis, it is surmised that this age group is economically active and at a stage in life where most get married and have children, which increased the number of households that needed to be housed. Hence, informants from KZN DoHS and eThekweni Municipality reported that an increase in housing affordability challenges, compounded by a shortage of AURL, put pressure on the state to increase the

provision of public housing to accommodate the additional demand. A comparison of the population distribution in the three study sites shown in the Table indicated that the informal settlement on

Table 5.1 Distribution of population by race, age and informal settlement

Characteristic	Informal Settlement			Frequency	Percent	Cumulative percent
	Lacey Road	Havelock Road	Sir Kumar Reddi Road			
Race						
African	593	419	275	1287	100	
Other	-	-	-	-		
Age group						
0-4	8	8.9	6.7	103	8	8
5-9	13.3	8.2	10.6	143	11.1	19.1
10-14	8	8.9	12.5	119	9.2	28.3
15-19	6.7	9.5	12.5	114	8.8	37.1
20-24	14.2	12.7	12.5	172	13.3	50.4
25-29	16.9	8.2	15.4	177	13.8	64.3
30-34	14.2	18.4	11.5	193	15	79.2
35-39	10.7	12	4.8	127	9.9	89.1
40-44	2.2	8.9	2.9	58	4.5	93.6
45-49	1.3	1.3	5.8	29	2.3	95.9
50-54	1.3	0.6	1.9	16	1.2	97.1
55-59	1.3	0.6	1.9	16	1.2	98.3
60-64	0.9	-	-	5	0.4	98.7
65-69	0.4	1.3	1	11	0.8	99.5
70-74	-	0.6	-	3	0.2	99.8
75-79	-	-	-	-		
80-84	-	-	-	-		
85+	0.4	-	-	3	0.2	100
Total	100	100	100		100	
	593	419	275	1287		

Source: Field Survey (2018)

Table 5.2 Distribution of population by functional age group and gender and informal settlement

Characteristic	Informal Settlement			Frequency	Percent
	Lacey Road	Havelock Road	Sir Kumar Reddi Road		
Age group					
0-14	174	109	82	365	28.4
15-64	414	302	190	906	70.4
65+	5	8	3	16	1.2
Total	593	419	275	1287	100
Dependency ratio	1:2.3	1:2.6	1:2.3	1:2.4	
Age group: Male					
0-14	76	53	37	166	28.2
15-64	185	143	95	423	71.8
65+	-	-	-	-	
Total	261	196	132	589	100
Age group: Female					
0-14	98	56	45	199	28.5
15-64	229	159	95	483	69.2
65+	5	8	33	46	6.6
Total	332	223	143	698	100

Source: Field Survey (2018)

Havelock Road had the highest dependency ratio at 1: 2.6, which was above the average of 1:2.4 for all three study sites. Such high levels of dependency suggested that the majority of the households were not able to afford housing without state support. Generally, the mean age of the head of household in all the informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road was 31 years. As shown in Table 5.3 about 70 per cent of households in these settlements were headed by single persons. The majority of the heads of households consisted of single parents with young children or one person households. However, heads of households who were married indicated that their spouses were living in informal settlements elsewhere in the metropolitan.

Table 5.3 Distribution of population by marital status and informal settlement

Marital status	Informal Settlement			Frequency	Percent	Cumulative percent
	Lacey Road	Havelock Road	Sir Kumar Reddi Road			
Never married	63.6	73.3	58.8	280	66.3	66.3
Widowed	-	3.3	5.9	11	2.5	69.3
Divorced/separated	1.5	-	-	3	0.6	69.9
Married	15.2	5	8.8	42	10	79.9
Cohabiting	19.7	18.3	26.5	87	20.6	100
Total	100	100	100		100	
No. of households	174	159	90	423		66.3

Source: Field Survey (2018)

As shown in Table 5.4 the average household size of 3.0 persons in the three study sites was below the national average of 3.3 persons, which indicated that these settlements had a large number of households that needed to be housed. In particular, the results in the Table show that the average

Table 5.4 Percent distribution of households by gender of head of household and household size

Characteristic	Informal Settlement			Frequency	Percent
	Lacey Road	Havelock Road	Sir Kumar Reddi Road		
Gender of head of household					
Male	43.9	46.7	41	589	44.3
Female	56.1	53.3	59	698	55.7
Total	100	100	100	1287	100
Household members					
1	22.6	12.1	40.5	90	21.3
2	24.2	22.3	12.4	88	20.8
3	15.1	30.4	17.5	90	21.3
4	18.2	18.7	18.6	79	18.7
5	10.2	15.1	6.8	48	11.3
6	3.1	1.4	4.4	11	2.6
7	2.3	-	-	6	1.4
8	4.5	-	-	11	2.6
Total	100	100	100		100
No. of household members	593	419	275	1287	
No. of households	174	159	90	423	
Mean size	3.4	2.6	3.1	3.0	

Source: Field Survey (2018)

household size of 2.6 persons in the informal settlement on Havelock Road was below the average of informal settlements on Lacey Road and Sir Kumar Reddi Road. On this basis, it is surmised that households in the informal settlement on Havelock Road had multiple family units residing in a single dwelling. Many of these multiple households were cared for by single household heads, many of them women with young children or grandchildren under their care. The multiple family units contributed to an increase in the number of households that needed to be housed. Even though many of these household members were reported as relatives, it was evident from the respondents' answers to the researcher's questions that some were possibly tenants that respondents loosely referred to as relatives to disguise the rent-income they contributed to the household. The researcher came to this conclusion after noticing that the respondents did not know personal information about their 'relatives' such as the date of birth or age, school attended and highest level of education attained, place of work, etc.

5.2.2 Affordability and Household Expenditure

The results shown in Table 5.5 indicated that households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road were generally poor with an average monthly income of about R3564. This income was just within the national minimum wage of R3,500 per month, which was adequate for a household to afford only the most basic non-housing necessities. Results shown in the Table indicate that about 48 per cent of households in the three study sites earned an annual income of R19,201 to R76,800. A comparison of the three settlements indicated that households in informal settlements on Lacey Road and Havelock Road earned slightly more income than households

Table 5.5 Percent distribution of annual household income by source of income and informal settlement

Characteristic	Informal Settlement			Total	Percent	Cumulative Percent
	Lacey Road	Havelock Road	Sir Kumar Reddi Road			
Annual Income Category						
No income	60	20	20	66	15.6	15.6
R1-R4,800	27	55	18	29	6.9	22.5
R4,801-R9,600	23	38	38	34	8.1	30.6
R9,601-R19,200	35	44	21	90	21.3	51.9
R19,201-R38,400	38	36	26	104	24.4	76.3
R38,401-R76,800	47	39	13	100	23.8	100.0
No of households	174	159	90	423	100.0	
Average monthly income	R3,564	R3,511	R3,097			
Source of Income						
Salaries, wages & business	72.7	28.3	35.3	204	48.1	48.1
Government grants	15.2	45	35.3	130	30.6	78.7
Clandestine activities	10.6	23.3	29.4	81	19.4	98.1
Offspring and relatives	1.5	3.3	-	8	1.9	100
Total No of households	174	159	90	423	100.0	

Source: Field Survey (2018)

in the informal settlement on Sir Kumar Reddi Road. About 31 per cent of the households in the three study sites that earned an annual income below R19,200 indicated that they received government grants or earned income in kind – paid in the form of goods. This data points to the income profile of these households falling within the housing subsidy qualification criteria. The results also show that 48 per cent of the households earned income as labourers or entrepreneurs, 20 per cent from clandestine activities and 2 per cent had an additional income from offspring and relatives. Informants from FEDUP, SDI and eThekweni Municipality indicated that in some cases residents of informal settlements inaccurately reported their income as they drew income from multiple sources including ‘clandestine business’ transactions.

The results shown in Table 5.6 indicate that households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road unsurprisingly allocated a noticeably smaller proportion (9 per cent) of household income to cover housing expenses. In contrast, these households allocated a higher proportion (38 per cent) of household income to cover food expenses. As shown in the Table, households spent about 14 per cent on transportation costs and about 77 per cent on non-housing costs including food, clothing, medical care, education etc. The results show that housing expenditure of 9 per cent was low in relation to the need to access a home of choice.

Table 5.6 Percent distribution of average household income by household expenditure

Household expenditure	Percentage of household income	Cumulative percent
Non-housing cost		
Furnishings	8	8
Health and medical care	2	10
Alcoholic beverages, tobacco and narcotics	4	14
Personal care	3	17
Clothing	9	26
Communication	4	30
Education	5	35
Restaurants	4	39
Food and non-alcoholic beverages	38	77
Housing cost		
Housing, electricity and gas	9	86
Transportation costs		
Commuting	14	100
Total	100	

Source: Field Survey (2018)

The results shown in Table 5.7 suggest that about 56 per cent of households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road were able to contribute R200 to R1,600 of their income towards the purchase of a plot of residential land. Only 15 per cent of the households were unable to contribute any portion of their income towards the purchase of a plot of residential land.

While many factors contribute to housing affordability, the level of education is a key determinant of an individual's income earning potential, lifestyle and ability to afford adequate housing. A higher level of education helps one to secure a good job that pays a high salary, which makes it easier to repay the mortgage and guarantees access to adequate housing (Stone, 1993). Hence, it is important for this study to assess the link between the level of education of adult household members and their income earning potential with the intention to assess how this link impacts on low-income housing affordability.

Table 5.7 Monthly income household is able to contribute towards the purchase of residential land

Household contribution	Frequency	Percent	Cumulative Percent
Nothing	63	14.9	14.9
R1-R50	61	14.4	29.3
R51-R100	45	10.6	39.9
R101-R200	50	11.8	51.7
R201-R400	58	13.7	65.4
R401-R800	74	17.5	82.9
R801-R1,600	53	12.5	95.4
R1,601-R3,200	14	3.3	98.7
R3,201-R6,400	5	1.2	100.0
Total	423	100.0	

Source: Field Survey (2018)

5.2.2.1 Level of Education

The results in Table 5.8 show that households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road were poorly educated. About 15 per cent of these households had some primary education, 75 per cent had some secondary education and 5 per cent had tertiary education. The results shown in Table 5.9 suggest that on average 25 per cent of heads of households in these settlements were illiterate, meaning unable to write a letter, read and calculate change. A close correlation existed between heads of households (25 per cent) who were illiterate shown in Table 5.9 and heads of households who were not educated beyond primary school level, shown in Table 5.8. Informants from eThekweni Municipality indicated that adult household members in these settlements struggled to secure jobs that paid a minimum wage because of their low levels of literacy. The lack of a good job that paid a good salary tended to limit the ability of these households to afford housing.

The results in Table 5.9 also show that about 88 per cent of the household members had difficulties with reading and about 97 per cent had difficulties with doing mathematical calculations. The informant from ABSA indicated that such limited reading and mathematical skills had an impact on financial literacy and the ability to manage finances effectively. Such limited financial literacy tended to limit the ability of some of these households whom, if they had personal financial education, could

lower the chances of defaulting on loans and improve their ability to afford housing without state financial support.

Table 5.8 Percent distribution of population aged 25 years and older by highest level of education attained

Highest level of education	Male	Female	Frequency	Percent	Cumulative percent
No schooling	2.5	8.8	26	5	5
Grade 1-7	10.7	22.5	82	15.3	20.3
Grade 8-11	50	46.3	259	48.5	68.8
Grade 12	32	18.8	143	26.7	95.5
FET/ University	4.9	3.8	24	4.5	100
Total	100	100	534	100	
No of household members	323	211			

Source: Field Survey (2018)

Table 5.9 Distribution of households and literacy

Level of literacy	Informal Settlement			Frequency	Percent
	Lacey Road	Havelock Road	Sir Kumar Reddi Road		
Writing a letter					
No difficulty	23	-	9	48	11.3
Some difficulty	47	57	24	193	45.6
A lot of difficulty	15	13	24	69	16.3
Unable to do	15	30	35	106	25.1
Do not know	-	-	9	8	1.7
Total	100	100	100		100
No of households	174	159	90	423	
Reading					
No difficulty	30	-	-	53	12.5
Some difficulty	39	57	44	198	46.8
A lot of difficulty	15	15	24	71	16.8
Unable to do	15	28	32	101	23.9
Do not know	-	-	-	-	-
Total	100	100	100		100
No of households	174	159	90	423	
Calculating change					
No difficulty	8	-	-	13	3.1
Some difficulty	55	57	35	217	51.3
A lot of difficulty	15	15	35	82	19.4
Unable to do	23	28	29	111	26.2
Do not know	-	-	-	-	-
Total	100	100	100		100
No of households	174	159	90	423	

Source: Field Survey (2018)

The type of work done by an adult household member has a close relationship with his/her level of education (Kauko, 2007). An adult household member with a low level of education and lack technical skills often secures jobs that pay the lowest salaries (Waddell, 2009). Thus, this study ought to understand the relationship between the level of education of household members and the type of work they do and how this relationship affects housing affordability.

5.2.2.2 Type of Work

The results shown in Table 5.10 on the type of work done by adult household members in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road indicate that about 96 per cent of these members were in menial jobs while 4 per cent occupied semi-skilled work. Most of the males were generally employed as labourers in nearby industries, while the females were mainly domestic workers in nearby townships. Some eked out a living by scavenging garbage on waste disposal sites and recycling waste.

Table 5.10 Percent of distribution of population by employment and informal settlement

Employment	Informal Settlement				
	Lacey Road	Havelock Road	Sir Kumar Reddi Road	Frequency	Percent
Employment Status					
Employed	68.2	66.7	70.6	289	68.1
Unemployed	31.8	33.3	29.4	134	31.9
Total	100	100	100		100
No of households	174	159	90	423	
Employment Sector					
Formal	80	82.5	87.5	239	82.6
Informal	20	17.5	12.5	50	17.4
Total	100	100	100		100
No of households	119	106	64	289	
Occupation					
Housekeeper	22.2	15	12.5	48	16.5
Security guard	4.4	5	12.5	19	6.4
Waitress	8.9	10	8.3	27	9.2
General hand	15.5	20	33.3	61	21.1
Hairdresser	2.2	-	4.2	5	1.8
Salesman	4.4	-	-	5	1.8
Electrician	2.2	2.5	4.2	8	2.8
Carpenter	2.2	-	-	5	0.9
Baby sitter	2.2	-	-	3	0.9
Gardener	2.2	-	4.2	5	1.8
Taxi Driver	-	5	-	5	1.8
Commercial Driver	2.2	2.5	-	5	1.8
Brick Layer	11.1	10	8.3	29	10.1
Cobbler	-	2.5	4.2	5	1.8
Home-based care giver	-	-	4.2	3	0.9
Mechanic	-	5	-	5	1.8
General Vendor	6.7	17.5	4.2	29	10.1
Cashier	6.7	5	-	13	4.6
Cook	4.4	-	-	5	1.8
Garbage Collector	2.2	-	-	3	0.9
Total	100	100	100		100
No of households	119	106	64	289	
Business activity					
Yes	22.7	23.3	11.4	87	20.6
No	77.3	76.7	88.6	336	79.4
Total	100	100	100		100
No of households	174	159	90	423	

Source: Field Survey (2018)

The results in Table 5.10 also show that between 68 per cent and 71 per cent of heads of households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road were employed. The number of those who were unemployed included the high number of wives who were not economically active or actively seeking work on the job market. The results in this Table suggest that above 80 per cent of household members were economically active and employed in the formal sector. The results shown in the Table indicated that about 21 per cent of the households in all three settlements were engaged in informal business activities. The number of households engaged in business was low and there is a chance that a large number may have given negative responses on this issue to avoid disclosing the clandestine nature of their businesses.

It is important for this study to establish the extent to which residential location impacts on housing affordability. This is vital for this study to understand the residential location decisions the urban poor make in choosing to settle in inner-city areas. This information helps this study to identify areas that the urban poor consider to be strategic for settlement; the mechanism this study proposes in Chapter 6 could deliver this land at prices that are affordable to the urban poor.

5.2.3 Affordability and Housing Location Choice

According to Liao and Chen (1998) a good location for settlement has community facilities in the vicinity, and is in close proximity to shopping centres, the workplace and public transportation. The study used these characteristics to evaluate the impact of a geographic location on housing affordability. Informants from SDI, Urban LandMark and FEDUP indicated that housing costs and transportation costs were the two largest expenses that forced residents of informal settlements to reside close to places of employment. Residents of informal settlements in the study sites confirmed that they chose to settle in inner-city locations to reduce the distance between places of residence and employment, which subsequently reduced the costs of housing and transportation. The residents reported that before they resettled in these settlements, they were spending more than 50 per cent of all household expenditure on housing and transportation costs as shown in Table 5.11. About 78 per cent of the households indicated that the portion of these expenses that covered transportation costs accounted for 17 to 20 per cent of household income.

Members of *Abahlali base Mjondolo* indicated that they settled on such well-located land because they were hopeful that by locating close to workplaces, they would make savings from reduced journey-to-work costs on transportation. Informants from eThekweni Municipality and KZN DoHS suggested that high transportation costs forced low-income households to make trade-offs in housing quality by abandoning free public housing located farther from employment opportunities. Although land is available at a low price in areas at the urban periphery, the informants from eThekweni

Municipality, Urban LandMark and KZN DoHS suggested that high transportation costs nearly wiped-out any savings in land costs. The informants from eThekweni Municipality and Iyer indicated that once a commute surpassed the 12-15km range, the increase in transportation costs usually outweighed the savings on housing costs. The results in Table 5.12 on page 125 show that about 89 per cent of the economically active households living in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road were located less than 10km from their work places. About 47 per cent of these workers walked to work because their places of residence were in close proximity to workplaces.

Table 5.11 Percent distribution of households by housing and transportation costs

Costs as a percentage of household income (%)	While living in housing at the urban periphery	While living in informal settlement in the inner-city
Housing costs		
10 and under	69	87
11 to 20	23	11
21 to 30	5	2
31+	3	-
Total	100	100
Number of households	423	423
Transportation costs		
10 and under	2	61
11 to 20	78	24
21 to 30	17	13
31+	3	2
Total	100	100
Number of households	423	423
Combined housing and transportation costs		
30 and under	21	92.9
31-60	77	7.1
61+	2	-
Total	100	100
Number of households	423	423

Source: Field Survey (2018)

Table 5.12 Distribution of households by mode of transport and distance to place of work or business

Transportation	Informal Settlement				
	Lacey Road	Havelock Road	Sir Kumar Reddi Road	Frequency	Percent
Distance to place of work or business					
1km-5km	22.2	50	37.5	103	35.8
6km-10km	68.9	35	54.2	154	53.2
No fixed location	4.4	7.5	4.2	16	5.5
Home based	4.4	7.5	4.2	16	5.5
Total	100	100	100		100
No. of households	119	106	64	289	
Mode of transport to place of work or business					
Walk	31.1	65	45.8	135	46.8
Public Taxi	68.9	35	54.2	154	53.2
Total	100	100	100		100
No. of households	119	106	64	289	

Source: Field Survey (2018)

Members of *Abahlali base Mjondolo* who lived in the three study sites also mentioned that they chose to reside in informal settlements close to workplaces because they offered housing opportunities at a low cost. Households in these settlements indicated that the savings they anticipated to make from the low housing expenses would help to lift them out of poverty. As previously mentioned in Section 5.12, most of these households were labourers with low-pay entry-level jobs. Thus, members of *Abahlali base Mjondolo* informed the researcher that any savings they made on housing and transportation expenses would cover non-housing costs.

In order to propose strategies that could deliver low-income housing in areas low-income households establish informal settlements in, the study had to understand the extremely precarious situations that inspired their decisions to migrate to eThekweni Municipality and establish residence in these locations. Hence, it was necessary for this study to gather data on reasons that inspired them to migrate and establish informal settlements in the inner-city areas. The results shown in Table 5.13 indicated that between 80 to 93 per cent of the various household types considered distance from workplace as the primary reason for their choice of residential location.

Table 5.13 A summary of preferred residential location criteria of households in informal settlements

Attribute	Member	Percent	Residential location criteria (%)					
			Housing cost	Distance from Workplace	Accessibility to			
					Retail stores	Educational centres	Health centres	Public transportation
Household Size	Single	6.9	100	92.9	46.4	17.9	3.6	78.6
	Couple	35.6	100	90.7	61.9	10.3	7.2	73.2
	3-4	44.4	100	84.2	62.6	71.3	12.3	71.3
	4+	13.1	100	79.4	55.9	88.2	14.7	73.5
Average Monthly income	R2,100	51.9	100	85.8	64.7	58.3	12.3	70.6
	R3,700	29.4	100	92.8	47.8	42.0	7.2	58.0
	R6,900	18.8	100	80.7	59.6	33.3	7.0	98.2
Average			100	86.6	57.0	45.9	9.2	74.8

Source: Field Survey (2018)

The informant from eThekweni Municipality's Economic Development Unit indicated that residents of informal settlements migrated to the municipality for economic reasons. The results in Table 5.14 show that about 81 per cent of households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road moved to these settlements to locate close to job opportunities, which suggested a strong association between the urban poor's place of residence and workplaces. The residents of the informal settlement on Sir Kumar Reddi Road indicated they were predominantly economic migrants who preferred to locate close to work opportunities in the service and manufacturing industries in the harbour, Congella, Maydon Wharf, Umbilo, Rossburgh, Bayhead and Jacobs.

The study was also interested to find out from residents of informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road their places of origin and length of stay in these settlements. Results shown in Table 5.15 indicate that about 65 per cent of households in the three study sites originated from KZN while 23 per cent were from Eastern Cape and 8 per cent were foreign immigrants. The results also show that about 95 per cent of households living in these settlements were resident in eThekweni Municipality by 1994. About 65 per cent of households in the three study sites have stayed in the settlements for a period of more than five years. Thus, the results suggest that

Table 5.14 Reason for moving to eThekweni and the informal settlement

Reason for moving	Informal Settlement				
	Lacey Road	Havelock Road	Sir Kumar Reddi Road	Frequency	Percent
To eThekweni Municipality					
Seek work	75.8	78.3	94.1	341	80.6
Better education	15.2	13.3	5.9	53	12.5
Moved with family	9.1	5	-	24	5.6
To get married	-	1.7	-	3	0.6
Low level of development in home country	-	1.7	-	3	0.6
Total	100	100	100		100
To the informal settlement					
Push factors					
Unaffordable to own/ rent formal house	81.8	65	76.5	315	74.4
Forced to sell house	-	1.7	-	3	0.6
Lack of privacy in rented or shared rooms	1.5	1.7	-	5	1.3
Loss of employer-provided shelter	7.6	5	5.9	26	6.3
Displacement: informal settlement upgrading	3	20	2.9	40	9.4
Rural poverty and unemployment	4.5	5	14.7	29	6.9
Political or personal conflict	1.5	1.7	-	5	1.3
Total	100	100	100		100
Pull factors					
Good location near to jobs and amenities	65.2	41.7	52.9	342	80.9
Cheaper housing related expenses	7.6	13.3	14.7	20	4.7
Swift access to land at low cost	6.1	13.3	14.7	18	4.3
Moved with partner	1.5	-	2.9	3	0.7
Close to family members & friends	13.6	1.7	14.7	16	3.8
Affordable rent	1.5	21.7	-	15	3.5
Possibility of getting free public housing	4.5	6.7	-	8	1.9
Availability of consumer market for informal business	-	1.7	-	1	0.2
Total	100	100	100		100
No. of households	174	159	90	423	

Source: Field Survey (2018)

these households have adverse possession rights to use, occupy and access a piece of land they have occupied for a continuous period of more than five years. Such rights are protected by the Interim Protection of Informal Land Rights Act 31 of 1996. Hence, these households have a right to be protected from eviction unless directed by a court order. This implies that both the landowner and the occupants have to come to an agreement on compensation that benefits both parties. Hence, the

argument of Cooperative Game by John Nash is applicable and is used by this study to guide the proposed mechanism that could deliver AURL for low-income housing.

Table 5.15 Percent distribution of households by place of birth, citizenship and residence

Characteristic	Informal Settlement				
	Lacey Road	Havelock Road	Sir Kumar Reddi Road	Frequency	Percent
Province of Birth					
Outside South Africa	15.2	-	8.8	34	8.1
KwaZulu-Natal	60.6	68.3	67.6	275	65
Eastern Cape	18.2	28.3	23.5	98	23.1
Free State	4.5	1.7	-	11	2.5
Western Cape	1.5	1.7	-	5	1.3
Total	100	100	100		100
No. of households	174	159	90	423	
South African Citizenship					
Yes	93.7	100	91.2	389	91.9
No	6.3	-	8.8	34	8.1
Total	100	100	100		100
No. of households	174	159	90	423	
Period of move to eThekweni Municipality					
Resident by 1994	88	100	100	402	95
1995-2000	1.5	-	-	3	0.6
2001-2010	1.5	-	-	3	0.6
2011-2015	4.5	-	-	8	1.9
2016	4.5	-	-	8	1.9
Total	100	100	100		100
No. of households	174	159	90	423	
Length of stay in the informal settlement					
Less than 5 years	33.3	50	14.7	151	35.6
6-10	37.4	31	63.1	145	34.3
11+	29.3	19	22.2	127	30.1
Total	100	100	100		100
No. of households	174	159	90	423	
Resident since 2011 in the informal settlement					
Yes	66.7	50	85.3	272	64.4
No	33.3	50	14.7	151	35.6
Total	100	100	100		100
No. of households	174	159	90	423	

Source: Field Survey (2018)

5.2.4 Affordability and Tenure Arrangements

The results on current tenure arrangements shown in Table 5.16 indicate that 43 per cent of the households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road 'owned' the dwellings while 57 per cent were letting from slumlords who had no legal title of ownership of the land and dwelling. In terms of the households that were letting, the results show that in the informal settlements on Sir Kumar Reddi Road and Havelock Road about 80 per cent of the households were sub-letting to other tenants compared to 32 per cent of households in the informal settlements on Lacey Road that were sub-letting. The percentage of tenants in the informal settlement on Sir Kumar

Reddi Road was very high, which reinforced the point made earlier on by informants from eThekweni Municipality that its location in close proximity to manufacturing and service industrial activities in the harbour and industrial estates of Congella, Maydon Wharf, Umbilo, Rossburgh, Bayhead and Jacobs made it an attractive location for those seeking employment. A significant 80 per cent of households in this settlement lived in rental accommodation; while this enlarged the potential market of prospective buyers it signified that rental accommodation was considered by the economically active and highly mobile household members to be more attractive than 'homeownership'.

Table 5.16 Percent distribution of tenure status in informal settlement

Tenure status	Informal Settlement				
	Lacey Road	Havelock Road	Sir Kumar Reddi Road	Frequency	Percent
On arrival					
Share with relative	42.4	78.3	35.3	230	54.4
Share with friend	7.6	1.7	8.8	24	5.6
Share with spouse or partner	4.5	3.3	5.9	19	4.4
Rented a room	28.8	11.7	35.3	100	23.8
Built own dwelling	15.2	5	2.9	37	8.8
Purchased	1.5	-	11.8	13	31.
Total	100	100	100		100
No. of households	174	159	90	423	
Current status					
Share with relative	25.8	6.7	14.7	69	16.3
Share with friend	6.1	3.3	-	16	3.8
Share with spouse or partner	9.1	1.7	5.9	24	5.6
Rented a room	24.2	38.3	35.3	135	31.9
Built own dwelling	34.8	50	44.1	180	42.5
Purchased	-	-	-	-	-
Total	100	100	100		100
No. of households	174	159	90	423	

Source: Field Survey (2018)

According to Weisbrod *et al* (2008) there is little understanding of whether the sacrifices low-income households make by residing in unsanitary and overcrowded informal settlements pay-off economically. In the absence of empirical evidence of the effects of limited housing affordability on housing conditions and human health in informal settlements, implicit assumptions and myths flourish (*ibid*). Therefore, it is important for this study to present empirical evidence that links limited housing affordability with poor living conditions. Hence, the study focuses on how limited housing affordability impacts on housing quality especially, the building materials used in home construction, the size of the dwellings and the occupation rate. This data on the quality of housing in informal settlements contributes to the design of a mechanism that could deliver residential land in inner-city areas at prices that are affordable to the urban poor.

5.2.5 Affordability and Quality of Housing

The results in Table 5.17 show that about 45 per cent of households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road used corrugated iron sheets to build the walls of their dwellings (see Photograph 5.1 on page 138), while 40 per cent used scrap wood. About 88 per cent of the households used corrugated iron sheets as a roofing material of the dwellings. A comparison of the three study sites indicates that about 59 per cent of households in the informal settlement on Sir Kumar Reddi Road utilised corrugated iron sheets for constructing dwelling walls, while households on Lacey Road and Havelock Road mainly used both corrugated iron sheets and scrap wood. The predominant use of such substandard building materials suggests that households in these settlements cannot afford to build housing using standard building materials. The results in this Table show that about 54 per cent of the households spent less than R5,000 in building and maintenance costs.

Photograph 5.1 Construction Material of Dwelling Units in Lacey Road Informal Settlement



Source: Field Survey (2018)

The results shown in Table 5.18 indicate that 50 per cent of the households lived in one room and 19 per cent in two rooms. The results show that a negative correlation existed between single-person households at 21 per cent shown in Table 5.19 and one-room dwellings at 50 per cent shown in Table 5.18. A mismatch between single-person households and one-room dwellings could be an indication

of overcrowding in the settlements. Informants from FEDUP, SDI and eThekweni Municipality indicated that overcrowding often resulted as low-income households sharing accommodation to save on housing costs. The informant from Urban LandMark indicated that competition for land in the highly dense settlements forced single-person households to share a small one-room dwelling with other single-persons.

Table 5.17 Percent distribution of households by type of building material and construction cost of dwelling

Characteristic	Informal Settlement			Frequency	Percent	Cumulative Percent
	Lacey Road	Havelock Road	Sir Kumar Reddi Road			
Walling material						
Scrap wood	50	40.3	21.1	169	40.0	40.0
Unburnt brick	-	-	5.6	5	1.3	41.3
Cement block/Concrete	2.9	-	5.6	11	2.5	43.8
Corrugated iron/zinc	33.3	50.3	58.9	190	45.0	88.8
Burnt Brick	-	-	3.3	3	0.6	89.4
Recycled plastic	1.7	-	-	3	0.6	90.0
Cardboard	12.1	10.1	5.6	42	10.0	100.0
Total	100	100	100		100	
Roofing material						
Corrugated iron/zinc	93.7	84.9	81.1	371	87.5	87.5
Asbestos	-	5	14.4	21	5.0	92.5
Scrap wood	4.6	6.9	-	19	4.4	96.9
Cardboard	1.7	3.1	4.4	12	3.1	100.0
Total	100	100	100		100	
Construction cost of dwelling						
R2,500 and under	33.3	10.1	58.9	114	26.9	26.9
R2,501-R5,000	50	24.4	21.1	114	26.9	53.8
R5,001-R10,000	4.6	15.2	3.3	37	8.8	62.5
Do not know	12.1	50.3	16.7	159	37.5	100.0
Total	100	100	100		100.0	
No. of households	174	159	90	423		

Source: Author (2018)

Table 5.18 Number of rooms per dwelling

Rooms in dwelling	Frequency	No. of rooms	Percent	Cumulative Percent
One room with multiple uses	312	312	50	50
Two rooms with multiple uses	58	116	18.6	68.6
Three rooms	24	72	11.4	80
Four rooms	21	128	13.6	93.6
Five rooms	8	40	6.4	100.0
Total	423	668	100.0	

Source: Field Survey (2018)

Results shown in Table 5.20 confirm that a high proportion of households in these settlements lived in dwellings smaller than 30m². The floor areas of the dwellings were calculated following the measurement of dwellings with a measuring tape. In order to understand the average available floor space per household, the net floor areas of dwellings were added together and divided by the

population in the three study sites. The results shown in this Table indicate that about 59 per cent of households in the three study sites lived in dwellings smaller than 30m² and about 23 per cent lived in dwellings of 35 to 60m².

Informants from FEDUP and SDI were asked about the size of these dwellings and the standard floor space accorded per person. The informants indicated that these makeshift dwellings were extremely small and often crowded. However, a member of *Abahlali base Mjondolo* who lived in the informal settlement on Havelock Road mentioned that “while our dwellings are extremely small, we do not mind living in crowded conditions as long as it gives us an opportunity to share housing costs and generate rental-income.” Informants from FEDUP and SDI indicated that such living arrangements made housing affordable for residents of informal settlements with insecure and irregular incomes. However, results shown in Table 5.20 do not take into account the number of occupants per dwelling; the results do not reveal the level of overcrowding that resulted as low-income households share accommodation to save on housing costs.

Table 5.19 Number of household members by informal settlement

No. of Household Members	Informal Settlement			Frequency count	Percent	Cumulative percent	People count
	Lacey Road	Havelock Road	Sir Kumar Reddi Road				
1	22.4	10.1	38.9	90	21.3	21.3	90
2	24.1	22	12.2	88	20.8	42.1	176
3	14.9	30.2	17.8	90	21.3	63.4	270
4	18.4	18.9	18.9	79	18.7	82.1	316
5	10.3	15.1	6.7	48	11.3	93.4	240
6	2.9	1.3	4.4	11	2.6	96.0	66
7	2.3	1.3	0	6	1.4	97.4	42
8	4.6	1.3	1.1	11	2.6	100.0	88
Total	100	100	100		100.0		1287
No of Hhds	174	159	90	423			

Source: Field Survey (2018)

Table 5.20 Floor space of dwellings in the informal settlements

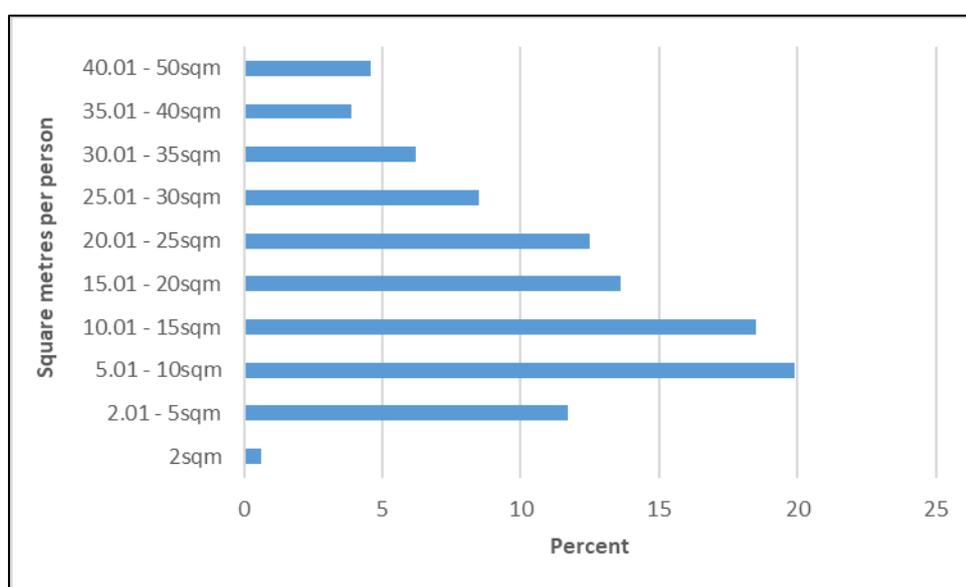
Square metres of floor space per person	Frequency count	Percent	Cumulative Percent
5.01 - 10m ²	17	2.5	2.5
10.01 - 15m ²	118	17.7	20.2
15.01 - 20m ²	113	16.9	37.1
20.01 - 25m ²	116	17.4	54.5
25.01 - 30m ²	98	14.7	69.2
30.01 - 35m ²	69	10.3	79.5
35.01 - 40m ²	57	8.5	88.0
40.01 - 50m ²	80	12.0	100.0
Total No. of Dwellings	668	100.0	

Source: Field Survey (2018)

In Figure 5.1, total floor space per dwelling was divided by the number of occupants to work out the floor space per person ratio. The data indicates that 50 per cent of households have access to less

than 15m² floor space and 20 per cent have access to 5 to 10m² floor space. The results in Table 5.21 exclude structures with only one occupant to better reflect square metres per person in dwellings with multiple occupants. When the total floor space of a dwelling was divided by the number of occupants (excluding single-person households), about 57 per cent of the residents had about 5 to 15m² of floor space per person. Further analysis of the floor areas shown in the Table indicate that 79 per cent of the occupants had access to less than 15m² of floor space per person and that 35 per cent of residents had access to 5 to 10m² of floor space per person. These results show that the density of the settlements was generally high (see Photograph 5.2 on page 142) and informants from eThekweni Municipality indicated that this was a major challenge for the provision of sanitation services.

Figure 5.1 Percentage of Floor Area per person provided by a Dwelling



Source: Field Survey (2018)

Table 5.21 Floor space of dwelling available per person excluding structures with one occupant

Square metres of floor space per person	Frequency count	Percent	Cumulative Percent
2m ²	4	0,8	0.8
2.01 - 5m ²	125	21,7	22.5
5.01 - 10m ²	202	35,0	57.5
10.01 - 15m ²	125	21,7	79.2
15.01 - 20m ²	53	9,2	88.4
20.01 - 25m ²	29	5.0	93.4
25.01 - 30m ²	19	3.3	96.7
30.01 - 35m ²	12	2.0	98.7
35.01 - 40m ²	5	0.8	99.4
40.01 - 50m ²	3	0.6	100.0
Total No. of Dwellings	578	100.0	

Source: Field Survey (2018)

The results shown in Table 5.22 suggest that all households in the informal settlement on Lacey Road were directly connected to the municipal electricity power grid (see Photograph 5.3 on page 143) and

paid an average monthly electricity bill of R375. The results shown in the Table also indicate that about 94 per cent of the households were able to pay for utility services if the combined cost of these services was below R1,000 per month. These results were presented to Eskom¹⁷ to explain why the firm was not providing electricity services to residents of informal settlements on Havelock Road and

Photograph 5.2 Density of development in Lacey Road informal settlement



Source: Field Survey (2018)

Sir Kumar Reddi Road when some residents were able to pay. The informant from Eskom indicated that the firm was reluctant to provide a reticulated electricity service to households in these informal settlements because residents of Greenwood Park and Clairwood Townships, that these settlements are part of, objected to such a plan arguing that such services should not be provided to illegal settlements. The results in this Table show that all residents of the informal settlement on Havelock Road and 94 per cent of residents in the informal settlement on Sir Kumar Reddi Road accessed electricity through illegal connections (see Photograph 5.4 on page 144). About 6 per cent of the residents of the informal settlement on Sir Kumar Reddi Road accessed electricity through direct lease agreements with neighbours in formal housing in Clairwood Township. Informants from the Municipality and Eskom stated that the minimal provision of these services to residents of informal settlements was designed to minimise the financial risk of non-payment due to the unwillingness or inability of the poor to pay for these services.

¹⁷ Eskom is a government owned firm that is responsible for the provision of electricity services.

Table 5.22 Percent distribution of households by expenditure on utility services and informal settlement

Characteristic	Informal Settlement			Frequency	Percent	Cumulative Percent
	Lacey Rd	Havelock Rd	Sir Kumar Reddi			
Monthly payment of electricity bill						
R100-R200	44	-	-	45	11	11
R201-R400	25	-	3	29	7	18
R401-R600	31	-	3	34	8	26
Nothing	-	100	94	315	74	100
Total	100	100	100		100	
Illegal electricity connection						
Yes	-	100	94	243	58	58
No	100	-	6	180	42	100
Total	100	100	100		100	
Ability to pay utility rates						
Yes	89	100	91	397	94	94
No	11	-	9	26	6	100
Total	100	100	100		100	
Amount household is able to pay						
R201-R400	40	62	50	81	50	50
R401-R600	47	30	38	62	39	89
R601-R800	-	7	-	4	3	92
R801-R1000	6	-	-	4	2	94
Nothing	8	2	12	10	6	100
Total	100	100	100		100	
No of households	174	159	90	423		

Source: Field Survey (2018)

Photograph 5.3 Electricity power lines in Lacey Road informal settlement



Source: Field Survey (2018)

Photograph 5.4 Illegal electrical power connections in Havelock Road informal settlement



Source: Field Survey (2018)

5.2.6 Assessing Affordable House Prices

After consideration of the fact that households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road were living in squalid conditions in dwellings that cost less than R10,000 to build, it was important for this study to calculate the price of formal housing they could afford. Assessing the house prices low-income households could afford was very crucial for this study to be able to formulate a mechanism that could deliver AURL for low-income housing.

The information provided by the informant from the Centre for Affordable Housing Finance (CAHF) shown in Table 5.23 indicates that the cost of developing a 55m² (house 46m² and veranda 9m²) low-cost house on a plot of land measuring 120m² in Pretoria was estimated in 2017 at R367,770 at an exchange rate of US\$1 to R13.

Informants from First Metro and SOHCO indicated that the public housing units they build measured 42m², 56m² and 60m² in floor area in accordance with DoHS guidelines. Hence, this study opted to use a 42m² house in calculating affordable house prices because it was cheaper to build and required the least amount of land for building compared to the 56m² and 60m² units. Using estimates 2 to 5 shown

in Table 5.23, a low-cost housing unit would cost R6,268.60 per m²; implying that a 42m² house cost about R263,281 to build. According to CAHF (2017) estimates, the value of land generally seems modest, probably at 6 per cent of the value of the house. However, if compliance costs and other development costs shown in this Table were excluded, the value of land rose to 8 per cent of the value of the house. A 42m² house built at a cost of about R264,000 was targeted at low-income households who earned below R3,500 per month in accordance with the housing policy.

Table 5.23 The cost of producing a 'generic' 55m² House in Pretoria and Port Elizabeth

Estimate	Pretoria		Port Elizabeth	
	US\$	% of cost	US\$	% of cost
1 Land costs	1,769		1,381	
Freehold tenure	1,020	58	714	52
Registration costs	340	19	272	20
Planning approval	408	23	395	29
2 Infrastructure costs	3,365		3,643	
Site preparation	2,135	63	2,331	64
Energy system	348	10	331	9
Sanitation system	554	16	629	17
Water system	328	10	352	10
3 Compliance costs	327		340	
Municipal approval fee	41	13	54	16
Plan drafting fee	163	50	163	48
Engineers fees	122	38	122	36
4 Construction costs	17,660		19,315	
Indirect costs	4,230	24	4,256	22
Material costs	9,092	51	10,106	52
Labour costs	4,337	25	4,952	26
5 Other development costs	5,169		5,436	
Sales taxes	3,474	67	3,698	68
Finance & holding costs	1,082	21	1,126	21
Marketing	612	12	612	11
Total costs	28,290		30,115	

Source: CAHF (2017)

Informants from eThekweni Municipality, KZN DoHS, FEDUP and SDI perceived that the estimated development costs of a low-income house presented by CAHF in 2017 were priced beyond what low-income households who earned below R3,500 per month could afford. The informants from FEDUP and SDI confirmed that the cost of a low-cost house of minimum standard and quality was not matched with the urban poor's level of income and remained beyond their reach. The informant from Urban LandMark agreed with this assessment and indicated that in a consumer market, goods are priced relative to the price a consumer was willing and able to pay, but distortions in the land and housing markets associated with market inducement and speculative tendencies helped determine prices beyond what low-income households could afford. Thus, the study tested this observation by conducting a housing affordability analysis among low-income households living in informal settlements in the study sites. The study assessed the possibility of developing low-income housing at

full cost recovery if land costs and interest rates were kept below market levels. The study calculated the price of housing that low-income households could afford under the assumptions shown in Table 5.24. However, it should be noted that this analysis established only the ability to pay and not the willingness to pay.

Table 5.24 Assumptions used to calculate monthly mortgage repayments

Assumptions
Monthly mortgage payment equivalent or below 30 per cent of monthly household income
No down payment – the mortgage would cover 100 per cent of the purchase price
Interest rate at 6 to 8 per cent (30 per cent of current open market rates fluctuating between 20-26%)
No transaction costs such as professional fees, transfer duty and legal costs
Term of loan is 25 years

The formula by Calvin (1990) used in this study to calculate monthly mortgage repayments is as follows:

$$M = \frac{i}{1-(1+i)^{-n}} \times P$$

Where i = Interest rate, n = term of loan, and P = Principal.

Affordability values were determined using household data gathered during the study survey and from informants from CAHF, SOHCO and eThekweni Municipality. The measurement of housing affordability across household income distribution in the study area was predicted using the income categories used by StatsSA in the 2011 Census as a reference point. Housing affordability was calculated by equating the average mortgage as a ratio of household income. The ratio was calculated by dividing house price by the average annual household income of residents of informal settlements in the study sites. The researcher calculated the house price for a flat because the informant from SOHCO indicated that four storey walk-up flats were cheaper to develop than detached units. The level of housing affordability for inhabitants of these settlements was classified based on the categories listed in Table 5.25.

Table 5.25 Housing affordability rating categories

Rating	Mortgage as Percentage of Income
Affordable	30 and under
Moderately unaffordable	31 to 40
Seriously unaffordable	41 to 50
Severely unaffordable	51 and over

Source: Author's own creation

The computations for the mortgage-to-income ratio shown in Tables 5.26 and 5.27 were based on the assumptions mentioned in Table 5.24 and the affordability ratings in Table 5.25. The results in Tables

5.26 show that once the mortgage repayment exceeds 50 per cent of disposable income, the house becomes severely unaffordable for those in income deciles one to three. Household income data from the survey suggests that about 25 per cent of the households earned between R3,501 and R6,400 per month. The calculations of housing affordability shown in Tables 5.29 indicates that residents of informal settlements on Lacey Road, Havelock Road, and Sir Kumar Reddi Road who earned an annual income of R19,201 to R38,400 could afford a mortgage of R120,000. Households that earned an annual income of R38,401 to R76,800 could afford a mortgage of R140,000 if the interest rate was below 8 per cent. A median house price of R140,000 was close to the 2017 housing subsidy (R155,000) and was affordable to 25 per cent of households in these settlements. As shown in Table 5.27 households that earned R90,000 per annum could afford a house costing less than R340,000 if the interest rate was kept at 6 per cent.

Table 5.26 Purchase affordability at different interest rates and income deciles

Decile Grouping	Median House Price	Annual Household Income	Total Loan Amount	Annual Repayment			Mortgage as % of Income		
				r=6%	r=7%	r=8%	r=6%	r=7%	r=8%
Level of affordability for a house costing R120,000									
1	R120,000	R4,800	R120,000	R9,387	R10,297	R11,241	195	215	234
2	R120,000	R9,600	R120,000	R9,387	R10,297	R11,241	98	107	117
3	R120,000	R19,200	R120,000	R9,387	R10,297	R11,241	49	54	59
4	R120,000	R38,400	R120,000	R9,387	R10,297	R11,241	24	27	29
5	R120,000	R76,800	R120,000	R9,387	R10,297	R11,241	12	13	15
6	R120,000	R153,600	R120,000	R9,387	R10,297	R11,241	6	7	7
7	R120,000	R307,200	R120,000	R9,387	R10,297	R11,241	3	3	4
8	R120,000	R614,400	R120,000	R9,387	R10,297	R11,241	2	2	2
9	R120,000	R1,228,800	R120,000	R9,387	R10,297	R11,241	1	1	1
Level of affordability for a house costing R140,000									
1	R140,000	R4,800	R140,000	R10,952	R12,013	R13,115	228	250	273
2	R140,000	R9,600	R140,000	R10,952	R12,013	R13,115	114	125	137
3	R140,000	R19,200	R140,000	R10,952	R12,013	R13,115	57	63	68
4	R140,000	R38,400	R140,000	R10,952	R12,013	R13,115	29	31	34
5	R140,000	R76,800	R140,000	R10,952	R12,013	R13,115	14	16	17
6	R140,000	R153,600	R140,000	R10,952	R12,013	R13,115	7	8	9
7	R140,000	R307,200	R140,000	R10,952	R12,013	R13,115	4	4	4
8	R140,000	R614,400	R140,000	R10,952	R12,013	R13,115	2	2	2
9	R140,000	R1,228,800	R140,000	R10,952	R12,013	R13,115	1	1	1

Source: Field Survey (2018)

Using the calculations shown in Table 5.27, the researcher used a ladder of affordability to show the maximum house prices that different income ranges could afford for first home purchase. These were then compared to 2018 market house prices provided by the informant from ABSA. This enabled the study to assess the scale of the affordability problem for the different income levels and what price levels could push first home ownership opportunities down the price ladder. The results shown in Table 5.28 suggests that households who earned an annual income of R19,201 to R38,400 could afford

Table 5.27 Purchase affordability for households earning an annual income between R18,000 and R90,000

Decile grouping	House price	Annual Household income	Total loan amount	Annual repayment			Mortgage as % of Income		
				r=6%	r=7%	r=8%	r=6%	r=7%	r=8%
Households earning R18,000									
3	R220,000	R18,000	R220,000	R17,210	R18,878	R20,609	96	105	114
3	R200,000	R18,000	R200,000	R15,645	R17,162	R18,736	87	95	104
3	R180,000	R18,000	R180,000	R14,081	R15,446	R16,862	78	86	94
3	R160,000	R18,000	R160,000	R12,516	R13,730	R14,987	70	76	83
3	R140,000	R18,000	R140,000	R10,952	R12,013	R13,115	61	67	73
3	R120,000	R18,000	R120,000	R9,387	R10,297	R11,242	52	57	62
3	R100,000	R18,000	R100,000	R7,823	R8,581	R9,368	43	48	52
3	R80,000	R18,000	R80,000	R6,261	R6,865	R7,494	35	38	42
3	R60,000	R18,000	R60,000	R4,694	R5,149	R5,621	26	29	31
Households earning R38,400									
4	R220,000	R38,400	R220,000	R17,210	R18,878	R20,609	45	49	54
4	R200,000	R38,400	R200,000	R15,645	R17,162	R18,736	41	45	49
4	R180,000	R38,400	R180,000	R14,081	R15,446	R16,862	37	40	44
4	R160,000	R38,400	R160,000	R12,516	R13,730	R14,989	33	36	39
4	R140,000	R38,400	R140,000	R10,952	R12,013	R13,115	29	31	34
4	R120,000	R38,400	R120,000	R9,387	R10,297	R11,241	24	27	29
4	R100,000	R38,400	R100,000	R7,823	R8,581	R9,368	20	22	24
4	R80,000	R38,400	R80,000	R6,258	R6,865	R7,494	16	18	20
4	R60,000	R38,400	R60,000	R4,694	R5,149	R5,621	12	13	15
Households earning R42,000									
5	220,000	R42,000	R220,000	R17,210	R18,878	R20,609	41	45	49
5	200,000	R42,000	R200,000	R15,645	R17,162	R18,736	37	41	45
5	180,000	R42,000	R180,000	R14,081	R15,446	R16,862	34	38	40
5	160,000	R42,000	R160,000	R12,516	R13,730	R14,987	30	33	36
5	140,000	R42,000	R140,000	R10,952	R12,013	R13,115	26	29	31
5	120,000	R42,000	R120,000	R9,387	R10,297	R11,242	22	25	27
5	100,000	R42,000	R100,000	R7,823	R8,581	R9,368	19	20	22
5	80,000	R42,000	R80,000	R6,261	R6,865	R7,494	15	16	18
5	60,000	R42,000	R60,000	R4,694	R5,149	R5,621	11	12	13
Households earning R76,800									
5	R400,000	R76,800	R400,000	R31,291	R34,324	R37,476	41	45	49
5	R380,000	R76,800	R380,000	R29,726	R32,608	R35,598	39	42	46
5	R360,000	R76,800	R360,000	R28,162	R30,898	R33,724	37	40	44
5	R340,000	R76,800	R340,000	R26,597	R29,176	R31,851	35	38	41
5	R320,000	R76,800	R320,000	R25,033	R27,459	R29,977	34	36	39
5	R300,000	R76,800	R300,000	R23,468	R25,743	R28,104	31	34	37
5	R280,000	R76,800	R280,000	R21,903	R24,027	R26,230	29	31	34
5	R260,000	R76,800	R260,000	R20,339	R22,311	R24,356	26	29	32
5	R240,000	R76,800	R240,000	R18,774	R20,595	R22,483	24	27	29
Households earning R90,000									
6	R340,000	R90,000	R340,000	R26,597	R29,176	R31,851	30	32	35
6	R320,000	R90,000	R320,000	R25,033	R27,459	R29,977	28	31	33
6	R300,000	R90,000	R300,000	R23,468	R25,743	R28,104	26	29	31
6	R280,000	R90,000	R280,000	R21,903	R24,027	R26,230	24	27	29
6	R260,000	R90,000	R260,000	R20,339	R22,311	R24,356	23	25	27
6	R240,000	R90,000	R240,000	R18,774	R20,595	R22,483	21	23	25
6	R220,000	R90,000	R220,000	R17,210	R18,878	R20,609	19	21	23
6	R200,000	R90,000	R200,000	R15,645	R17,162	R18,736	17	19	21
6	R180,000	R90,000	R180,000	R14,081	R15,446	R16,862	16	17	19

Source: Field Survey (2018)

a house priced at a maximum of R140,000. The market house price of R264,000 was 89 per cent more than what low-income households were able to afford. These results suggest that if urban land and low-income housing are to be available at prices the urban poor can afford, demand-side instruments of the land and housing policies would need to be adjusted.

Table 5.28 Maximum affordable house price by income decile

Decile grouping	Annual Household Income 2017	Maximum Affordable house price	Market house price
1	R4,800	None	R264,000
2	R9,600	None	R264,000
3	R19,200	R60,000	R264,000
4	R38,400	R140,000	R264,000
5	R76,800	R280,000	R422,000
6	R153,600	R400,000	R830,000
7	R307,200	R980,000	R2,304,000
8	R614,400	R1,960,000	R4,608,000
9	R1,228,800	R3,920,000	R5,800,000

Source: Field Survey (2018)

The same approach the study used to calculate affordable housing prices was also used to assess rents that were affordable to low-income households in the selected study sites. The results in Table 5.29 suggest that a household that earned an annual income of R4,800 to R19,200 faced severe housing stress because they could not afford to rent housing on the market. The results also indicated that a household that earned an annual income of R38,400 could afford to rent a house constructed or purchased for no more than R140,000.

Table 5.29 Affordable rental housing targets for different income deciles

Decile grouping	Household Income R.pm 2017	Rent @ 30% benchmark R.pm 2017	Capital value of the house
1	R372	R112	None
2	R740	R224	None
3	R1,480	R444	R60,000
4	R2,956	R892	R140,000
5	R5,908	R1,776	R280,000
6	R11,816	R3,548	R400,000
7	R23,632	R7,092	R980,000
8	R47,264	R14,180	R1,960,000
9	R94,524	R28,360	R3,920,000

Source: Field Survey (2018)

The analysis confirmed that a significant number of households in the study sites faced acute housing stress. While affordability might be a problem for a significant number of lower-income households, the analysis suggested that 241 households (57 per cent) of the 423 households surveyed in the three study sites either had the potential to purchase or rent housing. The level of affordability improved

when the mortgage interest rate was lowered from 8 per cent to 6 per cent for households that had the potential to purchase a low-income house.

Results shown in Table 5.30 indicate that households in the study sites that earned annual incomes of R19,201 to R38,400 and R38,401 to R76,800 could afford a house at a maximum cost of R120,000 and R140,000 respectively. Remarkably, as indicated in the Table, no household whose income was below the 2011 national minimum wage of R42,000 per annum could afford to own a house. The situation began to improve however when household income moved above the minimum wage. As shown in the Table, all households that earned annual incomes of R19,201 to R76,800 could afford a R140,000 house and their level of housing affordability improved even further when the lender interest rates were revised downward from 8 per cent to 6 per cent. If a financial subsidy was used to lower the cost of land or land was delivered at below-market cost, the house price became even more affordable. All households that earned annual incomes that were below R19,200 were predicted to have severe housing stress and would need state support.

Table 5.30 Predicted housing affordability by income distribution

Annual income	Affordability	Frequency	Percent	Cumulative per cent
R1-R4,800	Can Afford	0	0	100
	Cannot Afford	36	100	
	Total	36	100	
R4,801-R9,600	Can Afford	0	0	100
	Cannot Afford	41	100	
	Total	41	100	
R9,601-R19,200	Can Afford	0	0	100
	Cannot Afford	107	100	
	Total	107	100	
R19,201-R38,400	Can Afford	122	100	100
	Cannot Afford	0	0	
	Total	122	100	
R38,401-R76,800	Can Afford	119	100	100
	Cannot Afford	0	0	
	Total	119	100	

Source: Field Survey (2018)

The results shown in Tables 5.28 and 5.30 suggest that the majority of homes in this country are priced at close to construction costs even though the majority of the population faced a housing affordability crisis. These results were presented to informants from eThekweni Municipality, Wakefields and Tyson Properties who confirmed that they were an indication that South African cities were in the midst of a housing affordability crisis. The manager of the Informal Settlements Programme at eThekweni Municipality acknowledged the existence of such a crisis and indicated that limited housing affordability among low-income households justified the annual requests by his department in the last five years for more public funding from eThekweni Municipality and KZN DoHS for land assembly, informal settlement upgrading and low-income housing development. Informants from FEDUP,

People's Dialogue, Slum Dwellers International and *Abahlali base Mjondolo* shared this view and stressed that eThekweni Municipality and KZN DoHS should provide more public funding for low-income housing and commit to an alternative strategy for delivering AURL to combat the low-income housing crisis in urban South Africa.

5.3 Discussion of the Results

In an effort to integrate the results of this study and to further advance the scholarly discourse on housing affordability in South Africa, the study investigates the land pricing mechanism and its influence on the location and quality of low-income housing in inner-city areas. Most studies on informal settlements including those conducted by Lall *et al* (2009), Urban LandMark (2007a) and Oberlander (1985) tend to focus largely on household living conditions and how these settlements undermine property rights, infrastructure provision and economic growth, but focus less on the causal connections between severe housing stress and the shortage of AURL. Much has been written about the problems residents of informal settlements face, but few studies have provided a strategy that could address the shortage of AURL in a neo-liberal context. As a result, land administrators are not sure how to change the urban land administration system to suit the payment capabilities of the urban poor. Urban municipalities in South Africa lack information on land tenure, land value and land-use to support the delivery of AURL, partly as a result of a notable lack of academic research on the distribution of urban land ownership among the different income, racial and ethnic groups (McGaffin & Kihato, 2013; Napier, 2013). To address this knowledge gap, this research used a household questionnaire to survey households that reside in informal settlements and also conducted semi-structured interviews with various key informants in the case study area to collect data needed to develop a pricing mechanism that could deliver AURL for low-income housing. The results could be used by policymakers to review mechanisms through which urban land is supplied, valued, financed and sold in the urban land market that appears to be dysfunctional.

5.3.1 Affordability and Market Pricing Reality

In this study, the results of a household affordability analysis indicate that households in the study sites that earn an annual income of R19,201 to R38,400 can afford a house at a maximum cost of R120,000 if the mortgage interest rate is kept below 8 per cent. The results also show that households that earn an annual income of R38,401 to R76,800 can afford a house at a maximum cost of R280,000 if the mortgage interest rate is kept at 6 per cent. Thus, the study discovered that the second part of the interlinked hypotheses which states that setting mortgage interest for residential land in inner-city areas at a rate below 10 per cent can facilitate land acquisition by households earning a monthly income ranging between R3,500 and R7,500 in eThekweni municipality, is accurate. Thus, if mortgages

for purchasing urban land in inner-city areas are available at a rate below 10 per cent, such land would be affordable to households earning between R3,500 and R7,500 per month. Previous studies in Pretoria, East London, Johannesburg and Cape Town conducted by CAHF in 2017 and by Private Property in 2017 estimate that a newly built low-income house costs from R352,500 to R600,000. The results of these studies are consistent with this study's finding that a low-income household cannot afford a house costing above R280,000. The analysis proves that there is a misalignment of the urban poor's housing aspirations, personal affordability and market pricing realities. Hence, South Africa faces a low-income housing crisis (Pillay & Naudé, 2006) with the current backlog of low-income housing estimated at over 400,000 units (eThekweni Municipality, 2018). The persistence of the backlog is well documented by Charlton (2006), del Mistro and Hensher (2009), Huchzermeyer (2009), Bradlow *et al* (2011), Aigbavboa and Thwala (2012), Hart (2013), Cross (2014) and Marais and Cloete (2014) in their assessment of the low-income housing crisis and the widespread problem of informal settlement in South Africa, that result from a limited housing affordability among the urban poor.

In addition, urban land prices generally determine access to low-income housing in the study area with high land prices having a negative influence on access. This implies that access to AURL has a positive impact on access to low-income housing, which supports the argument by Lall *et al* (2009) and Napier (2013) that the land market does not 'supply' urban land in quantities that equal the quantity of land demanded at the lowest possible prices. The results of the study show that households in informal settlements in the study area are 100 per cent African, which suggests that access to AURL for low-income housing is both an economic and social issue rather than solely an economic issue as expressed in the 1998 Land Act. This implies that the land law is not meeting its objective of making land accessible to all South Africans as the majority Africans who lack the economic ability to access land are marginalised in informal settlements. Hence, these results are in alignment with the argument advanced by Mill (1973) in the Theory of Utilitarianism that the distribution of resources should achieve social and economic equality for the well-being of the majority. In fact, escalating costs of urban land, building materials, homeownership and rental housing have been issues of public concern in South Africa that led to legislative and policy measures such as the promulgation of the 1998 Housing Act, the 2004 Breaking New Ground strategy and the Capital Subsidy Scheme. However, these measures have not delivered AURL and low-income housing at the required scale of demand. Consequently, low-income households who are marginalised from the urban residential land market due to limited affordability resort to 'clandestine acquisition' and subdivision of urban land to access housing. Such actions by the urban poor are a form of anarchism (Faure, 1934) and a demonstration of 'insurgency citizenship' (Holston, 2009) and a 'right to the city' (Lefebvre, 1967). The implication of this is that informal settlements will continue to grow everywhere

in urban South Africa for some considerable time. The results confirm the need for fairness in the distribution of resources and opportunities essential for human development, an idea espoused by Adams (1963) in the Theory of Equity.

The results further suggest that reducing the cost of residential land to the level that low-income households can afford will have much effect on enabling these households to access housing. Accessing land is the first step towards low-income housing development and when policy measures to reduce the cost of urban land for low-income housing are considered, a substantial part of the housing affordability problem is solved. In fact, having access to AURL land for low-income housing development is a strong motivation to low-income households to build their own housing. Turner (1976) articulated this argument well, citing the ingenuity and determination of low-income households in attempting housing consolidation.

5.3.2 Affordability and Household Expenditure

In addition, the results confirm the importance of household income in accessing low-income housing. Income is perhaps the most significant measure of purchasing power and so it would be expected that it plays a significant role in enhancing housing affordability among low-income households. Unfortunately, however, the current high land prices in South Africa do not encourage widespread housing development by low-income households. With the current high levels of urban unemployment and poverty, the results suggest that a significant proportion of low-income households will remain unable to access AURL for low-income housing. This implies that the housing affordability problem results due to limited income and high costs of construction. The study's results also show that households in these settlements still experience disadvantages associated with poor basic education and economic capability that Lemon (1991) and Swanson (1983) cite as typical among Africans during apartheid. The level of income and employment status of most of these households reflect the historical disadvantage of urban Africans that was encouraged and enforced by the state during apartheid. Unless state intervention miraculously facilitates the delivery of AURL to aid the development of low-income housing at far less than normal construction costs, then the Capital Subsidy Scheme is unlikely to reduce significantly the cost of low-income housing development in South Africa. The results of this study suggest that unless an alternative mechanism is used to deliver urban residential land at a price the urban poor can afford, they will remain marginalised in informal settlements. Hence, in the following Chapter, this study proposes a mechanism of calculating the price of urban land based on a benchmark of household income.

It is generally expected that because households in informal settlements spend relatively more on basic necessities in order to survive, they face severe housing stress. Empirical evidence in this thesis shows that on average households in these settlements spend a high proportion of their income on non-housing necessities, thus, the majority of them cannot afford to build adequate housing. These non-housing expenditures often have pronounced depressing effects on the consumption of other items, particularly reticulated infrastructure services. The fact that low-income households opt to live without adequate reticulated infrastructure services such as reticulated water supply and electricity, sanitation and waste collection is directly related to their limited affordability.

It is instructive that the level of education of the head of household and household size contribute to housing affordability. The results show a strong association between the level of education of the household head and the type of work and level of income. Education tends to increase the chances of household heads getting better paying jobs, which enhances their ability to afford housing. However, the impact of education is better appreciated when considered together with the household size. Education is associated with greater enlightenment, which usually results in smaller-size households and reduced expenditures on non-housing basic necessities. Thus, low-income housing is generally more affordable to smaller-size households than to larger ones. These results support the argument by Stone (1993) expressed in Chapter 4. The results imply that high levels of education will contribute positively to improving housing affordability and counter the negative impact of large household size and low rate of engagement in economic activities by household heads.

5.3.3 Affordability and Household Size

The study's results on the size of households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road indicate that the average household size was 3.0 persons and confirms the average size of households in other informal settlements in eThekweni Municipality, which was reported in the 2011 National Census. The study's results on the types of households in the three study sites also confirm that many of these households were headed by single women with young children, which was also reported in the 2011 census. The small size of these households consisting mainly of multiple family units, contributed to an increase in the number of households that needed to be housed.

In spite of the fact that they recorded the lowest mean per capita non-housing expenditure, low-income households have the highest non-housing consumption threshold in the country. The significantly higher proportion of non-housing consumption threshold of low-income households is largely attributable to their relatively larger household size in comparison with middle-to-high-income

groups. Literature suggests that basic non-housing expenditure is mostly relevant to housing affordability when household income is relatively low. This contention underscores the logic of the shelter poverty affordability model that basic non-housing expenditure of households is an important factor in determining the housing affordability of any given household. Thus, policy and strategies that could deal with the housing affordability problems associated with high non-housing consumption include inflation control, education, transportation cost, poverty reduction and population control amongst others, which are beyond the focus of this thesis. However, strategies targeted at reducing household size in order to improve housing affordability among low-income households can only be effective if they are pursued in conjunction with other strategies aimed at reducing high housing expenditure and increasing household income.

5.3.4 Affordability and Housing Location Choice

The concept of trade-offs between transportation accessibility and other housing and location characteristics is not new. Economic 'bid-rent' theories were based on the intuitive concept that the residential location choices of individuals are based on a trade-off between the increasing costs of commuting to work and the decreasing prices of housing and urban land that are associated with living further out from a central area of employment. These theories offer explanations of the apparent paradox that in South Africa, whereby low-income households tend to squat on high-priced land in inner-city areas, while higher-income households choose suburban locations where land is cheaper. The explanation lies in the results of the study, which indicate that the majority of low-income households living in informal settlements desire adequate housing in an area close to job opportunities. The criteria these households use to select an area to establish a home include locational factors, good amenities and their greater willingness to pay for transportation over long distances to and from work.

5.3.5 Affordability and Quality of Housing

With overcrowding as an indicator of housing consumption, the results of this study did not support the proposition that households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddy Road were deliberately under-consuming housing in order to keep their housing cost within a level they can afford. On the contrary, the majority of households in these settlements were consuming housing at a standard above the occupancy norm appropriate to the size and composition of the household. This begs the question of whether households in informal settlements, which are living in overcrowded housing conditions, should be regarded as voluntarily establishing these

settlements out of choice or these settlements are the only housing option that is available to them within their limited means of affordability as Hancock (1993) suggests.

It is however clear that a poor quality of housing often directly correlates to poor neighbourhood quality. Hence, a poor quality of housing is widely recognised as constituting major problem in South African cities. The poor quality of housing in informal settlements is directly linked to housing affordability problems. In the light of the poor quality of housing the urban poor live in, informal settlement upgrading should also be viewed as a strategy to boost the supply of adequate housing to low-income households. This contention has far reaching policy and planning implications. It underscores the urgent need to prioritise the delivery of AURL for low-income housing in inner-city areas where most informal settlements are located as one of the most critical elements in ensuring adequate housing for all. All too often concerns about shortages of AURL for low-income housing in inner-city areas receive secondary attention from policy and decision makers as well as peripheral attention in housing and urban policy documents. Concerted and urgent emphasis should therefore be given to strategies that could deliver AURL as a way of enhancing housing affordability among low-income households.

5.3.6 Future Direction of Research on Housing Affordability

Overall, results of the study do provide new insights to housing affordability among low-income households. The study's results eliminate entirely 57 per cent of households in the study sites from state financial support if residential land is provided at a ratio of household income. The study shows that lack of consideration of the housing location choice in relation to workplaces and associated transportation cost burdens can lead to misleading conclusions on housing affordability. Future research on low-income housing affordability should carefully consider the role of housing location choice in the pricing of urban land.

A question one may ask is whether Africans choose to squat on plots of land in inner-city areas that are more expensive to purchase or develop than outlying areas even though they may not be able to own an adequate home. The results of the study indicate that Africans locate in these areas due to better job opportunities and amenities, but unfortunately the results do not allow the researcher to distinguish whether Africans are pushed into these locations due to market-led racial steering. Improved understanding of why Africans are pushed into areas that are more expensive to purchase or develop needs to be focused on in future research on housing affordability. Future research should also focus on devising a statistical algorithm for minimising land prices and for optimising access to AURL for low-income housing. This is accomplished by optimal allocation of urban land at 9 per cent

of household income by changing the pricing mechanism to be demand-based. The problem should be formulated as a 'minimisation-optimisation problem', suitable for solution by the linear-programming technique.

5.3.7 Summary of Study Results

The study's investigation of 423 households in informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road has revealed some surprising statistics about these settlements. There are a number of results that should centrally inform future settlement planning and decision-making:

- 57 per cent of all households that earned an annual income of R19,201 to R38,400 and R38,401 to R76,800 could afford a house at a maximum cost of R140,000 and R280,000 respectively,
- 43 per cent of all households that earned an annual income below R19,200 faced severe housing stress,
- The market price for a house was R264,000 and R422,000 for a household that earned an annual income of R38,000 and R76,800 respectively,
- 80 per cent of adult household members were economically active and employed in the formal sector and earned an average monthly household income of R3,564
- 77 per cent of all household expenditure was on non-housing costs and 14 per cent on transportation costs,
- 89 per cent of all residents were located less than 10km from work places, 41 per cent walked to work,
- 70 per cent of household heads were single, of which 44 per cent were male, 79 per cent were younger than 35 years old and 66 per cent had never been married,
- The average household size was 3.0 persons,
- 50 per cent of dwellings were single rooms,
- 59 per cent of all dwellings occupied by nuclear households were less than 30m²,
- 78 per cent of the occupants had less than 15m² of floor space per person,
- 36 per cent of residents reported to have lived in their dwellings for less than five years,
- 43 per cent of residents claimed to own their dwellings, and
- 92 per cent of residents were South Africans and 34 foreigners were recorded.

The exorbitant price of land occupied by these settlements limits housing affordability, which makes prospects for incremental low-income housing development difficult without significant state financial support land rehabilitation. Taking the history of land 'acquisition' and settlement establishment into account, the household data gives an accurate portrayal of an economically active population that is

challenged by high levels of unemployment and low level of educational attainment and small living spaces. The average household size in the three study sites is 3.0 persons per household. The study's investigation of the pricing mechanism for urban land and its influence on the location and quality of low-income housing in inner-city areas established the causal connections between severe housing stress and the shortage of AURL. The implications of these results for the delivery of AURL and settlement planning are tremendous. However, addressing the shortages of AURL and low-income housing through the conventional housing finance and land delivery mechanisms will clearly be unrealistic given the current financial limitations low-income households face. The results of this investigation that inform the mechanism proposed in Chapter 6 provide a strategy that land administrators can use to change the urban land administration system to suit the payment capabilities of the urban poor. This strategy could deliver AURL for low income housing in inner-city areas, which tend to have a high incidence of informal settlement close to employment opportunities.

5.4 Chapter Summary

The evidence presented in this chapter suggests that clandestine land 'acquisition' and subdivisions are not merely a result of the 'weak' formulation and implementation of land legislation. Rather, the common driver of land invasion and informal settlement in the case-study area is the shortage of AURL for low-income housing and demand-side challenges that limit housing affordability among low-income households. The research findings indicate that even though residents of informal settlements on Lacey Road, Havelock Road and Sir Kumar Reddi Road face severe housing affordability challenges and severe housing stress associated with the shortage of AURL for low-income housing, about 57 per cent of households in these settlements can afford a R140,000 without public financial support.

In light of all the evidence presented in this chapter, the study concludes that eThekweni Municipality is, at present, failing to come up with new and applicable ideas to deliver AURL for low-income housing and combat the rising growth of informal settlement. Data provided in this chapter could be useful to policymakers and other stakeholders in the formulation of feasible policies that could be used to tackle the shortage of AURL for low-income housing and the ever increasing socio-economic and environmental challenges in informal settlements. The mechanism proposed in the next chapter could help deliver AURL for low-income housing at a price the urban poor can afford.

6 CHAPTER SIX: CONCLUSION

6.1 Introduction

The Chapter presents a concise summary of the entire study and draws conclusions from the study's results. It also discusses the implications of these results and the contribution of this study to knowledge in relation to the delivery of affordable urban residential land (AURL) for low-income housing in South Africa. This study contributes to the current discourse on housing affordability and the non-formal system of housing delivery in South Africa and also explores an alternative way of delivering AURL to the urban poor that could reverse the growth of these settlements. The motivation for the study is to devise an alternative mechanism that could price urban land in inner-city areas at levels the urban poor can afford. To do this, the study has measured housing affordability among low-income households in selected informal settlements and considers the implications of the study's results for land and housing policy reform in South Africa.

6.2 Synopsis of Research Objectives and Research Questions

Over the past three decades, an increase in concerns about rapid urban population growth and a hike in house prices and housing cost burdens of low-income households pushed housing affordability to the centre of housing policy debate in South Africa. Much of the debate centres on the shortage of AURL for low-income housing, but makes little reference to the link between the delivery of AURL and the growth of informal settlements. Notwithstanding the debate, most of the literature on low-income housing in South Africa promote a neo-liberal housing policy and elevate the incremental housing approach as an appropriate solution to the low-income housing crisis. Thus, the housing sector in South Africa has not given any room for pricing urban land at a benchmark of household income to facilitate low-income housing development.

In light of the situation discussed above, the study has been divided into three major parts in order to address the research objectives. The first part of the study consists of the first two chapters that are devoted to identifying the South African informal settlement dilemma within the context of housing affordability and the market enablement approach. In this section, the study also seeks to address gaps in the South African housing literature through a number of secondary objectives exploring the key variables that constrain housing affordability among low-income households. The study further documents the historical development of informal settlements and intervention strategies implemented in the past and planned in the future. The research has an overarching practical orientation with the aim to inform a more nuanced understanding of informal settlements in South Africa and to suggest mechanisms that have the potential to deliver AURL for low-income housing and

reverse the tide of escalating informal settlement. To justify the suggested mechanisms of intervention, the research is positioned within a broader conceptual and theoretical context. Several closely related concepts and theories are discussed within a framework centred on the theories of liberalism and equity. Further, theoretical exploration focuses on the contention between the market and non-market provision of housing and the inherent need for public intervention in the delivery of AURL for low-income housing. Focusing on market and non-market mechanisms of housing provision complements the theories of liberalism and equity and consolidates the theoretical framing for this study.

The second part of the study consists of Chapters 3 and 4, which are devoted to addressing objectives exploring: practices used by the urban poor to access, retain and exchange urban land, and the possible relationship between mechanisms of formal urban land delivery, land invasion and informal settlement. The review of local literature on the shortage of AURL and low-income housing, residential location, quality of housing, tenure arrangements, household income, transportations costs and informal settlements has been intended to inform the pricing mechanism that could deliver AURL for low-income housing in inner-city areas in South Africa. Contemporary housing affordability literature in South Africa rarely situates these themes within a broader historic and social justice context. The study has focused on these themes in this context in order to answer the key questions, analyse the linkage between the delivery of AURL and the growth of informal settlement, and identify some pertinent weaknesses and gaps in intervention strategies that research objectives have sought to address. The literature review has shown the weaknesses and gaps in intervention strategies to be generally associated with the challenge of striking the delicate balance between market liberalisation, public intervention and 'self-help' mechanisms in the housing process. Hence, this study tries to cover the gaps in intervention strategies by proposing an alternative mechanism that could deliver AURL for low-income housing.

The third part of this study consists of Chapters 5 and 6 that explore the housing affordability issues and planning implications of the research findings. These last two chapters also reflect on the impact of the market enablement approach on housing affordability and the demand-side issues influencing informal settlement in South Africa. Possible policy implications of specific results of the study along with the broad implications they have on housing affordability and informal settlement in South Africa are discussed. The results of this study demonstrate empirically, that the determinants of housing affordability such as transportation costs impact greatly on the ability of low-income households accessing housing in inner-city areas without public financial support. The study therefore concludes that the conventional price-setting mechanism of the market is inappropriate, because the

mechanism for pricing urban land and housing fails to reflect the local realities of limited housing affordability or what the consumer is able to pay as per normal market practice. Mechanisms of land delivery or housing production are rooted in the common view and practice that housing is a product accessed through mortgage finance. The literature review has shown that the way the price-setting mechanism of the market is formulated, is unlikely to deliver AURL to low-income households at the scale of need and in inner-city locations. Hence, the study concludes that in order to address the demand-side issues that limit housing affordability in South Africa, the pricing of urban land in inner-city areas should be determined based on an affordability benchmark of 0.09 per cent of household income. The conventional price-setting mechanism of the market has failed to provide AURL for low-income housing in these locations and the reluctance of the state to rescale the pricing mechanism is hindering responsive housing policy reforms.

On the basis of the arguments presented above, the study proceeds to propose an alternative mechanism for pricing urban land at a level the urban poor can afford. The income data of households living in informal settlements of eThekweni Municipality is used to formulate this mechanism. The logic behind the argument for an alternative pricing mechanism is two-fold. It is based on the premise that land prices should be scaled at a level that the urban poor can afford to pay and that the pricing mechanism should reflect the local economic context. The intention behind rescaling the pricing mechanism is to facilitate the delivery of AURL for low-income housing development and reverse the growth of informal settlements. In order to derive the formula for calculating land prices, this study needs to make certain mathematical assumptions that allow the researcher to establish a geometric series of how much the mortgage repayments would cost if compound interest is levied over a specified duration of the loan.

6.3 Alternative Land Pricing Mechanism

The alternative land pricing mechanism proposed in this study seeks to address key issues that cause informal settlement including disparities between household income and land prices, transportation costs and tenure arrangements.

6.3.1 Derivation of the Formula to Calculate Affordable Land Price

Say a mortgagee borrows an amount 'P' at a monthly interest rate of 'i' and pays back the loan in monthly instalments 'M' in 'n' number of months.

The current monthly interest 'H' is calculated using $H = Pi$. The amount of the principal loan a mortgagee pays for the month is calculated using $C = M - H$. The new balance of the principal of the loan is calculated using $Q = P - C$. The study set $P = Q$ and also set the affordable price of urban land

at a benchmark of 30 per cent of monthly mortgage repayment. An affordable land price is calculated using $ALP = 0.3M$.

For the first month $n = 1$:

$$H = Pi$$

$$C = M - Pi$$

$$\begin{aligned} Q &= P - (M - Pi) \\ &= P + Pi - M \\ &= P(1 + i) - M \end{aligned}$$

For the second month $n = 2$:

$$H = Pi(1 + i) - Mi$$

$$C = M - (Pi(1 + i) - Mi)$$

$$\begin{aligned} Q &= P(1 + i) - M - (M - Pi(1 + i) - Mi) \\ &= P(1 + i) - M - M + Pi(1 + i) + Mi \\ &= P(1 + i)^2 - M(1 + i) - M \end{aligned}$$

For the third month $n = 3$:

$$H = (P(1 + i)^2 - M(1 + i) - M) i$$

$$C = M - (Pi(1 + i)^2 - Mi(1 + i) - Mi)$$

$$\begin{aligned} Q &= P(1 + i)^2 - M(1 + i) - M - (M - Pi(1 + i)^2 - Mi(1 + i) - Mi) \\ &= P(1 + i)^2 + Pi(1 + i)^2 - M(1 + i) - Mi(1 + i) - M + Mi - M \\ &= P(1 + i)^3 - M(1 + i)^2 - M(1 + i) - M \end{aligned}$$

[Equation #1]

After 'n' number of months:

$$Q = P(1 + i)^n - M(1 + i)^{n-1} - M(1 + i)^{n-2} - \dots - M$$

Where $M(1 + i)^{n-1} - M(1 + i)^{n-2} - \dots - M$ is a Geometric series with a first term $-M$ and a common ratio $(1+i)$.

Let one digress and consider the Geometric series:

Where $r =$ is the common ration $(1 + i)$

$a =$ is the first term $- M$

$n =$ is the number of terms

One knows that:

$$T_n = ar^{n-1}$$

So assuming r is greater than 1, the sum of the series is expressed as:

$$S_n = \frac{a(1-r^n)}{(r-1)}$$

From $P(1+i)^3 - M(1+i)^2 - M(1+i) - M$ one knows that $M(1+i)^2 - M(1+i) - M$ is a Geometric series with first term $a = -M$ and $r = (1+i)$ and greater than 1.

Thus, the sum of this series is equal to:

$$\begin{aligned} S_n &= \frac{a(1-r^n)}{(r-1)} \\ &= \frac{-M(1+i)^n - 1}{(1+i) - 1} \\ &= \frac{-M((1+i)^n - 1)}{i} \end{aligned} \quad \text{[Equation \#2]}$$

So

$$Q = P(1+i)^n - M \frac{((1+i)^n - 1)}{i}$$

Now substitute $\frac{-M((1+i)^n - 1)}{i}$ into $P(1+i)^3 - M(1+i)^2 - M(1+i) - M$ and set $Q = 0$,

The reason why the study set Q equal to zero is that when the mortgagee finishes paying the loan Q , the balance is reduced to 0.

So,

$$0 = P(1+i)^n - M \frac{((1+i)^n - 1)}{i}$$

Solving for M, one gets

$$\frac{M(1+i)^n - 1}{i} = P(1+i)^n$$

$$M(1+i)^n - 1 = Pi(1+i)^n$$

$$M = \frac{Pi(1+i)^n}{(1+i)^n - 1}$$

$$M = \frac{Pi}{1 - (1+i)^{-n}} \quad \text{[Equation #3]}$$

So from [Equation 3], with the monthly mortgage repayment set at the affordability benchmark of 30 per cent of monthly household income, the study assumes that the price of land ought to be set also at an affordability benchmark of 30 per cent of monthly mortgage repayment. Thus, the price of urban land ought to be equal to 0.09 per cent of monthly household income. The formula for determining the annual repayment cost for affordable urban land based on 0.09 per cent of the annual household gross income is expressed as:

$$ALP = 0.09y \frac{(1 - (1+i)^{-n})}{i} \quad \text{[Equation #4]}$$

Where ALP = Affordable land price
 y = Gross household income
 i = Interest rate
 n = Term of loan

If the intense demand for land in inner-city areas is contributing to rising prices for housing and limiting housing affordability among low-income households, it could be ideal to rescale the pricing mechanism of urban land. However, before rescaling the pricing mechanism of urban land it is important to know its market. Hence, the study determines the market value of the land occupied by the informal settlement on Lacey Road using the Comparative Method of valuation. The researcher derives the market value of the land using comparative values of residential properties in Sydenham, the township where the informal settlement on Lacey Road is located. An inspection of the land valuation register of eThekweni Municipality reveals that in Sydenham the value of a 200m² plot is on average about R2,475 per square metre. The study prefers to use a 200m² plot of land because it is the minimum size for a standard residential plot in South Africa.

It is difficult to derive the value of land occupied by an informal settlement by subtracting the construction cost from the value of the house and dividing by the size of the plot of land to obtain a per-square metre value of the land that is implied in the price of the house. Hence, the study conducted its own valuation of the land because an inspection of the land valuation register of eThekweni Municipality revealed that some land parcels that are part of the land occupied by the informal settlement on Lacey Road are not assigned a value because they are owned by the municipality. To cover this information gap, the researcher tasked valuation professionals from Rawson and the Real Estate Department of the municipality to derive a market value of the land. The valuation professionals estimate the value of the 2.37ha plot of land occupied by the informal settlement on Lacey Road at R49,177,500. Thus, it implies that on average a 200m² plot of land cost about R415,000 or R2,075 per square metre, which makes this land unaffordable to low-income households in the settlement.

For purposes of comparison, the researcher uses the proposed pricing mechanism to determine a fair value for the land. Households in the informal settlement on Lacey Road that earn incomes between R38,400 and R76,800 can afford a mortgage for a house costing R140,000 at interest rates between 6 to 8 per cent as shown in Tables 5.26 and 5.27. For a house costing R140,000, the annual mortgage repayment is R10,952. Thus, the pricing mechanism proposed in this study sets the price of a 200m² plot of land at R82,140 or R411 per square metre. The affordable price of this plot of land set at a benchmark of 30 per cent of the mortgage is calculated as follows:

$$\begin{aligned} \text{ALP} &= 0.3M \times 25 \\ &= 0.3 \times R10,952 \times 25 \\ &= R82,140 \end{aligned}$$

The land values calculated using this mechanism demonstrate that if the price of land is set at a benchmark of 0.09 per cent of income, it is more affordable to the urban poor. The market value of R2,075 per square metre for the plot of land occupied by the informal settlement on Lacey Road is 505 per cent more than the price calculated using the mechanism proposed in this study. The results of this research study demonstrate that it is possible to deliver AURL for low-income housing if the land price is scaled at a benchmark of 0.09 per cent of income. Hence, a 2.37ha plot of land if developed at a density of 50du/ha would yield 118 plots, each plot measuring 200m²; a yield that is adequate to accommodate 73 per cent of the households in the informal settlement on Lacey Road. Based on these results, the mechanism could be strengthened through the following recommendations.

The study used its proposed pricing mechanism to deduce the affordable price of urban land. The model proposed in this study set the price of a 200m² plot of land at R82,150 or R411 per square metre. The model proved that if land is priced at the benchmark of 0.09 per cent of income, it is affordable to the urban poor. The market value of R2,075 per square metre for the plot of land in Lacey Road for example, is 500 per cent more than the price proposed by this model. The results of this research study prove that it is possible to deliver AURL for low-income housing if the land price is scaled at a benchmark of 0.09 per cent of income. Thus, the study discovered that the first part of the interlinked hypotheses which states that pricing residential land in inner-city areas at a benchmark of 0.09 per cent of monthly household income ranging between R3,500 and R7,500 can improve overall housing affordability in eThekweni municipality, is accurate.

6.4 Contribution to Knowledge

The study makes significant contribution to the housing affordability literature particularly in South Africa where the literature is scanty. Most importantly, it creates room for a new discussion on housing affordability challenges in South Africa by extending the debate to include rescaling the price of land in inner-city areas at a benchmark of 0.09 per cent of household income. Thus, the focus of this benchmark is to facilitate the delivery of AURL to low-income households that build non-conventional housing using informal finance and incremental processes due to affordability constraints; an area of study hitherto housing literature in South Africa does not deeply explore. In doing so, the study provides a basis for a rethink of land delivery strategies in terms of facilitating low-income housing development with limited subsidy support.

In specific terms, the study makes the following significant contributions to knowledge:

1. A major contribution to the housing affordability debate is the formulation of a pricing mechanism that could deliver AURL for low-income housing in inner-city areas. The delivery of urban land at prices affordable to low-income households can assist these households to build their own housing incrementally primarily with household income.
2. Another major contribution of the study is that it determines, with analytical evidence, the level of housing affordability among low-income households, which guides the proposed mechanism of land delivery and provides the basis for reliable assumptions for policy planning.
3. The study provides a major empirical contribution to the housing affordability literature through the testing of the pricing mechanism that could deliver AURL for low-income housing in inner-city areas.

The recommendations of this study are summarised below.

6.5 Recommendations for Delivery of AURL in Inner-City Areas

Based on results of this study there is reason to believe that vested interests of monopoly landowners make it difficult to deliver AURL for low-income housing. Hence, it is necessary to improve the effectiveness of land administration and agencies responsible for land management as a prerequisite to scale-up the delivery of AURL for low-income housing. In order to achieve this, particular attention should be given to the following approaches.

6.5.1 Restructure the Land Administration System

6.5.1.1 Revise Taxation and Zoning Regulations

The results of the study indicated that the urban poor fail to access land for housing largely due to demand-side challenges that limit housing affordability. Hence, to encourage the urban poor to participate in the market, the price for urban land should be set at a benchmark of 0.09 per cent of household income. In order to achieve this, the expropriation mechanism in the 1997 Land Policy and Section 25(2;3) of the 1996 Constitution need to be amended to accommodate this benchmark. The results also indicated that access to AURL is also limited by supply-side challenges associated with issues of withholding land from the market for speculative reasons. Within eThekweni municipality, there are many parcels idle, under-utilised and undeveloped land in inner-city areas that could be unlocked for low-income housing.

Ethekewini Municipality should adopt a citywide strategy for the assembly of AURL for low-income housing through the identification of idle, underutilised and undeveloped urban land in inner-city areas. In order to implement this strategy, the municipality should conduct audits of vacant and underutilised urban land held by the public and private owners in order to match land availability with low-income housing needs. The audits should be conducted concurrently with an assessment of current and anticipated housing needs of low-income households in relation to demographic trends, including patterns of urbanisation, labour, migration and population growth and age. This could ensure that the delivery of AURL targets the low-income segment of the population who face acute housing need. These audits should lead to a review of urban land-use by-laws to ensure that urban land is zoned, used and regulated in a manner that serves the collective housing needs of low-income, middle-income and high-income households. The review of land-use by-laws could, for example, designate urban land occupied by informal settlements as 'special zones' within which town planning and engineering standards of settlement establishment are adapted to allow for incremental housing development by low-income households. This ensures that urban land in these 'special zones' could be available to low-income households at a price benchmarked at 0.09 per cent of their household income

Such idle, under-utilised and undeveloped land in inner-city areas could be freed for low-income housing development through the use of a high rate of taxation. Taxation of idle urban land in inner-city areas is required to support the delivery of AURL for low-income housing. An annual tax on idle land in inner-city areas that is more than 0.5ha in size should be set at the same level as the mortgage interest rate to encourage landowners to supply urban land for development. This measure is also intended to discourage speculative behaviour in the land market. However, the municipality should only sanction a transaction of urban land in inner-city areas if the selling price of the land is set at a benchmark of 0.09 per cent of household income.

The study also recommends that eThekweni Municipality should utilise zoning regulations in Land-use Schemes to deny planning consent to proposed housing developments on idle, under-utilised and undeveloped land in inner-city areas unless it is for low-income housing. Middle-high-income housing developments proposed on idle, under-utilised and undeveloped land in inner-city areas should only be permitted under special consent if the material considerations are compelling. The zoning by-laws in Land-use Schemes that regulate development in locations close to employment opportunities should compel private owners of idle, under-utilised and undeveloped land in inner-city areas to develop low-income housing within a 10 year period commencing from the day the scheme is promulgated. If they fail to develop such housing within the specified time frame they should be compelled to sell the land to low-income households at a benchmark of 0.09 per cent of household income.

6.5.1.2 Regularisation of Urban Land Rights

Local government should recognise and regularise tenure arrangements on land occupied by informal settlements if these settlements are on land ideal for human settlement. The proposed pricing mechanism could assist in the regularisation of such tenure arrangements by allowing residents of informal settlements to purchase land they currently occupy at a price they can afford. Participation of residents of informal settlements in a market that sets land prices at a benchmark of 0.09 per cent of household income would be crucial to successful implementation of tenure regularisation projects. The participation of residents of informal settlements in the land market, whose land rights are often ignored due to limited affordability, should be actively supported by recognising their right of adverse possession on an individual or collective basis. Owners of land occupied by the informal settlement should give the squatters, on an individual or collective basis, the right of first refusal when such land is up for sale. However, the municipality should only sanction a transaction of urban land occupied by an informal settlement if the selling price of the land is set at a benchmark of 0.09 per cent of urban poor's household income and the land invaders with the right of adverse possession are given the right of first refusal.

Expropriation of urban land subject to no compensation to facilitate the delivery of AURL to residents of informal settlements. Subject to national laws, this may be appropriate for urban land that has been neglected for a prolonged period by absentee landowners, including land held by landowners who failed to pay land taxes. Ethekewini Municipality could expropriate with compensation urban land occupied by informal settlements and allocate it to residents of these settlement. This option should be considered only as a last resort, given the high fiscal cost to the government, when voluntary measures have been unsuccessful and expropriation does not apply to urban land held by absentee landowners. There should also be a compelling justification for expropriation, such as when the size of the landholding is excessive and inequitable in the given urban setting.

The complete registration of tenure rights in the urban residential land information system (URLIS) would be an important step towards tenure security. Hence, consideration should be given to the impact regularisation of insecure tenure and registration would have on the price of urban land and low-income housing. In this regard, eThekewini Municipality should support a 10 year restriction on transaction of land whose tenure is regularised under conditions specified above. This could safeguard low-income households against sudden increases in the price of urban land and counteract the risk of gentrification. In order to strengthen tenure security, the URLIS should be simple, accessible, transparent and affordable to give low-income households a reasonable opportunity to contest or query recorded tenure rights and arrangements through public consultation on tenure arrangements, public display of tenure maps and appeal processes. Unlike a conventional cadastre, the URLIS should not only support ownership but reflect varied and overlapping tenure rights and the spatial realities that exist in urban settlements.

6.5.1.3 Completion and Updating of Urban Land Registers

The efficient operation of land management requires efficient and complete registration of urban land and up-to-date information on land-use and value. The complete registration of urban land, which provides up-to-date information on land ownership, use and value is crucial in facilitating the redistribution of such land at prices the urban poor can afford. Ethekewini Municipality can use these registers to identify, zone and reserve urban land close to job opportunities for low-income housing but subject to a proviso that such land can only be sold to low-income households at a price benchmarked at 0.09 per cent of their household income. Valuing urban land at a price set by the proposed mechanism would allow the urban poor to participate in the housing market without public financial support. A complete land registry could make transfers and registration of urban land more efficient, easier and less costly, and thus, reduce the financial obstacle that seriously hinder low-income housing development due to costs of delays in obtaining development permits. Efficient urban land management could directly provide accurate information on land rights, land-use and land value

that could facilitate low-income housing development. Urban land management could be strengthened through the partnership of local government and community organisations to develop accurate land registers that could help in the redistribution of urban land subject to low or no compensation. The ideas of John Nash are crucial in guiding negotiations for tenure regularisation and the level of compensation to be paid to affected landowners.

6.5.2 Efficient Release of Affordable Urban Land

The legacy of land dispossession and residential segregation in South Africa makes it imperative for the post-1994 housing policy to deliver AURL for low-income housing in inner-city areas. Therefore, this study recommends that eThekweni Municipality should utilise Land-use Schemes to deny planning consent to proposed housing developments on vacant land in inner-city areas unless it is for low-income housing. Middle-high-income housing developments proposed on vacant land in these zones can only be permitted under special consent if the material considerations are compelling. The by-laws of Land-use Schemes that regulate development in locations close to employment opportunities should compel private owners of vacant land to develop low-income housing within a 10 year period commencing from the day the scheme is promulgated. If they fail to develop such housing within the specified time frame they should be compelled to sell the land at below-market rates to the municipality. Therefore, the expropriation mechanism in the 1997 Land Policy and Section 25(2;3) of the 1996 Constitution that require the government to expropriate urban land with compensation need to be revised or changed to enable the expropriation of urban land subject to low or no compensation.

The delivery of AURL for low-income housing close to employment opportunities needs to be linked to the 'banking' of urban land in inner-city areas. Funding for the acquisition of urban land in such locations can be sourced in two ways. Firstly, a land fund must be set up that municipalities can use to immediately purchase and 'bank' urban land in inner-city areas for low-income housing. Secondly, municipalities can use revenue they generate from land taxation on vacant urban land, industrial, commercial and high-income housing developments. If the landowners of urban land in such locations remain committed to holding on to their land for speculative reasons, the municipality should adopt a range of measures discussed below to curb speculative behaviour linked with urban land ownership and encourage private landowners to release AURL at scale for low-income housing.

In order to deliver AURL for low-income housing eThekweni Municipality could, firstly, substantially increase land taxes on idle, underutilised and undeveloped urban land in inner-city areas to discourage the behaviour of holding land for speculative reasons or of inducing land supply to push up prices. Secondly, the municipality could also expropriate unused urban land at low or no compensation if owners of vacant urban land in inner-city areas refuse to develop it for low-income housing. Thirdly,

the municipality could permit landowners to hold on to urban land, but only in peri-urban areas where demand for such land for low-income housing is not high. As an incentive, the municipality could give a land tax exemption to owners of vacant land in peri-urban areas to encourage landowners to consider exchanging their vacant urban land in inner-city locations for land in peri-urban areas. Under this tax incentive, vacant urban land in inner-city areas could be taxed heavily so that speculative landholders can be coerced into developing their land for low-income housing or sell it to low-income households at a price benchmarked at 0.09 per cent of their household income. However, any proposed development on vacant land in inner-city areas has to comply with the provisions of the Land-use Scheme that compel them to develop the land for low-income housing or sell it to the municipality at below-market rates if they do not wish to develop low-income housing. Fourthly, the municipality could also use the incentive scheme of transferable development permission through which landowners could release vacant urban land in inner-city areas for low-income housing in exchange for attractive terms for the development of industrial and commercial enterprises elsewhere. Fifthly, the municipality could further require private owners of extensive reserves of vacant urban land, who are also housing developers such as Tongaat Hullets, to make such land available to low-income households at a price benchmarked at 0.09 per cent of their household income as a condition for the issue of development permits for high-income housing.

Overall, the research findings on the prices for urban land and housing that the urban poor can afford suggest that housing affordability issues the urban poor face cannot be resolved by the market. The policy implication of this is that in order to improve housing affordability among low-income households it requires policy reforms in the land, housing and finance sectors that target demand-side challenges. In order to effectively deal with the housing affordability problem requires the state to rescale the mechanism for pricing urban land in inner-city areas at a benchmark of 0.09 per cent of household income. Vacant land in inner-city areas should be reserved only for low-income housing and the prices for land in such areas must be set using this benchmark. Zoning restrictions and land-use by-laws are vital in the practical implementation of this alternative mechanism of pricing urban land at levels the urban poor can afford. The government at all levels has to demonstrate genuine commitment and political will to implement necessary and comprehensive land market reforms particularly the mechanism for pricing urban land.

6.6 Chapter Summary

This study attempted to explore how the delivery of AURL for low-income housing could reverse the growth of informal settlements in South Africa. It made two broad significant contributions to the current housing affordability discourse. A major contribution to knowledge is the development of a pricing mechanism that could deliver AURL for low-income housing in strategic areas of the city. The

pricing mechanism would assist households experiencing severe housing affordability stress to build their own housing incrementally primarily with household income. Findings in this study indicate that households that under-consume housing and basic non-housing goods are able to purchase urban land without state financial support if the land is priced at a benchmark of 0.09 per cent of household income. This mechanism could have significant housing policy implications. It is hoped that further assessment and wider application of this mechanism would confirm the findings of this study with respect to its potential to reverse the growth of informal settlements.

Another significant contribution of this study is the application of this pricing mechanism to strengthen the incremental housing process in South Africa. The application of this mechanism proves that it is possible to deliver urban land at price levels the urban poor can afford without subsidy support. Given the current lack of in-depth research literature on housing affordability in South Africa, it is hoped that this study would contribute to the existing pool of scant literature and help to inspire other research work in this important area of housing research. This study could hopefully contribute towards overcoming the existing dearth of in-depth housing affordability research literature in South Africa.

Beyond arguing for increased public intervention in housing delivery in pursuit of the housing policy objectives, there is need for exploring alternative mechanisms of housing assistance that would complement the proposed land pricing mechanism given the level of housing affordability of low-income households in South Africa. Valuable insights would be gained in exploring the viability and feasibility of using different planning instruments such as zoning, taxation, housing quota systems to unlock the delivery of AURL for low income housing.

It is pertinent to emphasise that the neo-liberal housing policy in South Africa is failing to tackle the enormous shortage of AURL and low-income housing. There is little connection between the goal of land and housing policies of scaling-up the delivery of AURL for low-income housing and the means to achieve it. The nature of low-income housing; the complexity of its delivery systems, its physical and socio-economic roles, and the enormity of the housing backlog are raising the informal settlement challenge beyond any solution the market ideology or the social redistributive ideology can independently provide. The liberal housing market is failing to deliver AURL at scale in strategic locations due to market inefficiencies. The public sector is also failing to meet the scale of low-income housing need especially due to limitations of the budget, human resources and level of housing backlog.

Therefore, the real issue is not whether public intervention in AURL delivery is necessary, it is how best to scale-up the delivery of AURL in support of the incremental housing process, given the enormity of the low-income housing shortage and the socio-economic realities in South Africa. It is

evident that the neo-liberal land policy is failing to deliver AURL for low-income housing. While mistakes in land expropriation witnessed in other countries should be avoided, that should not be a reason or the justification for the government to remain committed to market-based land redistribution when the socio-economic realities in South Africa contradict such an approach. Indeed it is beneficial to all stakeholders when low-income households gain access to AURL for low-income housing. However, the enormity of the low-income housing shortage requires the active involvement and integrated efforts of all stakeholders including the government, private sector, civil society and local communities. Thus, rather than de-emphasise the role of government, the land and housing policies should have strongly amplified its role within the context of the enablement approach.

Nevertheless, policies for land, housing and finance can be restructured to meaningfully support the incremental housing process and community-driven housing initiatives. The challenge is that the South African constitution commits the government to redistribute land within the market framework guided by the 'willing seller-willing buyer' principle. However, the limited level of affordability on the part of the government and poor households hampers the redistribution of urban land for low-income housing development. The 'willing seller-willing buyer' principle limits the ability of the government to resist the pressure from supporters of markets to adopt inappropriate neo-liberal land and housing policies. The government must prioritise the housing interest of the majority who are poor before safeguarding the private interests of monopoly landowners and big business. Fortunately, the amount of vacant urban land presents an ample and uncommon opportunity to substantially redistribute land resources at prices the poor can afford to stimulate low-income housing development. With careful planning and implementation, the delivery of urban land at a price benchmark of 0.09 per cent of household income could boost low-income housing production and reverse the tide of escalating informal settlement in South Africa.

The present South African housing context and socio-economic realities demand far more vigorous government involvement in the redistribution of urban land and housing resources. In this regard, the government should work together with the private sector, civil society and local communities in order to tackle the enormous shortage of AURL and low-income housing in the country. The housing policy goal of ensuring that all South Africans own or have access to affordable and adequate housing with secure tenure poses such a formidable challenge that it would require fundamental changes in the mechanisms of housing provision and income distribution. It would also require changes in the mechanisms of land delivery that ensures redistributive policies are not just provided but implemented. The government must show deeper commitment to move beyond political rhetoric and pursue practical policy reforms and implementation strategies with a political will that matches the

monumental housing challenge the country faces. It is only then that the lofty goal of the South African housing policy would mean something more than just words.

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APPENDIX

HOUSEHOLD QUESTIONNAIRE							PROCEDURES OF ENUMERATION							FLAP: PARTICULARS OF ALL INDIVIDUALS																																																																									
ENUMERATION AREA NUMBER							WHO SHOULD BE THE RESPONDENT?							Please write the name and surname of the household head and first names of every person who was present in this household on the enumeration night. One name on each row. Start with head or acting head of household. The head or acting head is the person who is the main decision-maker of the household. If people are equal decision-makers, then take the oldest person as the household head. For babies with no name, write baby. Please include babies, small children, old people and visitors who were present in this household on the enumeration night																																																																									
Local Municipality			Main Place				The head/acting head of the household. In the absence of head/acting head, any responsible adult member left in charge of the household.																																																																																
Sub-Place							Note: a household is a group of persons who live together, and provide themselves jointly with food or other essentials for living, or a single person who lives alone. Domestic workers are counted as a separate household even if they live in the same dwelling as the employer.																																																																																
Physical Identification of the Dwelling Unit																																																																																							
Postal Code			Landline/Cell phone of Enumerated Household				WHO SHOULD BE COUNTED IN THIS QUESTIONNAIRE?																																																																																
PARTICULARS OF THE HOUSEHOLD							All persons present in the household on the reference night (midnight 9-10 October 2016). Include babies born before the reference night as well as visitors. Members who died after the reference night must be counted as alive. Members of the household who were absent overnight, for example working, traveling, at an entertainment venue or religious gathering, if they returned to the household the following day.																																																																																
Dwelling Unit Number		Total Number of Persons in the Household		Males		females		Total		HOW TO COMPLETE THE QUESTIONNAIRE																																																																													
Household Number		Total number of households at this dwelling		of		Completed for this Household		Listing record number																																																																															
Questionnaire										Read every question carefully. Make sure that all the codes are written inside the boxes. Numeric values, such as age, person number, number of children, the enumerator/respondent should write the correct answer in the box and include leading zeros. Do not write zeros in boxes where questions are not applicable. For open ended questions, the enumerator/respondent should write legibly in CAPITAL LETTERS in the boxes provided with no spaces between the words.																																																																													
Map reference number																																																																																							
Method of Questionnaire Completion – Mark the appropriate circle with an X							WHAT TO USE WHEN COMPLETING THIS QUESTIONNAIRE?																																																																																
A fieldworker through an interview			A household member through self-completion				Use only a pencil. If you make a mistake, use a soft rubber to erase the mistake and write the correct answer.																																																																																
FIELD STAFF							<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">F-00 PERSON NUMBER</th> <th style="width: 30%;">F-01 PERSON NAME</th> <th style="width: 15%;">F-02 AGE IN COMPLETED YEARS</th> <th style="width: 45%;">F-03 GENDER</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="vertical-align: top;">Write 0 or 1 in the first box for all persons listed on the flap Example Row 1 0 1 Row 2 1 0</td> <td rowspan="2" style="vertical-align: top;">Example <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>Z</td><td>I</td><td>N</td><td>A</td><td>D</td><td>I</td><td>N</td><td>E</td></tr> <tr><td>Z</td><td>I</td><td>D</td><td>A</td><td>N</td><td>E</td><td></td><td></td></tr> </table></td> <td rowspan="2" style="vertical-align: top;">Example 1 <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>0</td><td>3</td><td>1</td></tr> </table> Example 2 Child Less than 1 year <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>0</td><td>0</td><td>0</td></tr> </table></td> <td rowspan="2" style="vertical-align: top;">Example <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>X</td><td>1=Male</td></tr> <tr><td></td><td>2=Female</td></tr> </table> Mark the appropriate box with an X</td> </tr> <tr> <td style="text-align: center;">1</td> <td></td> <td></td> <td style="text-align: center;">1=Male 2=Female</td> </tr> <tr> <td style="text-align: center;">2</td> <td></td> <td></td> <td style="text-align: center;">1 = Male 2=Female</td> </tr> <tr> <td style="text-align: center;">3</td> <td></td> <td></td> <td style="text-align: center;">1 = Male 2=Female</td> </tr> <tr> <td style="text-align: center;">4</td> <td></td> <td></td> <td style="text-align: center;">1 = Male 2=Female</td> </tr> <tr> <td style="text-align: center;">5</td> <td></td> <td></td> <td style="text-align: center;">1 = Male 2=Female</td> </tr> <tr> <td style="text-align: center;">6</td> <td></td> <td></td> <td style="text-align: center;">1 = Male 2=Female</td> </tr> <tr> <td style="text-align: center;">7</td> <td></td> <td></td> <td style="text-align: center;">1 = Male 2=Female</td> </tr> <tr> <td style="text-align: center;">8</td> <td></td> <td></td> <td style="text-align: center;">2=Female</td> </tr> <tr> <td style="text-align: center;">9</td> <td></td> <td></td> <td style="text-align: center;">1 = Male 2=Female</td> </tr> <tr> <td style="text-align: center;">1 0</td> <td></td> <td></td> <td style="text-align: center;">1 = Male 2=Female</td> </tr> </tbody> </table>							F-00 PERSON NUMBER	F-01 PERSON NAME	F-02 AGE IN COMPLETED YEARS	F-03 GENDER	Write 0 or 1 in the first box for all persons listed on the flap Example Row 1 0 1 Row 2 1 0	Example <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>Z</td><td>I</td><td>N</td><td>A</td><td>D</td><td>I</td><td>N</td><td>E</td></tr> <tr><td>Z</td><td>I</td><td>D</td><td>A</td><td>N</td><td>E</td><td></td><td></td></tr> </table>	Z	I	N	A	D	I	N	E	Z	I	D	A	N	E			Example 1 <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>0</td><td>3</td><td>1</td></tr> </table> Example 2 Child Less than 1 year <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>0</td><td>0</td><td>0</td></tr> </table>	0	3	1	0	0	0	Example <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr><td>X</td><td>1=Male</td></tr> <tr><td></td><td>2=Female</td></tr> </table> Mark the appropriate box with an X	X	1=Male		2=Female	1			1=Male 2=Female	2			1 = Male 2=Female	3			1 = Male 2=Female	4			1 = Male 2=Female	5			1 = Male 2=Female	6			1 = Male 2=Female	7			1 = Male 2=Female	8			2=Female	9			1 = Male 2=Female	1 0			1 = Male 2=Female
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Source: This questionnaire has been adapted from the household questionnaire used by Statistics South Africa in the 2011 census.

SECTION A: DEMOGRAPHICS – ASK OF EVERYONE LISTED ON THE FLAP

C-01 DATE OF BIRTH	C-02 RELATIONSHIP	C-03 MARITAL STATUS	C-04 SPOUSE OR PARTNER	C-05 POPULATION GROUP	C-07 PROVINCE OF BIRTH	C-08 COUNTRY OF BIRTH	C-08a YEAR MOVED TO DURBAN	C-08b YEAR MOVED TO SOUTH AFRICA	C-09 SOUTH AFRICAN CITIZENSHIP	C-10 USUAL RESIDENCE	C-10a PROVINCE OF USUAL RESIDENCE																
<p>What is (name's) date of birth?</p> <p>The head or acting head is the person listed in row 1 of the first questionnaire, if more than one questionnaire has been completed for this household.</p> <p>Example</p> <table border="1"> <tr><td>1</td><td>9</td></tr> <tr><td>0</td><td>4</td></tr> <tr><td>1</td><td>9</td><td>7</td><td>9</td></tr> </table>	1	9	0	4	1	9	7	9	<p>What is (name's) relationship to the head or acting head of the household?</p> <p>The head or acting head is the person listed in row 1 of the first questionnaire, if more than one questionnaire has been completed for this household.</p> <p>1 = Head/Acting Head 2 = Husband/Wife/Partner 3 = Son/Daughter 4 = Adopted Son/Daughter 5 = Stepchild 6 = Brother/Sister 7 = Parent(Mother/Father) 8 = Parent-in-law 9 = Grand/Great Grandchild 10 = Son/Daughter-in-law 11 = Brother/Sister-in-law 12 = Grandmother/Father 13 = Other relative 14 = Non-related person</p> <p>Write the appropriate code in the boxes.</p>	<p>What is (name's) PRESENT marital status?</p> <p>1 = Married 2 = Living together like married partners 3 = Never married 4 =Widower/widow 5 = Separated 6 = Divorced</p> <p>Write the appropriate code in the box.</p> <p>If 3-6 go to C-05</p>	<p>Who in this household is (name's) spouse or partner?</p> <p>Write the person number of the spouse or partner in the appropriate boxes. If the spouse or partner does not reside in the household, write 98.</p> <p>Note: Refer to person on flap e.g. 02</p>	<p>How would (name) describe him/herself in terms of population group?</p> <p>1 = African 2 = Coloured 3 = Indian/Asian 4 = White 5 = Other</p> <p>Write the appropriate code in the box</p>	<p>In which province was (name) born?</p> <p>1 = Western Cape 2 = Eastern Cape 3 = Northern Cape 4 = Free State 5 = KwaZulu-Natal 6 = North West 7 = Gauteng 8 = Mpumalanga 9 = Limpopo 10 = Outside South Africa 11 = Do not know</p> <p>Write the appropriate code in the boxes.</p> <p>If 01-09 or 11 Go to C-09</p>	<p>In which country was (name) born?</p> <p>Use CAPITAL LETTERS only</p> <p>Examples: NEWZAELAND, BOTSWANA, SIERRALEONE</p>	<p>In which year did (name) move to Durban?</p> <p>If moved more than once into Durban, please indicate the year of last move.</p> <p>Example</p> <table border="1"> <tr><td>1</td><td>9</td><td>9</td><td>8</td></tr> </table> <p>Write the appropriate year in the boxes.</p>	1	9	9	8	<p>In which year did (name) move to South Africa?</p> <p>If moved more than once into South Africa, please indicate the year of last move.</p> <p>Example</p> <table border="1"> <tr><td>1</td><td>9</td><td>9</td><td>5</td></tr> </table> <p>Write the appropriate year in the boxes.</p>	1	9	9	5	<p>Is (name) a South African citizen?</p> <p>1 = Yes 2 = No</p> <p>Mark the appropriate box with an X.</p>	<p>Does (name) usually live in this household for at least four nights a week and has done so for the last six months? OR intends to live in this household for at least four nights a week for the next six months?</p> <p>1 = Yes 2 = No</p> <p>Mark the appropriate box with an X.</p> <p>If 1, Go to C-11</p>	<p>In which province does (name) usually live?</p> <p>1 = Western Cape 2 = Eastern Cape 3 = Northern Cape 4 = Free State 5 = KwaZulu-Natal 6 = North West 7 = Gauteng 8 = Mpumalanga 9 = Limpopo 10 = Outside South Africa 11 = Do not know</p> <p>Write the appropriate code in the boxes.</p>
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Source: This questionnaire has been adapted from the household questionnaire used by Statistics South Africa in the 2011 census.

SECTION B: MIGRATION (Continued)

C-10b MUNICIPALITY OF USUAL RESIDENCE	C-10c CITY/TOWN OF USUAL RESIDENCE	C-11 SINCE 2001	C-11a MONTH AND YEAR MOVED	C-11b PROVINCE OF PREVIOUS RESIDENCE	C-11c MUNICIPALITY OF PREVIOUS RESIDENCE	C-11d CITY/TOWN OF PREVIOUS RESIDENCE	C-12 REASON FOR MOVING TO DURBAN	C-12a REASON FOR MOVING TO ... INFORMAL SETTLEMENT
In which Municipality does (name) usually live? Use CAPITAL LETTERS Only Example	In which city/town does (name) usually live or what is the nearest city/town? Use CAPITAL LETTERS Only	Has (name) been living in this place since October 2001? 1 = Yes 2 = No 3 = Born after October 2001 but never moved 4 = Born after October 2001 and moved Write the appropriate code in the box If 1 or 3, Go to C-12	When did (name) move to this place? Write the month and year in the appropriate boxes. Example 0 4 2 0 0 2	In which province did (name) live before moving to this place? 1 = Western Cape 2 = Eastern Cape 3 = Northern Cape 4 = Free State 5 = KwaZulu-Natal 6 = North West 7 = Gauteng 8 = Mpumalanga 9 = Limpopo 10 = Outside South Africa 11 = Do not know Write the appropriate code in the boxes. If 10, Go to C-12	In which municipality did (name) live before moving to this place? Use CAPITAL LETTERS Only J O B U R G M E T R O	In which city/town did (name) live before or what was the nearest city/town? Use CAPITAL LETTERS only Example J O H A N N E S B U R G	What was the reason (name) moved to Durban? 1 = Seeking work or family 2 = Moved with parents 3 = To get married 4 = Better education 5 = Relocated by employer 6 = Religious reason 7 = Political situation of home country 8 = Low level of development of home country 9 = Lack of opportunities in home country Write the appropriate code in the boxes.	Why did (name) settle in this informal settlement? 1 = Convenient in location (close to work places & transport routes) 2 = Avoid paying rates 3 = Formal house not affordable 4 = Swift access to land at a low cost 5 = Moved in with partner 6 = Sold house under duress from debt 7 = Close to family members 8 = Affordable rent Write the appropriate code in the boxes.
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4								
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7								
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1								

Source: This questionnaire has been adapted from the household questionnaire used by Statistics South Africa in the 2011 census.

SECTION F: EMPLOYMENT – ASK OF ALL PERSONS AGED 15 YEARS AND OLDER LISTED ON THE FLAP

C-23 EMPLOYMENT STATUS Answer all three questions and then follow the skip instruction below			C-24 TEMPORARY ABSENCE FROM WORK	C-25 LOOKING FOR WORK	C-26 LIKED TO WORK	C-27 REASONS FOR NOT WORKING	C-28 AVAILABLE TO WORK
C-23a	C-23b	C-23c					
<p>In the SEVEN DAYS before 10 October 2016 did (name) work for a wage, salary, commission or any payment in kind (including paid domestic work), even if it was only for one hour?</p> <p>1 = Yes 2 = No 3 = Do not know</p> <p>Mark the appropriate box with an X.</p>	<p>In the SEVEN DAYS before 10 October 2016 did (name) run or do any kind of business, big or small, for herself/ himself or with one or more partners, even if it was for only one hour?</p> <p>1 = Yes 2 = No 3 = Do not know</p> <p>Mark the appropriate box with an X.</p>	<p>In the SEVEN DAYS before 10 October 2016 did (name) help without being paid in any kind of business run by her/his household, even if it was for only one hour?</p> <p>1 = Yes 2 = No 3 = Do not know</p> <p>Mark the appropriate box with an X.</p>	<p>Even though (name) did not do any work for pay, profit or did not help without pay in the household business in SEVEN DAYS before 10 October, did he/she have a paid job or business that he/she would definitely return to?</p> <p>1 = Yes 2 = No 3 = Do not know</p> <p>Mark the appropriate box with an X.</p>	<p>In the four weeks before 10 October was (name) looking for any kind of job or trying to start any kind of business?</p> <p>1 = Yes 2 = No 3 = Do not know</p> <p>Mark the appropriate box with an X.</p> <p>If 1, Go to C-28</p>	<p>Would (name) have liked to work in the in the SEVEN DAYS before 10 October?</p> <p>1 = Yes 2 = No 3 = Do not know</p> <p>Mark the appropriate box with an X.</p> <p>If 2 or 3, Go to C-32</p>	<p>What was the main reason for not trying to find work or starting a business in the last four weeks before 10 October?</p> <p>01 = Awaiting the season work 02 = Waiting to be recalled to former job 03 = Health reasons 04 = Pregnancy 05 = Disabled or unable to work (handicapped) 06 = Housewife/homemaker (family considerations/ child care) 07 = Undergoing training to help find work 08 = No jobs available in the area 09 = Lack of money to pay for transport to look for work 10 = Unable to find work requiring his/her skills 11 = Lost hope of finding any kind of work 12 = No transport available 13 = Scholar or student 14 = Retired 15 = Too old/young to work 16 = Did not want work 17 = Other</p> <p>Write the appropriate code in the boxes.</p>	<p>If a suitable job had been offered or circumstances had allowed, would (name) have been able to start work or a business in the SEVEN DAYS before 10 October?</p> <p>1 = Yes 2 = No 3 = Do not know</p> <p>Mark the appropriate box with an X.</p> <p>Any response, Go to C-32</p>
If 1 (Yes) to any of C-23a, C-23b or C-23c, Go to C-29a							
1	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know		Yes No Do not know
2	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know		Yes No Do not know
3	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know		Yes No Do not know
4	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know		Yes No Do not know
5	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know		Yes No Do not know
6	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know		Yes No Do not know
7	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know		Yes No Do not know
8	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know		Yes No Do not know
9	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know		Yes No Do not know
1	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know	Yes No Do not know		Yes No Do not know

Source: This questionnaire has been adapted from the household questionnaire used by Statistics South Africa in the 2011 census.

SECTION G: MUNICIPAL SERVICES (Continued)									
G-03 COST OF RATES	G-03a WILLINGNESS TO PAY RATES	G-03b AFFORDABILITY OF RATES	G-04 WATER SOURCE	G-05 ACCESS TO PIPED WATER	G-06 QUALITY OF WATER	G-06a TREATMENT OF WATER BEFORE USE	G-06b TREATMENT OF WATER	G-07 DISTANCE TO WATER SOURCE	G-08 PERSON RESPONSIBLE FOR FETCHING WATER
<p>How much does your household pay for services per month?</p> <p>1 = Nothing 2 = Do not know</p> <p>Mark the appropriate box with an X.</p>	<p>Would (name) be willing to pay rates if eThekweni Municipality upgraded your house and provide utility services?</p> <p>1 = Yes 2 = No 3 = Do not know</p> <p>Mark the appropriate box with an X.</p>	<p>How much would (name) be willing to pay for rates?</p> <p>1 = Nothing 2 = R500</p> <p>Mark the appropriate box with an X.</p>	<p>What is the MAIN SOURCE of water supply for the household?</p> <p>1 = Piped water into dwelling 2 = Piped water to yard/plot 3 = Public tap/standpipe 4 = Bore hole 5 = Protected dug well 6 = Unprotected dug well 7 = Surface water (river, creek, stream) 8 = Protected spring 9 = Unprotected spring 10 = Rainwater collection 11 = Tanker-truck</p> <p>Write the correct number in the boxes below</p>	<p>In which way does this household mainly get piped water for household use?</p> <p>1 = Piped (tap) water inside dwelling 2 = Piped (tap) water inside yard 3 = Piped (tap) water on community stand: distance less than 200m from dwelling 4 = Piped (tap) water on community stand: distance between 200m and 500m from dwelling 5 = Piped (tap) water on community stand: distance between 500m and 1km from dwelling 6 = Piped (tap) water on community stand: distance greater than 1km from dwelling 7 = No access to piped water</p> <p>Write the correct number in the boxes below</p>	<p>How does (name) classify the quality of water from the MAIN SOURCE of supply?</p> <p>1 = Treated 2 = Untreated 3 = Do not know</p> <p>Mark the appropriate box with an X.</p> <p>If 1, Go to G-07</p>	<p>Does (name) treat his/her water in any way to make it safer to drink?</p> <p>1 = Yes 2 = No 3 = Do not Know</p> <p>Mark the appropriate box with an X.</p>	<p>What does (name) usually do to the water to make it safer to drink?</p> <p>1 = Boil 2 = Add bleach or chlorine 3 = Strain it through a cloth 4 = Use a water filter (ceramic, sand, composite, etc.) 5 = Solar disinfection 6 = Let it stand and settle 7 = Distil 8 = Do not know</p> <p>Write the correct number in the boxes below</p>	<p>How far is the MAIN SOURCE of water from the dwelling?</p> <p>1 = Immediately next to dwelling 2 = Within 50m of the dwelling 3 = More than 50m but within 100m of dwelling 4 = More than 100m of dwelling</p> <p>Write the correct number in the boxes below</p>	<p>Who usually goes to this source to fetch the water for your household?</p> <p>1 = Adult woman 2 = Adult man 3 = Female child 4 = Male child 5 = Do not know</p> <p>Children are those that are under 15 years of age.</p> <p>Write the correct number in the boxes below</p>
1 <input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = Do not know	<input type="checkbox"/> 1 = Yes <input type="checkbox"/> 2 = No <input type="checkbox"/> 3 = Do not know	<input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = R500	<input type="text"/>	1 <input type="text"/>	<input type="checkbox"/> 1 Treated <input type="checkbox"/> 2 Untreated <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
2 <input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = Do not know	<input type="checkbox"/> 1 = Yes <input type="checkbox"/> 2 = No <input type="checkbox"/> 3 = Do not know	<input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = R500	<input type="text"/>	2 <input type="text"/>	<input type="checkbox"/> 1 Treated <input type="checkbox"/> 2 Untreated <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
3 <input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = Do not know	<input type="checkbox"/> 1 = Yes <input type="checkbox"/> 2 = No <input type="checkbox"/> 3 = Do not know	<input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = R500	<input type="text"/>	3 <input type="text"/>	<input type="checkbox"/> 1 Treated <input type="checkbox"/> 2 Untreated <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
4 <input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = Do not know	<input type="checkbox"/> 1 = Yes <input type="checkbox"/> 2 = No <input type="checkbox"/> 3 = Do not know	<input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = R500	<input type="text"/>	4 <input type="text"/>	<input type="checkbox"/> 1 Treated <input type="checkbox"/> 2 Untreated <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
5 <input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = Do not know	<input type="checkbox"/> 1 = Yes <input type="checkbox"/> 2 = No <input type="checkbox"/> 3 = Do not know	<input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = R500	<input type="text"/>	5 <input type="text"/>	<input type="checkbox"/> 1 Treated <input type="checkbox"/> 2 Untreated <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
6 <input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = Do not know	<input type="checkbox"/> 1 = Yes <input type="checkbox"/> 2 = No <input type="checkbox"/> 3 = Do not know	<input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = R500	<input type="text"/>	6 <input type="text"/>	<input type="checkbox"/> 1 Treated <input type="checkbox"/> 2 Untreated <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
7 <input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = Do not know	<input type="checkbox"/> 1 = Yes <input type="checkbox"/> 2 = No <input type="checkbox"/> 3 = Do not know	<input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = R500	<input type="text"/>	7 <input type="text"/>	<input type="checkbox"/> 1 Treated <input type="checkbox"/> 2 Untreated <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
8 <input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = Do not know	<input type="checkbox"/> 1 = Yes <input type="checkbox"/> 2 = No <input type="checkbox"/> 3 = Do not know	<input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = R500	<input type="text"/>	8 <input type="text"/>	<input type="checkbox"/> 1 Treated <input type="checkbox"/> 2 Untreated <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
9 <input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = Do not know	<input type="checkbox"/> 1 = Yes <input type="checkbox"/> 2 = No <input type="checkbox"/> 3 = Do not know	<input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = R500	<input type="text"/>	9 <input type="text"/>	<input type="checkbox"/> 1 Treated <input type="checkbox"/> 2 Untreated <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
1 <input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = Do not know	<input type="checkbox"/> 1 = Yes <input type="checkbox"/> 2 = No <input type="checkbox"/> 3 = Do not know	<input type="checkbox"/> 1 = Nothing <input type="checkbox"/> 2 = R500	<input type="text"/>	1 <input type="text"/>	<input type="checkbox"/> 1 Treated <input type="checkbox"/> 2 Untreated <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>

Source: This questionnaire has been adapted from the household questionnaire used by Statistics South Africa in the 2011 census.

SECTION G: MUNICIPAL SERVICES (Continued)								
G-09 REFUSE DISPOSAL	G-10 DISTANCE TO SOLID WASTE DISPOSAL AREA	G-11 WASTE DISPOSAL SYSTEM	G-12 ACCESS TO TOILET	G-12a ACCESS TO TOILET BY OTHER RESIDENTS	G-12b ACCESS TO TOILET BY NON RESIDENTS	G-13 LOCATION OF TOILET	G-14 METHOD OF WASTE DISPOSAL	G-15 LEVEL OF SANITATION
<p>Where does (name) dispose of household rubbish or trash?</p> <p>1 = Burned on, or next to, dwelling 2 = Buried on, or next to, dwelling 3 = Garbage dump site on, or next to, dwelling 4 = Transported off dwelling by municipal garbage collection trucks</p> <p>Write the correct number in the boxes below</p>	<p>What is the distance from the solid waste disposal area to the MAIN SOURCE of water supply for the household?</p> <p>1 = Immediately next to water source 2 = Within 50m of the water source 3 = More than 50m but within 100m of water source 4 = More than 100m of water source 5 = No water source near the waste disposal system</p> <p>Write the correct number in the boxes below</p>	<p>What kind of toilet facility do members of your household usually use?</p> <p>1 = Flush toilet (connected to sewerage system) 2 = Flush toilet (with Septic tank) 3 = Pit toilet with ventilation (VIP) 4 = Pit toilet without ventilation 5 = Chemical toilet 6 = Composting toilet 7 = Bucket toilet 8 = Hanging toilet 9 = No facilities/use bush or field</p> <p>Write the correct number in the boxes below</p>	<p>Do you share this facility with other households?</p> <p>1 = Yes 2 = No 3 = Do not know</p> <p>Mark the appropriate box with an X.</p>	<p>How many households share this toilet facility?</p> <p>Write the correct number in the boxes below</p>	<p>Can any member of the public use this toilet?</p> <p>1 = Yes 2 = No 3 = Do not know</p> <p>Mark the appropriate box with an X.</p>	<p>How far is the toilet facility located from the dwelling?</p> <p>1 = Within the dwelling 2 = Separate from the dwelling</p> <p>Write the correct number in the boxes below</p>	<p>The last time (name of youngest child) passed stools, what was done to dispose of the stools?</p> <p>1 = Child used toilet/latrine 2 = Put/rinsed into toilet or latrine 3 = Put/rinsed into drain or ditch 4 = Thrown into garbage 5 = Buried 6 = Left in the open 7 = Do not know</p> <p>Write the correct number in the boxes below</p>	<p>What sanitation related disease has (name) experienced within the past two years?</p> <p>1 = Diarrhoea 2 = Head lice 3 = Worms 4 = Scabies 5 = Malaria 6 = Skin infection 7 = Conjunctivitis 8 = Hepatitis B</p> <p>Write the correct number in the boxes below</p>
1 <input type="text"/>	<input type="text"/>	1 <input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
2 <input type="text"/>	<input type="text"/>	2 <input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
3 <input type="text"/>	<input type="text"/>	3 <input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
4 <input type="text"/>	<input type="text"/>	4 <input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
5 <input type="text"/>	<input type="text"/>	5 <input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
6 <input type="text"/>	<input type="text"/>	6 <input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
7 <input type="text"/>	<input type="text"/>	7 <input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
8 <input type="text"/>	<input type="text"/>	8 <input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
9 <input type="text"/>	<input type="text"/>	9 <input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>
1 <input type="text"/>	<input type="text"/>	1 <input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not Know	<input type="text"/>	<input type="text"/>	<input type="text"/>

Source: This questionnaire has been adapted from the household questionnaire used by Statistics South Africa in the 2011 census.

SECTION H: HOUSING, HOUSEHOLD GOODS AND SERVICES – ASK OF EVERY HOUSEHOLD

H-01 LOCATION OF DWELLING UNIT			H-08 SQUATTING			H-17 LAND TENURE SECURITY		
Where is the dwelling unit located? 1 = Steep slope 2 = River flood plain 3 = Waste disposal site 4 = Marsh land 5 = Railway setback Write the appropriate code in the boxes			How many persons are sharing the same room? Number of persons sharing			What is their age and gender? 1 = Male 2 = Female Age		
6 = Servitudes of utility services 7 = Close to major transport networks			<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>		
H-02 TYPE OF DWELLING			H-09 HOUSING TENURE			H-18 COMMUNITY PARTICIPATION		
Which of the following best describes the dwelling that this household occupies? 1 = Brick house 2 = Free standing shack 3 = Semi-detached shack 4 = Row shacks 5 = Traditional hut Write the appropriate code in the boxes			On arrival 1 = Share with relative 2 = Share with friend 3 = Employer provided 4 = Rented Owned house/flat Write the appropriate code in the box.			Current 1 = Share with relative 2 = Share with friend 3 = Employer provided 4 = Rented Owned house/flat Write the appropriate code in the box.		
<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>		
H-03 DEVELOPMENT PERMIT			H-10 ENERGY/FUEL			H-18a COMMUNITY ACTIVITIES		
When building the dwelling did (name) obtain the following permit? 1 = Construction 2 = Occupancy 3 = Zoning 4 = None Write the appropriate code in the box.			What type of energy/fuel does the household MAINLY use for cooking, heating and lighting? 1 = Electricity 2 = Gas 3 = Paraffin 4 = Wood 5 = Coal 6 = Candles 7 = Animal dung 8 = solar 9 = Other 10 = None Write the appropriate code in the box. Note: Wood (4), Coal (5) and Animal dung (7) cannot be used for lighting. Candles (6) cannot be used for heating or cooking.			In what community organisation activities have you participated in as a resident of this settlement? 1 = Building brigade 2 = Housing stokvel 3 = Burial society Write the appropriate code in the box.		
<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>		
H-04 EARNED VALUE OF PROPERTY			H-11 OWNERSHIP			H-18b OBSTACLES TO PARTICIPATION		
How much did (name) spend during the construction of the dwelling? 1 = Less than R2,500 2 = R5,000 3 = R10, 000 4 = Do not know Write the appropriate code in the box.			How did (name) acquire access to land where dwelling is built? 1 = Informal rental 2 = Informal purchase 3 = Land invasion 4 = Inheritance 5 = Gradual occupation 6 = Through political patronage Write the appropriate code in the box.			Are there obstacles encountered in trying to carry out community activities? 1 = Lack of finance 2 = Cooperation 3 = Political interference 4 = Lack of government support 5 = Poor leadership Write the appropriate code in the box.		
<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>		
H-05 CONSTRUCTION MATERIAL			H-12 HOUSEHOLD GOODS AND SERVICES			H-20 PLANNED RELOCATION		
What is the main material used for the construction of the roof and wall of the dwelling? 1 = Burnt Brick 2 = Unburnt brick 3 = Cement block/Concrete 4 = Corrugated iron/zinc 5 = Wood 6 = Plastic 7 = Cardboard 8 = Wattle and daub 9 = Tile 10 = Mud 11 = Thatch/Grass 12 = Asbestos 13 = Mud and cement mix Write the appropriate code in the box.			Does this household own any of the following in working order? 1 = Yes 2 = No Write the appropriate code in the box.			Do you have plans to move out of this settlement? 1 = Certainly not 2 = Uncertain 3 = Certain Write the appropriate code in the box.		
<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>		
H-06 ROOMS			H-12a ACCESS TO INTERNET			H-21 PLANNING PERMISSION		
How many rooms are there in the dwelling of this household? Exclude bathrooms and kitchen. Include garages if some members of the household are living in them. 1 = One room with multiple uses 2 = Bedroom 3 = Dining room 4 = Living room 5 = Dining/living room 6 = Two rooms with multiple uses Write the appropriate code in the box.			How does (name) mainly access internet? 1 = From home 2 = From cell phone 3 = From work 4 = From elsewhere 5 = No access to internet Write the appropriate code in the box.			Do you report to the Municipality whenever you want to carry out any development on the following: A = House B = Basic facilities C = Public space 1 = Yes 2 = No 3 = Do not know Write the appropriate code in the box.		
<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>			<input type="text"/> <input type="text"/>		

Source: This questionnaire has been adapted from the household questionnaire used by Statistics South Africa in the 2011 census.

<p>H-07 LAND PURCHASE</p> <p>What is the expenditure category that best describes the monthly or annual premiums (name) can afford to purchase land for housing?</p> <p>Monthly 1 = No income 2 = R1-R50 3 = R51-R100 4 = R101-R200 5 = R201-R400 6 = R401-R800 7 = R801-R1 600 8 = R1 601-R3 200 9 = R3 201-R6 400 10 = R6 401 or more</p> <p>Annual No income R1-R600 R601- R1 200 R1 201-R2 400 R2 401-R4 800 R4 801-R9 600 R9 601-R19 200 R19 201-R38 400 R38 401-R76 800 R76 801 or more</p> <p>Write the appropriate code in the box. <input type="text"/> <input type="text"/></p>	<p>H-13 HOUSING SATISFACTION</p> <p>How happy is (name) with the household accommodation?</p> <p>1 = Very unhappy 2 = Unhappy 3 = Satisfied 4 = Happy 5 = Very happy</p> <p>Write the appropriate code in the box.</p> <p>Design of your dwelling <input type="text"/> Access to outdoor spaces e.g. garden <input type="text"/> Size of your dwelling <input type="text"/> The security of your dwelling <input type="text"/> Room sizes in your dwelling <input type="text"/> The security of your area <input type="text"/></p>	<p>H-22 CONSTRUCTION PERSONNEL</p> <p>Who were involved in the construction of the house?</p> <p>1 = Own household 2 = Own household and relatives 3 = Own household and community assistance 4 = Own household and hired labour 5 = Hired skilled labour 6 = Do not know</p> <p>Write the appropriate code in the box. <input type="text"/> <input type="text"/></p>
<p>H-14 STOKVEL SCHEME</p> <p>What is (name's) opinion on Stokvel Schemes for which squatters contribute a certain amount of money each month to cover any construction costs community members incur while building houses for each other?</p> <p>Mark the appropriate box with an X. <input type="checkbox"/> Good idea <input type="checkbox"/> Bad idea</p>	<p>H-14a STOKVEL SCHEME CONTRIBUTION</p> <p>What proportion of the household income can the household contribute MONTHLY towards a Stokvel Scheme for constructing houses for everyone in the community?</p> <p>Monthly 1 = No income 2 = R1-R50 3 = R51-R100 4 = R101-R200 5 = R201-R400 6 = R401-R800 7 = R801-R1 600 8 = R1 601-R3 200 9 = R3 201-R6 400 10 = R6 401 or more</p> <p>Annual No income R1-R600 R601- R1 200 R1 201-R2 400 R2 401-R4 800 R4 801-R9 600 R9 601-R19 200 R19 201-R38 400 R38 401-R76 800 R76 801 or more</p> <p>Write the appropriate code in the box. <input type="text"/> <input type="text"/></p>	<p>H-22a REFURBISHMENTS</p> <p>What improvement have you done to your property in the past 10 years?</p> <p>1 = Roof 2 = Walls 3 = Floor 4 = Water 5 = Toilet 6 = Electricity 7 = Painting 8 = Additional rooms 9 = Fencing 10 = Tree planting 11 = None</p> <p>Write the appropriate code in the box. <input type="text"/> <input type="text"/></p>
<p>H-14b NUMBER OF STOKVEL-BUILT UNITS</p> <p>If you already have a Stokvel Scheme for constructing houses for most people in the community, how many houses has the community built so far?</p> <p>Write the appropriate number in the boxes <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>	<p>H-15 LAND PURCHASE</p> <p>Did you buy the land on which your house is built?</p> <p>Mark the appropriate box with an X.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Do not know</p>	<p>H-23a FUTURE REFURBISHMENTS</p> <p>What improvements do you plan for your property in the near future?</p> <p>1 = Painting 2 = Additional rooms 3 = Fencing 4 = Tree planting 5 = Toilet 6 = None</p> <p>Write the appropriate code in the box. <input type="text"/> <input type="text"/></p>
<p>H-16 RELOCATION</p> <p>If ever you decide to relocate from this settlement are you going to sell this property?</p> <p>Mark the appropriate box with an X.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Do not know</p> <p>If No go to H-17</p>	<p>H-16a PROPERTY EXCHANGE</p> <p>Which part of the property would you sell?</p> <p>Mark the appropriate box with an X.</p> <p><input type="checkbox"/> Building structure <input type="checkbox"/> Land <input type="checkbox"/> Both <input type="checkbox"/> None</p>	<p>H-23b OBSTACLES TO REFURBISHMENT</p> <p>What is the reason of not planning to improve?</p> <p>1 = Fear of eviction 2 = Received eviction notice 3 = Rumour of eviction 4 = No need to improve 5 = Do not want to remain in the area 6 = Plot size small 7 = Lack of funds</p> <p>Write the appropriate code in the box. <input type="text"/> <input type="text"/></p>
<p>H-24 BUILDING MATERIALS</p> <p>What type of building materials were used to build the unit?</p> <p>1 = Cardboards 2 = Crude brick 3 = Recycled plastic 4 = Cement blocks 5 = Scrap wood 6 = Tins</p> <p>Write the appropriate number in the boxes <input type="text"/> <input type="text"/></p>	<p>H- 24a SUSCEPTIBILITY TO DISEASES</p> <p>While staying in this house, has any member of this household suffered from the following diseases?</p> <p>1 = Asthma 2 = Tuberculosis 3 = Pneumonia 4 = HIV and STIs 5 = Diarrhoea 6 = Cholera 7 = None</p> <p>Write the appropriate number in the boxes <input type="text"/> <input type="text"/></p>	

Source: This questionnaire has been adapted from the household questionnaire used by Statistics South Africa in the 2011 census.

SECTION N: FERTILITY – ASK OF WOMEN AGED 12-50 YEARS LISTED ON THE FLAP											SECTION J: MORTALITY IN THE LAST 12 MONTHS				
N-32 CHILDREN EVER BORN	N-33 AGE AT FIRST BIRTH	N-34 TOTAL CHILDREN EVER BORN	N-35 TOTAL SURVIVING AND LIVING IN THE HOUSEHOLD	N-36 TOTAL SURVIVING AND LIVING ELSEWHERE	N-37 TOTAL CHILDREN NO LONGER ALIVE	N-38 LAST CHILD BORN	N-39 LAST CHILD BORN ALIVE	N-40 DATE OF DEATH OF LAST CHILD BORN	M-00 DEARTH OCCURED	M-00a NUMBER OF DEATHS					
Has (name) ever given birth to a live child, even if the child died soon after birth? 1 = Yes 2 = No 3 = Do not know Mark the appropriate box with an X. If 2 Or 3, Go to M-01	At what age did (name) have her first child born? Write the appropriate code in the box.	How many children has (name) ever had that were born alive? Write the appropriate number in the boxes.	How many of (name's) children are still alive and living with her in this household, including grown-ups? Write the appropriate number in the boxes.	How many of (name's) children are still alive and living elsewhere, including grown-ups? Write the appropriate number in the boxes.	How many of (name's) children are no longer alive? Write the appropriate number in the boxes.	When was (name's) last child born, even if the child died soon after birth? Write the day, month and the year in the appropriate boxes.	Is (name's) last child born still alive? 1 = Yes 2 = No 3 = Do not know Mark the appropriate box with an X. If 1 or 3, Go to M-00	When did (name's) last child born die? Write the day, month and the year in the appropriate boxes.	Has any member of this household passed away in the last 12 months (between 10 October 2012 and 9 October 2013)? Mark the appropriate box with an X. <input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know If 2 or 3, Questionnaire completed	How many members of the household passed away in the last 12 months (between 10 October 2012 and 9 October 2013)? <input type="text"/> <input type="text"/> ASK ONLY ABOUT DECEASED WOMEN THAT WERE AGED 12-50 AT THE TIME OF DEATH					
									M-01 NAME OF DECEASED	M-02 MONTH AND YEAR OF DEATH	M-03 GENDER OF THE DECEASED	M-04 AGE OF THE DECEASED	M-05 NATURAL OR UNNATURAL DEATH		
									What was the first name of (the deceased)? Use CAPITAL LETTERS only	What was the MONTH and the YEAR of (the deceased's) death? Write the month and the year in the appropriate boxes.	Was (the deceased) male or female? 1 Male 2 Female Mark the appropriate box with an X.	What was (the deceased) age in completed years at the time of death? Write the age in the boxes. If age is less than 1 year, write 000.	Was the death due to a natural cause? 1 = Natural (e.g. illness) 2 = Unnatural (e.g. accident, assault) 3 = Do not know Mark the appropriate box with an X.		
1	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> D <input type="text"/> D <input type="text"/> M <input type="text"/> M <input type="text"/> Y <input type="text"/> Y <input type="text"/> Y <input type="text"/> Y	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/> D <input type="text"/> D <input type="text"/> M <input type="text"/> M <input type="text"/> Y <input type="text"/> Y <input type="text"/> Y <input type="text"/> Y	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Male <input type="checkbox"/> 2 Female	<input type="text"/>	<input type="checkbox"/> 1 Natural <input type="checkbox"/> 2 Unnatural <input type="checkbox"/> 3 Do not know			
2	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Male <input type="checkbox"/> 2 Female	<input type="text"/>	<input type="checkbox"/> 1 Natural <input type="checkbox"/> 2 Unnatural <input type="checkbox"/> 3 Do not know			
3	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Male <input type="checkbox"/> 2 Female	<input type="text"/>	<input type="checkbox"/> 1 Natural <input type="checkbox"/> 2 Unnatural <input type="checkbox"/> 3 Do not know			
4	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Male <input type="checkbox"/> 2 Female	<input type="text"/>	<input type="checkbox"/> 1 Natural <input type="checkbox"/> 2 Unnatural <input type="checkbox"/> 3 Do not know			
5	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Male <input type="checkbox"/> 2 Female	<input type="text"/>	<input type="checkbox"/> 1 Natural <input type="checkbox"/> 2 Unnatural <input type="checkbox"/> 3 Do not know			
6	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Male <input type="checkbox"/> 2 Female	<input type="text"/>	<input type="checkbox"/> 1 Natural <input type="checkbox"/> 2 Unnatural <input type="checkbox"/> 3 Do not know			
7	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Male <input type="checkbox"/> 2 Female	<input type="text"/>	<input type="checkbox"/> 1 Natural <input type="checkbox"/> 2 Unnatural <input type="checkbox"/> 3 Do not know			
8	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Male <input type="checkbox"/> 2 Female	<input type="text"/>	<input type="checkbox"/> 1 Natural <input type="checkbox"/> 2 Unnatural <input type="checkbox"/> 3 Do not know			
9	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/> Boys <input type="text"/> Girls <input type="text"/> Total	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="text"/>	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Do not know	<input type="checkbox"/> 1 Male <input type="checkbox"/> 2 Female	<input type="text"/>	<input type="checkbox"/> 1 Natural <input type="checkbox"/> 2 Unnatural <input type="checkbox"/> 3 Do not know			
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THANKS FOR PARTICIPATING

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KEY INFORMANT INTERVIEW SCHEDULES

1. Provincial Department of Land Affairs, KwaZulu-Natal

Land Policy and Land Law

1. In practice it appears hard to achieve equitable and democratic land holding in urban South Africa. Why?
2. What legal and land-use management reforms have been attempted to make the urban land market deliver affordable urban land for housing the poor?
3. Do you agree that by protecting land rights conferred since 1913 post-apartheid legislation has less socio-political legitimacy? If yes, why has the government not reviewed current land laws to facilitate equitable redistribution of land resources?
4. Scholars and analysts have stated that the negotiated settlement on land during the political transition prior to 1994 has failed to address the critical land inequalities in urban settings. Do you agree?
5. Why do you think the negotiated settlement on land has failed to address the critical land inequalities in urban areas?
6. If the willing buyer-willing seller principle has failed to deliver affordable urban land what practical solutions would address land inequalities in South Africa?
7. The urban land market is known to frustrate low-income housing delivery. How can the land policy assist the development of low-income housing?
8. What land-use mechanisms could locate the urban poor close to employment opportunities?
9. How can land legislation reverse the market-led trend of locating the urban poor on the urban fringes?
10. What other measures could be used to assemble affordable urban land besides compulsory purchase mechanisms?
11. In your opinion, what measures need to be enacted to ameliorate poor delivery of affordable urban land for low-income housing?

Land Access and Delivery

1. To what extent is the speculative behaviour of landholders limiting free competition in the land market in eThekweni municipality?
2. Land in eThekweni municipality is considered to be the most expensive relative to other cities in South Africa. Do you agree?
3. Do you think that land prices in eThekweni municipality are highly influenced by the nature of the topography?
4. The supply of affordable land is influenced by the extent and pattern of infrastructure. Do you agree?
5. The current land reform process has a rural bias. How can we achieve equitable land ownership in urban areas to ensure that the poor are effectively integrated in South African cities?
6. How can land legislation be used to efficiently allocate and equally distribute urban land to house the urban poor?
7. How will the location of low-income housing in inner-city areas promote economic integration?
8. How has land delivery constrained the development of low-income housing in eThekweni municipality?
9. If the urban land market distributes landholding inefficiently and inequitably, what is the role of the state in effecting equitable distribution of affordable urban land?

10. How can land expropriation be used as an effective mechanism of assembling affordable urban land for low-income housing?
11. During land expropriation, what policy and legal framework can be established to guide just and equitable remuneration to the landholder?
12. What legal framework can be established so that legal recourse is available to buyers and sellers of expropriated urban land to seek fairness?
13. Is the Expropriation Act effective in assembling affordable urban land for low-income housing? If not, why?
14. Which sections of the Expropriation Act should be redrafted to address how and when expropriation should be used to assemble affordable and strategic urban land for low-income housing?
15. How can spatial planning be used as an effective mechanism to reserve strategic and affordable urban land for low-income housing?
16. If by 2000 about 67% of the country's total land area under freehold tenure was held by 0.2% of the national population, how can such an unjust landholding structure be permanently sustained when 70% of the population are suffering from housing poverty?

Land Tenure and Tenure Security

1. Land tenure reforms of 1996 began a series of laws preventing evictions. How do such reforms result in the growth of informal settlements?
2. What is the nature of those public interests and what are the threats to the security of land rights and customary land rights?
3. What are the tools and mechanisms to regulate public interests in privately owned land and how effective are they?
4. Why have land tenure reform programmes not been adequate socially and politically responsive and receptive to the poor?
5. Are legal tenure administration norms compatible with locally-based land tenure systems? If yes, how?
6. What delivery mechanisms should be adopted in land legislation to strengthen land tenure rights?
7. Have programmes to increase security of tenure reduced urban land disputes and decreased the probability of losing urban land rights without fair and adequate compensation?
8. Does enhanced tenure security raise the value of land or bid price of the buyer? Does it increase the asking price of the seller?
9. Is inadequate tenure security adversely affecting lenders' decisions to supply housing credit and landholders' decisions to acquire housing credit? Would enhanced tenure security increase credit supply, credit demand and credit use in housing development?
10. How are urban land rights distributed among and within households under the *de facto* tenure system, how are these distributions affecting tenure security, and for whom?
11. Has urban land registration increased or decreased security of tenure in cases where the state has intervened, and for whom?
12. Is it justifiable for the urban poor to have limited bundle of rights and lower tenure security than the rest of society?
13. Do the urban poor receive sufficient land tenure security?
14. Land tenure rights received by the urban poor are inferior to a freehold title. In your opinion, are these land tenure rights disqualifying the urban poor from mortgage finance?
15. Which forms of land tenure have been granted to the urban poor?
16. Which bundles of rights can they enjoy?
17. In your opinion, are the urban poor satisfied with their land tenure status?

18. Do you think the urban poor would prefer another form of land tenure, and if so, which one and why?
19. How can land legislation secure adequate tenure for the urban poor living in informal settlements?

Land Valuation

1. What are the main factors that impact the value of urban land?
2. What role do court rulings have in developing an indication of value of urban land?
3. Where should/could the municipality target or locate new low-income housing developments, particularly to give low-income households access to amenities?
4. Standards of settlement establishment could be revised to ensure new multi-family housing projects are affordable; what are the cost implications?
5. What incentives are most effective to encourage the delivery of affordable urban residential land?
6. What new or revised zoning incentives could the municipality use to encourage the delivery of affordable urban land?
7. What new or revised land tax incentives could the municipality use to encourage the delivery of affordable urban land?
8. What new or revised financial incentives could the municipality use to encourage the delivery of affordable urban land?
9. How can policymakers ensure there are enough affordable housing options available for all households, at all income levels?
10. How do policymakers encourage a variety of housing options in every neighbourhood throughout the City?
11. What steps can policymakers take to eliminate housing discrimination and ensure urban residential land is priced at a level that all households, at all income levels, can afford? What is missing from local/provincial/national law?
12. Many low-income households have difficulty finding adequate affordable housing, what can be done to change that?
13. Are there appropriate pricing options for urban land that address issues of affordability while allowing low-income households to live in their preferred neighbourhood?
14. At this point in time, how many low-income households are on the housing waiting list? What is the total monetary value of residential land needed to alleviate this backlog?

Land Transfers and Registration

1. In your opinion, are informal land transactions beneficial to the urban poor?
2. Of the land that has been exchanged in eThekweni municipality in the last 5 years what has been its price, volume and location?
3. Land registration has often served to redistribute land resources towards the wealthier and better informed instead of helping the urban poor confirm their claims to urban land. Do you agree?
4. Has urban land registration improved land market efficiency by lowering transfer costs and facilitating land transfers?
5. Has urban land registration contributed to an inequitable distribution of land resources? Has it promoted or arrested problems of land concentration or landlessness? Has it strengthened, protected, or adversely altered the distribution of urban land rights in urban areas?

6. Under what conditions, if any, has urban land registration enhanced tenure security and stimulated higher low-income housing investment and development?
7. Are land disputes or insecure land rights creating high transfer costs?
8. Are the serious credit- and insurance-market imperfections forcing smaller landholders into distress sales?
9. Are these distress sales exacerbating downward raiding?
10. Can provisions be made which explicitly address the need to level the playing field between poorer and better-off groups in relation to registering claims over land?
11. What lessons can be learnt from pro-poor land administration in Ethiopia, Ghana, and Mozambique to inform policy and practice for future interventions in the registration of urban land rights in South Africa?

Land Governance

1. Would you agree that the colonial and apartheid legacy of unequal urban landownership and access to infrastructure is what underlies the struggle for urban land by the urban poor? How vital is the resolution of the land issue for the political, economic and environmental well-being of South Africa?
2. How can those excluded from the urban land market be compensated for their loss of entitlement to land for housing?
3. If the rights of those excluded are truly 'unalienable', how can their descendants be compensated in perpetuity?
4. How is landholding generally endowing the landowner with political power to influence government policy on land?
5. How can the Department synergise country experiences and develop more viable pro-poor land governance frameworks to tackle the institutional constraints on sustainable land administration and urban development?

2. Provincial Department of Human Settlements, KwaZulu-Natal

Land Access and Delivery

1. The national DoHS established the Housing Development Agency to acquire land for low-income housing, why is it struggling to meet the demand of affordable urban land for low-income housing?
2. To what extent is the speculative behaviour of landholders limiting free competition in the urban land market in eThekweni municipality?
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6. The current land reform process has a rural bias. How can we achieve equitable land ownership in urban areas to ensure that the poor are effectively integrated in South African cities?
7. How can land legislation be used to efficiently allocate and equally distribute urban land to house the urban poor?
8. How will the location of low-income housing in inner-city areas promote economic integration?
9. How has land delivery constrained the development of low-income housing in eThekweni municipality?

10. If the urban land market distributes landholding inefficiently and inequitably, what is the role of the state in effecting equitable distribution of affordable urban land?
11. How can land expropriation be used as an effective mechanism of assembling affordable urban land for low-income housing?
12. During land expropriation, what policy and legal framework can be established to guide just and equitable remuneration to the landholder?
13. What legal framework can be established so that legal recourse is available to buyers and sellers of expropriated urban land to seek fairness?
14. Is the Expropriation Act effective in assembling affordable urban land for low-income housing? If not, why?
15. Which sections of the Expropriation Act should be redrafted to address how and when expropriation should be used to assemble affordable and strategic urban land for low-income housing?
16. How can spatial planning be used as an effective mechanism to reserve strategic and affordable urban land for low-income housing?
17. If by 2000 about 67% of the country's total land area under freehold tenure was held by 0.2% of the national population, how can such an unjust landholding structure be permanently sustained when 70% of the population is languishing in poverty?

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10. What other measures could be used to assemble affordable urban land besides compulsory purchase mechanisms?
11. In your opinion, what measures need to be enacted to ameliorate poor delivery of affordable urban land for low-income housing?
12. What responsibility should the state assume to facilitate low-income housing development?
13. The policy goal of delivering as many units as possible has been constrained by high costs of urban land, leading to development of projects on the urban periphery in unfavourable localities. What do you think should be done to address this problem?

Land Tenure and Tenure Security

1. The land management system has not afforded the poor access to affordable land for housing. How can the state make urban land markets offer a flexible tenure system to allow people to move between different types of tenure as their financial circumstances permit? If not, why?
2. The urban poor are excluded from urban land markets due to lack of information or poor knowledge about policies, rights, land opportunities, access mechanisms. What is the department doing to educate people on how they can acquire rights to urban land?
3. Land tenure reforms of 1996 began a series of laws preventing evictions. How do such reforms result in the growth of informal settlements?
4. What is the nature of those public interests and what are the threats to the security of land rights and customary land rights?
5. What are the tools and mechanisms to regulate public interests in privately owned land and how effective are they?
6. Why have land tenure reform programmes not been adequate socially and politically responsive and receptive to the poor?
7. Are legal tenure administration norms compatible with locally-based land tenure systems? If yes, how?
8. What delivery mechanisms should be adopted in land legislation to strengthen land tenure rights?
9. Have programmes to increase security of tenure reduced urban land disputes and decreased the probability of losing urban land rights without fair and adequate compensation?
10. Does enhanced tenure security raise the value of land or bid price of the buyer? Does it increase the asking price of the seller?
11. How are urban land rights distributed among and within households under the de facto tenure system, how are these distributions affecting tenure security, and for whom?
12. Has urban land registration increased or decreased security of tenure in cases where the state has intervened, and for whom?
13. Is it justifiable for the urban poor to have limited bundle of rights and lower tenure security than the rest of society?
14. Do the urban poor receive sufficient land tenure security?
15. Land tenure rights received by the urban poor are inferior to a freehold title. In your opinion, are these land tenure rights disqualifying the urban poor from mortgage finance?
16. Which forms of land tenure have been granted to the urban poor?
17. Which bundles of rights can they enjoy?
18. In your opinion, are the urban poor satisfied with their land tenure status?
19. Do you think the urban poor would prefer another form of land tenure, and if so, which one and why?
20. How can land legislation secure adequate tenure for the urban poor living in informal settlements?

Land Governance

1. How has corruption in land administration affected the delivery of land to the poor?
2. Would you agree that the colonial and apartheid legacy of unequal urban landownership and access to infrastructure is what underlies the struggle for urban land by the urban poor? How vital is the resolution of the land issue for the political, economic and environmental well-being of South Africa?
3. How can those excluded from the urban land market be compensated for their loss of entitlement to land for housing?
4. If the rights of those excluded are truly 'unalienable', how can their descendants be compensated in perpetuity?

5. How is landholding generally endowing the landowner with political power to influence government policy on land?
6. How can the Department synergise country experiences and develop more viable pro-poor land governance frameworks to tackle the institutional constraints on sustainable land administration and urban development?

Land Transfers and Registration

1. In your opinion, are informal land transactions beneficial to the urban poor?
2. Of the land that has been exchanged in eThekweni municipality in the last 5 years what has been its price, volume and location?
3. Land registration has often served to redistribute land resources towards the wealthier and better informed instead of helping the urban poor confirm their claims to urban land. Do you agree?
4. Has urban land registration improved land market efficiency by lowering transfer costs and facilitating land transfers?
5. Has urban land registration contributed to an inequitable distribution of land resources? Has it promoted or arrested problems of land concentration or landlessness? Has it strengthened, protected, or adversely altered the distribution of urban land rights in urban areas?
6. Under what conditions, if any, has urban land registration enhanced tenure security and stimulated higher low-income housing investment and development?
7. Are land disputes or insecure land rights creating high transfer costs?
8. Are the serious credit- and insurance-market imperfections forcing smaller land holders into distress sales?
9. Are these distress sales exacerbating downward raiding?
10. Can provisions be made which explicitly address the need to level the playing field between poorer and better-off groups in relation to registering claims over land?
11. What lessons can be learnt from pro-poor land administration in Ethiopia, Ghana, and Mozambique to inform policy and practice for future interventions in the registration of urban land rights in South Africa?
12. Is the mortgage finance scheme sustainable?
13. If yes, why are households earning less than R7,500 per month unable to access land resources for low-income housing?
14. Poverty and unaffordability results in the poor not being able to buy land and housing, and also makes it difficult to hold onto land and housing. What specific mechanisms should be implemented to address poverty and unaffordability?

Informal Settlement Upgrading

1. Should informal settlements be seen as a housing problem requiring a housing solution, or is a more holistic approach required
2. Is it true that informal settlement upgrading rewards the unlawful occupiers and encourages further invasion of land?
3. Should the target be to eradicate informal settlements or to improve the lives of those living in them?
4. Should informal settlement dwellers not be central to any initiatives to improve their lives?
5. How can improvements be achieved that don't destroy people's fragile livelihoods?
6. What rights to informal settlement dwellers have, and are these being respected?

7. Given the shortage of housing and the overburdening of existing housing stock for the poor, is it acceptable to practice zero tolerance on new land invasions?
8. What are the major causes of informal settlements and which factors underpin the evolution and expansion of these settlements in eThekweni municipality?
9. Which strategies have been implemented to tackle problems of informal settlements in eThekweni municipality and to what extent have these improved the situation of the urban poor?
10. Which best practices can be used to define more comprehensive approaches to informal settlement upgrading?
11. How can appropriate and affordable housing typologies that respond to the poor's lifestyles, the environment and the on-going transformation of the urbanised communities in eThekweni municipality be developed?
12. How well do current housing typologies suit the existing and emerging households?

3. Department of Housing, eThekweni Municipality

Land access and delivery

1. Urban planners are struggling with extreme land market failure. What institutional approaches and mechanisms for land-use assembly need to be put in place to deliver low-income housing?
2. The national DoHS established the Housing Development Agency to acquire land for low-income housing, why is it struggling to meet the demand of affordable urban land for low-income housing?
3. To what extent is the speculative behaviour of landholders limiting free competition in the urban land market in eThekweni municipality?
4. Land in eThekweni municipality is considered to be the most expensive relative to other cities in South Africa. Do you agree?
5. Do you think that land prices in eThekweni municipality are highly influenced by the nature of the topography?
6. The supply of affordable land is influenced by the extent and pattern of infrastructure. Do you agree?
7. The current land reform process has a rural bias. How can we achieve equitable land ownership in urban areas to ensure that the poor are effectively integrated in South African cities?
8. How can land legislation be used to efficiently allocate and equally distribute urban land to house the urban poor?
9. How will the location of low-income housing in inner-city areas promote economic integration?
10. How has land delivery constrained the development of low-income housing in eThekweni Municipality?
11. If the urban land market distributes landholding inefficiently and inequitably, what is the role of the state in effecting equitable distribution of affordable urban land?
12. How can land expropriation be used as an effective mechanism of assembling affordable urban land for low-income housing?
13. During land expropriation, what policy and legal framework can be established to guide just and equitable remuneration to the landholder?
14. What legal framework can be established so that legal recourse is available to buyers and sellers of expropriated urban land to seek fairness?

15. Is the Expropriation Act effective in assembling affordable urban land for low-income housing? If not, why?
16. Which sections of the Expropriation Act should be redrafted to address how and when expropriation should be used to assemble affordable and strategic urban land for low-income housing?
17. How can spatial planning be used as an effective mechanism to reserve strategic and affordable urban land for low-income housing?
18. If by 2000 about 67% of the country's total land area under freehold tenure was held by 0.2% of the national population, how can such an unjust landholding structure be permanently sustained when 70% of the population is languishing in poverty?

Land Policy and Land Law

1. How can planners proactively institutionalise and direct state investment in low-income housing and infrastructure in inner-city areas?
2. Would you recommend the introduction of designated areas within which planning rules could be relaxed to help attract new low-income housing investment into inner-city areas?
3. How can the planning system 'plan proactively' to harness the concept of Restructuring Zones through low-income housing?
4. How can these Zones be used to direct growth industries to the most sustainable sites?

Land Tenure and Tenure Security

1. What are the constraints restricting upgrading of existing informal settlements?
2. Is your focus on Greenfield sites rather than upgrading of existing informal settlements?
3. What do you anticipate will happen in the low-income housing market going forward?
4. Which strategies have been implemented to tackle problems of informal settlements in eThekweni municipality and to what extent have these improved the situation of the urban poor?
5. Which best practices can be used to define more comprehensive approaches to informal settlement upgrading?
6. How can appropriate and affordable housing typologies that respond to the poor's lifestyles, the environment and the on-going transformation of the urbanised communities in eThekweni municipality be developed?
7. How well do current housing typologies suit the existing and emerging households?
8. Have programmes to increase security of tenure reduced urban land disputes and decreased the probability of losing urban land rights without fair and adequate compensation?
9. Does enhanced tenure security raise the value of land or bid price of the buyer? Does it increase the asking price of the seller?
10. How are urban land rights distributed among and within households under the de facto tenure system, how are these distributions affecting tenure security, and for whom?
11. Has urban land registration increased or decreased security of tenure in cases where the state has intervened, and for whom?

Land valuation

1. What are the main factors that impact the value of urban land?
2. What role do court rulings have in developing an indication of value of urban land?
3. Where should/could the municipality target or locate new low-income housing developments, particularly to give low-income households access to amenities?
4. Standards of settlement establishment could be revised to ensure new multi-family housing projects are affordable; what are the cost implications?

5. What incentives are most effective to encourage the delivery of affordable urban residential land?
6. What new or revised zoning incentives could the municipality use to encourage the delivery of affordable urban land?
7. What new or revised land tax incentives could the municipality use to encourage the delivery of affordable urban land?
8. What new or revised financial incentives could the municipality use to encourage the delivery of affordable urban land?
9. How can policymakers ensure there are enough affordable housing options available for all households, at all income levels?
10. How do policymakers encourage a variety of housing options in every neighbourhood throughout the City?
11. What steps can policymakers take to eliminate housing discrimination and ensure urban residential land is priced at a level that all households, at all income levels, can afford? What is missing from local/provincial/national law?
12. Many low-income households have difficulty finding adequate affordable housing, what can be done to change that?
13. Are there appropriate pricing options for urban land that address issues of affordability while allowing low-income households to live in their preferred neighbourhood?
14. At this point in time, how many low-income households are on the housing waiting list? What is the total monetary value of residential land needed to alleviate this backlog?

Land transfers and registration

1. In your opinion, are informal land transactions beneficial to the urban poor?
2. Of the land that has been exchanged in eThekweni municipality in the last 5 years what has been its price, volume and location?
3. Land registration has often served to redistribute land resources towards the wealthier and better informed instead of helping the urban poor confirm their claims to urban land. Do you agree?
4. Has urban land registration improved land market efficiency by lowering transfer costs and facilitating land transfers?
5. Has urban land registration contributed to an inequitable distribution of land resources? Has it promoted or arrested problems of land concentration or landlessness? Has it strengthened, protected, or adversely altered the distribution of urban land rights in urban areas?
6. Under what conditions, if any, has urban land registration enhanced tenure security and stimulated higher low-income housing investment and development?
7. Are land disputes or insecure land rights creating high transfer costs?
8. Are the serious credit- and insurance-market imperfections forcing smaller land holders into distress sales?
9. Are these distress sales exacerbating downward raiding?
10. Can provisions be made which explicitly address the need to level the playing field between poorer and better-off groups in relation to registering claims over land?
11. What lessons can be learnt from pro-poor land administration in Ethiopia, Ghana, and Mozambique to inform policy and practice for future interventions in the registration of urban land rights in South Africa?
12. What creative new ideas could improve the current low-income housing system?
13. Property developers often prefer that strategic urban land be allocated for economic use that derives the highest economic rent to low-income residential use which yield limited profits.

What would you say to the notion that some development proposals should be refused if they undermine low-income housing opportunities?

4. Interview Schedule for the Department of Planning, eThekweni Municipality

Land Access and Delivery

1. Urban planners are struggling with extreme land market failure. What institutional approaches and mechanisms for land-use assembly need to be put in place to deliver low-income housing?
2. The national DoHS established the Housing Development Agency to acquire land for low-income housing, why is it struggling to meet the demand of affordable urban land for low-income housing?
3. To what extent is the speculative behaviour of landholders limiting free competition in the land market in eThekweni municipality?
4. Land in eThekweni municipality is considered to be the most expensive relative to other cities in South Africa. Do you agree?
5. Do you think that land prices in eThekweni municipality are highly influenced by the nature of the topography?
6. The supply of affordable land is influenced by the extent and pattern of infrastructure. Do you agree?
7. The current land reform process has a rural bias. How can we achieve equitable land ownership in urban areas to ensure that the poor are effectively integrated in South African cities?
8. How can land legislation be used to efficiently allocate and equally distribute urban land to house the urban poor?
9. How will the location of low-income housing in inner-city areas promote economic integration?
10. How has land delivery constrained the development of low-income housing in eThekweni Municipality?
11. If the urban land market distributes landholding inefficiently and inequitably, what is the role of the state in effecting equitable distribution of affordable urban land?
12. How can land expropriation be used as an effective mechanism of assembling affordable urban land for low-income housing?
13. During land expropriation, what policy and legal framework can be established to guide just and equitable remuneration to the landholder?
14. What legal framework can be established so that legal recourse is available to buyers and sellers of expropriated urban land to seek fairness?
15. Is the Expropriation Act effective in assembling affordable urban land for low-income housing? If not, why?
16. Which sections of the Expropriation Act should be redrafted to address how and when expropriation should be used to assemble affordable and strategic urban land for low-income housing?
17. How can spatial planning be used as an effective mechanism to reserve strategic and affordable urban land for low-income housing?
18. If by 2000 about 67% of the country's total land area under freehold tenure was held by 0.2% of the national population, how can such an unjust landholding structure be permanently sustained when 70% of the population is languishing in poverty?

Land Policy and Land Law

1. How can planners proactively institutionalise and direct state investment in low-income housing and infrastructure in inner-city areas?
2. Urban planners are struggling with extreme land market failure. What institutional approaches and mechanisms for land-use assembly need to be put in place to deliver low-income housing?
3. Would you recommend the introduction of designated areas within which planning rules could be relaxed to help attract new low-income housing investment into inner-city areas?
4. How can the planning system 'plan proactively' to harness the concept of Urban Redevelopment Zones and Restructuring Zones through low-income housing?
5. How can these Zones be used to direct growth industries to the most sustainable sites?
6. The effects of new economic developments competing with housing for space in inner-city areas constrain land delivery for low-income housing. What would you say to the notion that some development proposals should be refused if they undermine low-income housing opportunities?
7. How can municipal property rates policies be used as an instrument to promote access by the poor to urban land markets?
8. While processing a development application for non-residential use how can the municipality make trade-offs and take approaches to balance municipal revenue concerns with low-income housing development?
9. Does the municipal rates policy provide direct tax relief (rebates, exemptions, and reductions on rates liability) to induce the demand-side of the land market so it's more affordable for the poor to access the land and property markets or to move up the property ladder? If yes how?
10. Does the municipal rates policy create incentives for land and property owners to make land-use decisions that increase the supply of available well-located land and the stock of low-income housing? If yes how?
11. What policies exist about informal settlement upgrading?
12. Which strategies have been implemented to tackle problems of informal settlements in eThekweni municipality and to what extent have these improved the situation of the urban poor?
13. Which best practices can be used to define more comprehensive approaches to informal settlement upgrading?

Land Tenure and Tenure Security

1. The land management system has not afforded the poor access to affordable land for housing. How can the state make urban land markets offer a flexible tenure system to allow people to move between different types of tenure as their financial circumstances permit? If not, why?
2. The urban poor are excluded from urban land markets due to lack of information or poor knowledge about policies, rights, land opportunities, access mechanisms. What is the department doing to educate people on how they can acquire rights to urban land?
3. Land tenure reforms of 1996 began a series of laws preventing evictions. How do such reforms result in the growth of informal settlements?
4. What is the nature of those public interests and what are the threats to the security of land rights and customary land rights?
5. What are the tools and mechanisms to regulate public interests in privately owned land and how effective are they?
6. Why have land tenure reform programmes not been adequate socially and politically responsive and receptive to the poor?

7. Are legal tenure administration norms compatible with locally-based land tenure systems? If yes, how?
8. What delivery mechanisms should be adopted in land legislation to strengthen land tenure rights?
9. Is it justifiable for the urban poor to have limited bundle of rights and lower tenure security than the rest of society?
10. Have programmes to increase security of tenure reduced urban land disputes and decreased the probability of losing urban land rights without fair and adequate compensation?
11. Does enhanced tenure security raise the value of land or bid price of the buyer? Does it increase the asking price of the seller?
12. How are urban land rights distributed among and within households under the de facto tenure system, how are these distributions affecting tenure security, and for whom?
13. Has urban land registration increased or decreased security of tenure in cases where the state has intervened, and for whom?
14. Do the urban poor receive sufficient land tenure security?
15. Land tenure rights received by the urban poor are inferior to a freehold title. In your opinion, are these land tenure rights disqualifying the urban poor from mortgage finance?
16. Which forms of land tenure have been granted to the urban poor?
17. Which bundles of rights can they enjoy?
18. In your opinion, are the urban poor satisfied with their land tenure status?
19. Do you think the urban poor would prefer another form of land tenure, and if so, which one and why?
20. How can land legislation secure adequate tenure for the urban poor living in informal settlements?

Land Valuation

1. What are the main factors that impact the value of land property?
2. What role do court rulings have in developing an indication of value of land property?
3. Where should/could the municipality target or locate new low-income housing developments, particularly to give low-income households access to amenities?
4. Standards of settlement establishment could be revised to ensure new multi-family housing projects are affordable; what are the cost implications?
5. What incentives are most effective to encourage the delivery of affordable urban residential land?
6. What new or revised zoning incentives could the municipality use to encourage the delivery of affordable urban land?
7. What new or revised land tax incentives could the municipality use to encourage the delivery of affordable urban land?
8. What new or revised financial incentives could the municipality use to encourage the delivery of affordable urban land?
9. How can policymakers ensure there are enough affordable housing options available for all households, at all income levels?
10. How do policymakers encourage a variety of housing options in every neighbourhood throughout the City?
11. What steps can policymakers take to eliminate housing discrimination and ensure urban residential land is priced at a level that all households, at all income levels, can afford? What is missing from local/provincial/national law?
12. Many low-income households have difficulty finding adequate affordable housing, what can be done to change that?

13. Are there appropriate pricing options for urban land that address issues of affordability while allowing low-income households to live in their preferred neighbourhood?
14. At this point in time, how many low-income households are on the housing waiting list? What is the total monetary value of residential land needed to alleviate this backlog?

Land Transfers and Registration

1. In your opinion, are informal land transactions beneficial to the urban poor?
2. Of the land that has been exchanged in eThekweni municipality in the last 5 years what has been its price, volume and location?
3. Land registration has often served to redistribute land resources towards the wealthier and better informed instead of helping the urban poor confirm their claims to urban land. Do you agree?
4. Has urban land registration improved land market efficiency by lowering transfer costs and facilitating land transfers?
5. Has urban land registration contributed to an inequitable distribution of land resources? Has it promoted or arrested problems of land concentration or landlessness? Has it strengthened, protected, or adversely altered the distribution of urban land rights in urban areas?
6. Under what conditions, if any, has urban land registration enhanced tenure security and stimulated higher low-income housing investment and development?
7. Are land disputes or insecure land rights creating high transfer costs?
8. Are the serious credit- and insurance-market imperfections forcing smaller land holders into distress sales?
9. Are these distress sales exacerbating downward raiding?
10. Can provisions be made which explicitly address the need to level the playing field between poorer and better-off groups in relation to registering claims over land?
11. What lessons can be learnt from pro-poor land administration in Ethiopia, Ghana, and Mozambique to inform policy and practice for future interventions in the registration of urban land rights in South Africa?
12. What creative new ideas could improve the current low-income housing system?
13. Property developers often prefer that strategic urban land be allocated for economic use that derives the highest economic rent to low-income residential use which yield limited profits. What would you say to the notion that some development proposals should be refused if they undermine low-income housing opportunities?

Land Governance

1. How, in particular, will upgrading informal settlements change residents' perceptions of the municipal property rates and their willingness to pay?
2. How has corruption in land administration affected the delivery of land to the poor?
3. Would you agree that the colonial and apartheid legacy of unequal urban landownership and access to infrastructure is what underlies the struggle for urban land by the urban poor? How vital is the resolution of the land issue for the political, economic and environmental well-being of South Africa?
4. How can those excluded from the urban land market be compensated for their loss of entitlement to land for housing?
5. If the rights of those excluded are truly 'unalienable', how can their descendants be compensated in perpetuity?
6. How is landholding generally endowing the landowner with political power to influence government policy on land?

7. How can the Department synergise country experiences and develop more viable pro-poor land governance frameworks to tackle the institutional constraints on sustainable land administration and urban development?
8. What is known or what is unknown about the magnitude of economic losses resulting from not developing low-income housing in Restructuring Zones?
9. What do you anticipate will happen in the low-income housing market going forward?
10. What are the major causes of informal settlement emergence and which factors underpin the evolution and expansion of informal settlements in eThekweni municipality?
11. How can appropriate and affordable housing typologies that respond to the poor's lifestyles, the environment and the on-going transformation of the urbanised communities in eThekweni municipality be developed?
12. How well do current housing typologies suit the existing and emerging households?

5. Department of Engineering, eThekweni Municipality

1. How will local government budget for services be affected by the large and increasing burden to provide housing for the homeless?
2. What policy is there in the department on informal settlement?
3. Is the council doing the much it should for residents in these settlements?
4. Would one be justified to say that services by your department are only when its campaign times?
5. How does the community go about getting services from your department?
6. What are the main problems in these settlements according to you?
7. What method of upgrading would you recommend for these settlements?
8. Do these settlements have a future according to you?

6. Private property Development Firms in eThekweni Municipality

Land Valuation

1. What are the main factors that impact the value of land property?
2. What role do court rulings have in developing an indication of value of land property?
3. How, in particular, will upgrading informal settlements change residents' perceptions of the local property tax and their willingness to pay?
4. What do you anticipate will happen in the low-income housing market going forward?
5. Where should/could the municipality target or locate new low-income housing developments, particularly to give low-income households access to amenities?
6. Standards of settlement establishment could be revised to ensure new multi-family housing projects are affordable; what are the cost implications?
7. What incentives are most effective to encourage the delivery of affordable urban residential land?
8. What new or revised zoning incentives could the municipality use to encourage the delivery of affordable urban land?
9. What new or revised land tax incentives could the municipality use to encourage the delivery of affordable urban land?
10. What new or revised financial incentives could the municipality use to encourage the delivery of affordable urban land?

11. How can policymakers ensure there are enough affordable housing options available for all households, at all income levels?
12. How do policymakers encourage a variety of housing options in every neighbourhood throughout the City?
13. What steps can policymakers take to eliminate housing discrimination and ensure urban residential land is priced at a level that all households, at all income levels, can afford? What is missing from local/provincial/national law?
14. Many low-income households have difficulty finding adequate affordable housing, what can be done to change that?
15. Are there appropriate pricing options for urban land that address issues of affordability while allowing low-income households to live in their preferred neighbourhood?
16. At this point in time, how many low-income households are on the housing waiting list? What is the total monetary value of residential land needed to alleviate this backlog?

7. Estate Agency Firms in eThekweni Municipality

Land Valuation

1. What are the main factors that impact the value of land property?
2. What role do court rulings have in developing an indication of value of land property?
3. How, in particular, will upgrading informal settlements change residents' perceptions of the local property tax and their willingness to pay?
4. What do you anticipate will happen in the low-income housing market going forward?
5. Where should/could the municipality target or locate new low-income housing developments, particularly to give low-income households access to amenities?
6. Standards of settlement establishment could be revised to ensure new multi-family housing projects are affordable; what are the cost implications?
7. What incentives are most effective to encourage the delivery of affordable urban residential land?
8. What new or revised zoning incentives could the municipality use to encourage the delivery of affordable urban land?
9. What new or revised land tax incentives could the municipality use to encourage the delivery of affordable urban land?
10. What new or revised financial incentives could the municipality use to encourage the delivery of affordable urban land?
11. How can policymakers ensure there are enough affordable housing options available for all households, at all income levels?
12. How do policymakers encourage a variety of housing options in every neighbourhood throughout the City?
13. What steps can policymakers take to eliminate housing discrimination and ensure urban residential land is priced at a level that all households, at all income levels, can afford? What is missing from local/provincial/national law?
14. Many low-income households have difficulty finding adequate affordable housing, what can be done to change that?
15. Are there appropriate pricing options for urban land that address issues of affordability while allowing low-income households to live in their preferred neighbourhood?
16. At this point in time, how many low-income households are on the housing waiting list? What is the total monetary value of residential land needed to alleviate this backlog?

8. Wholesale Financial Lenders in eThekweni Municipality

1. Are subsidy mechanisms offering a flexible tenure system to allow people to move between different tenures as their financial circumstances permit? If not, why?
2. If there is no sustainable mortgage financing will informal money-lenders not use people's inability to repay loans to take possession of loan defaulter's houses and become multiple property owners.
3. What are the fiscal and other financial rules which affect urban land transactions?
4. How essential is it to increase the flexibility of the Housing Subsidy Scheme in order to meet ever more diverse housing needs and requirements?
5. Without a flexible Housing Subsidy Scheme, do you think many poor people will be trapped in deplorable housing conditions?
6. Are you facing financial constraints in mobilising financial resources for investment in low-income housing development? If yes, which ones?
7. Are you facing non-financial constraints in mobilising financial resources for investment in low-income housing development? If yes, which ones?
8. What financial institutional reforms need to be put in place to protect the rights of both lenders and borrowers to enhance access to credit?
9. Do you think the terms of borrowing bridging finance are favourable for low-income housing development?
10. Do you think that the cost of developing low-income housing within the current subsidy band is creating an affordability gap?

9. Retail Financial Lenders in eThekweni Municipality

1. What are the main factors that impact the value of land property?
2. What role do court rulings have in developing an indication of value of land property?
3. What do you anticipate will happen in the low-income housing market going forward?
4. What are the fiscal and other financial rules which affect urban land transactions?
5. In your opinion, is the Housing Subsidy Scheme the only way that poor people would ever be able to get formal access to urban land and housing?
6. If the urban poor are unable to access finance from banks because they cannot keep up with mortgage loan repayments, what is the bank doing to make finance available at affordable rates to the poor?
7. In your opinion, is housing finance available from banks for lower-income people, but that the poor are not aware of it or do not know how to access it? If yes, what are the terms of accessing this financial package?
8. How much money has been set aside for land mortgage loans?

10. Non-Governmental Organisations in eThekweni Municipality

1. How was your organisation formed?
2. How did your organisation become involved in informal settlement upgrading programmes?
3. How active is this organisation in this community?
4. What role do community organisations play in informal settlement upgrading programmes?
5. What method of upgrading would you recommend for these settlements?
6. How effective are public meetings in informal settlement upgrading programmes?

7. Is public participation in urban land management satisfactory? If yes, why?
8. In your opinion, how popular or unpopular are community organisations in informal settlements?
9. What limits community participation in urban land management related matters?
10. What would you term as the real problems facing the residents of informal settlements?
11. Many community organisations are accused of being too weak to engage effectively with the state or to mobilise local communities effectively in urban land related matters. What is your opinion?
12. As a community organisation involved in informal settlement upgrading programmes, how is the urban land market hindering access to urban land by the poor?
13. Experiences and perspectives of civil society call for non-market subsidised housing instead of a market-led approach to land and housing delivery. In your opinion, how can urban land markets be restructured to deliver affordable land to the poor?
14. What are the limiting factors for the households to realize their housing aspirations in the settlement?
15. As a stakeholder in the housing delivery system, what is your opinion on the land management system?

11. Registrar of Deeds, KwaZulu-Natal Province

Land Transfers and Registration

1. Land registration might, in theory, be expected to help the urban poor confirm their claims to urban land, in practice has land registration not often served to redistribute land resources towards the wealthier and better informed?
2. Can provisions be made which explicitly address the need to level the playing field between poorer and better-off groups in relation to registering claims over land?
3. What lessons can be learnt from pro-poor land administration in Ethiopia, Ghana, and Mozambique to inform policy and practice for future interventions in the registration of urban land rights in South Africa?
4. What political and legislative framework governs the actions of the actors involved in land registration? How is accountability to a broad constituency assured?
5. How well do the different organisations involved in land registration coordinate their activities?
6. How do formal processes of rights registration interact with informal processes for securing rights?
7. What are the principal determinants and constraints that the urban poor face when accessing formal sources of credit? Can land titling lift up some of these impediments and improve credit access for its beneficiaries?
8. Can land titling programmes generate an externality effect on housing investments and land values by increasing the spatial coverage of land rights formalisation?
9. How do legal documents affect housing tenure security and land related investments? Is land titling required to enhance low-income housing development in South Africa?
10. Has urban land registration improved land market efficiency by lowering transfer costs and facilitating land transfers?
11. Has urban land registration contributed to an inequitable distribution of land resources? Has it promoted or arrested problems of land concentration or landlessness? Has it strengthened, protected, or adversely altered the distribution of urban land rights in urban areas?
12. Under what conditions, if any, has urban land registration enhanced tenure security and stimulated higher low-income housing investment and development?

13. Are land disputes or insecure land rights creating high transfer costs?

Land Tenure and Tenure Security

1. What will happen to the historic land rights claims of weaker groups in society who were previously disadvantaged by land expropriations that occurred during colonial and apartheid eras?
2. How are land rights of more disadvantaged groups changing in peri-urban contexts where competition for high value land is intense?
3. What is the role of property rights in shaping the relationship between land distribution, low-income housing development, and economic growth?
4. To what extent do the urban poor in South Africa with different tenure arrangements enjoy tenure security, particularly in the context of post-1994 land reforms?
5. In view of the levels of tenure security these different tenure arrangements provide, what are the socio-economic benefits of current approaches to attaining tenure security, particularly those in which land registration plays a pivotal role?
6. On the basis of these findings, what policy suggestions can be made to enhance tenure security of the urban poor?
7. Who loses and who benefits from promoting security of tenure in informal settlements?
8. How do the perceptions of informal settlement dwellers on tenure security translate into investment in housing improvement?
9. Does the average dweller actually aspire to legalisation of tenure, and if so, what is expected?
10. Why is it so difficult to establish 'modern' property rights in sub-Saharan Africa?
11. In the context of informal tenure, do informal dwellers often invade urban land knowing that the probability of a forced eviction is very low, in particular when a settlement is relatively consolidated?
12. Have programmes to increase security of tenure reduced urban land disputes and decreased the probability of losing urban land rights without fair and adequate compensation?
13. Does enhanced tenure security raise the value of land or bid price of the buyer? Does it increase the asking price of the seller?
14. How are urban land rights distributed among and within households under the de facto tenure system, how are these distributions affecting tenure security, and for whom?
15. Has urban land registration increased or decreased security of tenure in cases where the state has intervened, and for whom?
16. What kind of management structures and processes are best suited to proper implementation of integrated land administration systems?
17. What kind of local leadership and decision-making structures best allow for downward accountability to local people in the management of customary land claims?
18. What rules and systems may best protect the land rights of the most powerless members of a community? How best to address intra-community discrimination, and protect the land rights of women and other vulnerable groups in the face of discriminatory customary practices?
19. What is the most appropriate role for state officials when land rights are managed locally and according to custom? How best to leverage the technical and administrative powers, skills, and capacities of the state?
20. How best to facilitate the merging and streamlining of customary and formal justice systems?
21. How best to address emerging markets within the context of customary land administration and management systems? How best to formalize land transactions so as to ensure fairness and provide a measure of security?
22. How to address power imbalances during land transactions and benefits negotiations between communities and outside investors?

23. What considerations should inform the process of drafting legislation that harmonises customary and statutory law?

12. Surveyor-General, KwaZulu-Natal Province

Surveying and Mapping

1. How would you conduct a Mortgage Loan Inspection on a land parcel that is informally occupied?
2. What arrangements can be possibly made to ensure that a bank can obtain title insurance on the property (informally occupied) it holds a mortgage on?
3. How useful is a review of the current deed and an on-site inspection of the land parcel to show the bank where the improvements are with respect to the 'apparent' boundaries of the property when conducting an informal settlement upgrade?
4. Deed Analysis involves researching the chain of ownership back in time until the deed which created record boundaries, dimensions, and a better description of the parcel is found. When doing Deed Analysis do you also go further back to look at communal ownership of the land parcel?
5. If so, why is it that urban land is not being expropriated at scale and ownership transferred back to the native African it was expropriated from?
6. Have boundary surveys been conducted on informally occupied urban land? If yes, was the survey trying to map the property boundaries of the informal dwellings or the land parcel informally occupied?

13. Utility Companies in eThekweni Municipality

Access to Utility Services

1. What policy does your organisation have on taking services to informal settlements?
2. The city planning department requires that no services should be taken to informal areas. So what is your organisation doing about illegal use of your services by informal residents?
3. How does the policy of no services before planning and regularisation affect your activities in these settlements?
4. What is your driving force considering the requirement of no services to informal settlements?
5. How do you gain access to your clients in these areas where public purpose spaces are not defined?
6. How do you protect your way leaves?
7. In which ways do you think your work of taking services to residential areas would be made easier?
8. Who do you blame for the sprawl of informal settlements in eThekweni municipality?
9. What relationship is there between your organisation and other service giving bodies involved in informal settlements?
10. In your opinion what do you think is the best method of upgrading the settlements?
11. What is your organisation's future plan in these settlements?
12. As service and infrastructure providers how do you plan for increased demand?

14. Property Valuation Consulting Firms in eThekweni Municipality

Land Valuation

1. What are the main factors that impact the value of urban land?
2. What role do legal judgements have in developing an indication of value of urban land?
3. How, in particular, will upgrading informal settlements change residents' perceptions of the local property tax and their willingness to pay?
4. What do you anticipate will happen in the low-income housing market going forward?
5. What influence do valuers and land valuations have on the workings of the land and housing property investment market in South Africa?
6. Is the common assumption that land valuation processes are independent of the urban land market a correct interpretation? If no, how do valuers and valuations themselves influence the operation of the market and invalidate the pricing mechanism of land resources, which depend upon the presumption of independence.
7. In your opinion, does land valuation have perceived influence over market operations or are instead an integral part of it?
8. Valuers are perceived to influence land and property market activity and prices. How accurate and independent are land valuations in setting land market activities and prices?
9. Studies have found that a significant minority of valuers were prepared to revise valuation estimates upwards at the request of clients. How has the client-valuer relationship influenced urban land prices for housing?
10. How do procedures and precedents of a statutory and regulatory nature affect land valuations?
11. What are the fiscal and other financial rules which affect urban land transactions?
12. Where should/could the municipality target or locate new low-income housing developments, particularly to give low-income households access to amenities?
13. Standards of settlement establishment could be revised to ensure new multi-family housing projects are affordable; what are the cost implications?
14. What incentives are most effective to encourage the delivery of affordable urban residential land?
15. What new or revised zoning incentives could the municipality use to encourage the delivery of affordable urban land?
16. What new or revised land tax incentives could the municipality use to encourage the delivery of affordable urban land?
17. What new or revised financial incentives could the municipality use to encourage the delivery of affordable urban land?
18. How can policymakers ensure there are enough affordable housing options available for all households, at all income levels?
19. How do policymakers encourage a variety of housing options in every neighbourhood throughout the City?
20. What steps can policymakers take to eliminate housing discrimination and ensure urban residential land is priced at a level that all households, at all income levels, can afford? What is missing from local/provincial/national law?
21. Many low-income households have difficulty finding adequate affordable housing, what can be done to change that?
22. Are there appropriate pricing options for urban land that address issues of affordability while allowing low-income households to live in their preferred neighbourhood?
23. At this point in time, how many low-income households are on the housing waiting list? What is the total monetary value of residential land needed to alleviate this backlog?

15. Owners of Urban Land Occupied by Informal Settlements, eThekweni Municipality

Land Valuation

1. What is the actual gross monthly income being generated from rental or use of the property by third parties?
2. If the property were leased, state the anticipated gross monthly income?
3. Is any person or entity occupying any portion of the property at a reduced rate? If yes explain why.
4. Is any person or entity managing the property?
5. What are the terms of the management agreement?
6. Have any other alternatives been considered as to the disposition of the property (i.e. refinancing, capital infusion, stipulation with lender)?
7. Have you made any attempts to sell the property?
8. Where should/could the municipality target or locate new low-income housing developments, particularly to give low-income households access to amenities?
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