Sustainable subsidy housing provision: A planning approach

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Dissertation submitted in fulfilment of the requirements for the degree *Magister Artium et Scientiae* in Urban and Regional Planning at the Potchefstroom Campus of the North-West University

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May 2014

ACKNOWLEDGEMENTS

"Wat ek is, is net genade. Wat ek het, is net geleen" Koos du Plessis

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The following people deserve special mention for their involvement in this project:

- The Lord ~ Philippians 4:13 ~
- Dr. Cilliers for her mentoring, assistance and guidance throughout the past few years
- The various professionals who provided their time and inputs to add depth to the study
- Pieter 'Valk-oog' de Jager for his technical inputs
- My parents (old and new) for their love and support
- and Bennie, for everything, every day. 143.

ABSTRACT

South Africa is plagued with a staggering housing backlog (estimated at approximately 2.1 million units at present) due, in part, to the poor planning principles advocated by the Apartheid regime. Concerted efforts were made by the newly elected government since 1994 to provide houses for the urban poor who were previously disadvantaged. As such, a subsidised housing scheme in South Africa was introduced as a method to provide adequate housing to citizens who could not afford to do so themselves. However, despite the construction of approximately 3 million dwellings over the past 19 years, the backlog today is larger than the initial backlog experienced in 1994.

Two questions were therefore raised in this research:

1) Whether the current approach to subsidised housing provision is sustainable, given the socio-economic conditions present in South African cities and

2) Which planning principles could be applied with regards to subsidised housing in order to ensure the development of sustainable human settlements.

In order to address these issues, research regarding sustainable human settlements, and the South African context in terms of housing provision, was done in the form of a literature review and empirical study.

The literature reviewed shed light on (a) urban models, (b) the elements of sustainable human settlements, (c) policies and legislation relating to subsidised housing provision in South Africa and (d) the criticisms against the South African policies and the current method of subsidised housing provision in South Africa.

Information gained during the literature review phase was used to compile a set of criteria by which housing provision for the urban poor could be evaluated. This evaluation took the form of an empirical study which consisted of structured questionnaires and interviews, and a comparative analysis of international and local pilot studies. The following subsidised housing projects were scrutinised to establish best practices that may be applied to the South African context:

- Bairro Carioca and Taroni Condiminiums in Rio de Janeiro, Brazil,
- Haram City in October 6 City, Egypt,
- Cosmo City, South Africa,
- Community Residential Units in Potchefstroom, South Africa, and

- Reconstruction and Development Program Units in Potchefstroom, South Africa.

Through the critical evaluation of the above mentioned projects, it became clear that the typical South African method of subsidised housing provision, in which beneficiaries receive a loose standing dwelling house on a single erf, is in fact unsustainable, and that this approach is not facilitating the formation of sustainable human settlements.

Alternative methods of housing delivery that can be implemented in the South African context were identified and led to the formulation of planning related recommendations in terms of sustainable subsidised housing provision, focussing on (1) increased densities, (2) improved location and (3) providing a range of household types. Mention was also made of non-planning related recommendations such as (4) alternative services delivery, (5) including different forms of tenure and (6) increasing financial responsibility.

Key words:

- Subsidised housing provision
- Low-cost housing development
- RDP housing
- Sustainable human settlements

OPSOMMING

Suid Afrika gaan gebuk onder ‘n geweldige behuisings agterstand (tans ongeveer 2.1 miljoen eenhede). Hierdie agterstand word gedeeltelik toegeskryf aan swak beplanningsbeginsels wat ingestel is gedurende die Apartheids era. Met die aanstelling van die nuwe regering in 1994 is aktiewe besluite geneem om huise te voorsien aan voorheen benadeelde inwoners. As sulks, is ‘n gesubsidieerde behuising skema in Suid Afrika geloods as ‘n metode om voldoende behuising te voorsien aan burgers wat nie self behuising kan bekostig nie. Die behuising agterstand is egter groter vandag as die aanvanklike agterstand in 1994, ten spyte van die voorsiening van 3 miljoen wooneenhede deur die staat oor die laaste 19 jaar.

Die navorsing stel dus twee vrae:

1) Of die huidige aanslag tot gesubsidieërde behuising voorsiening volhoubaar is, gegewe die sosio-ekonomiese toestande in Suid Afrikaanse stede, en

2) Watter beplannings beginsels geïmplimenteer kan word met betrekking tot gesubsidieërde behuising om die ontwikkeling van volhoubare nedersettings te verseker.

Om die kwessie aan te spreek is navorsing oor volhoubare nedersettings en die Suid Afrikaanse konteks in terme van behuising voorsiening gedoen in die vorm van ‘n literatuur studie en empiriese navorsing.

Die literatuur wat bestudeer is het lig gewerp op (a) stedelike modelle, (b) die elemente van volhoubare nedersettings, (c) beleide en wetgewing rakende subsidie behuising voorsiening in Suid Afrika en (d) kritiek rakende die beleide en die huidige metode van subsidie behuising voorsiening in Suid Afrika.

Inligting wat verkry is uit die literatuur studie is gebruik om ‘n stel kriteria saam te stel waarteen behuising voorsiening vir voorheen benadeeldes geevalueer kon word. Die evaluasie is gedoen deur middel van empiriese navorsing wat bestaan het uit gestruktureerde vraagbriewe en onderhoude, en ‘n vergelykende analise van internasionale en plaaslike projekte. Die volgende gesubsidieërde behuisingsprojekte is ontleed om die beste gebruike te identifiseer wat op die Suid Afrikaanse konteks toegepas kan word:

- Bairro Carioca en Taroni Condiminiums in Rio de Janeiro, Brasilië,
- Haram City in October 6 City, Egipte,
- Cosmo City, Suid Afrika,

- Community Residential Units in Potchefstroom, Suid Afrika, en
- Reconstruction and Development Program Units in Potchefstroom, Suid Afrika.

Deur kritiese evaluering van die bogenoemde projekte het dit duidelik geword dat die tipiese Suid Afrikaanse manier van gesubsidieërde behuising voorsiening, waar begunstigdes ‘n losstaande wooneenheid op ‘n enkel erf ontvang, onvolhoubaar is, en dat die aanslag nie bydra tot die skepping van volhoubare nedersettings nie.

Alternatiewe metodes in terme van behuising voorsiening wat in Suid Afrika geïmplimenteer kan word is identifiseer en het gelei tot die formulering van beplannings verwante voorstelle wat fokus op (1) hoër digthede, (2) verbeterde ligging en (3) die voorsiening van ‘n verskeidend behuising tipes. Melding is ook gemaak van nie-beplannings verwante voorstelle soos (4) alternatiewe dienste voorsiening, (5) verskeidenheid eiendomsreg en (6) groter finansiële verantwoordelikhede.

Kern woorde:

- Gesubsidieërde behuising voorsiening
- Lae-koste behuising ontwikkeling
- RDP behuising
- Volhoubare nedersettings

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TABLE OF ACRONYMS

Table 1: Table of Acronyms

ANC	African National Congress
BNG	Breaking New Ground
BRL	Brazil Real
CBD	Central Business District
CRU	Community Residential Units
IDP	Integrated Development Plan
IRDP	Integrated Residential Development Programme
LM	Local Municipality
MCMV	Minha Casa Minha Vida (My House, My Life)
MEC	Member of Executive Committee
NDoH	National Department of Housing
NEMA	National Environmental Management Act
NHSS	National Housing Subsidy Scheme
NTNSP	New Towns and New Settlements Policy
OHC	Orascom Housing Communities
RDP	Reconstruction and Development Program
RSA	Republic of South Africa

CHAPTER 1: INTRODUCTION

1.1 POINTS OF DEPARTURE AND PROBLEM STATEMENT

"While it is government's duty to provide houses to the destitute,
this policy is unsustainable in the future"
Former Human Settlements Minister Tokyo Sexwale

Source: Moodley (2013:23).

When the African National Congress (ANC) was elected in South Africa in 1994, as the new government, it had unique challenges to overcome with regards to spatial segregation and racial integration. The previous Apartheid system had left a legacy of fragmented urban environments, with racial groups being separated by planning laws such as the Group Areas Act. Furthermore, socio-economic conditions of the majority of the population were dire, with poor service delivery, poverty, overcrowding and an increasing amount of squatter settlements present (Napier, 2005:3). It stands to reason that one of the primary objectives put in place by the government was to address the inequalities of the past. One method employed by the state in this regard was the implementation of subsidised housing for previously disadvantaged citizens.

It is estimated that the urban housing backlog in 1994 was approximately 1.5 million units (Napier, 2005:3). The state undertook to build a minimum of 1 million units (Tissington, 2010:33) in the following five years for qualifying beneficiaries, as a means of poverty alleviation. Today, despite impressive housing delivery in numerical terms (Hassen as quoted by Napier, 2005:3), the housing backlog is estimated at 2.1 million units, with an estimated 10 million beneficiaries on the waiting list (Moodley, 2013:23).

From these figures it can be concluded that the supply side of subsidised housing is struggling to keep up with the demand in the country. The question can therefore be asked if the current approach to subsidised housing is effective and sustainable.

Although subsidised housing provision is essentially a political issue, the implementation thereof is closely related to the planning field. As such, planners are responsible to ensure that planning principles are implemented that promote sustainable human settlements that are well integrated and vibrant. Political and socio-economic issues at the root of subsidised housing, as discussed in Chapter 4, merit further investigation by specialists in the respective fields.

1.2 AIMS AND OBJECTIVES OF THIS STUDY

The primary objective of this study is to evaluate the current housing provision and subsidy housing programs in South Africa, in order to make recommendations regarding planning principles that can be applied for sustainable subsidy housing provision for the urban poor. These recommendations are based on knowledge gained from an in depth literature study, the investigation of various pilot studies and interviews and questionnaires with relevant planning professionals.

1.2.1 PRIMARY RESEARCH QUESTION

For this study the main research questions to address are: 'Given the socio-economic conditions in urban areas in South Africa, is the current approach to subsidy housing provision sustainable? And if not, which planning principles can be applied to improve the sustainability of subsidised housing in South Africa.'

The following assumptions were made prior to the commencement of this research:

- That the current method of subsidised housing provision in South Africa is unsustainable.
- That subsidised housing projects in South Africa do not necessarily form sustainable human settlements.
- That the fragmented spatial structure of the Apartheid era remains in South African cities.
- That proper planning principles can be applied to improve the sustainability of subsidised housing provision in South Africa.

The research questions and above mentioned assumptions were researched using quantitative (literature review) and qualitative (empirical study) methods.

1.2.2 PRIMARY RESEARCH OBJECTIVES

- Evaluating the spatial patterns of South Africa with regards to the location of the urban poor.
- Examining the current policies and legislation put in place to regulate subsidy housing programs in South Africa, especially the criteria and shortcomings of these regulations.
- Evaluating the current approach to subsidy housing in Tlokwe Local Municipality and establishing whether this approach addresses the current housing need in a sustainable manner.
- Researching sustainable solutions to low cost housing, both locally and abroad.

- Suggesting planning principles that will encourage sustainable subsidised housing provision in the future.

1.3 BASIC HYPOTHESIS

The current situation regarding subsidised housing provision in South Africa is unsustainable, and can be improved by implementing certain planning principles to create sustainable human settlements for the urban poor.

1.4 METHODOLOGY

As can be seen in Figure 1 below, the research methodology comprised of two sections – a literature review and empirical research. From the knowledge gained in these two sections conclusions and recommendations could be made with regards to sustainable subsidy housing provision.

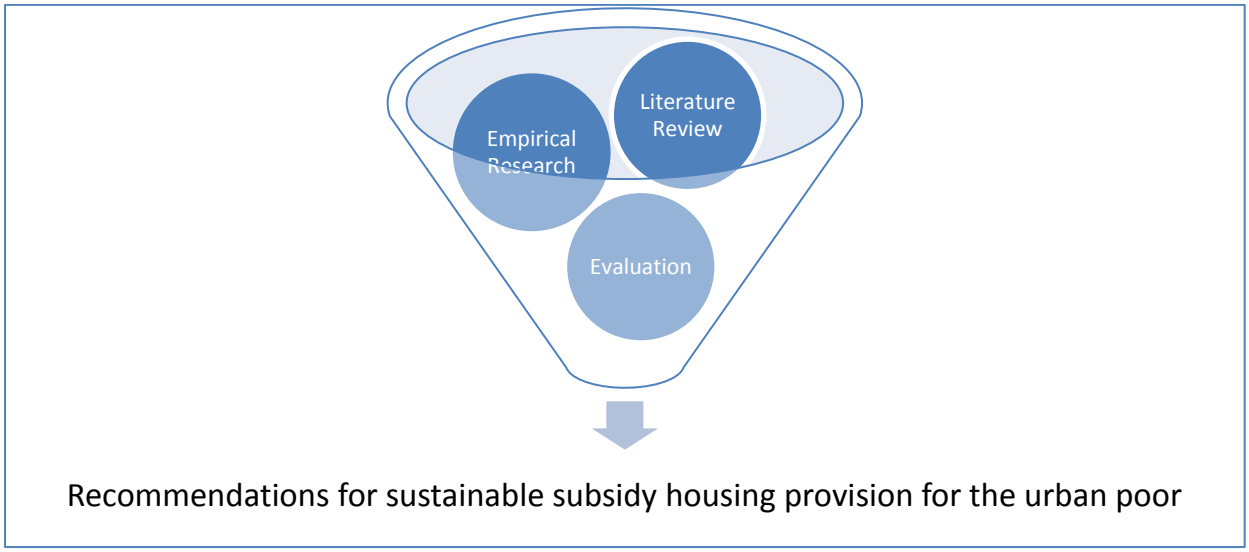

Figure 1: Methodology of Study

Source: Own creation (2013).

1.4.1 LITERATURE REVIEW

An array of literature was duly scrutinised in order to gain insight into the spatial patterns inherent in South African cities, the legislation behind subsidised housing and the criticisms of the current housing system.

Several articles and planning related documents were studied to comprehend the spatial legacy of Apartheid, and the structure of South African towns, especially with regards to the location of the urban poor. Research with regards to the elements of sustainable human settlements was also conducted by studying the work of both South African and international authors.

The context surrounding subsidised housing in South Africa was established through the discussion of relevant policies and the current subsidy systems. These policies shed light on the process of subsidised housing delivery, and allowed for the evaluation of the system currently in place.

1.4.2 EMPIRICAL RESEARCH

Empirical research conducted focussed both locally and abroad and consisted of interviews, questionnaires and the evaluation of international legislation and various pilot studies.

Perceptions towards the subsidy system were gained from relevant professionals, both in the private and public sector, through the distribution of structured questionnaires. Specific information regarding subsidy projects in Potchefstroom was gained through an interview with the Head Town Planner at Tlokwe City Council Local Municipality, Mr Bernhard Bautsch. Pilot studies pertaining to subsidised housing schemes, both locally and abroad, were evaluated in order to ascertain best practices that can be adopted and applied to the South African context. Projects that were examined include:

- Bairro Carioca and Taroni Condiminiums in Rio de Janeiro, Brazil,
- Haram City in October 6 City, Egypt,
- Cosmo City, South Africa,
- Community Residential Units in Potchefstroom, South Africa, and
- Reconstruction and Development Program Units in Potchefstroom, South Africa.

These projects were chosen based on their relevance to this study, as all projects are located in developing countries, with large housing backlogs, similar to South Africa. The international studies illustrated effective alternative options to subsidised housing provision whereas the South African study offered an interesting perspective on best practices applied locally.

1.5 DELINEATION OF THE STUDY AREA

The study focuses on the implementation of the subsidised housing scheme that was introduced in South Africa in 1994. Specific attention was paid to the implementation of these projects in the Potchefstroom area, and the sustainability of these projects. Other pilot studies and projects, both local and international, were also discussed in search of best practices and viable housing strategies for the urban poor. Although Potchefstroom is used as an example in the study, the proposed recommendations are applicable throughout South Africa.

1.6 STRUCTURE OF THE DISSERTATION

The structure of the following chapters is divided as illustrated in Figure 2:

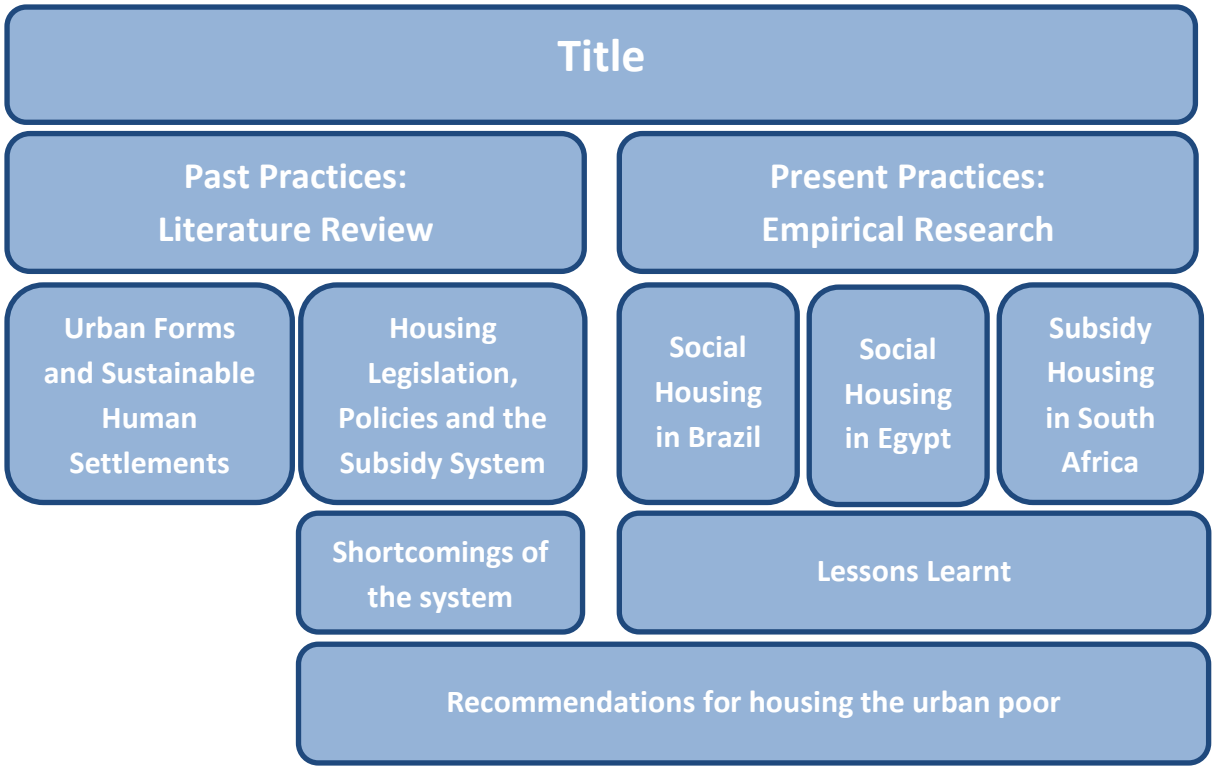

Figure 2: Structure of the Dissertation

Source: Own creation (2013).

1.7 DEFINITIONS

The following definitions captured in Table 2 are important in context of this research.

Table 2: Definitions pertaining to the study

Affordable Housing	"That which is adequate in quality and location and does not cost so much that it prohibits its occupants meeting other basic living costs, or threatens their enjoyment of basic human rights" (UN-Habitat, 2011:9).
Basic Services	"The provision of potable water, adequate sanitary facilities and domestic energy supply" (South Africa, 1994:22).
Density	"Maximum number dwelling units per nett hectare" (Town Council of Potchefstroom, 1980:52).
Formal Housing	"Is recognised by the nature of its building materials, engineering services, site definition, identifiable location and compliance with planning and building regulations" (Charlton, 2010:4).
Greenfields Development	"The creation of planned communities on previously undeveloped land. This land may be rural, agricultural or unused areas on the outskirts of urban areas" (Panse, 2013).
Housing Subsidy (South Africa)	"A grant by government to qualifying beneficiaries for housing purposes. The subsidy is either paid to a seller of a house or, in new developments; the subsidy is used to finance the construction of a house that complies with the ministerial minimum norms and standards. The house is then transferred to the qualifying beneficiary" (van Niekerk, 2013).
Informal Settlements	"[An] area of unplanned and unapproved informal settlement of predominantly indigent or poor persons with poor or non-existent infrastructure or sanitation" (Patel, 2013:271).
Medium Density Mixed Housing	"Housing that has a minimum of 50 dwelling units per hectare (du/ha) and a maximum of 125 du/ha" (Poulsen & Silverman, 2005:5).
Sustainable Development	"Development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (World

	Commission of Environment and Development, 1987;43).
Sustainable Human Settlements	"Well-managed entities in which economic growth and social development are in balance with the carrying capacity of the natural systems on which they depend for their existence and result in sustainable development, wealth creation, poverty alleviation and equity" (Department of Human Settlements, 2009b:23).

Source: Own creation (2013) based on above mentioned sources.

1.8 LIMITATIONS TO RESEARCH

Subsidised housing provision in South Africa is an extremely complex, and sensitive, issue. The system is rooted in a strong political agenda and involves more than just the final top structures provided to beneficiaries.

The system has provoked a wide spectrum of comments, discussed in further detail throughout the study. Subsidised housing is viewed by many as a method of poverty alleviation in South Africa by empowering the urban poor through means of home ownership. Others criticise the system extensively for maladministration and corruption and claim that home ownership is not necessarily related to improved economic status.

This study, however, is not focussed on the socio-economic and political elements of subsidised housing. Although these aspects are briefly discussed where applicable, the focus of the study is based on a town planning perspective. The study does not assume to have answers to deep rooted socio-economic problems caused by decades of political interference. Instead, the study aims only to illustrate the problems associated with subsidised housing (which merit further investigation by other specialists in their field) and address those of a spatial nature.

SECTION A: LITERATURE REVIEW

CHAPTER 2: URBAN MODELS AND SUSTAINABLE HUMAN SETTLEMENTS

2.1 INTRODUCTION

This chapter focuses on two key issues; different urban models and the elements of sustainable human settlements. In order to ultimately scrutinise subsidy housing projects it is important to understand the general layout of the urban environment, in particular the location of the urban poor within a town/city, and the elements that add to the development of sustainable human settlements.

The chapter will provide a brief overview of four urban models, including the Apartheid City Model which is the most relevant model to the South African context, to investigate the formation of urban centres and the relationship between different land uses.

Furthermore, the chapter will investigate the different components of sustainable human settlements, to establish criteria by which current subsidy housing projects can be measured. The figure below provides a brief overview of the sections to follow:

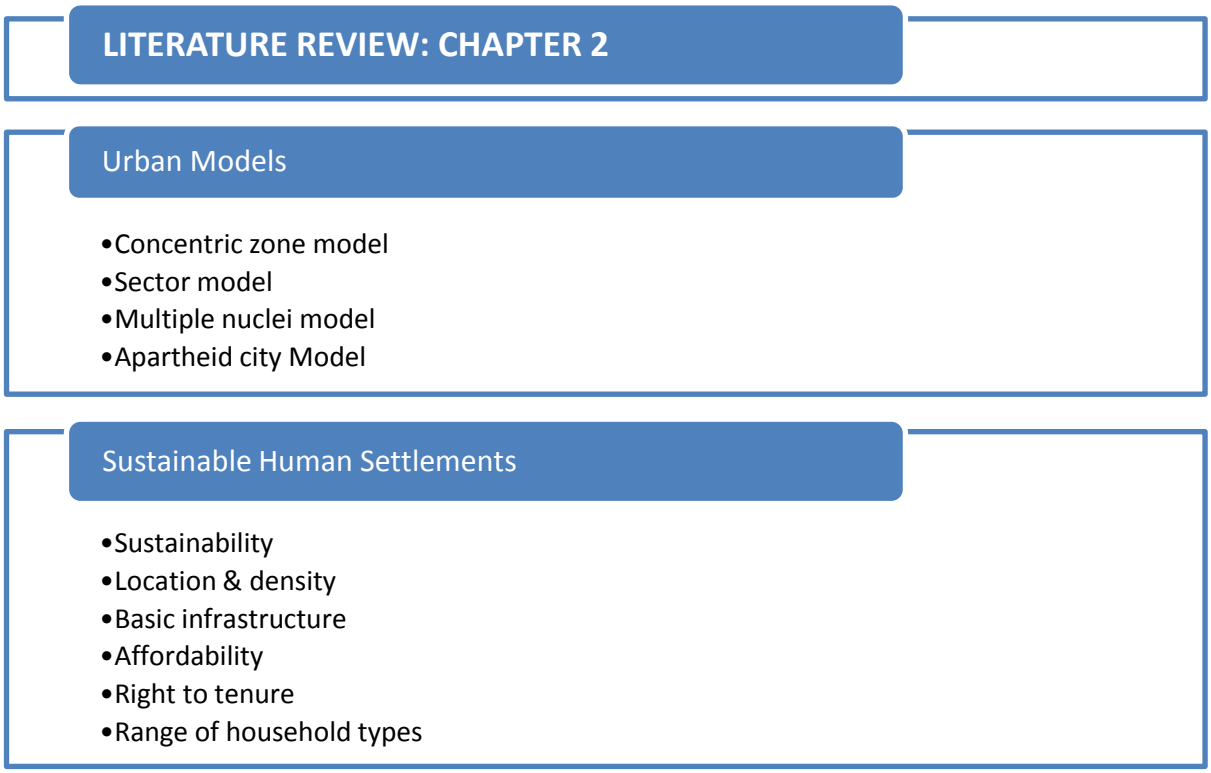

Figure 3: Overview of Chapter 2

Source: Own creation (2013).

2.2 URBAN MODELS

Over the years, several theories and models have been developed indicating urban patterns of land uses and the spatial relationships between these functional zones. Internationally, the three most accepted models are the Concentric Zone Model, the Sector Model and the Multiple Nuclei Model (Pekelharing, 2005:12). Due to the unique spatial history of South Africa, and the implementation of the Group Areas Act in the 1950's and 1960's, however, a distinctive model was formulated depicting South African cities: the Apartheid City Model.

These models are briefly discussed below in order to shed some light on urban patterns and especially the location of different neighbourhoods within the urban structure. In order to address sustainable subsidy housing provision, it is crucial to understand the urban form and urban models.

2.2.1 CONCENTRIC ZONE MODEL

The Concentric Zone Model was developed in the 1920's by E.W. Burgess (Pekelharing, 2005:12), following his observations in Chicago, USA. The theory simplifies urban structure into the following 6 land uses: downtown, factory zone, zone of transition, working class zone, residential zone and commuter zone. These different land uses are depicted as six concentric circles, the centre of which is downtown (or the central business district (CBD), as illustrated below):

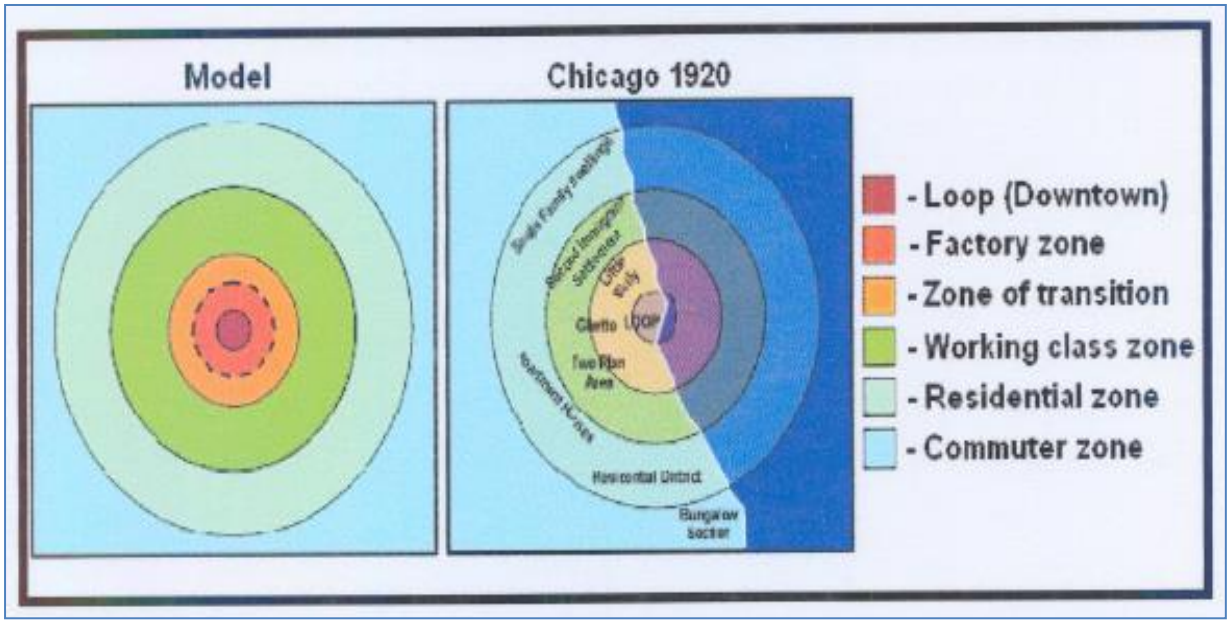

Figure 4: The Concentric Zone Model

Source: Rodrigue (1988)

In essence, the model suggests that "within the city, people competed for limited space" (Daniel & Hopkinson, 1991:119) with the affluent being able to secure the most desirable locations for their homes. As the urban poor were unable to afford the costs of commuting, they were forced to locate in less desirable residential areas, creating a situation where the wealthy lived on the periphery of town and lower income groups near the city centre. Burgess argued that "as the city grows in size the inner rings in every case will grow outwards and replace the next outer rings" (Evarson & Fitzgerald, 1972:31). This mechanism is described as invasion and succession and results due to push and pull factors, such as business expansion in the CBD and the attraction of suburbia for family life, respectively (Johnston, 1971:68).

The Concentric Zone Model has been widely criticised as an idealistic model that is restricted to a certain time and place in history and not universally applicable. Van der Merwe (1991:141) and Daniel & Hopkinson (1991:124-125) summarises the main critique of the model as follows:

- The focus is only on ground floor functions, without taking into consideration different functions on different floors of multi-level buildings.
- Boundaries between the different zones are precise and abrupt and do not make provision for gradual transition.
- Zones are portrayed as homogenous ecological areas.
- The distribution of industry is largely ignored in the model.
- Distortion factors such as topography, technological improvements and human nature can easily interfere with the distribution of zones in the model.

2.2.2 SECTOR MODEL

The Sector Model, developed by H. Hoyt in the 1930's, can be seen as an extension of the Concentric Zone Model. Hoyt focused his research on residential rent patterns in 64 American cities and concluded that "different types of residential areas produced by various factors (including chance) around the centre of a growing city will migrate outwards along transport arteries in wedges" (Evarson & Fitzgerald, 1972:34). These wedges represent the following land uses: central business district, bulk retail and light industries, low-income housing, medium income housing and high income housing, as can be seen in his graphical representation of the model below:

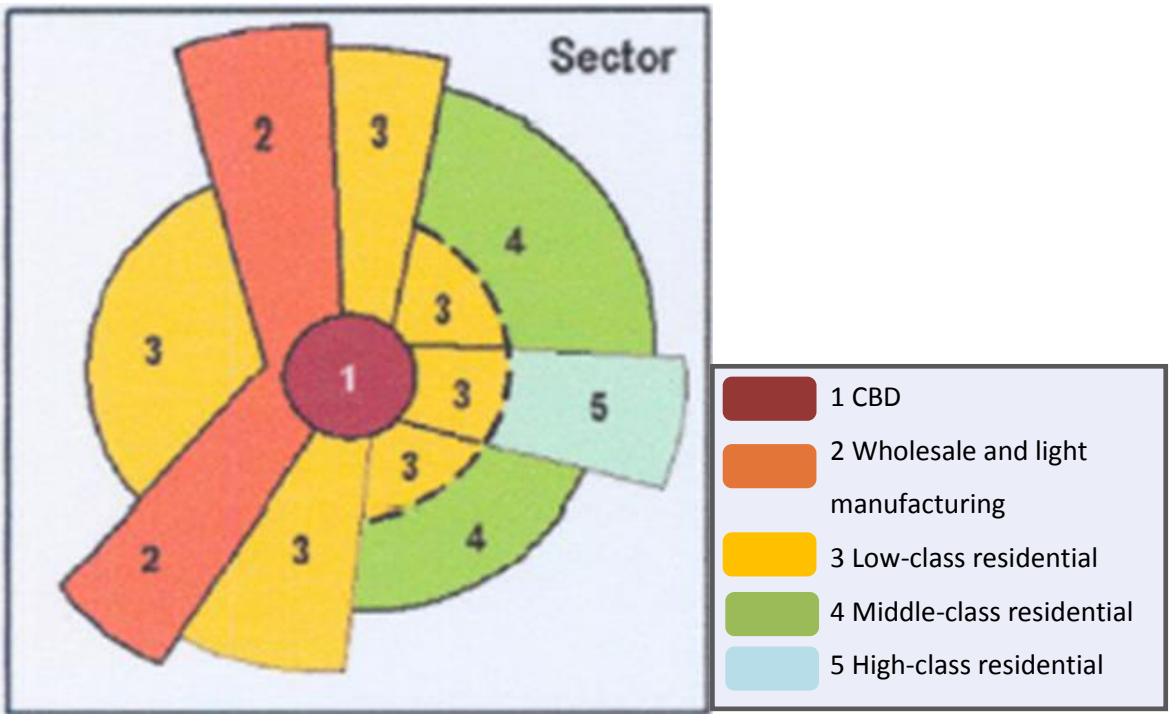

Figure 5: The Sector Model

Source: Carter (1995).

Hoyt further argued that higher income residential areas were not confined to an outer circle, as suggested by Burgess, but prominent towards "(a) high ground and open spaces; (b) existing outlying smaller settlements; (c) the homes of influential leaders within the community" (Daniel & Hopkinson, 1991:129). Through detailed mapping of several American cities' suburban patterns Hoyt deduced "that in few cities did the highest rental areas occupy more than 25 percent of the periphery" (Johnston, 1971:83).

The main criticism of the Sector Model is that it places too large an emphasis on housing and rent (van der Merwe, 1991:141). However, the model also includes other land uses, such as industry, and makes provision for the impact of improved transport systems, which has made it more realistic in application than the Concentric Zone Model.

2.2.3 MULTIPLE NUCLEI MODEL

Where the previous models both place the central business district at the core of urban development, C.D. Harris and E.L. Ullmann argued "that a number of quite separate nuclei, in addition to the central point of the city, can exist as growth points round which the city can develop" (Evarson & Fitzgerald, 1972:36). The model proposed the following land uses: central business district, wholesale light manufacturing, low class residential, medium class residential, high class,

heavy manufacturing, outlying business district, residential suburb and industrial suburb, as seen below:

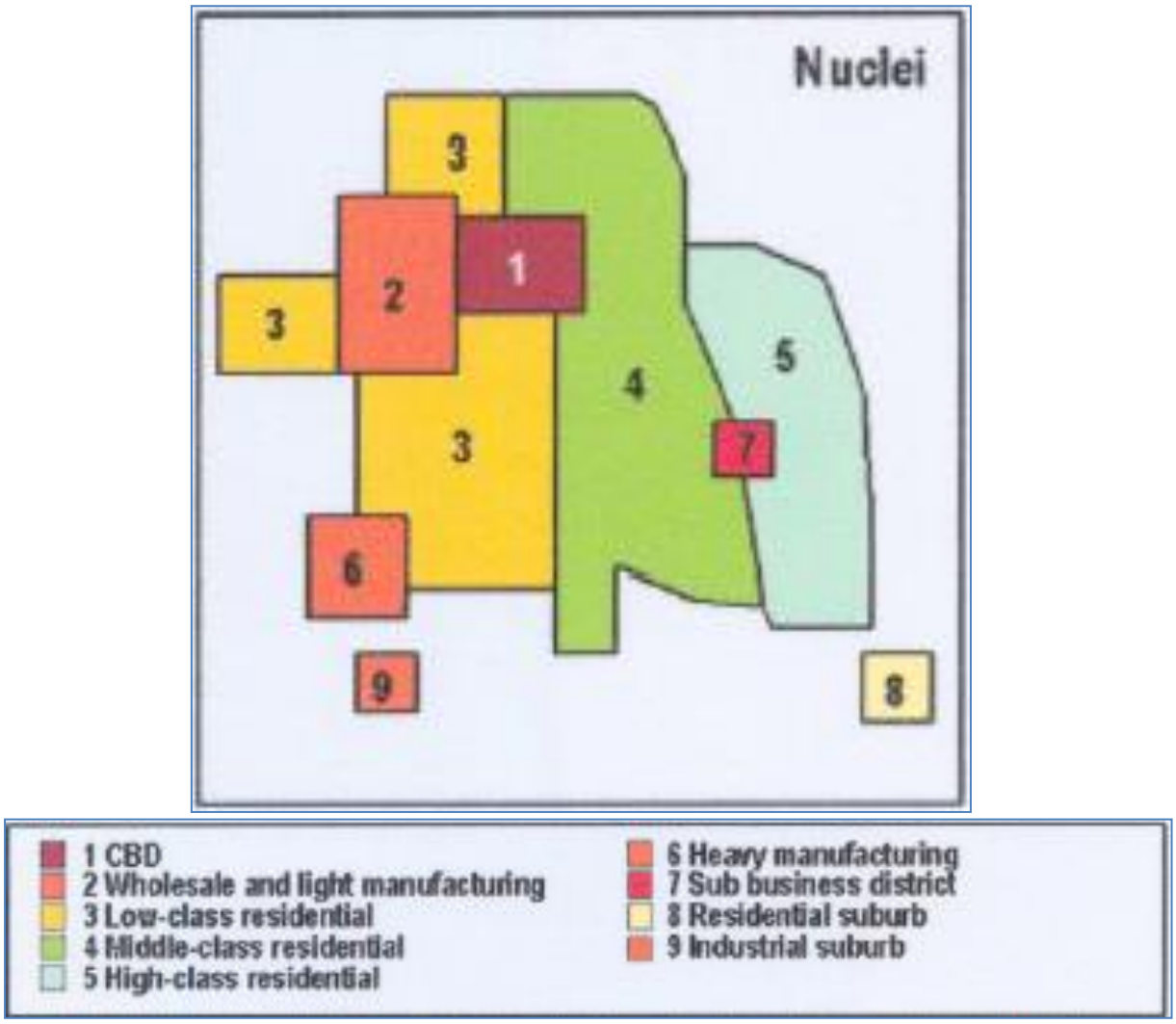

Figure 6: The Multiple Nuclei Model

Source: Carter (1995).

Although the CBD remains a central feature within the model, Harris and Ullmann identified the following four factors which led to the creation of separate nuclei (Daniel & Hopkinson, 1991:133):

1. Certain activities have specialised requirements.
2. Certain activities tend to group together.
3. Certain activities are repulsed by other activities.
4. Various activities have different rent paying capabilities.

Each nucleus forms the centre of a decentralised land use, with a hierarchy between the different nuclei. The amount and nature of nuclei are determined by the size of the city – with larger cities including a variety of specialised nuclei (van der Merwe, 1991:142).

The Multiple Nuclei Model is considered the most realistic of the urban models discussed, as it emphasises the uniqueness of cities, and the need for a pragmatic approach regarding land use zones (Johnston, 1971:96). Despite this, the three models are often seen as complementary to one another, in that each builds on the previous model. It must be noted that "because of their purely descriptive character, none offers much help in predicting behaviour not yet observed" (Muth, 1971:5).

2.2.4 APARTHEID CITY MODEL

"Apartheid policies of racial segregation have left a daunting legacy - a fragmented urban form with unequal access to jobs, amenities and public services. The legacy has not disappeared in the aftermath of apartheid because of the durability of the built form, the power of vested interests, persistent income inequalities between races and lack of upward mobility. The dispersed built environment demands long journeys, raises carbon emissions, reduces city productivity, and undermines the financial ability of municipalities because of the high servicing costs."

(Turok, 2012:26).

As previously mentioned, South Africa inherited a unique city structure. Where the above mentioned models were influenced by economic and transport factors, South African cities were regulated by strict rules under the Group Areas Act. In short, cities developed during apartheid were known for "racially segregated suburbs, buffer zones separating suburbs, mono-functional land use, a dispersed city, characterised through low density urban sprawl [and] racially divided urban growth patterns" (Donaldson, 2001:1).

The Group Areas Act legalised the separation of different races by confining specific race groups to specific urban areas. These areas were then usually separated by buffer-zones and vacant pieces of land to further enhance the segregation. The object of these fragmented layouts was to limit racial interaction and integration and to ensure that the superior pieces of land were reserved for white citizens (Spinks, 2001:16).

Blacks were therefore not allowed to own property and were forced to settle in townships located far away from city centres, created primarily to house black labourers. National laws prohibited businesses and industries from establishing in these townships, which created a serious lack of

revenue and related infrastructure such as schools and urban services. A racial and economic divide was created, and enforced, as blacks were forced to spend their incomes in white areas (Kihato, 2013:4).

The model below was proposed by R. J. Davies in 1981, and clearly indicates the racial segregation prominent at the time:

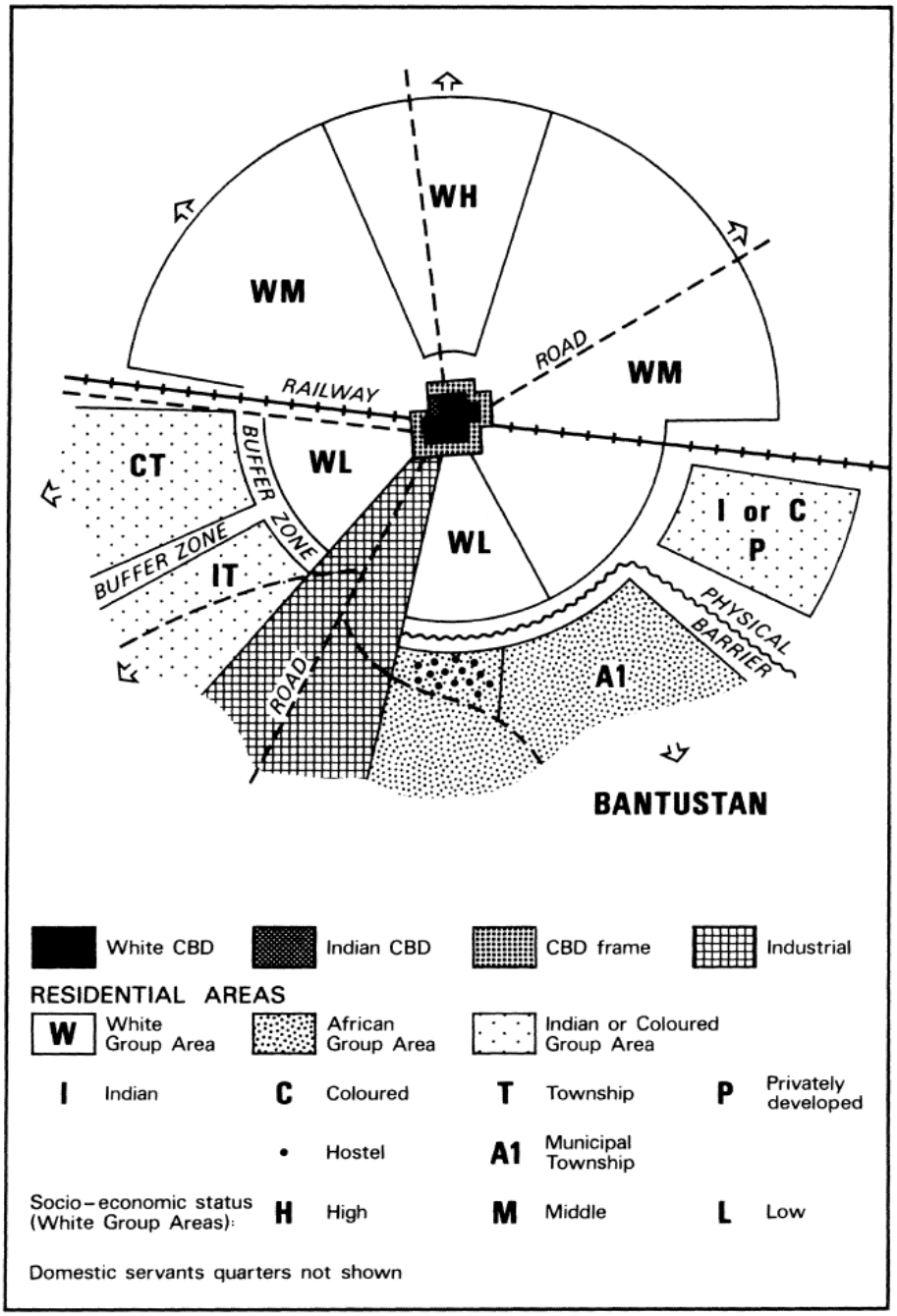

Figure 7: The original Apartheid City Model

Source: Simon (1989:192).

As can clearly be seen above "whites were allocated large central areas, and blacks displaced to distant urban periphery townships" (Spinks, 2001:16) during this timeframe. This in turn led to a "spatially segregated, highly fragmented and dispersed urban society" (Donaldson, 2001:1). This spatial pattern contradicts the observations of Burgess, that outlying areas are usually occupied by higher income groups, and enforces the impact legal intervention had on the distribution of different racial groups in South Africa.

Unfortunately, this stringent racial segregation would prove to be difficult to counteract. Smith (2003:29) notes that the spatial pattern enforced during apartheid was still evident in the 1990s, despite the repeal of group areas legislation, and that these patterns would remain in the years to follow. The President of South Africa, Mr Jacob Zuma, as quoted by Moodley (2013:23) confirmed these spatial discrepancies in his 2013 State of the Nation address by stating: "apartheid-spatial patterns still persist in our towns and cities."

Dewar (2010:210) notes the following reasons why segregation continued even after the repeal of the Group Areas Act:

- Existing households had invested time and money into making their lives comfortable at these remote locations and were hesitant to uproot their lives.
- Political decision makers were mainly white (until the 1994 elections) and therefore had little interest in pursuing change.
- Land prices were considerably cheaper on the periphery of settlements.

Burgoyne (2008:12) notes the following effects of the apartheid city, which had to be addressed by the newly elected democratic government in 1994:

- Dire housing and service backlogs,
- Inequalities in municipal expenditure
- Spatial anomalies
- High unemployment
- Many poverty stricken households

Many of these issues still burden South Africa today. With regards to this study the most relevant are the housing backlog and spatial anomalies created by past planning practices.

Academics (Franklin, 2011:12, Khan & Thurman, 2001:18 and Burgoyne, 2008;44) argue that segregation remains, albeit in an altered state. Where races were previously forcibly segregated, certain social classes remain disenfranchised due to their economic inability to change their

circumstances (Todes, 2003:111). Many previously disadvantaged individuals do not have the means to relocate to better equipped areas (in terms of location, infrastructure provision and safety) and are therefore forced to remain in townships on the periphery of cities.

It will become evident in the following pages that the location of housing has a vital effect on the social well-being and prosperity of a community. Special attention should be given to these issues through planning, especially where the urban poor is concerned, as they are not necessarily in a position to improve their own situation. As planning professionals, it is important to always aim for the creation of sustainable human settlements, that stretch to the benefit of all citizens and not only an elitist minority. The theoretical knowledge of past practices is therefore crucial to ensure that future planning does not repeat mistakes. Through thorough understanding of urban models used in the past, planners can identify aspects that aid sustainable development and incorporate these aspects in future planning. The following sections will investigate the components of sustainable human settlements and planning measures that can be introduced to promote these components.

2.3 SUSTAINABLE HUMAN SETTLEMENTS

It is evident from the discussion of the apartheid city above that planning principles and practices often outlive individuals and have a defining effect on a society. It is therefore critical that the sustainable development of human settlements be kept in mind when formulating policies and planning future projects in this regard.

Girardet (2004:419) defines a sustainable city as 'a city that works so that all its citizens are able to meet their own needs without endangering the well-being of the natural world or the living conditions of other people, now or in the future'. However, as previously discussed, certain socio-economic groups cannot necessarily meet their own needs and therefore rely on the government to help in this regard.

'Housing is a major factor determining the life and welfare of the urban poor' (Healy et al, 1988:123) and has therefore been emphasised as a basic need by the government. One of the methods in which the government helps the disenfranchised is through the subsidy housing scheme, discussed in more detail in the following chapter. The scheme aims to deliver subsidised housing to the urban poor, and is the focus of this study. Therefore, when discussing the issue of sustainability it is important to investigate the adequacy and sustainability of these subsidised housing projects.

Adequate housing is not an easily defined concept. Instead, it is "the sum of a number of considerations" Pottie (2003:433). The factors highlighted by Pottie (illustrated in Figure 8) are discussed in more detail in the following pages, to determine the extent to which they impact on housing provision for the urban poor.

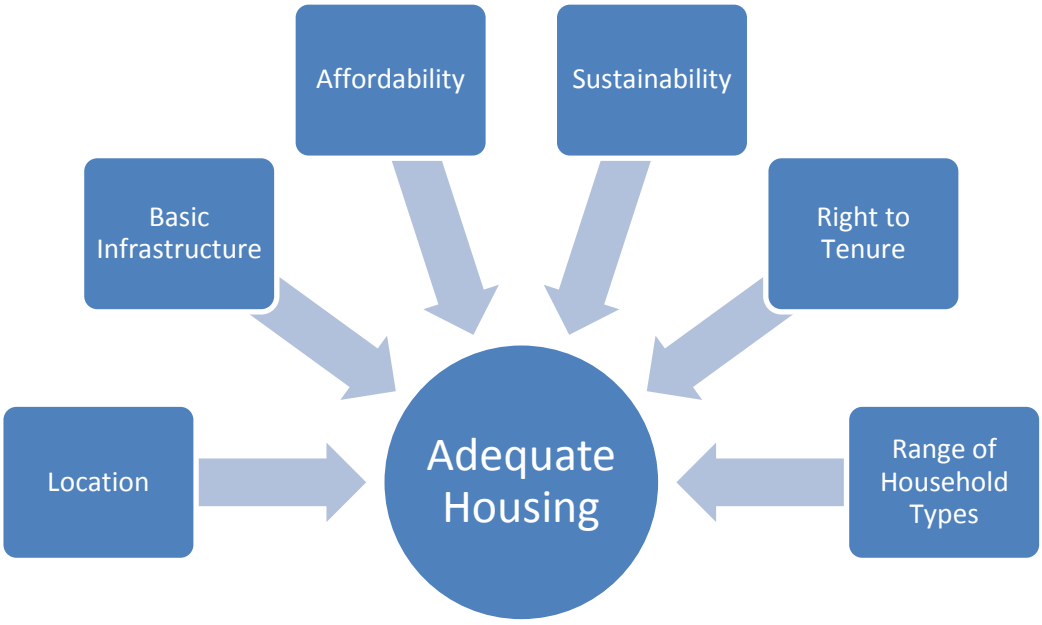

Figure 8: Factors influencing adequate housing provision

Source: Own creation based on Pottie (2003:433).

2.3.1 SUSTAINABILITY

Sustainability is a multi-faceted issue. It is widely accepted that sustainability involves meeting current needs in a way that will not affect future generations' ability to meet their needs. With regards to development there are usually three broad components of needs (illustrated below in Figure 9). Sustainable development can therefore be seen as development (be it environmental, economic or social) which does not detrimentally influence one of the other categories; a middle ground, as such.

According to Olotuah and Bobadoye (2009:59) sustainable housing can be defined as "the gradual, continual and replicable process of meeting the housing needs of the populace, the vast majority of who are poor and are incapable of providing adequately for themselves."

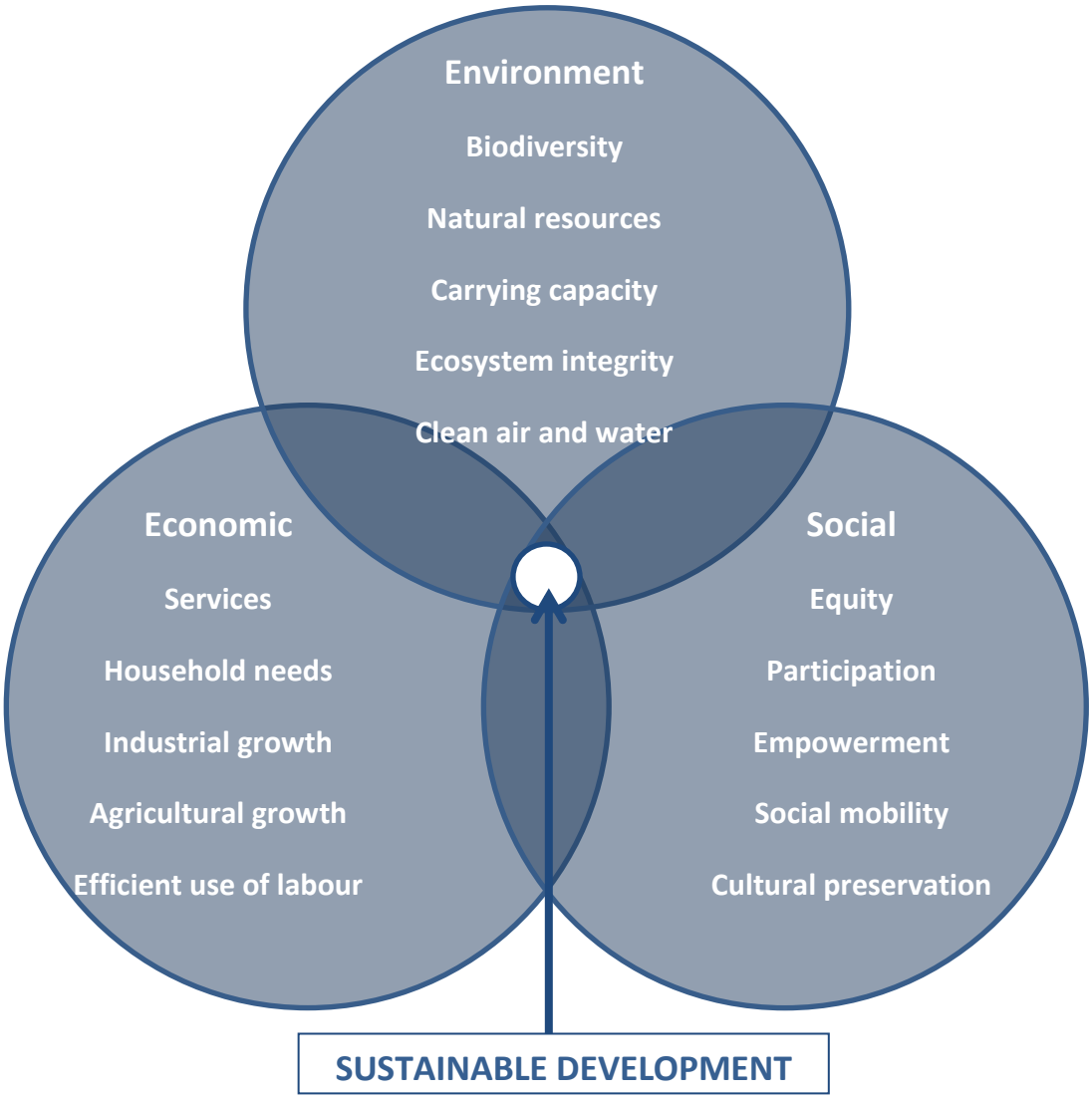

Figure 9: Components of sustainable development

Source: Own creation based on Ajayi & Haruna (2012:3).

The provision of housing can be viewed as both an economic and social component, addressing socio-economic issues such as labour provision and adequate shelter. If measured by the concepts of sustainability then, housing can only be viewed as sustainable if it will continue to last, without negatively influencing the environment, in which it is placed. Therefore, certain environmental factors need to be taken into account when discussing sustainable subsidised housing.

Ooi (2005:125) notes the tendency of "squatter housing developments to be located in ecologically fragile or highly vulnerable sites" if left unchecked by authorities. This type of development is not only harmful to the environment, but could also pose serious risks in terms of health and safety to

residents in the area. The residents of these areas tend to be the disadvantaged of society, who often suffer from poverty and illness, and spend substantial amounts of their time at home, increasing their need for healthy living environments (Leuta *et al*, 2012:26).

It is the responsibility of government to protect its citizens, especially those who are incapable of protecting themselves and are uninformed of possible dangers surrounding them. Illegal squatting in environmentally sensitive areas is often as a result of ignorance on the part of the people.

The enforcement of policies aimed at sustainable developments (e.g. National Environmental Management Act (NEMA) regulations) should therefore receive strict attention from local authorities with regards to subsidised housing provision to ensure the longevity of projects. The aim of providing subsidised housing is not a short term objective, but a long term goal to improve the quality of life of beneficiaries and create viable, sustainable human settlements. It is therefore of critical importance that long term planning principles are kept in mind when implementing subsidised housing projects.

2.3.2 LOCATION & DENSITY

As previously discussed, black townships tend to form on the outskirts of most South African cities due to the legacy of apartheid planning. This spatial pattern has traditionally been linked to low density housing provision, which has become the accepted norm in both squatter camps and subsidised housing projects. However, these low densities "make it theoretically impossible for our cities to accommodate the increasing population" (Kok & Gelderblom 1994:113).

If the current housing backlog is to be met through low density housing provision, large supplies of land will have to be used. Beavon (2001:239) argues that "the only available land in large supply for the low-cost housing needed by millions of Black people will be found in the vicinity of existing townships." By continuing to use these outlying areas to house the urban poor, however, the existing framework of segregation is only amplified. Donaldson (2001:6) states that "an aerial view of these developments resembles the apartheid architecture and spatial configuration of townships at its worst."

Several constraints exist with regards to housing provision on well-located land. Khan (2003:230) identifies the following factors:

- "Limited availability of 'developing land'
- Higher land costs in well-located areas

- Competition with environmental interests for land
- Land claims
- Confusion about ownership status of public land
- Tedious and convoluted land registration protocols and procedures
- Institutional fragmentation
- Weak administrative capacity"

Despite these constraints however, government should do its' best to ensure that housing is provided in areas that are suitable from a social, economic and environmental viewpoint. Strelitz (1993:477) identifies eight zones "that are essentially identifiable geographic areas of the cities which offer particular sets of opportunities for the delivery of low-income housing".

These zones are:

1. Inner city areas
2. Existing low density suburbs
3. Transitional areas
4. Strategic public or private land holdings
5. Symbolic group-areas land
6. Existing 'spontaneous settlements'
7. Existing black townships and
8. The urban periphery.

For the purpose of this study, inner city areas and existing 'spontaneous settlements' are regarded as the most relevant options for subsidised housing in South Africa, as they are generally well located in terms of economic opportunities and provide opportunities for socio-economic integration. As such they are briefly discussed below.

2.3.2.1 INNER-CITY AREAS

All four urban models discussed previously indicate an inner city area, or central business district which is found at the core of cities. 'Traditionally, CBDs are interpreted as multifunctional areas incorporating commercial, retail, cultural and residential components' (Hoogendoorn *et al*, 2008: 160).

Characteristically these areas include high rise buildings, and subsequently the highest occupancy densities found in urban areas. According to van der Merwe (1991:151) the CBD also serves as the

most important source of employment in the city. The co-location of the urban poor with employment opportunities therefore seems to be an expected solution.

Although inner city areas are limited in terms of physical expansion opportunities, they often contain existing infrastructure including vacant and/or under-utilised buildings which can be renovated and converted for residential purposes (Strelitz, 1993:479). Tibbalds (1992:79) argues that "in many instances, upgrading the existing built environment is the more sensible option and the better value for money."

As the provision of bulk services to outlying areas is often the most expensive part of housing projects, the use of existing infrastructure, where present, could act as a viable solution in some instances and even add to urban regeneration of inner city areas. The use of existing inner city areas also counteracts urban sprawl, creating more compact and denser cities. As discussed below densification is of great significance in urban sustainability as it encourages the optimal usage of infrastructure, decreases traveling distances and makes public transport more viable.

2.3.2.2 EXISTING 'SPONTANEOUS SETTLEMENTS'

Informal settlements are not an uncommon sight in South Africa. Instead, these 'spontaneous settlements' are found across the country and provide shelter to vast numbers of the urban poor.

The Kwa-Zulu Natal Department of Human Settlements define informal settlements in the Kwa-Zulu Natal Elimination and Prevention of Re-emergence of Slums Bill of 2006 as follows: "[An] area of unplanned and unapproved informal settlement of predominantly indigent or poor persons with poor or non-existent infrastructure or sanitation" (Patel, 2013:271).

Informal settlements are a result of a gap in the housing market where the housing available is either too expensive for the urban poor, or the amount of affordable housing that is available is too little to satisfy the demand by the poor. The urban poor therefore "evade rules to produce outcomes that they need, but that are otherwise too regulated for them to reach" (Cross, 2006:5). This results in illegal squatting on un-serviced land and often the erection of sub-standard housing. In contrast, formal housing "is recognised by the nature of its building materials, engineering services, site definition, identifiable location and compliance with planning and building regulations" (Charlton, 2010:4).

Marx (2003:301) is of the opinion that the South African government should support existing informal settlements as a solution to the housing problem. A method of doing this is in-situ

upgrading of these areas in which stands are formalised and basic infrastructure is provided to residents.

Spontaneous settlements are often well located within a city, as the residents choose the location and are not placed there by the government. As such, these settlements are often close to employment opportunities and other facilities deemed important by the residents. However, several conditions need to be kept in mind when considering the formalisation of these areas. Ownership, environmental conditions and the provision of basic services need to be investigated to determine the practicality of these sites.

It is obvious from the two examples above that the location of housing projects is a defining factor in the quality of life created for residents. Well located housing projects (close to employment opportunities and social facilities) tend to create integrated communities where interaction is easily facilitated through proximity. However, housing located far from these opportunities can fragment a society by increasing traveling distances and costs.

As important as where land is located, is the optimal use of the land. The densification of residential areas can be as effective in reducing traveling distances and integrating communities and is becoming increasingly important due to an increasing need for housing, with a limited supply of suitable land.

Some of the proven benefits of higher residential densities include (Metroplan, 2005:2):

- Reduced demand for land, and subsequently reduced land costs
- Efficient provision and maintenance of infrastructure through shared services
- Efficient public transport and decreased traveling distances
- Improved economic performance due to increased accessibility (to both employment opportunities and the labour force)
- Decreased urban sprawl and sustainable urban development.

However, when increasing densities it is important to pay specific attention to the living environments being created, to ensure that quality of life is improved and that the privacy and dignity of residents are maintained. The following table represents certain advantages and disadvantages pertaining to both high- and low density developments:

Table 3: High vs. low density

HIGH DENSITY			
ADVANTAGES	Efficiency of infrastructure provision High revenue generation High access for customers Efficient land use Economies of scale Good access for employment	Infrastructure overload Environmental hazards Pollution Congestion	PROBLEMS
	Less pollution Quiet Low cost infrastructure options possible	Poor access to services Poor and expensive transportation Services expensive to provide and maintain Uses large amounts of land	
LOW DENSITY			

Source: Own creation based on Metroplan (2005:6).

As can be seen above, dense residential areas are renowned for efficiency; creating compact living areas with mixed land uses in close proximity to one another. Low densities are regarded as less sustainable as they require large pieces of land and are expensive to service. Optimal density is a subjective concept and will vary between countries and cultures. The following three methods can however be used to quantify density:

Table 4: Three measures of density

Type of Density	Building Density	Occupancy Density	Population Density
Measure of Density	Measures the number of units per hectare	Measures the number of people per unit	Measures the number of people per hectare
Comments	Most visible element of density and easiest to control in land use planning	Low income areas tend to have higher occupancy densities, irrespective of building densities.	Can differ dramatically from building density, depending on occupancy density. Should be used to calculate social facilities needed.

Source: Own creation based on Poulsen & Silverman (2005:5) and Metroplan (2005:12).

The practicality of increased densities in residential areas with regards to subsidised housing is investigated further in the pilot study section of this paper.

2.3.3 BASIC INFRASTRUCTURE

Access to basic infrastructure is a fundamental right of all citizens of South Africa as per the White Paper on Housing and subsequent Housing Act of 1997 (South Africa, 1994:22). Basic infrastructure includes potable water, adequate sanitary facilities and domestic energy supply.

Ooi (2005:124) argues that adequate provision of housing in developing countries can be measured by the provision of infrastructural services such as modern sanitation, piped drinking water and proper drainage. Provision of these services is often difficult due to the spatial pattern of most urban areas in South Africa. Haarhoff (1991:7) emphasises that low density development (which is typical of subsidised housing projects) is wasteful of land, but more importantly makes the provision of social services and public infrastructure increasingly difficult.

Ooi (2005:125-129) explains that the difficulty in providing these services to expanding residential areas on the periphery of a city, is the fact that existing neighbourhoods and other existing city sites also require the provision of services, and continuous maintenance and upgrades in this regard.

The optimal utilisation of existing infrastructure is therefore important with regards to the provision of subsidised housing, to reduce costs and ensure decent living conditions for beneficiaries.

2.3.4 AFFORDABILITY

Affordability is probably one of the main issues crippling the housing sector in South Africa. UN-Habitat (2011:9) defines affordable housing as "that which is adequate in quality and location and does not cost so much that it prohibits its occupants meeting other basic living costs or threatens their enjoyment of basic human rights."

Unfortunately, in South Africa a large portion of the nation is incapable of providing decent shelter for their families due to economic factors. This can be seen in the expected housing backlog of 2.1million units (SAPA, 2011). According to the National Development Commission (2011:271) only 15% of South African households have access to bond finance. As seen Figure 10 below an alarming 60% qualify for subsidised houses, whilst 25% of the nation falls into 'gap' market whereby they earn too much to qualify for a subsidy, but not enough to qualify for a bond (National Development Commission, 2011:271). Sixty per cent of the nations' citizens are therefore unable to afford their own property, and rely on the government for assistance.

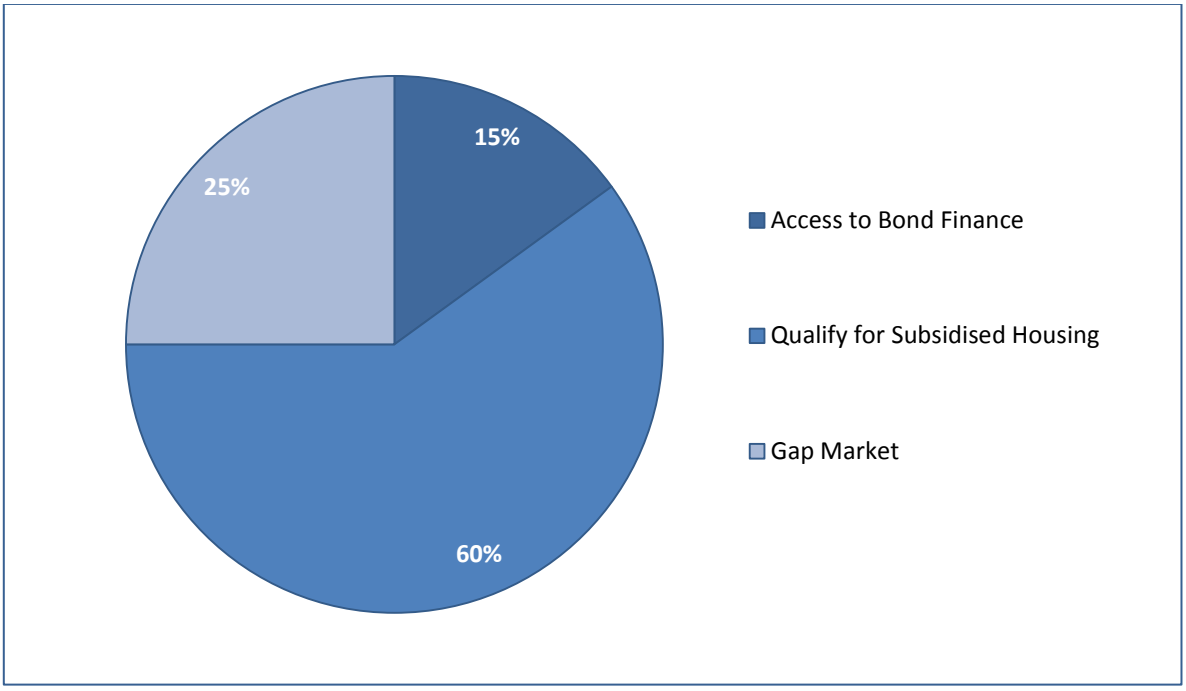

Figure 10: South African housing market

Source: Own Creation based on National Development Commission (2011:271).

According to Tomlinson (as cited by Kok & Gelderblom, 1994:108) "the issue for the poor is not one of access to housing – this costs too much – it is one of access to serviced land." Brown-Luthango (2010:124) agrees that access to affordable, well-located land is problematic for the urban poor and policy interventions are needed in terms of the urban land market to correct this problem.

The figure below indicates the various costs involved in financing a property, and may shed some light on why a large number of the population cannot afford formal housing. As is evident from the figure below, affordability of housing cannot simply be measured by the capital cost involved in purchasing the house. Running costs such as maintenance and rates also need to be kept in mind when considering affordability. These are all factors that do not apply to informal housing, and contribute to the inability of the urban poor to procure adequate housing themselves.

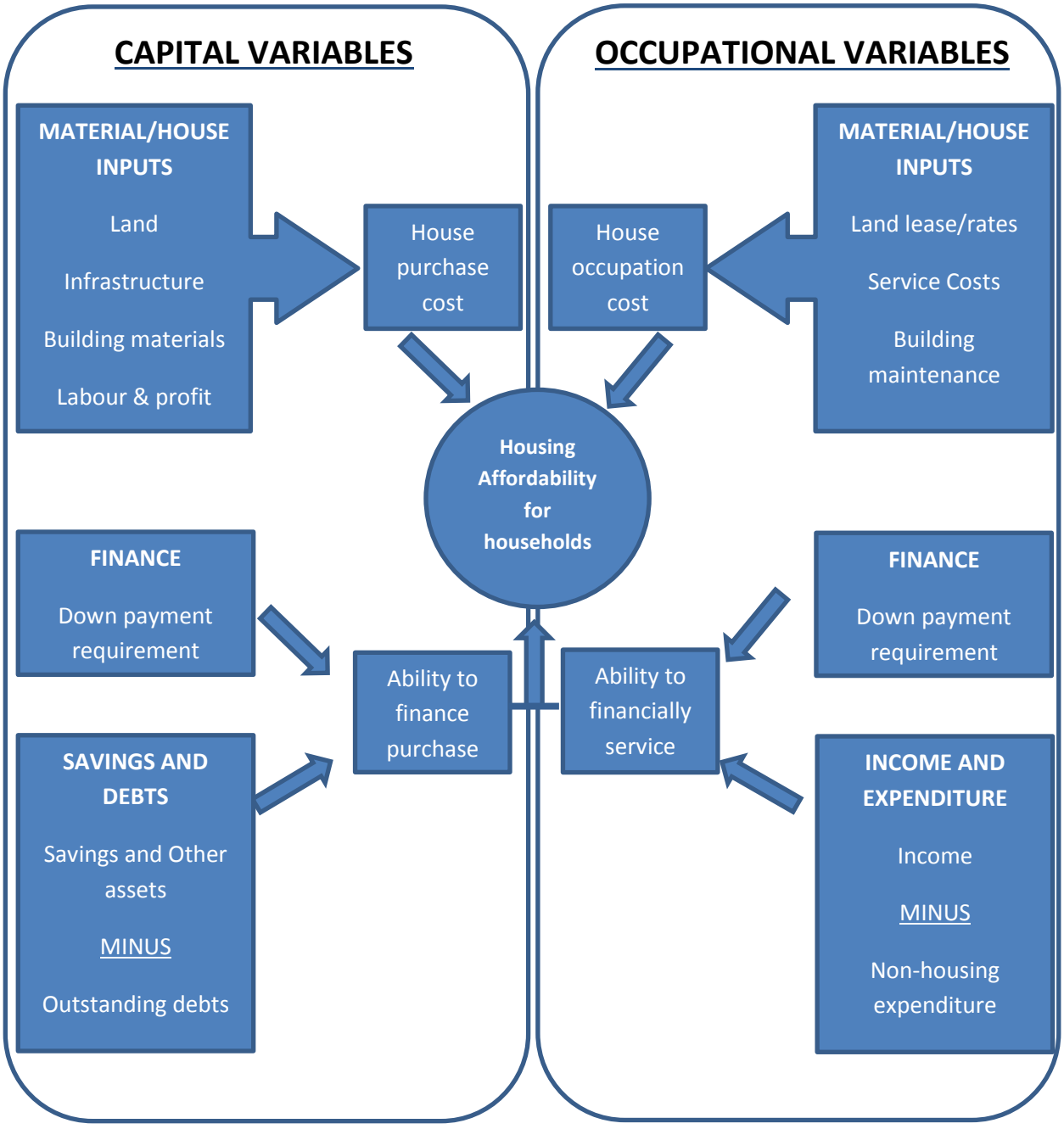

Figure 11: Basic components of housing affordability

Source: Own creation (2013).

Although beneficiaries of subsidised housing projects receive the above mentioned capital variables from the state, the occupational variables are not covered by the subsidy amount. Running costs of the house (such as maintenance and service bills) are therefore the responsibility of the beneficiary.

2.3.5 RIGHT TO TENURE

Tenure with regards to land can be described as ownership of a specific property. In South Africa, ownership of property is regulated by the national Registrar of Deeds (an independent unit within the National Department of Rural Development and Land Reform). Legal proof of ownership is provided in a registered title deed which, in effect, allows for the legal transfer of land.

For subsidised housing to be seen as an asset for recipients, the legal transfer of the property is vital. Being in possession of a title deed allows owners to use the property as security in financial transactions, and to legally sell the property in future. Legally owning a property (and subsequently the house on it) also allows the occupant to make additions/improvements to the structures (Shisaka Development Management Services, 2011:29) and to use the property to generate an income (e.g. establishing a guesthouse/tuck shop).

However, with regards to housing the urban poor, the most important benefit of secure tenure is freedom of eviction. Residents of informal settlements often occupy land illegally, and as such have little legal protection against forceful removal or relocation. Legally enforceable documentation regarding ownership is therefore vital to protect individuals' assets (Patel, 2013:272).

Secure tenure is not restricted to home ownership, but includes legal rental agreements. Statistics regarding the transfer of title in recent subsidy housing projects is discussed further in Chapter 4.

2.3.6 RANGE OF HOUSEHOLD TYPES

Access to decent housing for all citizens is a fundamental part of the South African Constitution. As such, the national government has implemented several pieces of legislation and subsidy housing projects (discussed further in Chapter 3) to aid the provision of housing, especially to the poor. However, Kok and Gelderblom (1994:99) argue that "the right to housing does not mean that the state is required to build and provide housing free of charge to the entire population".

Joseph (2012:1) argues that governments should place less emphasis on home ownership, and rather encourage the small scale rental markets that have become common in developing countries. Renting as opposed to home ownership carries several benefits.

Jammine (1961:68) explains the financial freedom that tenants experience with comparison to home owners. Owning a property carries the financial burden of rates and taxes, utilities and maintenace, that tenants (or illegal squatters) are not used to paying. In addition, interesting additional costs are incurred through home ownership. Research in a Cape Town low-income settlement showed that "homeownership brings pressure to exhibit 'proper living', for example purchasing furniture, electrical appliances and decorative ornaments that were not deemed necessary in informal settlements" (Lemanski, 2011:71). Therefore, the provision of rental housing, which can also provide adequate shelter for individuals who do not qualify for government assistance, appears to be a viable solution to improve variety with regards to household types.

However, ensuring a range of household types extends further than the mere issue of home ownership. As peoples' situations differ so too do their needs with regards to housing. Hindson (1968:27) argues that "alternatives to apartheid housing strategy and the shack strategy of orderly and positive urbanisation need not be confined to any one residential model, for example the single family units on small plots". Instead, he proposes a range of housing including more high rise buildings, and making use of central urban areas. According to Todes (2003:119) the need exists for housing policies and projects to "embrace the diversity of housing needs, which includes both large plots on the periphery, and access to cheap accommodation in central areas, among others."

In discussing the zones of opportunity for housing, Strelitz (1993:479) also lists a range of housing types appropriate for each zone. These housing delivery options are listed below, along with a description of each and the applicable zone of opportunity.

Table 5: Housing delivery options

Housing Delivery Option	Description	Applicable Zones of Opportunity
Attached housing	Two or more – usually single storied, formal housing units which are attached horizontally.	Inner-city areas Existing low-density suburbs Existing black townships The urban periphery Transitional areas Strategic public/private land Symbolic group-areas land
Multi-unit housing	Two or more units on the same property which may be attached either horizontally or vertically.	Inner-city areas Existing low-density suburbs

		Transitional areas Strategic public/private land Symbolic group-areas land
Converted housing	Converted existing non-residential buildings into residential units or existing residential structures into buildings with an increased intensity of residential use.	Inner-city areas Transitional areas
Detached housing	Formal detached houses constructed on individual plots in proclaimed residential areas.	Existing low-density suburbs Existing black townships The urban periphery Strategic public/private land Symbolic group-areas land
Densified properties	Legally sanctioned construction of additional dwelling units on existing established properties, or the legal sub-division of existing sites into two or more new sites.	Existing low-density suburbs
Site & service delivery	Separate residential sites developed on vacant land, offering security of tenure and a level of service ensuring basic health and safety to the occupants.	Existing black townships The urban periphery Strategic public/private land Symbolic group-areas land
In-situ site & service delivery	The provision of secure tenure and the installation of a level of service guaranteeing health and safety to existing informally housed populations and the improvement of housing structures and the environment (physical, social and economic)	Existing 'spontaneous settlements'

Source: Own creation based on Strelitz (1993:479).

Alternative housing options used locally and abroad will be investigated in Chapter 6 and 7 of this study.

2.4 CONCLUSION

From the information presented above it is evident that South African cities are characterised by a unique spatial pattern which resulted due to apartheid planning and the implementation of the Group Areas' Act in the 1950's. This fragmented spatial layout has created distinctive challenges with regards to housing provision and the improvement of equality across races and is a constant reminder of the importance of good planning principles in creating sustainable human settlements.

Furthermore, it is evident that the creation of sustainable human settlements encompasses a range of considerations. It can be summarised that housing provision for the urban poor should ideally:

- Be sustainable with regards to economic, social and environmental factors
- Be well located and accessible with high enough densities to support complementary amenities
- Be fully serviced with regards to water, sanitation and electricity
- Be affordable to all social and economic classes
- Include a range of household types, including rental units
- Provide secure tenure to home owners.

Several housing laws and policies have been passed in the past 18 years in an attempt to provide government funded housing that meets these criteria. These laws and acts are discussed in the following chapter to evaluate their success concerning the creation of sustainable human settlements.

CHAPTER 3: OVERVIEW OF HOUSING POLICIES AND LEGISLATION IN SOUTH AFRICA

3.1 INTRODUCTION

When the first free elections in South Africa were held in 1994 the country had already seen its fair share of inequality and suppression. The monumental task of building an equal nation, irrespective of race and culture, was left to the newly appointed African National Congress (ANC). One of the main priorities was improving the standard of living of residents who had been disadvantaged during the apartheid regime.

The promulgation of the Constitution of the Republic of South Africa Act, No. 108 of 1996, served to enhance this goal, by providing a list of human rights applicable to all citizens. One of the founding provisions of the act is Article 26 – the right to housing. According to the Act (South Africa, 1996):

"(1) Everyone has the right to have access to adequate housing.

(2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right."

Amendments to other existing policies and legislation were unavoidable. The table below illustrates the different phases South African housing legislature has underwent, and the key characteristics and policies of each period. Housing provision from 1992 can be classified into the following 5 broad categories:

- 1992 - 1994: Policy Formation
- 1994 - 2001: Private Sector developer driven delivery
- 2001 - 2004: Public Sector driven delivery
- 2004 - 2009: Delivering Human Settlements
- 2010+: Informal Settlement Upgrading.

Source: Shisaka Development Management Services (2011:22).

Table 6: Time line periods of policy trends impacting on the national subsidy programme

Period	Overview
1992 – 1994: Policy Formulation	This period commences with the National Housing Forum and ends with the launch of the Natioanl Subsidy Programme in 1994. The **key focus of this period is the formulation of South Africa's housing policy**.
1994 – 2001: Private sector developer driven delivery	This period commences with the implementation of the National Subsidy Programme in 1995 and ends with the termination of the use of conveyancers to pay out subsidies. The period is characterised by the **delivery of subsidised housing through private sector developers** who identified land and structured and implemented projects drawing down the subsidy through a process managed by conveyancers. Initially developers identified the beneficiaries themselves, towards the end of the period beneficiaries were allocated to the project from a waiting list managed by provinces and/or municipalities.
2001 – 2004: Public sector driven delivery	This period commences with the termination of the use of conveyancers to pay out subsidies and ends with the publishing of the Comprehensive Plan (Breaking New Ground). The period is characterised by the **delivery of subsidised housing through Provinces and Municipalities** who structured projects and appointed private sector developers and contractors to implement them. Increasingly, small scale builders were appointed to implement projects.
2004 – 2009: Delivering human settlements	This period commences with the publishing of the Comprehensive Plan (BNG) and ends with the adoption of the Revised Housing Code. This period is characterised by a **focus on sustainable human settlements**. This came to be interpreted as the implementation of "Mega-projects" of which subsidy housing was one component. The issue of the need to upgrade informal settlements was identified during this period.
2010+: Informal Settlement Upgrading	This period commences with the adoption of the Revised Housing Code. Government policy begins to **focus on upgrading of informal settlements** as the key mechanism to address the housing backlog.

Source: Shisaka Development Management Services (2011:22).

This chapter serves to highlight and evaluate some of the key policy changes relating to the housing sector over the past 19 years in South Africa. The figure below outlines the different policies to be discussed as part of this research:

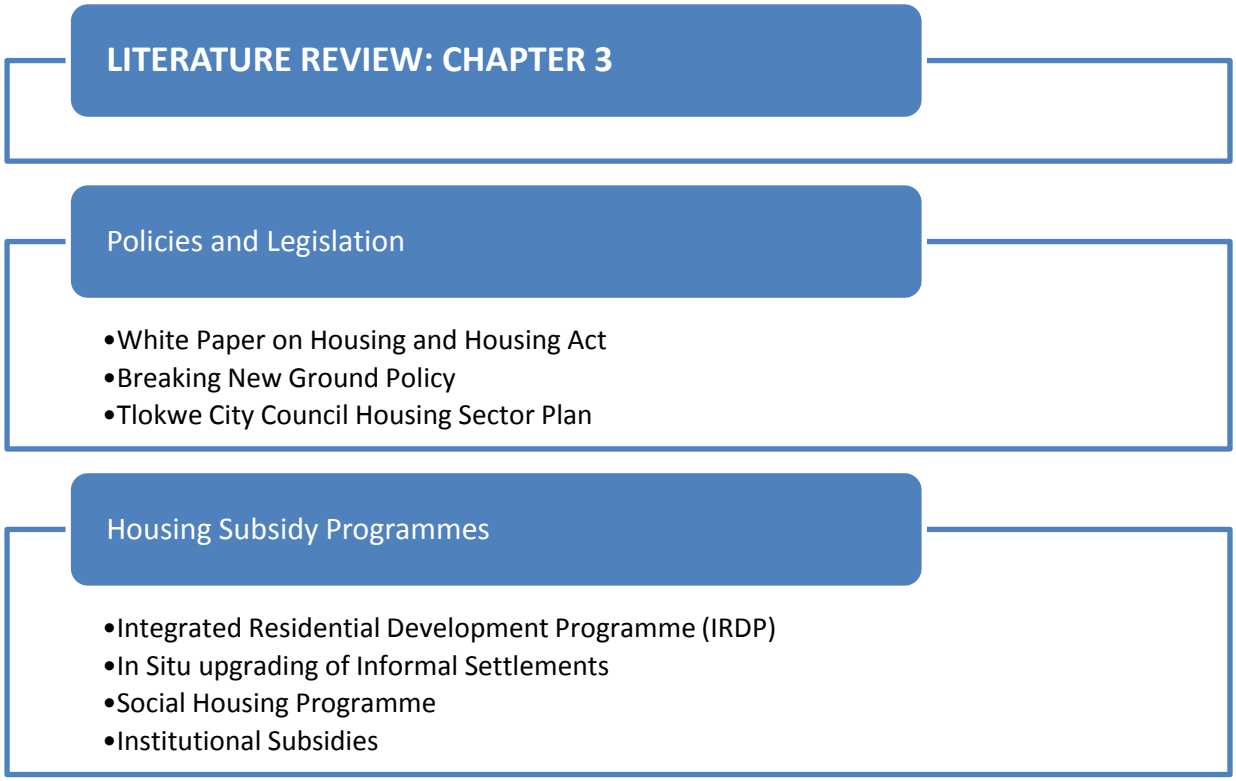

Figure 12: Overview of Chapter 3

Source: Own creation (2013).

3.2 WHITE PAPER ON HOUSING (1994) AND THE HOUSING ACT (1997)

The White Paper on Housing (also referred to as 'A new Housing Policy and Strategy for South Africa) was published in 1994, after two years of deliberation by the National Housing Forum. The Housing Act 107 of 1997 largely gave legislative effect to the White Paper. The sections below provide a brief overview of the principles contained in the acts and the relevance to this study.

3.2.1 HOUSING DEFINITION

Housing is defined in the White Paper as "a variety of processes through which habitable, stable and sustainable public and private residential environments are created for viable households and communities" (South Africa, 1994:22).

3.2.2 VISION

The National housing vision was laid out as to "create viable, integrated settlements where households could access opportunities, infrastructure and services, within which all South Africa's people will have access on a progressive basis to:

- A permanent residential structure with secure tenure, ensuring privacy and providing adequate protection against the elements; and
- Potable water, adequate sanitary facilities including waste disposal and domestic electricity supply" (South Africa, 1994:22).

The policy of the White Paper focussed on the following 7 key strategies (Department of Human Settlements, 2009b:9-12):

1. Stabilising the housing environment
2. Mobilising housing credit
3. Providing subsidy assistance
4. Supporting the Enhanced People's Housing Process (EPHP)
5. Rationalising institutional capacities
6. Facilitating the speedy release and servicing of land
7. Coordinating government investment in development

Taking into account that the State estimated the urban housing backlog to be approximately 1.5 million units at the time, it is clear that they envisaged mass housing delivery to meet the goal of access to housing by all South Africa's people.

3.2.3 STRATEGY

The State set a minimum standard of 1 million houses, to be built in the following five years. This target was to be financed by increasing the allocation to housing from the national budget to 5%, and increasing housing delivery progressively to a level of 338 000 units annually (Tissington, 2010:33). An individual, income-linked state subsidy program was imposed, which worked on a sliding scale based on income levels. This subsidy program has been expanded over the past 19 years to include a range of subsidies (discussed in more detail later in this research) and remains the cornerstone of public housing delivery today.

The most significant difference between the White Paper and Housing Act is probably the role of the state in housing provision. Where the White Paper relied on the private sector to act as developer the Act increased the role of local municipalities with adequate capacity to act as developers.

The Act allocated the following roles and responsibilities to the three spheres of government:

Table 7: Roles and responsibilities of Government with regards to housing provision

Sphere of Government	Roles and Responsibilities
National Government	Establish and facilitate a sustainable national housing development process.
Provincial Government	Create an enabling environment by doing everything in its power to promote and facilitate the provision of adequate housing in its province within the framework of national housing policy.
Local Government	Pursue the delivery of housing. Every municipality must take all reasonable and necessary steps within the framework of national and provincial housing legislation and policy to ensure that the housing right is realised. It should do this by actively pursuing the development of housing, by addressing issues of land, services and infrastructure provision, and by creating an enabling environment for housing development in its area of jurisdiction.

Source: Own creation based on Tissington (2010:36).

3.2.4 CRITIQUE

The following critique has been raised against the respective policies:

Table 8: Critique of White Paper and Housing Act

White Paper	Housing Act
Implementation with regards to quantity and quality was problematic. Housing delivery had a limited effect on poverty alleviation. Development continued on the periphery of towns. Complementary social services were lacking in developments.	The increased responsibility on Local Authorities to act as developers was criticised as municipalities were already overburdened and under-capacitated. The political control associated with the shift, especially in terms of the location of projects and the approval of subsidy applications, was also criticised.

Source: Own Creation based on Tissington (2010:35-37).

These, and other, shortcomings of the subsidised housing program are discussed in more detail in Chapter 4.

3.3 BREAKING NEW GROUND POLICY, 2004

In 2002 the Department of Housing decided to review the housing programme as the following problems had arisen with regards to the system:

- Ongoing peripheral residential development
- Poor quality products
- A lack of community participation
- Corruption, maladministration, underspent budgets and a decreased delivery rate
- Increasing housing backlog and
- The continued growth of informal settlements (Tissington, 2010:41)

The review resulted in the release of A Comprehensive Plan for the Development of Sustainable Human Settlements (commonly referred to as the Breaking New Ground, or BNG, principles) in 2004. The changes introduced in the new policy are discussed in short below.

3.3.1 VISION

The policy reiterated the vision of the Department of Housing as 'to promote the achievement of a non-racial, integrated society through the development of sustainable human settlements and quality housing' (Napier, 2005:12).

3.3.2 OBJECTIVES

By adopting the BNG the Department of Housing committed to seven unique objectives (Victor, 2009:62). These objectives are summarised in figure 13 below:

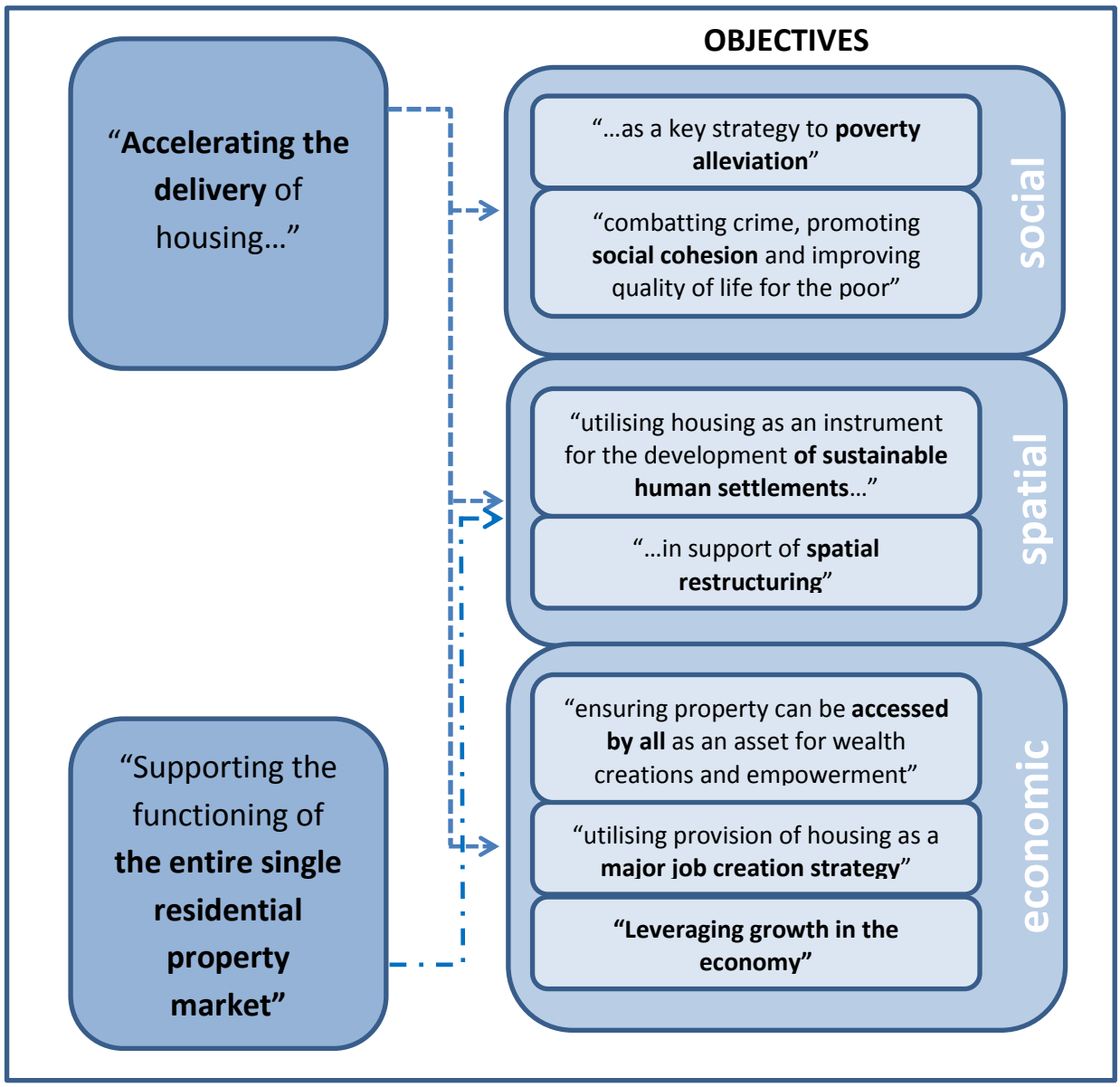

Figure 13: Summary of key objectives of BNG

Source: Own creation based on Napier (2005:13).

3.3.3 SHIFTS FROM PREVIOUS LEGISLATION

The BNG aimed to move away from the supply-centred model in use at the time to a model driven by the needs of those on the ground (Tissington, 2010:43). The following key shifts were introduced (Napier, 2005:14):

- Emphasising sustainable human settlements as opposed to the provision of basic shelter
- Introducing phased development as an approach
- Decentralising more responsibility to municipalities with regards to housing investments
- Increasing the focus on partnerships and public participation to achieve fast track delivery
- Coordinating projects across communities to be more efficient, equitable and integrated.

3.3.4 CRITIQUE

The proposals mentioned above represent a significant improvement on the legislation, advocating quality over quantity and viable, integrated communities that are sustainable over time. The question however, is whether these proposals were implemented as suggested.

Tissington (2010:42) and Charlton and Kihato (2006:259) argue that the BNG is disappointing in that it lacks clear strategic policy direction and fails to address key weaknesses within the previous policy.

3.4 TLOKWE CITY COUNCIL HOUSING SECTOR PLAN

The Tlokwe City Council Housing Sector Plan was compiled in 2010 as a part of the Tlokwe Integarated Development Plan (IDP). The core components of the plan are briefly discussed below.

3.4.1 HOUSING DEFINITION

Housing development is defined as “the establishment and maintenance of habitable, stable and sustainable public and private residential environments that ensure viable households and communities in areas allowing convenient access to economic opportunities, health, educational and social amenities in which all citizens of South Africa will, on a progressive basis, have access to permanent residential structures with secure tenure, potable water, adequate sanitation facilities and domestic energy supply and which will ensure internal and external privacy and provide adequate protection against the elements” (Tlokwe City Council, 2010:53).

3.4.2 VISION

The document primarily focuses on providing guidelines to regulate the allocation of accommodation, both in the form of municipal rental accommodation and government subsidised housing (Tlokwe City Council, 2010:54).

3.4.3 STRATEGY

The Housing Policy is divided into 5 discernible policies. These are:

- The Housing Allocation Policy
- The Housing Database Policy
- The Housing Financing Policy
- The Eradication of Informal Settlements, Land Invasion and Evictions from Land Policy and
- The Integrated Human Settlement Policy or Housing Developments.

The key policy objectives of each section are described in Table 9 below:

Table 9: Key policy objectives of Tlokwe Housing Policy

Policy	Policy Objectives
Housing Allocation	Promotion of equal access to housing for Potchefstroom residents. Transparency Prevention of unfair discrimination Promotion of fair administrative justice. Occupation of municipal rental accommodation shall be in line with ability to pay rent Apply the principle of "first come first serve" Proper recording of all housing applicants Prevention of double allocation Prevention of speculation of subsidised houses.

Housing Database	Promotion of fair administrative justice in the administration of housing allocations Centralisation of all housing information The Housing Database shall serve as the core instrument in the implementation of housing allocation The Housing Database shall serve as a planning tool to the Departments Housing and Planning and Infrastructure
Eradication of Informal Settlements, Land Invasion and Evictions from Land	To contain and prevent land invasion and the spread of informal settlements. To plan for sustainable human settlements through the rapid release of land for development
Integrated Human Settlement Policy	To ensure that sustainable housing development takes place To integrate housing with other municipal services in order to establish sustainable human settlement To coordinate municipal departments to work together in planning and implementing housing projects To promote middle and high income housing which will in turn generate resources to improve low income areas To give equal preference to urban and rural development projects To promote environmental sensitive and energy efficient housing

Source: Own creation based on Tlokwe City Council (2010).

3.4.4 CRITIQUE

Although the above mentioned policies are sound norms to measure developments by, no actual information is contained in the document regarding housing delivery. The Plan provides a good theoretical base, which is aligned to the principles contained in national legislature, but lacks direct planning principles for the rolling out of projects. No mention is made of housing backlogs, proposed housing projects or the possible location of such projects which makes it difficult to accurately evaluate the Plan.

3.5 HOUSING SUBSIDY PROGRAMMES

3.5.1 HOUSING SUBSIDY

From the above mentioned policies it is clear that state driven delivery of housing for the urban poor in South Africa is largely focused on the provision of Government Housing Subsidies. These subsidies comprise of a once off grant paid by Government, of which the amount is adjusted accordingly on an annual basis. Grants are not paid directly to beneficiaries, but rather to agents that facilitate the housing process, either through selling a house or constructing new houses (commonly referred to as RDP houses). In both cases the properties are registered in the name of the beneficiary (Department of Co-operative Governance, Human Settlement & Traditional Affairs, 2013:4).

The subsidy amount is used to fund 'the planning, acquisition and local servicing of land and to build top structures, or houses. It also provides for secure tenure and access to provision of basic services (Napier, 2005:12). These projects are managed by the Provincial Departments of Human Settlements, or accredited Local Municipalities, where applicable.

Originally the subsidy programme was introduced primarily as a method to meet basic needs. However, as illustrated in the sections above, home ownership through subsidy housing became a method of poverty alleviation. The ideal is therefore for beneficiaries to improve their own socio-economic conditions by investing in the property and selling the house at a later stage to someone with low income as entry level accommodation. Profit made from this sale should then be put towards buying a better property and playing an active role in the housing supply chain (Charlton, 2010:5). Unfortunately, there exists a gap at present between the value of subsidised housing, and housing found in the private sector.

Several primary criteria exist in order to qualify as a beneficiary. These include (Department of Co-operative Governance, Human Settlement & Traditional Affairs, 2013:4):

- Citizenship or permanent residency in South Africa
- Competency to contract
- Applicants (and/or their spouses) may not have benefitted previously from a Government subsidy with regards to housing.
- Applicants (and/or their spouses) may not have a history of home ownership.
    - The following cases are excluded from this provision:
        - Disabled persons
        - People who obtained a vacant plot through the Land Restitution Programme

- People who own a house (that was not obtained through Government assistance) that does not comply with the national norms and standards with regards to permanent residential structures.

3.5.2 SUBSIDY PROGRAMMES

Government Subsidy Programmes can be categorised into four broad intervention categories:

1. Financial programmes
2. Incremental housing programmes
3. Social and rental housing programmes
4. Rural housing programmes

These categories are briefly defined below, with an outline of the different programmes available in each category:

Table 10: Available subsidy programmes

CATEGORY	DEFINITION	PROGRAMMES AVAILABLE
FINANCIAL PROGRAMMES	Programmes facilitating immediate access to housing goods and services creating enabling environments and providing implementation support.	Individual Housing Subsidies Enhanced Extended Discount Benefit Scheme Social and Economic Facilities Accreditation of Municipalities Operational Capital Budget Housing Chapters of IDP's Rectification of Pre-1994 Housing stock
INCREMENTAL HOUSING PROGRAMMES	Programmes facilitating access to housing opportunities through a phased process.	Integrated Residential Development Programme Enhanced People's Housing

		Process (EPHP) Informal Settlement Upgrading Consolidation Subsidies Emergency Housing Assistance
SOCIAL AND RENTAL HOUSING PROGRAMMES	Programmes facilitating access to rental housing opportunities, supporting urban restructuring and integration.	Institutional Subsidies Social Housing Community Residential Units
RURAL HOUSING PROGRAMMES	Programmes facilitating access to housing opportunities in rural areas.	Rural Subsidy: Informal Land Rights Farm Residents Housing Assistance Programme.

Source: Own Creation based on Department of Human Settlements (2009a:10-13).

For the purpose of this study the most applicable subsidy projects are the integrated residential development programme, in situ upgrading of informal settlements, social housing programme and institutional subsidies as they are focused on the urban environment. A brief overview of these programmes with their respective objectives, beneficiaries and role players is provided in Table 11.

Table 11: Summary of applicable subsidy programmes

Programme	**Integrated Residential Development Programme**	**In Situ upgrading of Informal Settlements**	**Social Housing Programme**	**Institutional Subsidies**
Objective	Integrated human settlements in well-located areas	Secure tenure and access to basic services and housing in existing informal settlements.	Secure tenure with regards to affordable rental accommodation.	Secure tenure with regards to affordable rental accommodation for lower end of the

				rental market.
Projects	Acquisition of land, servicing of stands and provision of various land uses including commercial and social facilities, residential stands for differing income groups.	Upgrading of informal settlements through community involvement to encourage social cohesion, integrated developments and employment opportunities.	Improving urban efficiency by provision of rental accommodation in "restructuring zones" (identified by municipalities) and areas where bulk infrastructure is under-utilised.	Provision of affordable rental accommodation in settlements not well located with regards to employment opportunities.
Beneficiaries	Beneficiaries who do not meet the criteria in 3.5.1 may purchase stands.	Beneficiaries that exceed the income criteria, are headed by minors, do not have dependants and are not first time home owners may also apply.		Additional to 3.5.1 criteria, qualifying income amounts for beneficiaries will be announced annually.
Role Players	Municipalities act as developers and submit business plans to the Member of the Executive Committee (MEC) for funding.	Municipalities act as developers and submit business plans to the MEC for funding.	Accredited social housing institutions act as developers with assistance from local and provincial government.	Accredited housing institutions act as developers and submit business plans to the MEC for funding.
Notes	Projects may roll out in phases.	Residents may be relocated if the area is deemed unsuited to residential development.	Subsidy amounts vary according to project conditions.	Housing institutions are responsible for maintenance and operation of accommodation.

Source: Own creation based on Department of Human Settlements (2009a:13-26).

3.6 CONCLUSION

The policies discussed above provide a brief oversight of how subsidised housing legislation has evolved since 1994. Initially, housing was only identified as a basic right for all citizens. However, as the state realised that large amounts of people could not provide decent housing for themselves, policies and legislation were created to aid citizens through the provision of subsidised housing.

Several amendments have been made with regards to housing policy over the past 19 years. Legislation has been revised in order to adapt to changing socio-economic circumstances and needs. The most notable amendment is probably the introduction of the BNG principles, theoretically shifting the focus of housing provision from low density RDP developments to vibrant subsidised projects including a variety of housing types. The table below provides a brief overview of the different approaches associated with the different legislation*:

Table 12: Comparison between RDP and BNG approach

Elements of adequate housing and the formation of sustainable human settlements	**RDP approach (Housing Act, 1997)**	**BNG approach (Breaking New Ground Policy, 2004)**
Location and density	Low density units are encouraged.	A range of densities are encouraged.
Basic infrastructure	Potable water and decent sanitary facilities are viewed as a basic right and should be included with housing provision.	Potable water and decent sanitary facilities are viewed as a basic right and should be included with housing provision.
Right to tenure	According to the legislation, properties should be transported to beneficiaries upon completion of the project.	Various forms of tenure exist – from rental units to fully owned properties.
Range of household types	Provision is only made for low density developments comprising of single dwelling houses on single	Provision is made for various household types.

	erven.			
Sustainability	Poor location, low densities and a lack of socio-economic integration makes this approach fundamentally unsustainable		Despite ideals contained in the document implementation is severely lacking due to a lack of specific targets and deliverables.	
		Effective		Ineffective

Creation: Own creation (2013).

* This evaluation is based on theoretical content, and not necessarily the implementation of the legislation. It will become obvious in the following chapters that the above mentioned BNG principles are not always adhered to, and that the current method of subsidised housing provision in South Africa still relies heavily on the RDP approach of a single dwelling house on a single erf.

Although the policies discussed above provide guidelines aimed at creating sustainable human settlements they do not provide specific targets related to the housing backlog. Despite the development of the legislation the country still faces an enormous backlog to be addressed by subsidised housing projects. Efficient implementation of the policies and proposed projects remains the most important factor in housing delivery. The following chapter investigates shortcomings identified by academics with regards to the implementation of the subsidy system.

CHAPTER 4: SHORTCOMINGS OF SOUTH AFRICAN SUBSIDY SYSTEM

4.1 INTRODUCTION

As discussed in Chapter 3, housing subsidies in South Africa comprise of a once off grant paid by Government, of which the amount is adjusted accordingly on an annual basis. Grants are not paid directly to beneficiaries, but rather to agents that facilitate the housing process, either through selling a house or constructing new houses (commonly referred to as RDP houses). In both cases the properties are registered in the name of the beneficiary.

The system has, however, been criticised for not addressing socio-economic conditions of beneficiaries and for repeating the spatial injustices of apartheid. The Financial and Fiscal Commission (2012:6) has even gone as far as to refer to the subsidy program as 'inadequate and inefficient'. Many academics are of the opinion that the approach places too much emphasis on quantitate delivery of units, as opposed to quality developments that not only provide shelter, but create viable communities for the beneficiaries (Kihato, 2013:4).

Burgoyne (2008:37) argues that the "intrinsic worth of housing programmes cannot only be measured in terms of the amount of units delivered". In this light the following issues (illustrated in Figure 14) are investigated in more detail to measure the success of the subsidy program as a whole, and emphasise areas where the state has fallen short in creating sustainable human settlements:

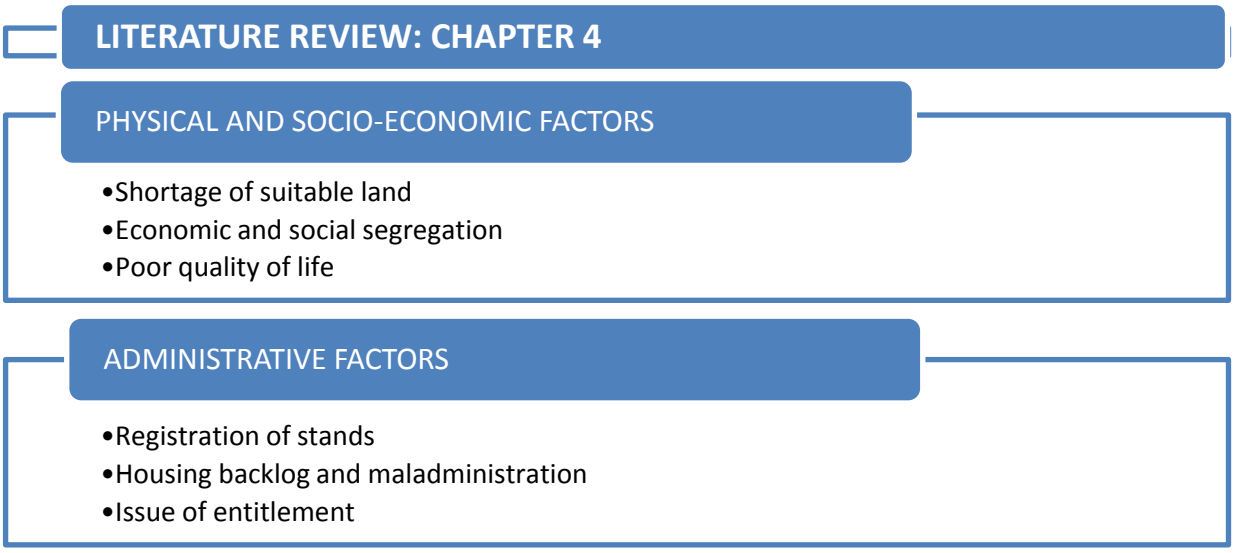

Figure 14: Overview of Chapter 4

Source: Own creation (2013).

4.2 PHYSICAL AND SOCIO-ECONOMIC FACTORS

The following section will highlight the interrelationship of the location of subsidy developments, the socio economic opportunities and quality of life of beneficiaries within the South African context, as illustrated by Figure 15 below.

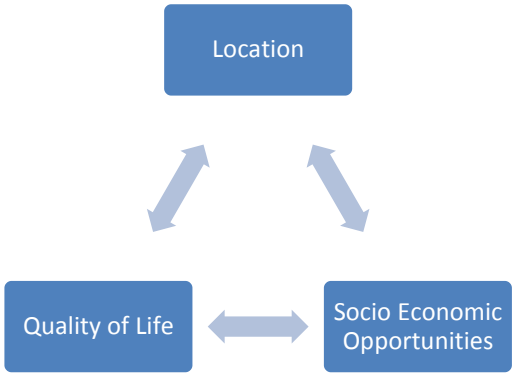

Figure 15: Physical and socio-economic shortcomings

Source: Own creation (2013).

4.2.1 SHORTAGE OF SUITABLE LAND

As previously mentioned, the current method of housing provision (providing beneficiaries with a residential unit on a separate stand) is very much land intensive. Therefore, to meet the current targets in terms of backlogs would require enormous amounts of state owned land. Again, land that is readily available is not necessarily optimal. In order for subsidy programs to be sustainable they need to be located on suitable land. Unfortunately, it is widely believed that subsidy projects continue to be located on the urban periphery (Biermann & Ryneveld, 2007:2). The impact of the location of subsidy programs is discussed further in the section below. Firstly, factors need to be identified why subsidy programs are not always ideally located.

Royston (2003:239-240) argues that 'while the location of land for housing development may have featured prominently in the housing discourse at one time, it has been de-emphasised in the course of implementing the housing programme.' According to Royston (2003), the following shortcomings in the subsidy programme have added to the poor location of housing projects in South Africa:

1. Emphasis has been placed on rate and scale of delivery rather than location
2. Development of vacant land has been favoured, often at the cost of location
3. Subsidy amounts are rather spent on top structures than well located land
4. Proactive inputs from local governments regarding land identification is limited

5. Lacking clarity regarding national responsibility for urban land reform.

Subsequent to case studies done on housing projects in Durban, Cape Town and Port Elizabeth Todes *et al.* (2003:261-265) identified the following constraints with regards to urban restructuring:

1. Access to land: Access to well-located land, suitable for development, remains one the most significant constraints. Vacant land of suitable size, which adheres to geo-technical standards for the proposed developments, tend to be located on the periphery of existing urban areas, often in, or adjacent to existing townships.
2. Land cost: Land which is better located is often disregarded, due to the financial costs involved. Due to limited subsidy amounts (R1000 per site in 2003 – which was well below the market value) housing projects tend to be located where land is cheap, often enforcing the existing fragmentation.
3. Competing claims to vacant land: Well-located land is often prioritised for commercial or industrial use, as opposed to housing developments, due to the economic impact of these uses. Similarly, subsidy housing is often discouraged in areas of economic importance (i.e. the tourism sector along the Durban coast). Objections to subsidised developments from residents already located in areas, often delays the process.
4. Uncertain land ownership: More often than not, well-located land is privately owned and difficult to obtain. In other instances uncertainty regarding ownership exists due to departmental changes, poor record keeping and absentee private land owners.
5. Political constraints: Suitable land is often owned by tribal authorities, and subsidies are not granted in these instances. Councillors often approve sites and developments that are not aligned with planning principles, as a way of gaining political favour.

From the above it is clear that the inherent problem with regards to land provision stems from the subsidy program itself, ranging from subsidy amounts that do not make provision for well-located land, to political interference regarding the location of developments. The continued focus of the subsidy program on separate stands for beneficiaries further adds to the problem.

The constraints mentioned above have a definite influence on the location of subsidised housing developments, and often cause these projects to be located on readily available land on the periphery of towns. As is discussed below this location further disenfranchises beneficiaries, and undermines the success of the subsidy program.

4.2.2 ECONOMIC AND SOCIAL SEGREGATION

Closely tied to the shortage of well-located land is the continued economic and social segregation experienced in many subsidised developments. Franklin (2011:12) argues that many "projects simply reinforce the spatial logic of apartheid by continuing to settle poor (and almost entirely non-white) communities on the periphery of cities, missing a great opportunity to break down racial segregation and economic marginalisation."

By locating subsidised developments on convenient land (land which is already state owned/cheap to acquire) at the periphery of towns, these programs are undermining the principles of equality they should be promoting. Khan and Thurman (2001:18) note the following effects this continued segregation has on the communities that live there:

- Residential areas are located great distances from urban/industrial centres
- The racial composition in these areas tend to homogenous
- The developments tend to include few income generating opportunities for residents
- Transport costs from new settlements into town tend to be extremely high

Burgoyne (2008:44) agrees that 'these developments are usually mono-functional settlements, removed from employment, economic, social and transport opportunities'. This removal from employment and recreational opportunities poses several economic problems for residents, the most obvious being transport costs. However, several social problems are also associated with the far commute, including time spent away from home by the bread winner of a family. This in turn negatively impacts the quality of life of residents, as discussed below.

4.2.3 POOR QUALITY OF LIFE

The quality of life produced by subsidised developments has been widely criticised. Criticisms raised range from the quality of units provided to the general layout of neighbourhoods. The following key issues pertain to quality of life in these developments:

1. Quality of units

   As mentioned previously, the focus of subsidised housing units has often been on quantity as opposed to quality. Franklin (2011:12) states that 'especially in the beginning of the program, the houses were far too small, and were alleged to be worse living environments than even the shacks from which people had moved'. Housing specifications in terms of size have since increased (Charlton & Kihato, 2006:254) from 28m² to 40m² (Victor, 2009:62), but

remain small. Furthermore, the workmanship on several of the initial projects was substandard and produced houses that were not considered safe to occupy. In 2010 the Department of Human Settlements announced that the government would be using R1.3 billion 'to rectify badly constructed RDP houses' (Tissington, 2010:36).

2. Lack of public participation

Miraftab (2003:236) commends the government on its inclusion of public participation during the housing delivery process, but notes that 'the institutional requirement has not furthered the power of low-income communities in decision making and exercise of their participatory right.' The traditional subsidy scheme is a top down approach, reproducing different models of the same prototype brick house across the country.

Olotuah & Bobadoye (2009:60) emphasise the need for proper public participation in housing projects as local communities contain a wealth of knowledge regarding their attitudes towards space, cultural traditions and unique building methods and materials suited to the local environment. In a country as ethnically diverse as South Africa this type of indigenous knowledge regarding cultures and environments is imperative. Improved public participation can therefore greatly enhance the quality of life produced by subsidised developments.

3. Lack of complementary services

'There is broad consensus that many of the neighbourhoods in which new 'RDP' housing is located are not holistic and do not offer the full range of amenities... Often provision has been made in the township layout for the necessary facilities, and the land set aside, but for several years or longer it remains as undeveloped "wasteland"' (Charlton, 2004:12). Hopkins (2006:5) attributes the lack of additional facilities to the low densities characteristic of subsidised developments. It is widely accepted that higher densities allow for the diversification of facilities, as there is an increased need for facilities, coupled with an increased population that can support these facilities.

The CSIR (2005:215) suggests a density of 50 residential dwellings per hectare in developing urban areas in South Africa. However, the single unit developments traditionally used in subsidy programs range between 10 and 30 units per hectare. According to Hopkins (2006:5), these low densities cannot accommodate a range of activities, which in turn leads to the creation of mono-functional neighbourhoods. This continued segregation from amenities (for example schools, health care facilities and retail markets) has a negative

impact on the quality of life of residents who are forced to travel great distances to meet every day needs.

According to Dewar (1998:370) the lack of social amenities is not the only problem with regards to the layout of subsidised neighbourhoods. He argues that 'it is usually impossible to discern any social, economic or environmental concerns in the making of these schemes, which seem to have been ordered simply by question of engineering efficiency.' Adebayo and Adebayo (2000:7) agree that low-cost housing in South Africa tends to "ignore design and layout that recognises human habitation. Mass production of housing units has led to loss of architectural value, aesthetic quality and a sense of identity for its residents". The incorporation of good design principles can vastly improve the quality of life of residents (Chapman, 1996:89).

Charlton and Kihato (2006:254) argue that not only social services are neglected in housing projects, but also infrastructural services. According to them the emphasis on delivering houses in greater numbers led to a decrease in standards relating to sanitation, water and roads. 'Thus, pit latrines, communal stand-pipes and gravel roads [are] accepted as adequate' (Tissington, 2010:34). The inadequate provision of services has an obvious effect on quality of life.

4. Financial ability of beneficiaries

An important socio-economic aspect raised by Hopkins (2006:5) is the inability of many beneficiaries to carry the on-going costs of homeownership, such as municipal accounts and general maintenance to the building. This issue is not only problematic for beneficiaries, but also for municipalities, who often see these projects as liabilities as they provide services to beneficiaries, but are not compensated (Department of Human Settlements, 2009b:18). This problem is mainly due to the economic class beneficiaries' fall into where extreme poverty is rife.

However, Hopkins also notes a lack of skills transfer and economic empowerment in the subsidy process. It needs to be understood that many beneficiaries of these houses have been squatting illegally for their entire lives. The concept of paying for utilities may therefore be foreign to them (Jammine, 1961:68). It is therefore the responsibility of the developers of such projects to properly inform beneficiaries of costs that will be incurred once they receive a house.

It is clear from the above that the location of a subsidised housing project can have an enormous effect on beneficiaries in terms of access to economic opportunities, and general quality of life. As the location of a project is a direct consequence of the implementation of a project it is imperative that the administration of such projects is well organised to ensure optimal functionality and outcomes. Several shortcomings in terms of administrative factors and the implementation of these projects are discussed below.

4.3 ADMINISTRATIVE FACTORS

Where the previous sections addressed the physical aspects of subsidised developments and their effect on the general well-being of beneficiaries the following sections will investigate administrative factors used to measure the success of the subsidy program.

4.3.1 REGISTRATION OF STANDS

One of the cornerstones of the subsidy program was to provide the urban poor with secure tenure in the form of title deeds. A telling method to measure the success of the subsidy program (independent of delivery statistics) is therefore to investigate the number of stands registered to beneficiaries.

Table 13 below indicates the decline in registration of stands since 1994:

Table 13: Average annual reported housing delivery and number of houses registered, 1994 – 2009

	PERIOD 1 (1994 – 2000)	**PERIOD 2 (2001 – 2003)**	**PERIOD 3 (2004 – 2009)**
Average annual number of subsidies approved	203,936	328,731	147,036
Average annual number of houses reported completed/under construction per year	142,539	179,765	234,037
Average annual number of subsidy houses registered	105,551	121,928	57,041
Average % of annual Subsidy Houses Registered to Houses Reported Completed/Under construction	**74%**	**68%**	**24%**

Source: Shisaka Development Management Services (2011:29).

The table above illustrates unacceptable statistics regarding the registration rates of stands. As the aim of subsidy houses is to grant first time home ownership to the urban poor as a method of wealth creation, it is imperative that more than 51% of completed houses are legally transferred to beneficiaries, especially as the subsidy amount makes provision for the registration of stands. These figures clearly indicate an administrative problem. According to Todes (2003:118), the focus of the government to provide secure tenure in the form of individually owned detached units 'may serve to marginalise those for whom proximity to sources of income is important.' A possible solution to this problem, as well as the decline in registered stands, may be an increase in the provision of rental accommodation by the state. This suggestion is investigated in more detail at a later stage in this paper.

4.3.2 HOUSING BACKLOG AND MAL ADMINISTRATION

Subsidised developments are generally large projects, especially in the case of Greenfield developments where the coordination of multiple professionals (engineers, town planners, land surveyors and lawyers) is required. It is therefore no surprise that the management of such projects can be challenging, especially as government involvement is required on a national, provincial and local level. From an administrative point of view, two main issues have been highlighted with regards to the current system. These are the physical housing backlog and maladministration of projects.

In 2004 the government went as far as to announce the eradication of informal settlements by 2014 as a state objective (Victor, 2009:1). However, at the end of 2013 it is obvious that this is an objective not to be reached. Kihato (2013:4) illustrates the problem of the housing backlog as 'the impossible task of catching a moving target, as the list of citizens qualifying for subsidies is constantly increasing.' Burgoyne (2008:39) agrees that 'the insufficiency to meet new demand reveals that the housing shortage remains the same. '

According to The Financial and Fiscal Commission (2012:6) the rate of delivery of subsidy housing is insufficient if measured against the demand, and is ultimately unsustainable. The Department of Human Settlements (2009b:18) has also acknowledged that the number of beneficiaries qualifying for subsidies is expected to increase and is not showing decline. The current backlog remains at approximately 2 million houses, similar to the backlog experienced when the subsidy program was first introduced, despite the delivery of approximately 3 million subsided houses since 1994. If the current backlog is to be addressed, at an average cost of R140 000 per unit, and disregarding a

further increase in demand, it would cost the state over R300 billion, a figure that is not within the state's current fiscal capacity.

Furthermore, the state provision of housing is problematic in itself due to the institutions involved in the delivery process. The responsibility of housing development is shared by all three spheres of government (National, Provincial and Municipal), without clear roles and responsibilities allocated to each sphere, which delays and hinders housing provision (Financial and Fiscal Commission, 2012:21). The process of housing provision is already a long winding process, stretching on average over 3 years. This is problematic, as circumstances can change greatly over 3 years. In addition to an increasing list of beneficiaries, the circumstances of beneficiaries already approved may vary over time. Beneficiaries may have moved, passed away or acquired alternative housing in the time between being approved, and receiving a home.

Yet another problem with the current timeframe of projects is the issue of inflation. Napier (2005:7) notes that several projects have been stalled due to inflation erosion over time. The improvement on this process would therefore improve the efficiency of projects beyond measure.

Figure 16 below illustrates a simplified version of the housing provision process:

Figure 16: Housing provision process

Source: Own creation based on Financial and Fiscal Commission (2012:21).

The process illustrated above is based on well-functioning municipal structures. However, 'within local authorities there tends to be an absence of policies and land release systems, confusion and a lack of information relating to land ownership and debilitating red tape. Internal restructuring and political in-fighting compound the problem' (Khan & Thurman 2001:19). Kok and Gelderblom (1994:95) agree that the rate at which urban land is made available for housing should increase drastically considering the housing shortages. This maladministration and miscommunication between different spheres of government often delays housing provision even further, and does little to reduce the existing backlog.

4.3.3 ISSUE OF ENTITLEMENT

Many critics of the subsidy program have highlighted the expectations created by the system to provide free housing to the urban poor as a critical problem of the system. Johannes Linn (Stren, 1989:47) states that "public provision of housing is one of the least efficient and least equitable means of solving the housing problems of Third World cities". The Financial and Fiscal Commission (2012:30) agree that it is not the responsibility of the state to provide the nation with free housing, but rather that 'there is a need to shift the thinking and perception of households from being passive beneficiaries, dependent on the state, to being actively engaged in meeting their own housing needs.'

The fact that the housing backlog has not been significantly reduced, despite on-going housing delivery over the past 18 years, is a key indicator that socio economic issues are not being properly addressed. The subsidy program was introduced to aid persons who were disadvantaged during the apartheid regime. However, Mark Napier (as quoted by Kihato, 2013:4) asks 'If you've got new household formation, coming out of households already living in government housing and people who were born after independence, do the same issues around reparations apply as those of your parents who lived under apartheid?' This issue is more relevant today than ever before as the first generation of people born in a democratic South Africa reach the age where they qualify for subsidised housing, creating a perpetual cycle.

Bradlow *et al*. (2011:271) describe the urban poor of South Africa as 'increasingly passive, entitlement-driven constituencies' who have come to rely on the government for housing provision. However, as discussed previously, the state is not able to meet this growing need. Tokyo Sexwale, the former Minister of Housing, described this issue best in his address to Parliament in April 2011:

'The current increasing dependency and pressure on the state is not sustainable for the country going forward. Somewhere, sometime in the future, there will come a need to have a cut-off point on the government's subsidised housing, where people can begin to do things for themselves.'

(Kihato, 2013:5)

4.4 CONCLUSION

The following shortcomings were identified within the current subsidy program: shortage of suitable land, economic and social segregation, poor quality of life, backlog regarding registration of stands, housing backlog and maladministration and the issue of entitlement. Another issue with regards to the subsidy scheme is the practical implementation of the program, which undermines the success of the system.

However, it cannot be denied that approximately 3 million houses have been built in the past 19 years, providing shelter to citizens who would not have been able to provide it for themselves. The challenge is therefore to recognise the shortcomings of the system, and aim to improve on these in future projects. Keeping these criticisms and the elements of sustainable human settlements in mind, the following chapter aims to establish the perception of the subsidy system amongst planning practitioners in order to further identify room for improvement of the system.

SECTION B: EMPIRICAL STUDY

CHAPTER 5: PERCEPTIONS OF THE SUBSIDY SYSTEM

5.1 INTRODUCTION

The previous chapters clearly indicate the inadequacies of the current subsidised housing system in South Africa from an academic viewpoint. This chapter explores the perceptions of practitioners who work with subsidised housing on a daily basis. An overview of the chapter is provided below in Figure 17:

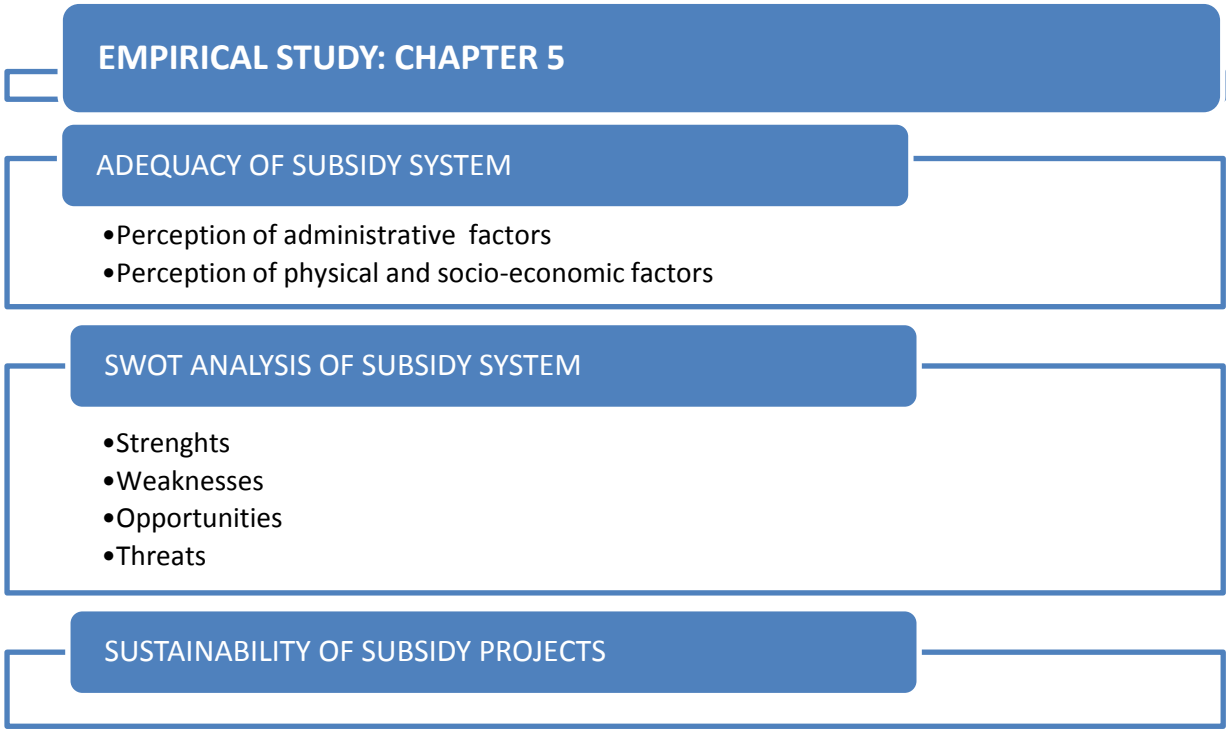

Figure 17: Overview of Chapter 5

Source: Own creation (2013).

5.2 ADEQUACY OF SUBSIDY SYSTEM

The elements of sustainable human settlements (discussed in Chapter 2) and the critique of subsidised projects (discussed in Chapter 4) were used as guidelines to formulate the following set of criteria by which to measure subsidised housing delivery in South Africa:

- Housing legislation
- Location of projects
- Administration of projects
- Registration of stands
- Economic and social integration
- Provision of basic infrastructure
- Density of units
- Size of erven
- Range of household types
- Provision of social facilities.

5.2.1 STRUCTURED QUESTIONNAIRES

The question of whether subsidised housing is sustainable in South African practice was posed to eleven professionals at different levels (private firms that act as consultants, municipal officials who work with the administration of projects on ground level and governmental officials who have experience in the implementation of subsidy projects as a whole). Planning professionals, and other related experts, were questioned through the distribution of structured questionnaires. A copy of the questionnaire used is attached in Annexure A, and a list of professionals consulted is attached in Annexure B.

It was clear from the information received that there exists a negative perception from the questioned professionals towards the current subsidy system, with only two (provision of basic infrastructure and housing legislation) out of the above mentioned ten criteria deemed adequate. From the information gathered it seems that the greatest challenges with regards to subsidy housing in South Africa are maladministration, a lack of integration and the provision of social facilities. A brief summary of comments received on each section is provided below in Table 14:

Table 14: Comments from professionals regarding subsidised housing

	Criteria	Comments
Administrative Factors	Housing legislation	Although the majority of participants agree that the legislation regarding housing is sufficient, several mentioned that implementation according to policies is often lacking and that the theoretical and technical aspects of subsidised housing do not always correspond with one another.
	Administration of projects	Corruption, a lack of capacity and political interference were highlighted by participants as problems regarding the administration of projects. The participant who deemed administration of projects to be adequate indicated that political interference often undermines the ability of officials to administer projects properly.
	Registration of stands	A backlog with regards to the registration of stands was noted by most participants.
	Range of household types	Many participants feel that housing products should be diversified in order to cater to the diverse housing need that exists. The opposite point was also raised that subsidised housing should be standardised in order to prevent emotional responses from recipients.
Physical and Socio-Economical Factors	Location of projects	Participants generally agreed that subsidised housing projects tend to be located on the outskirts of settlements; far from economic opportunities and that this causes issues in terms of transport and integration.
	Economic and social integration	Due to the location of projects on the periphery of cities, residents are removed from economic opportunities. A few participants made mention of the economic opportunities created through home ownership, such as guesthouses, tuck shop and general informal trade.
	Provision of basic infrastructure	Very few comments were received regarding the provision

	of infrastructure.
Density of units	Several participants indicated that densities should be increased to maximise available land.
Size of erven	Opinions regarding the size of erven were extremely varied. This is a good indication of the sensitivity of this matter. Whilst some participants believe erven to be too small, others believe beneficiaries are not entitled to erven. It was noted that the single stand method of housing delivery allows beneficiaries to extend their houses at a later stage.
Provision of social facilities	There was a general consensus that social facilities are lacking in subsidised neighbourhoods. Although erven are allocated for these facilities in the planning phase of the development these facilities often occur years after the houses are completed.

Source: Own creation (2013) based on information obtained in structured questionnaires.

The summarised results from the questionnaire are seen in Figures 18 & 19 below:

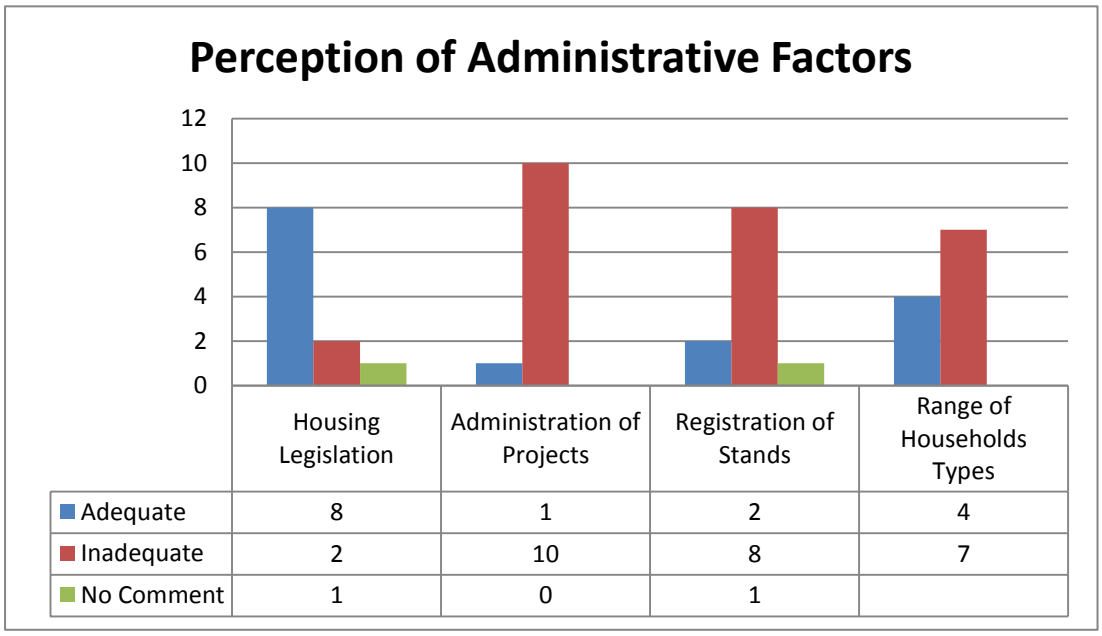

Figure 18: Perception of administrative factors regarding subsidised housing

Source: Own creation (2013) based on information obtained in structured questionnaires.

The results illustrated above in Figure 18 clearly indicate a negative perception towards administrative factors regarding subsidised housing provision in South Africa, as most of the criteria (with the exception of housing legislation) was deemed inadequate.

The results illustrated below in Figure 19 also indicate a negative perception towards physical and socio-economic factors regarding subsidised housing provision in South Africa, as only the provision of basic services was deemed adequate.

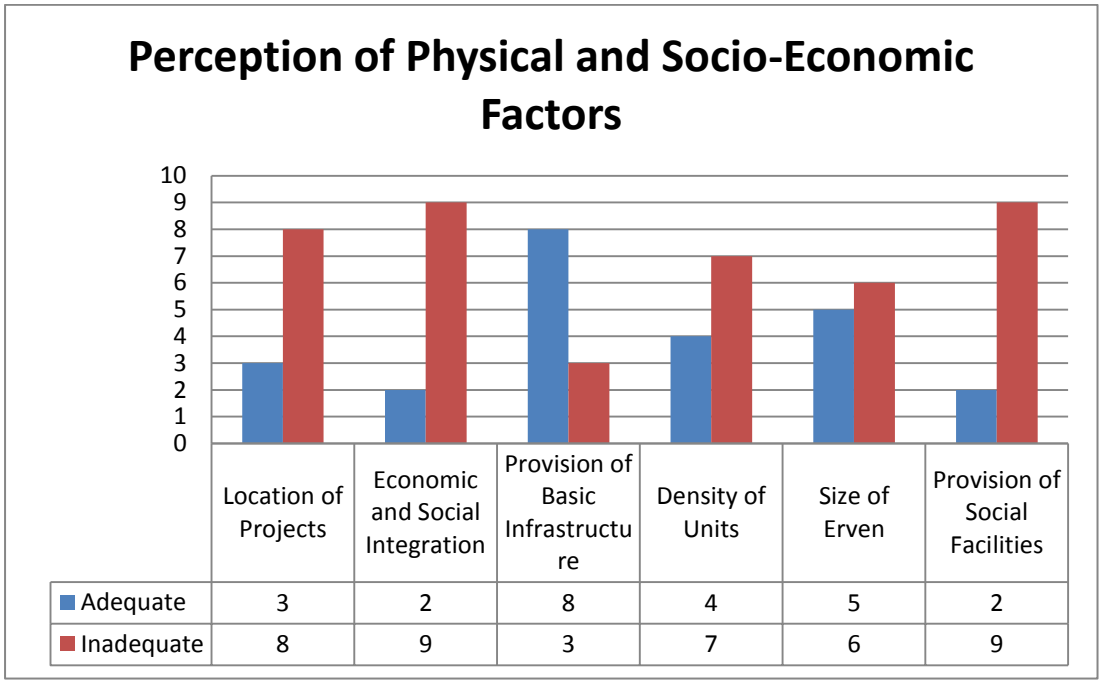

Figure 19: Perception of physical and socio-economic factors regarding subsidised housing

Source: Own creation (2013) based on information obtained in structured questionnaires.

It is clear from the results above that subsidised housing provision is a sensitive issue, with varying opinions on the subject. Wikan (1989:124) notes that different cultures attribute differing levels of significance to living space and the use thereof. This view is illustrated quite clearly in the responses from professionals. Where most factors were similarly judged (either adequate or inadequate) across professions, density and the size of erven were almost tied. It stands to reason that the perception of these two factors is influenced by personal experience.

It is important to take note of these issues, and the emotional response they received. If the perception of density and size of units is this varied between professionals it can be assumed that communities will also have strong opinions on the matter. However, these values should be measured against the overarching goal of creating sustainable human settlements.

5.3 SWOT ANALYSIS OF SUBSIDY SYSTEM IN SOUTH AFRICA

The same eleven professionals, with knowledge of subsidised housing in South Africa, albeit as consultants or officials, were also questioned in the structured questionnaire about the strengths, weaknesses, threats and opportunities of the subsidised housing system in South Africa to establish shortcomings and strong points in the system. Table 15 below provides an oversight of the perceptions received from professionals.

Table 15: SWOT analysis of subsidised housing in SA

SUBSIDISED HOUSING IN SOUTH AFRICA

STRENGHTS	Provides the urban poor with property they could not attain themselves. Employment opportunities are created in the building and related sectors. Continual financial support from the government e.g. – increased allocation of national budget to housing provision. Three million homes have been built for underprivileged citizens. Increased assistance from provincial governments where local municipalities lack capacity.
WEAKNESSES	Mismanagement, maladministration and corruption in projects. Insufficient quality control at ground level. One dimensional solution to poverty alleviation. Does not address the socio-economic issues underlying the housing backlog. Budget restrictions lead to monotonous designs and layouts. Projects are located far from employment opportunities with insufficient public transport. Employment opportunities created are not sustainable. Formalisation of informal housing without proper planning creates short term solutions with long term consequences. Some beneficiaries do not take ownership of houses since they are provided free of charge.

	Inadequate training of officials dealing with housing applications. Focus on quantity as opposed to quality. Lack of in-house specialists in government. Lack of governance in tribal areas.
OPPORTUNITIES	Increased use of green energy in projects. Improved management of projects will increase efficiency. Increased densities in residential areas to accommodate more units. Pay more attention to the related services (town planning, civil, electrical etc.) to create well rounded neighbourhoods that improve quality of life. Property creates economic opportunities e.g. starting a tuck shop/guesthouse. Involve residents in projects through information sharing, training and skills transfer. Provide a range of subsidised houses. Single dwelling units allow for future additions.
THREATS	Sub-standard quality of houses produced. Unsustainable. Dependency on the state. Political interference. Slow housing delivery versus increasing backlog. Limited amount of land for development. Some beneficiaries rent out the subsidised house. Affordable land often has geological and topographical restrictions, increasing building costs. Withdrawal of large construction groups from projects.

	Lack of long term planning from government leads to severe shortages with regards to service delivery.

Source: Own creation (2013) based on information obtained in structured questionnaires.

From the table above it is clear that the subsidy system in South Africa holds definitive benefits, especially for the urban poor. Professionals agree that there are strengths and opportunities, despite the weaknesses often associated with the system. From these inputs it can be concluded that it is not necessarily the concept of subsidised housing that is opposed, but rather the implementation thereof. The section below discusses the sustainability of the current method of implementation, as perceived by planning professionals.

5.4 THE SUSTAINABILITY OF SUBSIDY HOUSING IN SOUTH AFRICA

Participants of the structured questionnaires agreed that although the system aids the urban poor, the current subsidised housing provision in South Africa is unsustainable as spatial fragmentation remains present, social facilities are often lacking in developments and maladministration of projects is rife. The following opinions raised in the feedback by the eleven professionals, regarding the sustainability of subsidised housing, merit special mention as they convey the general reaction, and in certain instances suggestions, received from the questionnaire:

*"The current way of housing provision cannot be sustained and **higher density housing schemes must be one of the options for future generations**. The provision of different options for higher density housing nearer to the CBD and Industrial areas of towns and cities must become a reality and an option for future planners." Len Fourie, Head Town Planner at Macroplan*

Source: Fourie (2013).

*"Mostly they are **not sustainable** as the perception of the government was to provide houses and basic services leaving the people to look for jobs elsewhere. This makes the people to leave and go stray [sic] far from the house"*

Thinandavha Elvis Mudziwa, Town Planner at Rustenburg Local Municipality

Source: Mudziwa (2013).

*"As long as 30% of the employed residents of the country have to provide for the 70% who are not taxed, means there is an extra burden on taxpayers. While we build the economy through tax we are making an **established dependant population** who will quickly get used to this dependency"*

Msawenkosi Dladla, Department of Agriculture, Fishery and Foresty

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Source: Dladla (2013).

*"In South Africa government tend to develop good policies but **cannot meet the respective targets** as outlined therein. The focus must therefore be to find a way on how those policies can be met."*

Cedric Bosman, Assistant Manager at NC Treasury

Source: Bosman (2013).

Although these are only a few excerpts from the information collected, they convey the general sentiment expressed in the questionnaires and strongly indicate the need for a different approach to subsidised housing in South Africa.

Unfortunately, many issues highlighted in the responses dealt with the maladministration and corruption associated with subsidised housing projects. Other respondents indicated that the government should rather focus their attention (and budget) on creating an economic environment that is conducive to job creation and economic upliftment. These elements, however, fall outside the scope of this study and should be investigated further by specialists in the respective fields.

5.5 CONCLUSION

This chapter investigated the perceptions of planning and other related professionals with regards to the subsidised housing system in South Africa. From the information gathered it is clear that both academics (as discussed in Chapter 4) and professionals (as discussed above) agree that the current method of providing subsidised housing to the urban poor is in fact unsustainable. Research showed that:

- Subsidised housing projects are still located on the periphery of urban area, reinforcing the spatial segregation initiated by apartheid planning practices.
- Due to the poor location of these projects social and economic integration cannot take place as residents are far from economic opportunities.
- Subsidised housing projects often consist only of residential units, and do not make provision for social facilities.
- Maladministration within the system exists, which limits the success of housing provision.
- Despite the BNG principles that promote varied housing deliverables, the main method of housing delivery remains a single dwelling on a single erf. Therefore, there exists a need to incorporate a range of household types to diversify the housing market.

The following chapters will examine specific subsidised housing projects, both locally and abroad, in an effort to identify solutions for the current subsidy system in South Africa that add to the sustainability of the projects.

CHAPTER 6: INTERNATIONAL PILOT STUDIES

6.1 INTRODUCTION

This chapter focuses on current housing practices abroad, in an attempt to identify best practices and successful and sustainable methods of housing delivery for the urban poor. Two housing schemes in Rio de Janeiro, Brazil, are discussed; along with a housing project in October 6 City, Egypt. These projects are then compared with current subsidised housing projects being implemented in South Africa in the following chapter.

The above mentioned projects were included in this study as they all provide alternatives to the typical subsidised housing model in South Africa (fully subsidised single dwelling on single erf). The projects discussed are also all located in developing countries and therefore face similar problems in terms of rapid urbanisation and an increasing urban poor in need of adequate housing.

The projects discussed and compared to the Potchefstroom projects are:

- Bairro Carioca and Taroni Condominium in Rio de Janeiro, Brazil
    - Both these projects provide partially subsidised units to beneficiaries in the form of apartment blocks. Beneficiaries are given full ownership of the units, once a small loan has been paid off against the property.
- Haram City in October 6 City, Egypt
    - The project provides partially subsidised units to beneficiaries in the form of apartment blocks. Units vary in size and type of ownership.

All of the above mentioned projects were evaluated using two sets of criteria, derived from the literature review. The first set of criteria comprises some of the elements that contribute to sustainable human settlements, as discussed in Chapter 2. The second set of criteria is used to measure projects against the shortcomings of the current subsidy system in South Africa, as discussed in Chapter 4, to establish best practices in the examples that can be used in South Africa to correct current shortcomings.

A broad outline of the chapter is illustrated in Figure 20 below:

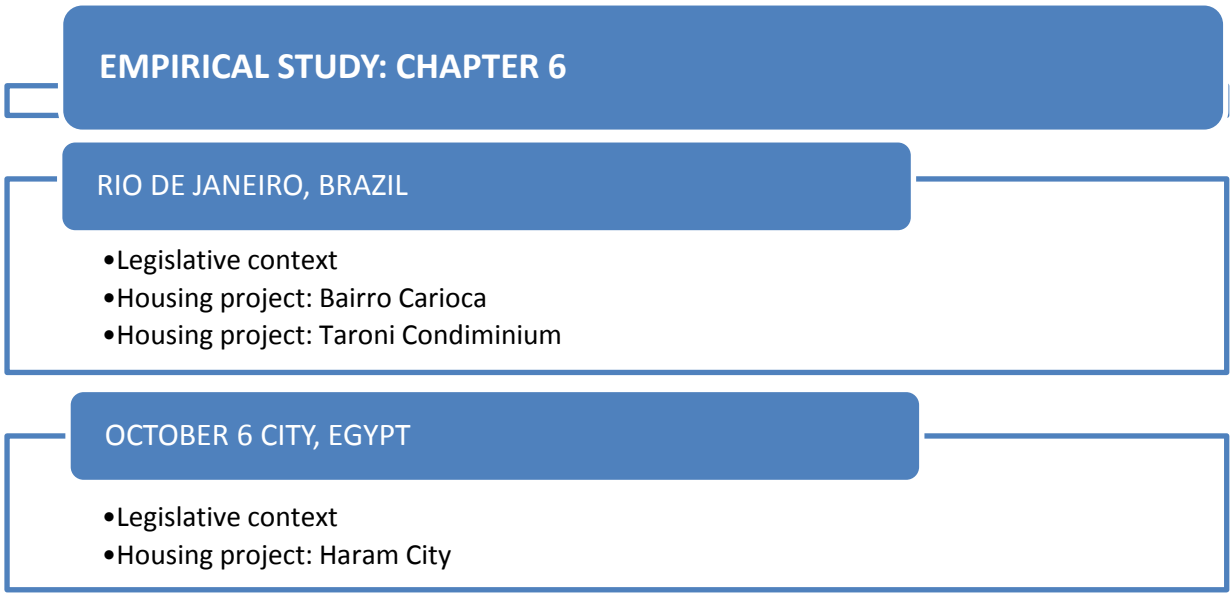

Figure 20: Overview of Chapter 6

Source: Own creation (2013).

6.2 PILOT STUDY: RIO DE JANEIRO, BRAZIL

6.2.1 INTRODUCTION

"The country has made progress in housing low-income households, but the extent of informal settlements and socio-spatial segregation are remaining challenges for Brazilian cities to overcome"

UN- Habitat (2013:6)

From the statement above it is clear that Brazil faces many similar challenges as South Africa with regards to housing provision for the urban poor. Brazil and South Africa share interesting statistics with regards to housing backlogs. According to a study done by UN-Habitat (2013a) the housing need was practically the same for both countries in 2005, with 28.9% of the Brazilian population, and 28.7% of the South African population, living in slum conditions. According to census data collected in the country in 2010, 7% of the urban population are currently residing in favelas (UN-Habitat, 2013:6). In an attempt to eradicate these favelas (similar to squatter camps experienced in South Africa) the government has introduced several policies regarding housing provision.

6.2.2 LEGISLATIVE CONTEXT

The following time line indicates the most significant housing and urban policies of Brazil since 2000:

Table 16: Time line periods of housing policy trends in Brazil

Period	Overview
2001 Enactment of the City Statute	Provides legal instruments to improve the **access to land** and the **right to housing.**
2004 Elaboration of National Housing Policy	Includes principles and **long-term strategy** for urban and housing action in Brazil. The main contents are (a) principles and guidelines for state and local government to intervene in the housing sector; (b) indications for the institutional restructuring needed to implement the national housing policy; (c) a long-term strategy for resource mobilisation and distribution of investments across the country and (d) a strategy for housing provision and integration of the Policy into the Urban Development Policy.
2007 Acceleration Growth Programme	A large scale infrastructure programme that **directed investments in energy, transport, social and urban infrastructure** between 2007 and 2010. The programme's slum upgrading effort is the largest project which has been implemented in Brazil's favelas.
2008 National Housing Plan – PlanHab	PlanHab comprises a strategic plan and an action plan, with tools that are operational and should be implemented over the short, medium and long-term. The implementation of the PlanHab is divided into four areas: (a) finance mechanisms and subsidies; (b) urban and land policies; (c) institutional framework; and (d) the construction supply chain focused on social housing provision.
2009 + Minha Casa Minha Vida (MCMV)	New housing provision programme targeting low-income groups launched in 2009, with the aim to contract **1 million housing units** by the end of 2010.

Source: Ministry of Cities (2012).

As can be seen in the table above the current policy regarding housing delivery for the urban poor in Brazil is the Minha Casa Minha Vida (My House, My Life) project. The project was introduced in 2009 by President Da Silva, as a method to counteract the global economic crisis at the time by providing

labour intensive employment opportunities in the construction sector, whilst simultaneously improving the housing market for the urban poor (UN-Habitat, 2013:31). In essence, the programme works as illustrated in Figure 21 below:

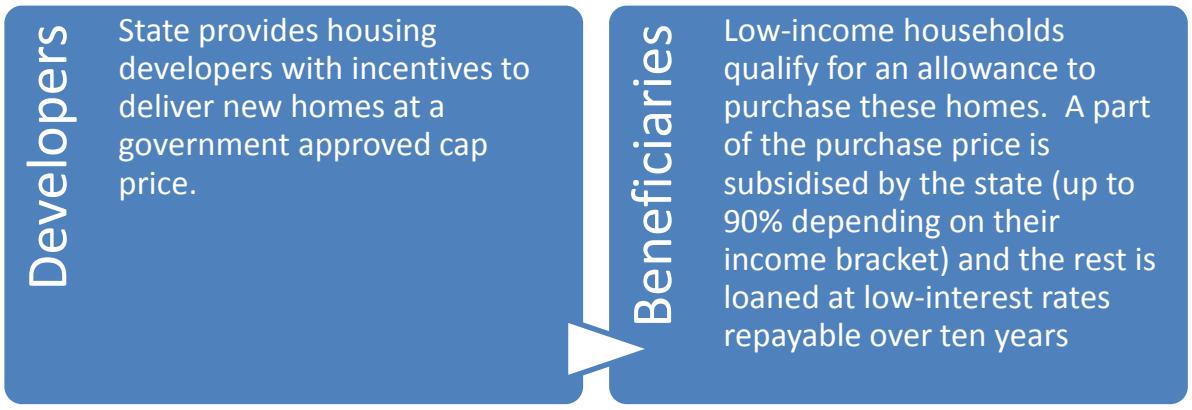

Figure 21: Summary of MCMV Programme

Source: Own Creation based on UN-Habitat (2012:50).

6.2.3 VISION OF MCMV PROGRAMME

The vision of the programme included the erection of 1 million new low-income housing units (in both urban and rural areas) for the first phase of operation (between 2009 and 2010). In order to meet these ambitious targets the federal government allocated BRL34 billion to the project, the largest amount of money spent on Brazilian subsidised housing to date (UN-Habitat, 2013:31). The following elements are significant with regards to the vision of the programme:

- Large scale approach to housing provision
- Integrated approach to housing and economic development
- Pro-poor approach that retains a wide eligibility range and
- Social housing provision (UN-Habitat, 2013:32).

Strategies to achieve this vision are discussed below.

6.2.4 STRATEGY OF MCMV PROGRAMME

In essence, the programme works as follows: production goals are set for each region by the government; families who qualify for the programme register to benefit in their area; and construction companies tender for the specific projects. Relevant financial institutions then review the projects, and make progress payments (Opalach, 2013).

The table below provides further detail on the different role players and responsibilities of each organisation involved in the programme:

Table 17: Role players and responsibilities in My House, My Life Programme

Function	Organisation	Responsibility
Management	**Ministry of Cities (Government body)**	Manager of the programme. Establishes rules and regulations for all modalities of housing provision. Defines the roles and responsibilities of organisations involved in the programme. Establishes eligibility criteria for developers, projects and beneficiaries. Monitors project implementation.
Finance	**CAIXA (Bank)**	Provides loans for developers to undertake housing construction and finance to the beneficiaries.
Administration & Finance	**Subnational governments (municipality)**	Select and enrol potential beneficiaries. Expected to help with funding, either in the form of money, land or the provision of services. Issue project licences.
Construction	**Private Sector**	Responsible for construction of units. Responsible for commercialising units when targeting income groups that can afford to purchase property.

Source: Own creation based on UN-Habitat (2013:33).

The programme is aimed at a range of income types, from the poorest to the low-middle class, with different household types aimed at the different income groups. Potential beneficiaries are categorised into the following three categories (UN-Habitat, 2013:32-33):

1. **Group 1** comprises of households that earn between zero and three minimum wages. Group 1 is largely subsidised by the state, on a non-repayable basis. 400 000 units were intended for Group 1 beneficiaries.
2. **Group 2** comprises of households that earn between three and six minimum wages. Group 2 is also largely subsidised by the state, on a repayable basis with tax reductions and special interest rates. 400 000 units were intended for Group 2 beneficiaries.

3. **Group 3** comprises of households that earn between six and 10 minimum wages. Group 3 is the least subsidised group, but still receives benefits from the state in the form of tax deductions and special interest rates. 200 000 units were intended for Group 3 beneficiaries.

The My House, My Life Programme has built a multitude of housing units throughout Brazil since its establishment in 2009. For the purpose of this study however, only two will be investigated: Bairro Carioca and Taroni Condominium. These projects are discussed in more detail below.

6.2.5 HOUSING PROJECTS IN RIO DE JANEIRO

Key aspects of two housing projects in Rio de Janeiro, Bairro Carioca and Taroni Condiminium, are detailed below.

Table 18: Key aspects of Bairro Carioca and Taroni Condiminium, Brazil

Project Name	**BAIRRO CARIOCA**	**TARONI CONDIMINIUM**
Project Overview		
City	Rio de Janeiro	Rio de Janeiro
Housing Units	2240 units	243 units
Estimated Total Costs	114 million BRL	12.4 million BRL
Role Players	The project is a public-private partnership with financing from CAIXA, donations in the form of property and bulk infrastructure from the local municipality and construction from a company called Direcional.	The project is a public-private partnership with financing from CAIXA, donations in the form of bulk infrastructure from the local municipality and construction from a company called Emccamp2.

Location		
	The project is located in the central city, on land that was donated by the local municipality. The project is well located in terms of public transport facilities and economic opportunities.	The project is located in the western part of the city, in a peripheral location, which is earmarked for residential expansion. The condominium is located close to a bus station and 10 minutes from the train station.
Basic Infrastructure		
	Bulk infrastructure was supplied by the municipality, and local connections supplied by the contractor. Traditional services were installed with regards to water, sanitation and electricity.	Bulk infrastructure was supplied by the municipality, and local connections made by local agencies in terms of water, sanitation, electricity and gas. Individual meters were installed to measure consumption of electricity and gas. Water is however included in the form of condominium fees.
Affordability		
House	Residents pay for the house in the form of repayments made to CAIXA over ten years. These payments vary between a minimum of 50BRL a month to a maximum of 10 per cent of the beneficiaries monthly income.	Residents pay for the house in the form of repayments made to CAIXA over ten years. These payments vary between a minimum of 50BRL a month to a maximum of 10 per cent of the beneficiaries monthly income
Amenities	Additional costs are charged for public services.	The local municipality pays for water in the first three months of occupancy. Additional costs are charged for gas and electricity consumed per household. Residents also pay 50BRL condominium services

		a month – which includes water consumption, basic maintenance and salaries for workers.
Range of Household Types		
	The project comprises of 11 condominium schemes of 112 5-storey blocks. Apartments are approximately 43m² in size, and consist of two bedrooms, an open living and dining room and side kitchen/laundry. 2% of units have been modified for use by disabled people and consist of 52m².	The project comprises of 15 four-storey blocks with 16 apartments each. Apartments consist of two bedrooms, and integrated dining room, living room and side kitchen/laundry. Three of the units have been modified for use by disabled persons.
Right to Tenure		
	After the loan has been repaid to CAIXA beneficiaries have full ownership of the unit.	After the loan has been repaid to CAIXA beneficiaries have full ownership of the unit.
Notes		
Construction	Innovative construction methods were employed – using in-situ concrete construction which reduces costs, speeds up construction and improves economies of scale.	Developers used standard concrete frame and brick infill wall construction. Gas is used throughout the building. Cylinders for each unit are installed on the ground floor outside the building and piped to the unit, improving safety.
Facilities	Housing units do not have private open space, but facilities are provided on floor level for residents. These include a kindergarten, playgrounds and car parks. The project is generally	Land uses in the condominium are restricted to residential. No allowance has been made for businesses. There exists a need for supporting facilities such as schools, hospitals and

	well designed architecturally.	transport.

Source: Own creation based on UN Habitat (2013:53-63).

From the table above it is clear that these two projects have a similar approach to housing provision, with minor variations between the two projects. The basic model includes the provision of apartment units to beneficiaries, who are aided financially by the state, but still carry a certain level of financial responsibility.

In order to establish whether this method of housing provision is suitable to the South African context the projects need to be evaluated by the shortcomings of the current SA system. The table below provides a brief evaluation of these projects, based on the physical and socio-economic shortcomings identified in Chapter 4 of this study. Please note that administrative factors are not discussed as they are not necessarily planning related, and are subjective matters influenced by the political context of a country.

Table 19: Evaluation of Brazilian pilot studies

PHYSICAL & SOCIO-ECONOMIC SHORTCOMINGS USED AS CRITERIA	**BAIRRO CARIOCA**	**TARONI CONDIMINIUM**
SHORTAGE OF SUITABLE LAND	The use of high density units is an effective solution to a shortage of suitable land as developments are less land intensive than single residential units on single erven (as is often the case in South Africa)	
ECONOMIC AND SOCIAL SEGREGATION	The project is well located in terms of economic opportunities. However, the social composition of residents is mainly homogenous.	The project is not centrally located, but rather in a peripheral area earmarked for residential development. The project is therefore located further from economic opportunities (as is often the case in South Africa).
POOR QUALITY OF LIFE		
Quality of units	Units are well constructed using innovative building methods that	Units are well constructed and utilise innovative service delivery

	reduce costs and building times.	such as gas.
Lack of public participation	No information could be found regarding public participation.	
Lack of complementary services	Complementary services and social facilities such as a kindergarten and playing areas are provided for use by the residents.	The project consists only of residential units, and lacks complementary services such as schools/businesses (as is often the case in South Africa).
Financial ability of beneficiaries	Residents are responsible for the payment of occupational costs after completion of the units (as in South Africa).	The local authority pays for water in the first three months of occupation. Thereafter, water is included in a monthly condominium fee, which also includes other occupational costs such as maintenance to the building. Residents are also charged according to consumption of electricity and gas.

Source: Own creation (2013).

From the table above it is clear that the two pilot studies do not address the shortcomings of the current South African approach as a whole. Strengths and weaknesses of this model are noted in the section below.

6.2.6 CONCLUSION

The two projects discussed above offer interesting alternatives with regards to housing provision, which may be considered as solutions for the shortcomings of the current subsidised housing scheme in South Africa. Table 20 below gives a brief overview of the strengths and weaknesses of these projects:

Table 20: Strengths and weaknesses of Brazilian pilot studies

Strengths	Weaknesses
Bairro Carioca	
Successful Public-Private Partnership Innovative construction method saved both time and money Inclusion of public space and collective-use facilities Well linked to public transport and employment opportunities Provides units suited to disabilities	No private open space provided for residents Construction method reduces flexibility of units in terms of design Intensive concrete use has negative effect on environment Condiminium blocks are purely residential – no mixed uses
Taroni Condiminium	
Green energy provision (gas) Municipality pays for use of water in first three months Common use areas are of high quality Provides units suited to disabilities	Social facilities in surrounding areas do not have capacity to accommodate volume of new residents Peripheral location (but within the vector of urban expansion) Condiminium blocks are purely residential – no mixed uses

Source: Own creation (2013).

The two Brazilian pilot studies discussed above are good examples of succsesful public-private partnerhsips and proof that higher density residential units can be effectively utilised with regards to housing provision for the urban poor.

From the information above it is clear that legislation in Brazil, and the approach towards subsidised housing delivery, differs from South Africa. The largest legislative difference is probably the method of financing. Where South Africa relies completely on state finance for subsidy housing, Brazil has incorporated the private sector, who aids in the financing of these projects.

However, despite these differences, there exists a correlation to some extent, regarding the selection of beneficiaries. As with South Africa, beneficiaries have to earn less than a certain amount in order to qualify for a housing subsidy. The differences regarding implementation of these policies, is discussed further in the conclusions of this research.

Haram City, a similar project located in Egypt, uses the same basic model as MCMV and is discussed in more detail in the following section.

6.3 PILOT STUDY: HARAM CITY, EGYPT

6.3.1 LEGISLATIVE CONTEXT

As with South Africa and Brazil, Egypt has undergone several changes with regards to housing policy over the past few decades. One of the largest factors influencing Egypt's approach to housing delivery was the war fought between 1967 and 1973. During this time governmental housing provision was drastically reduced, as all available funds were allocated to war efforts (Hassan, 2013:11). Following the war a new president was elected, who placed emphasis on the privatisation of the housing sector, and restricted state assisted housing to low-income housing (Arandel & El Batran, 1997:9). From this decision the New Towns and New Settlements Policy (NTNSP) was formulated.

6.3.2 VISION OF NTNSP

As discussed above, the Egyptian government made an active decision in 1975 to limit its involvement in the housing sector to the construction of low income housing. The government formulated the New Towns and New Settlements Policy in order to regulate the provision of low-income housing. The strategies encouraged by this policy are briefly discussed below.

6.3.3 STRATEGY OF NTNSP

As in South Africa, Egypt was faced with a lack of available land suitable for residential development. It was found that beneficiaries could not necessarily afford to live in urban centres such as Cairo, and areas surrounding urban centres were deemed valuable agricultural land that needed to be protected (Arandel & El Bartan, 1997:5). As such, the state introduced the New Towns and New Settlements Policy.

In effect, the policy strives to promote low-income housing development and urbanisation in the desert, where it has no negative impact on agricultural land. In other words, instead of providing subsidised housing in existing towns, new towns are formulated in decentralised locations. New towns can be classified as follows (Arandel & El Batran, 1997:5):

1. Independent new towns are created to be self-sufficient communities whereas
2. Satellite new towns are located in close proximity to large urban centres (e.g. Cairo) and rely in part on these surrounding centres.

6.3.4 HOUSING PROJECTS IN OCTOBER 6 CITY

Orascom Housing Communities (OHC) was established in 2006 by the Orascom Group, one of the largest businesses in Egypt, with the goal of building affordable housing in Egyptian cities. The initiative is similar to the two Brazilian projects discussed above in that the government subsidises land for developers to build on, and provides financial assistance to the beneficiaries (UN-Habitat, 2011:43).

The flagship programme for OHC is Haram City, a project located in October 6 City, 20 km west of Cairo. Key aspects of the housing project in October 6 City, Haram City, is detailed below.

Table 21: Key aspects of Haram City, Egypt

Project Name	**HARAM CITY**
Project Overview	
City	October 6 City
Housing Units	50 000 units – to be built over 8 years
Role Players	The project is a public-private partnership with financing and construction from Orascom Housing Communities and donations in the form of property from the Egyptian Government. The Government also provided subsidies for lower income families which covered 15% of the cost of the house.
Location	
	The project is located in October 6 City, 20km West of Cairo.

Affordability	
	The units are offered either to rent or buy, with financing ranging between 10 to 15 years. In addition to the government subsidy, the Orascom Housing Communities group introduced a microfinance scheme to assist lower income residents. Provision is also made for residents to scale down to rental units if they find the mortgage on too high.
Range of Household Types	
	The project comprises of 4 units per two-floor block. Apartments vary in size between 38m² and 63m².
Right to Tenure	
	Residents have an option between rental units and full ownership.
Notes	
Construction	Construction methods suited to the desert climate conditions were used.
Facilities	The Orascom Housing Communities group also built social facilities as part of the project, including schools, a hospital, areas suited for businesses, sporting and day-care facilities and a cinema complex. These facilities are to be managed and maintained in collaboration with the Egyptian government and/or non-governmental organisations.
Sustainability	As part of their focus on sustainability, wastewater is collected and used to irrigate communal green areas in the development, such as landscaped areas, sport fields and playgrounds.

Source: Own creation based on UN Habitat (2011:43).

From the table above it is clear that the Haram City model is very similar to both Bairro Carioca and the Taroni Condominium in Brazil. However, the project provides a larger variety in terms of unit types and tenure than the Brazil examples.

Again, this method of housing provision needs to be evaluated against the shortcomings of the current South African system. The table below provides a brief evaluation of the project, based on the physical and socio-economic shortcomings identified in Chapter 4 of this study:

Table 22: Evaluation of Egyptian pilot study

PHYSICAL & SOCIO-ECONOMIC SHORTCOMINGS USED AS CRITERIA	HARAM CITY
SHORTAGE OF SUITABLE LAND	The use of high density units is an effective solution to a shortage of suitable land as developments are less land intensive than single residential units on single erven (as is often the case in South Africa)
ECONOMIC AND SOCIAL SEGREGATION	The project is well located in terms of economic opportunities.
POOR QUALITY OF LIFE	
Quality of units	Units are well constructed and building methods are adapted to accommodate the desert climate.
Lack of public participation	No information could be found regarding public participation.
Lack of complementary services	A range of complementary services are provided, including commercial, health and recreational facilities.
Financial ability of beneficiaries	Owners are responsible for the payment of occupational costs after completion of the units (as in South Africa). However, a microfinance scheme was introduced to assist lower income residents. Residents of rental units however are only responsible for the payment of services and not all occupational costs such as maintenance.

Source: Own creation (2013).

From the table above it is clear that the Haram City approach largely addresses the shortcomings of the current South African system with regards to subsidised housing provision. Other strengths and weaknesses of this model are noted in the section below.

6.3.5 CONCLUSION

As discussed, the Haram City example differs from the Brazilian examples in that rental units are also made available. This different form of tenure may be considered as an alternative in current subsidised housing schemes in South Africa. Table 23 below gives a brief overview of the strengths and weaknesses of this project.

Table 23: Strengths and weaknesses of Egyptian pilot study

Strengths	Weaknesses
Haram City	
Construction methods suited to desert climate Variety of units in terms of tenure options and sizes Inclusion of public space and collective-use facilities Waste water is re-used for communal areas	Relatively new development – long term effects remain to be seen

Source: Own creation (2013).

From the information above it is clear that the Egyptian approach towards subsidised housing delivery, differs from methods used in South Africa. The most notable legislative difference in this regard is Egypt's efforts to decentralise low-income housing to new towns versus South African principles to increase densities in existing areas as promoted in the BNG principles.

The Egyptian example is a good example of flexibility incorporated into a housing scheme. The projects offers variety to beneficiaries, including different unit sizes, and different forms of tenure. This makes the project accessible to a wider range of people, as units can be chosen based on personal needs.

Cosmo City is a housing project in South Africa that includes the same principles of flexibility. The project also offers a range of units, including subsidised houses, rental units and private homes and is discussed in more detail in the following section.

CHAPTER 7: SOUTH AFRICAN PILOT STUDIES

7.1 INTRODUCTION

The figure below provides an overview of Chapter 7:

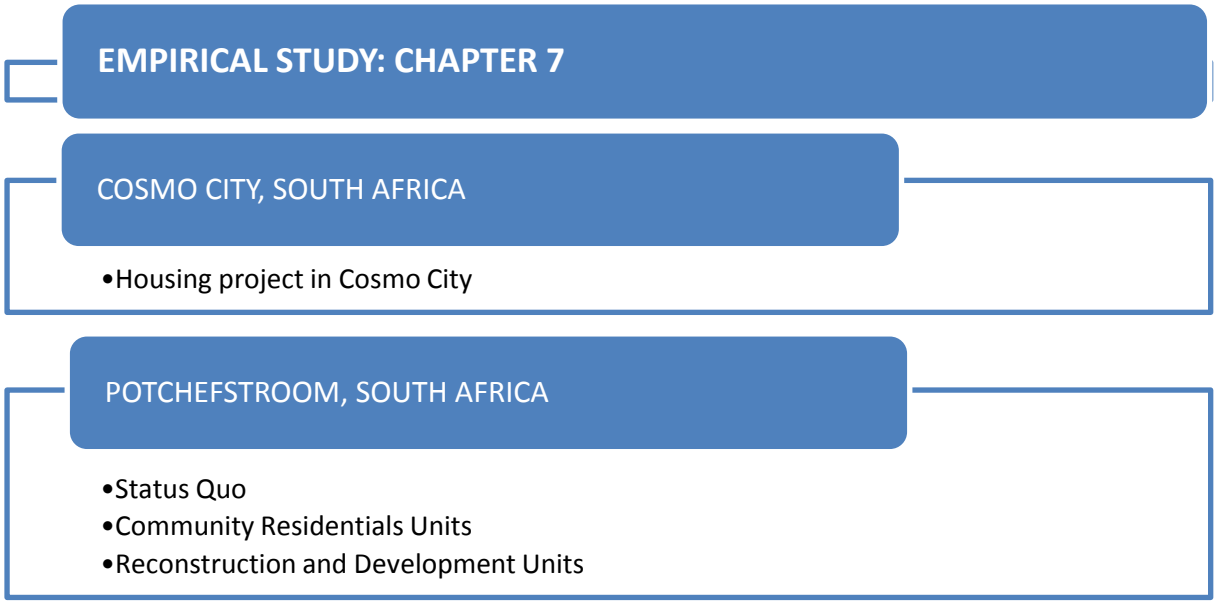

Figure 22: Overview of Chapter 7

Source: Own creation (2013).

7.1.1 COSMO CITY, SOUTH AFRICA

Cosmo City is a local example of a public-private partnership with regards to housing provision, wherein the City of Johannesburg signed a land Availability Agreement with CODEVCO in 2000, who then later developed the land in conjunction with Basil Read Developers and Kopano Ke Matla (Lategan, 2012:153).

The aim of the project was to provide a range of household types, in an attempt to develop an integrated, mixed use and inclusionary housing development. The programme is briefly discussed in the section below.

7.1.2 HOUSING PROJECTS IN COSMO CITY

Key aspects of the Cosmo City housing project in South Africa are detailed in the table below:

Table 24: Key aspects of Cosmo City, South Africa

Project Name	**COSMO CITY**
Project Overview	
City	Roodepoort
Housing Units	5 000 subsidised units 3 000 credit-linked houses 1 000 social housing rental units and 3 300 bonded houses
Role Players	The project is a public-private partnership with financing for subsidised units from the Gauteng Province, financing for engineering and services from CODEVCO (in partnership with Basil Read Developers and Kopano Ke Matla) and donations in the form of property from the local municipality.
Location	
	The project is located 25km North West of the Johannesburg CBD, in Gauteng province.
Basic Infrastructure	
	Bulk infrastructure was supplied by the municipality, and local connections supplied by the contractor. Traditional services were installed with regards to water, sanitation and electricity.
Affordability	
House	A range of units are provided for all income groups. Whilst most units are subsidised or available to rent, large bonded properties were for sale for higher income groups. Bonded houses were typically valued between R300 000 and R800 000, but sold for more on the open market.

Range of Household Types	
	As discussed above, units range between traditional subsidised houses, rental units in nine high rise apartment buildings, and bonded houses for higher income groups.
Right to Tenure	
	Subsidised-, credit-linked- and bonded houses all comprise ownership of the respective building, whereas rental units belong to a landlord.
Notes	
Integration	The aim of the development was to encourage the integration of different socio-economic groups through providing a range of housing possibilities.
Facilities	Adequate provision was made for additional facilities to encourage community interaction further. Facilities include 12 schools, 40 institutional sites, 43 parks/recreational sites and 30 commercial/retail sites. Provision was also made for 27ha of industrial development.

Source: Own creation based on Lategan (2012:152 - 158).

From the table above it is clear that the Cosmo City model differs greatly from the previous models discussed. The project provides the largest range in terms of both units and forms of ownership. Similarly to the Haram City example, the project also includes extensive additional facilities such as commercial and industrial sites that aim to create an integrated and economically viable settlement.

The table below evaluates the Cosmo City model with regards to the physical and socio-economic shortcomings identified in Chapter 4 of this study:

Table 25: Evaluation of South African pilot study

PHYSICAL & SOCIO-ECONOMIC SHORTCOMINGS USED AS CRITERIA	COSMO CITY
SHORTAGE OF SUITABLE LAND	The use of high density units is an effective solution to a shortage of suitable land as developments are less land intensive than single residential units on single erven (as is often the case in South Africa).

	However, high density units were only applied to rental units whilst the traditional RDP approach was used for subsidised units.
ECONOMIC AND SOCIAL SEGREGATION	Although the project is located 25km from Johannesburg commercial activities were included in the development, providing economic opportunities to a certain degree. Socio-economic integration is promoted through the provision of different housing types.
POOR QUALITY OF LIFE	
Quality of units	No mention is made of sub-standard building practices.
Lack of public participation	Extensive public participation was carried out including workshops, advertisements (in newspapers and displayed in public spaces) and even personal notices.
Lack of complementary services	A range of complementary services are provided, including commercial, health and recreational facilities.
Financial ability of beneficiaries	Beneficiaries of subsidised houses are responsible for the payment of occupational costs after completion of the units. However, solar heaters were installed to reduce costs for residents.

Source: Own creation (2013).

From the table above it is clear that the Cosmo City approach largely addresses the shortcomings of the current South African system with regards to subsidised housing provision. It should be noted that the project had enormous financial support, which is unfortunately not always the case for subsidised developments in South Africa. Strengths and weaknesses of this model are noted in the section below.

7.1.3 CONCLUSION

As discussed, the Cosmo City example offers the widest range of housing units to beneficiaries and aims to bridge the gap that traditionally exists between different socio-economic groups by creating an integrated neighbourhood with different forms of tenure available. This approach differs from the majority of subsidised projects implemented in South Africa, and is seen as a turning point in housing delivery in South Africa (Lategan, 2012:150). Table 26 below gives a brief overview of the strengths and weaknesses of this project:

Table 26: Strengths and weaknesses of South African pilot study: Cosmo City

Strengths	Weaknesses
Cosmo City	
Variety of units in terms of tenure options and sizes Inclusion of public space and collective-use facilities Focus on community participation	Success of socio-economic integration remains to be seen

Source: Own creation (2013).

The Cosmo City project is an excellent indication of what South Africa can achieve in terms of housing provision through effective public-private partnerships. The inclusion of a variety of units and tenure forms is a refreshing break from the traditional provision of standardised subsidised housing. The fully subsidised units are however still provided on the single unit per erf concept, whilst the rental units are higher in density.

Although Potchefstroom does not have a housing project as varied as Cosmo City, the town does offer two models at present. These are the provision of Community Residential Units (CRU) which are rented out, and the traditional, fully subsidised, Reconstruction and Development Programme houses. The following section investigates the status quo of both the housing need and provision in Potchefstroom to assess the sustainability of current practices in the town.

7.2 PILOT STUDY: POTCHEFSTROOM, SOUTH AFRICA

7.2.1 INTRODUCTION

Potchefstroom was deemed a relevant pilot study for this study as it epitomises the housing problems faced by so many Municipalities in the country. Currently, the Municipality faces a larger demand for subsidised housing than it can provide for (Bautsch, 2013). Coupled to this, the Local Municipality (LM) faces a shortage of Municipal owned land, with most of the available land being located on the outskirts of the town.

Furthermore, large portions of the available land are not suited for residential development due to dolomitic conditions (Bautsch, 2013). As such, there exists a definite need for innovative housing delivery to meet the current demand in a sustainable way.

The following sections will provide a brief overview of the current housing situation in Potchefstroom and examine two subsidised housing projects currently implemented by the government.

7.2.2 STATUS QUO OF POTCHEFSTROOM HOUSING

According to the latest census data (Statistics South Africa, 2013:11-35) the population of Tlokwe City Council LM increased with 26.8% from 128 353 (2001 census) to 162 762 (2011 census) with an overwhelming 167% increase in households from 32 038 in 2001 to 85 537 in 2011. This increase in households is coupled to an increased housing demand. As a thriving University town, Potchefstroom has a diverse housing need and an ever increasing private housing market. However, for the purpose of this study, the investigation into the housing need is focussed purely on the urban poor and residents who cannot provide adequate formal housing for themselves.

The effects of apartheid laws (as previously discussed under the Apartheid City Model) are evident in the spatial structure of Potchefstroom, with lower income neighbourhoods (Ikageng, Promosa and Mohadin) located to the West of the town, far from economic and social opportunities. Housing conditions in these areas vary greatly from the neighbourhoods surrounding the economic hub of town, the CBD. A housing analysis was done in these areas in 2008, as part of the Tlokwe Spatial Development Framework. As can be seen in Figures 23 and 24 below, informal houses and structures in Western Urban Areas outnumber formal houses significantly.

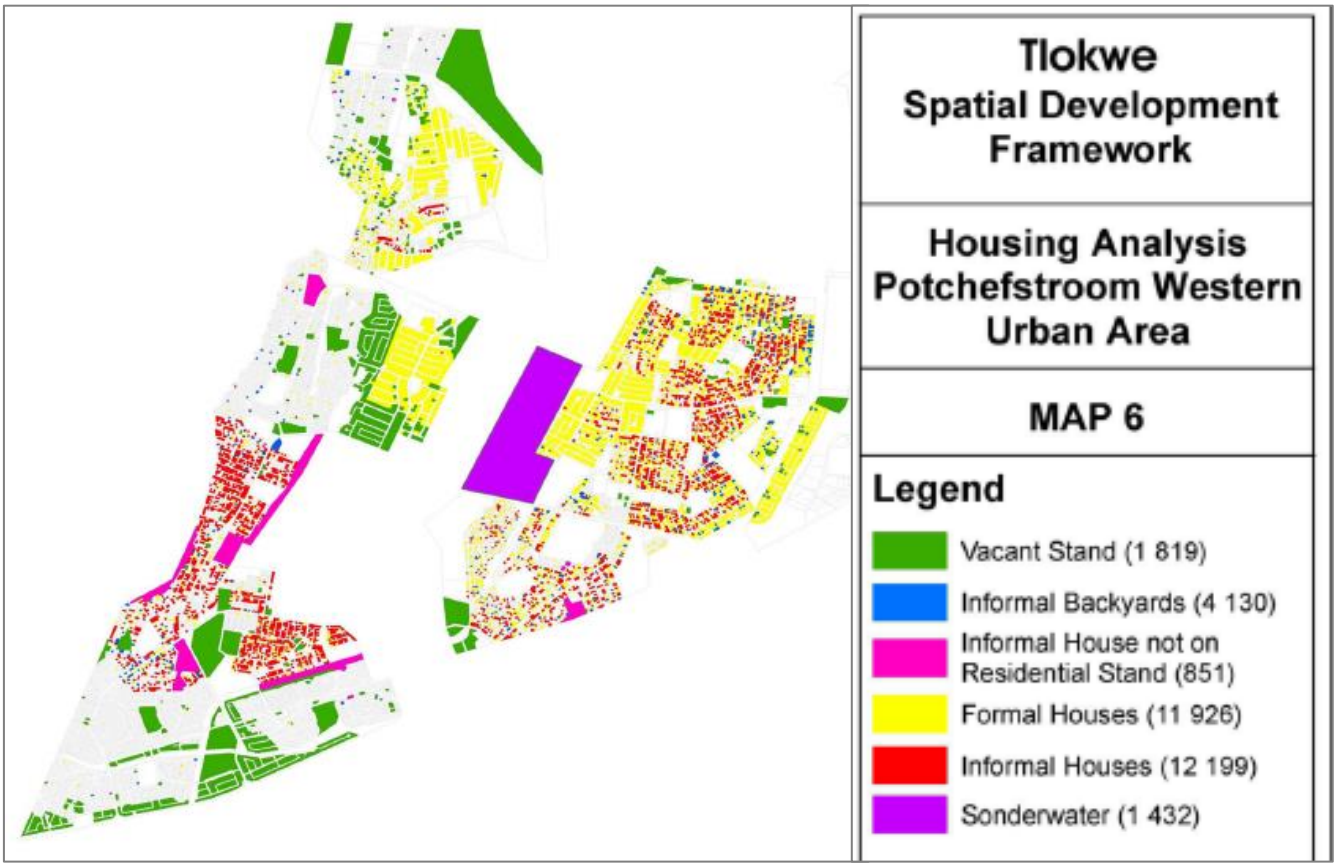

Figure 23: Housing analysis of Western urban areas of Potchefstroom

Source: Maxim Planning Solutions (2008:22).

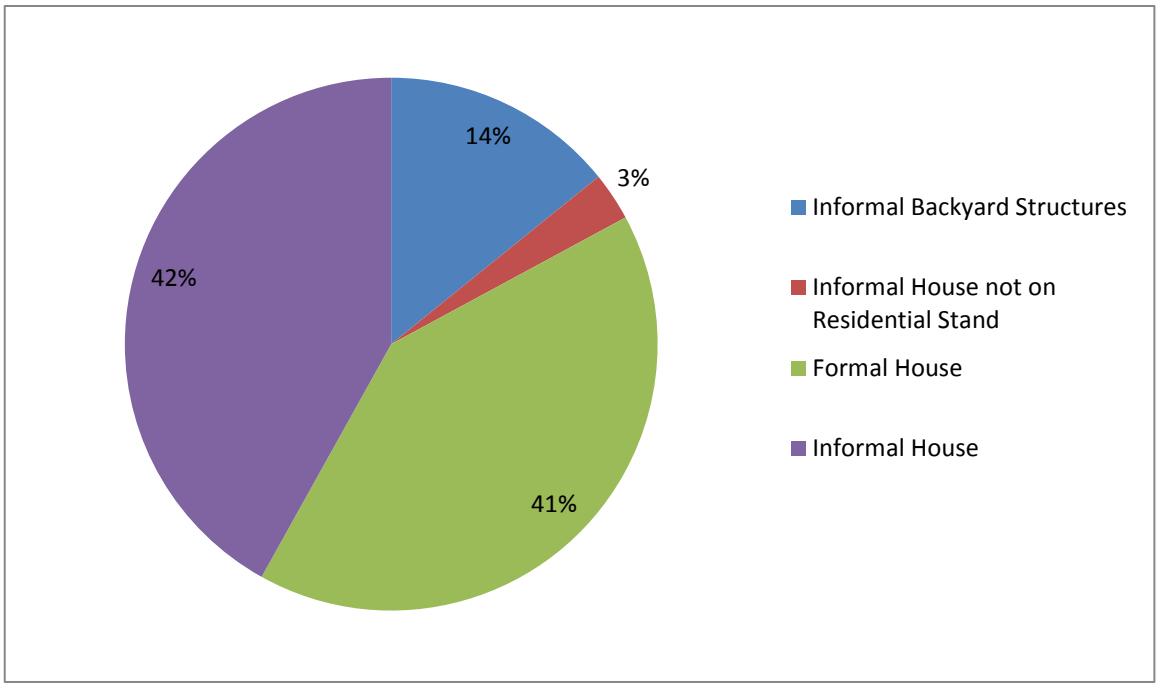

Figure 24: Analysis of housing needs in Western Urban Areas in Potchefstroom

Source: Own creation based on Maxim Planning Solutions (2008:22).

Based on these figures, the housing backlog for Potchefstroom can be calculated as follows:

Table 27: Tlokwe housing backlogs, as per 2008 SDF

Type of Dwelling	Number of Backlog
Informal Houses	12 199
Informal Backyard Dwellings	4 130
Informal not on Stands	8 51
Total	17 180

Source: Own creation based on Maxim Planning Solutions (2008:17).

The figures above indicate the dire need for formal housing in these areas. It can be estimated that the need for erven alone is approximately 3 162. This figure is calculated by adding the amount of illegal informal structures (in backyards and those not on residential stands) and subtracting the number of vacant stands. In addition, the 1 432 erven in the Sonderwater area will have to be relocated in future due to dolomitic conditions (Bautsch, 2013). It is therefore clear that a definite need exists for subsidised housing within the municipal area. The following section provides an outline of projects being implemented by the state in this regard.

7.2.3 SUBSIDISED HOUSING PROJECTS IN POTCHEFSTROOM, SOUTH AFRICA

Table 28 below examines the key aspects of two housing projects in Potchefstroom; the provision of Community Residential Units in the Central Business District and Reconstruction and Development Program subsidised housing found in the Western neighbourhoods of Potchefstroom.

Table 28: Key aspects of housing projects in Potchefstroom

Type of Project	COMMUNITY RESIDENTIAL UNITS (CRU)	RECONSTRUCTION AND DEVELOPMENT PROGRAM HOUSING (RDP)
Project Overview		
City	Potchefstroom	Potchefstroom
Housing Units	100 units	
Role Players	The project is funded by the Provincial Department of Housing as the Municipality is not yet accredited and cannot fulfil a housing mandate. Private contractors are appointed for construction.	The project is funded by the Provincial Department of Housing as the Municipality is not yet accredited and cannot fulfil a housing mandate. Beneficiaries are also selected by the Department, with the Municipality acting as facilitator. Private contractors are appointed for construction.
Location		
	The project is located in the central business district, behind the police station.	Projects are located in the western neighbourhoods of Potchefstroom such as Ikageng, Promosa and Mohadin, which are situated far from economic opportunities.
Basic Infrastructure		
	Traditional services were installed with regards to water, sanitation and electricity.	Infrastructure provision is often lacking with regards to projects and services such as roads, electricity, water and sewage is often only

		provided at a later stage.
Affordability		
House	Units are offered on a rental basis with rent ranging between R800 and R1800 a month.	Beneficiaries receive the house for free from the Government.
Range of Household Types		
	10% of the units are one bedroom units, whilst the rest consist of 2 – 3 bedroom units.	The houses are all identical, typically 43m² houses on erven of approximately 220m².
Right to Tenure		
	Units are only available to rent, with the Municipality acting as landlord. Maintenance is therefore also the responsibility of the Municipality.	After construction of the house the property should be legally transported to the beneficiary.
Notes		
Maladministration	Although construction of the units was completed in 2012 the building is still vacant as the Municipality does not have the capacity to act as landlord.	

Source: Own creation based on Bautsch (2013).

From the table above it is clear that Tlokwe Local Council Municipality has identified the need to diversify housing delivery to the urban poor. Although a laudable initiative, it is clear that many shortcomings exist regarding the implementation of CRUs. The table below also evaluates the projects with regards to the physical and socio-economic shortcomings of the South African approach, as discussed in Chapter 4 of this study:

Table 29: Evaluation of South African pilot studies: Potchefstroom

PHYSICAL & SOCIO-ECONOMIC SHORTCOMINGS USED AS CRITERIA	COMMUNITY RESIDENTIAL UNITS (CRU)	RECONSTRUCTION AND DEVELOPMENT PROGRAM HOUSING (RDP)
SHORTAGE OF SUITABLE LAND	The use of high density units is an effective solution to a shortage of suitable land as developments are less land intensive than single residential units on single erven.	The low density development continues to place pressure on the limited land available suitable for residential development.
ECONOMIC AND SOCIAL SEGREGATION	The project is well located in terms of economic opportunities. However, no integration has taken place as the development is not occupied.	The project is located in a peripheral area far from economic opportunities (as is often the case in South Africa). The social composition of residents remains largely homogenous.
POOR QUALITY OF LIFE		
Quality of units	No mention was made of sub-standard building practices.	
Lack of public participation	No mention was made of public participation. It can be assumed that standard public participation processes with regards to township establishment (RPD) and rezoning (CRU) processes were followed.	
Lack of complementary services	The development is purely residential and offers no complementary services.	Although erven are allocated for complementary services these stands are often vacant for years before services are provided.
Financial ability of beneficiaries	Residents will pay rent (under market value) and are therefore not responsible for occupational costs such as maintenance etc.	Residents are responsible for the payment of occupational costs after completion of the units. However, in certain instances,

		solar heaters were installed to reduce costs for residents.

Source: Own creation (2013).

From the table above it is clear that the CRU approach addresses more shortcomings than the RDP approach. The following section will discuss the strengths and weaknesses of these two projects.

7.2.4 CONCLUSION

It is clear from the information provided above that there are still shortcomings in the subsidy system as implemented by Tlokwe City Council Local Municipality. Table 30 below gives a brief overview of the strengths and weaknesses of the projects discussed above.

Table 30: Strengths and weaknesses of South African case study

Strengths	**Weaknesses**
Community Residnetial Units	
Range of units provided Different form of tenure (rental units) Well linked to public transport and employment opportunities Higher density means less land is needed for development	Poor administration and lack of capacity means the project has not been fully implemented
RDP houses	
Full ownership is awarded to beneficiaries by government upon completion of the top structure	Identical units provided throughout the project Infrastructure is often only provided after the top structures have been completed Peripheral location far from economic opportunities Purely residential Land intensive

Source: Own creation (2013).

Despite the introduction of CRUs the main method of subsidised housing provision in Potchefstroom remains the traditional provision of single houses on single erven in peripheral locations. As

discussed in previous chapters, this method is unsustainable in nature and cannot be the only method of housing provision if the current backlogs are to be met.

A comparative analysis of the discussed examples is provided below in order to identify best practices from different projects that can be incorporated into South African subsidised housing schemes.

7.3 COMPARATIVE ANALYSIS OF PILOT STUDIES

The sections above provided an overview of the different elements of several housing programmes across the globe, along with the main strengths and weaknesses of these programmes. The study of these different programmes is critical in establishing factors that enhance sustainable housing provision, and factors that detract from it.

The most important differences to note between the pilot studies and the projects in Potchefstroom projects are:

1. Use of higher density units

   It is noteworthy that all three international studies make use of apartment style buildings that are higher in density than the traditional subsidised housing schemes in South Africa. Even in Brazil, where the unit sizes are exact to that of the typical subsidised house in South Africa (43 m^2) units are grouped in blocks of up to 16 apartments. These increased densities ensure the optimal use of land, discourages urban sprawl, improves service provision in terms of infrastructure and encourages a greater range of social amenities.

   Cosmo City also employs higher densities, although only for rental units. The traditional low density erven layout is used for the fully subsidised component of the project.

2. Provision of mixed land uses

   The only examples to provide mixed land uses are those of Haram- and Cosmo City, who made provision for non-residential uses such as schools, businesses and industries. As previously discussed the integration of land uses is of vital importance to ensure the sustainability of a housing scheme as they add to the vibrancy of a neighbourhood. Bairro Carioca and Taroni Condiminium are both criticised for focussing only on residential development, similar to the Potchefstroom projects.

3. Reduced mortgage repayments

   As previously discussed the main method of financing subsidised units in South Africa is a fully inclusive subsidy that includes land acquisition, land use processes and a top structure. However, in all three international projects mentioned above, beneficiaries are only partially subsidised by the state, and are required to pay a percentage of the costs of the property over a certain time frame. These rates are purposefully kept low to ensure affordability for the urban poor. The shared financial responsibility with regards to beneficiaries eliminates the sense of entitlement often criticised as being part of the South African subsidy programme.

4. Alternative forms of tenure

   Both Haram- and Cosmo City include rental units in the project, especially for the 'gap' market that do not qualify for a subsidy, but cannot afford their own home either. These alternative forms of tenure lend flexibility to the projects and make them accessible to a wider range of people in the community. Rental units provide the perfect start-up opportunity, especially for young people who require adequate housing. In this regard the provision of rental units in Potchefstroom is a laudable initiative. Given the present housing backlog it is unacceptable that these units have not been filled with tenants due to maladministration of the project.

5. Use of alternative building materials

   Pilot studies in Brazil and Egypt illustrated the effective use of alternative building materials. The example of Bairro Caroioca includes the use of in-situ concrete construction as opposed to the traditional brick wall construction method. It is estimated that this method saved 3 months of construction time and large amounts of money. The example of Haram City includes the use of building materials specifically suited to the desert climate.

   The use of alternative building materials in subsidised housing provision in South Africa therefore warrants further research by the building profession.

Tables 31 and 32 below provides a summarised analysis of all six programmes previously discussed, evaluated using the two sets of criteria previously discussed.

Table 31 below illustrates how the different pilot studies measure against some of the elements of sustainable human settlements, as discussed in Chapter 2. Deliverables are rated as ineffective, adequate or effective to determine which of the aspects implemented add to the sustainable development of subsidised housing and can be incorporated into the South African context.

Table 31: Comparative analysis of pilot studies

	Bairro Carioca (Brazil)	**Taroni Cond. (Brazil)**	**Haram City (Egypt)**	**Cosmo City (South Africa)**	**CRUs (South Africa)**	**RDP Housing (South Africa)**
Location	Centrally located – well integrated	Located on periphery, in vector of urban expansion	Centrally located – well integrated	Well located	Centrally located – well integrated	Located on periphery
Financing	Partially subsidised by state	Partially subsidised by state	Range of financing – partial state subsidies & rental units	Range of financing – full state subsidies, rental units and private ownership	Rental units (below market value)	Fully subsidised by state
Range of Household types	Standard units	Standard units	Range of units – differences in sizes	Range of units – differences in sizes	Range of units – differences in sizes	Standard units
Right to tenure	Ownership – partial financial contribution	Ownership – partial financial contribution	Ownership – partial financial contribution and rental	Ownership - no financial contribution and rental units	Rental units	Ownership – no financial contribution

			units			
Land Use	Some additional land uses are provided	Purely residential	Mixed land uses provided	Mixed land uses provided	Purely residential	Purely residential
Density	Medium-High	Medium-High	Medium-High	Mixed. Rental units: Medium-High Subsidy houses: Low	Medium-High	Low
SUSTAINABILITY	**Range of Household types need to be addressed to improve sustainability**	**Range of Household types and Land uses need to be addressed to improve sustainability**	**All issues above are effectively addressed and developments are deemed sustainable**		**Right to Tenure and Land uses need to be addressed to improve sustainability**	**No issues above are effectively addressed and developments are not sustainable**

	Effective/ Most Sustainable		Ineffective/ Unsustainable		Acceptable/ Room for improved Sustainability		Not a spatial issue

Source: Own creation (2013).

Table 32 below illustrates how the different pilot studies measure against the physical and socio-economic shortcomings of the current South African approach discussed in Chapter 4. As previously discussed, administrative factors are not included in this analysis. Again, deliverables are rated as ineffective, adequate or effective to determine which aspects add to the sustainable development of subsidised housing and can be incorporated into the South African context.

Table 32: Comparative analysis of pilot studies according to identified shortcomings

	Bairro Carioca (Brazil)	Taroni Cond. (Brazil)	Haram City (Egypt)	Cosmo City (South Africa)	CRUs (South Africa)	RDP Housing (South Africa)
SHORTAGE OF SUITABLE LAND	High density units optimally uses available land	High density units optimally uses available land	High density units optimally uses available land	High density rental units are available – but traditional low density RDP units are still provided	High density units optimally uses available land	Low density RDP housing places pressure on available suitable land. Land is not optimally utilised
ECONOMIC OPPORTU-NITIES	Centrally located in close proximity to economic opportuni-ties	Peripheral location, but with the provision of economic opportuni-ties on site	Centrally located in close proximity to economic opportuni-ties	Located 25km from JHB, with the provision of economic opportuni-ties on site	Centrally located in close proximity to economic opportuni-ties	Peripheral location far from economic opportuni-ties
SOCIO-ECONOMIC INTEGRA-TION	Socio-economic situations of beneficiaries tend to be homogenous	Socio-economic situations of beneficiaries tend to be homogenous	Socio economic integration is promoted through the delivery of various housing types (subsidised and rental).	Socio-economic integration is promoted through the delivery of various housing types (subsidised, rental and	To be determined – the building is currently vacant	Socio-economic situations of beneficiaries tend to be homogenous

				bonded).		
QUALITY OF UNITS	Innovative building methods are used.	Innovative service delivery options are used	Building methods suited to the unique climate are used	No mention is made of poorly constructed units	No mention is made of poorly constructed units	No mention is made of poorly constructed units
PUBLIC PARTICIPA-TION	No mention is made of public participation	No mention is made of public participation	No mention is made of public participation	Extensive public participation was carried out	No mention is made of public participation	No mention is made of public participation
COMPLE-MENTARY SERVICES	Provision of certain services, e.g. kindergarten	Purely residential	Extensive provision of additional services	Extensive provision of additional services	Purely residential, but located in close proximity to services	Purely residential
FINANCIAL ABILITY OF BENEFI-CIARIES	Ownership – partial financial contribution. All occupational costs are paid by owners upon completion of project	Ownership – partial financial contribution. The Local Authority subsidises water costs for the first three months	Ownership and rental units. Micro-financing is made available to manage occupational costs.	Ownership and rental units. Variety of units offer varying occupational costs	Rental units. Rental units imply that occupational costs such as maintenance are not paid by residents. Rent charged is under market value	Ownership – no financial contribution. All occupational costs are paid by owners upon completion of project – cost saving initiatives are applied

SOLUTIONS TO IDENTIFIED SHORTCOMINGS / BEST PRACTICES	High Density Units, Central Location, Innovative Building Methods	High Density Units, Added Economic Opportunities, Innovative Service Delivery, Subsidised Living Costs	High Density Units, Central Location, Well suited building methods, Complementary Services and Financing provided	Varied housing types, Public Participation, Complementary Services, Varied occupational costs	High Density Units, Central Location, Rental units with no maintenance costs	Inefficient system with too many shortcomings
	Effective		Ineffective		Acceptable		Lack of information

Source: Own creation (2013).

The comparative analysis above reinforces the fact that the traditional RDP housing scheme currently implemented in South Africa is ineffective at best, and unsustainable in the long run. From the analysis above, it is clear that the models implemented in Haram City and Cosmo City are the most effective as they are well located, provide a range of household types that cater to different socio-economic needs, include a variety of complementary land uses, such as schools and commercial properties that stimulate the economy, and use higher densities that promote the optimal utilisation of land and infrastructure.

7.4 CONCLUSION

The projects examined in these two chapters provide a good indication of alternative methods to housing delivery that can be implemented in a subsidised system. Examples from other developing countries, as well as South African developments, were scrutinised in search of best practice lessons that can be adopted and applied to future housing projects in Potchefstroom. From the data collected it is clear that specific attention should be paid to:

1. The location of projects, to ensure that they are well integrated in terms of economic opportunities.
2. Providing a range of household types, in terms of size and tenure, that caters to the different needs of different individuals.

3. Increased densities of projects that encourage optimal use of land and available infrastructure.
4. Mixed land uses that make provision for complementary land uses that are not residential.

These conclusions, and others pertaining to previous sections of the study, are discussed in more detail in the following section.

SECTION C: CONCLUSIONS & RECOMMENDATIONS

CHAPTER 8: CONCLUSIONS

8.1 INTRODUCTION

The following chapter provides conclusions drawn from the literature review and empirical study in previous chapters, and provides a link between these chapters. These conclusions act as a summary of lessons learnt throughout the research previously conducted, and serve as the basis for the recommendations made in Chapter 9.

Figure 25 below provides a brief overview of Chapter 8:

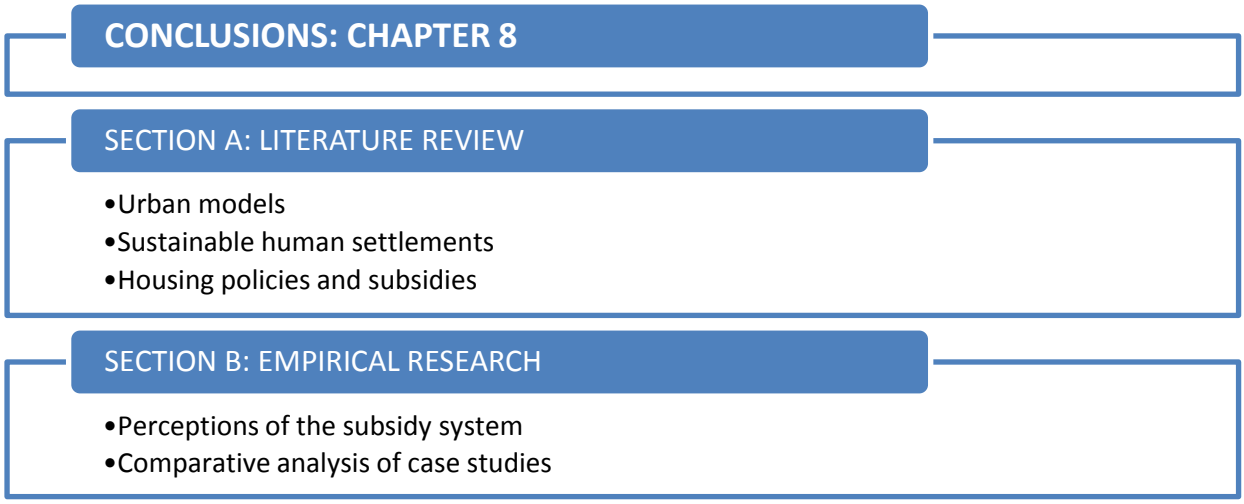

Figure 25: Overview of Chapter 9

Source: Own creation (2013).

8.2 URBAN MODELS

By examining the three most recognised urban models (Concentric Zone-, Sector- and Multiple Nuclei Model) and comparing them to the South African spatial model (the Apartheid City Model) it became clear that South Africa has a unique spatial pattern, created through strict segregation laws enforced in the Apartheid era.

This spatial model contributed to certain race groups being disenfranchised as they were forced to settle in peripheral locations, removed from economic and social opportunities. The effects of Apartheid planning and legislation can be seen in Figure 26 below:

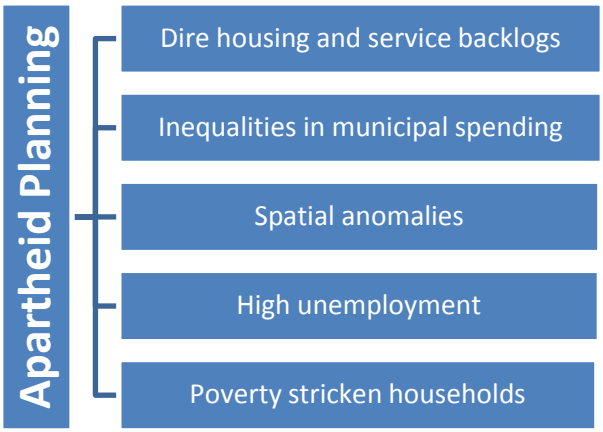

Figure 26: Legacy of Apartheid planning

Source: Own creation (2013).

The legacy created by Apartheid planning, such as the housing backlog and spatial anomalies especially, received a great amount of attention with the election of the new government in 1994. Active efforts to eradicate the housing backlog were put in place in the form of subsidised housing. However, despite on-going housing delivery by the State, severe housing backlogs and spatial segregation remain present in South African cities. As such, active efforts need to be made to counteract the Apartheid planning legacy to ensure well integrated, sustainable human settlements. In order to achieve this it is crucial to understand the different elements that contribute to sustainable human settlements, as discussed below.

8.3 SUSTAINABLE HUMAN SETTLEMENTS

With the demise of Apartheid a new planning approach was needed for the country, one that particularly aimed to improve the quality of life of the urban poor who had previously been disadvantaged. The large housing backlog at the time (estimated shortage of 1.5 million urban units) necessitated a focus on adequate housing provision for the urban masses. From the research conducted it is clear that housing provision is a complex matter, and that the delivery of top structures do not necessarily equate to adequate shelter. Instead, several factors contribute to the formation of adequate housing, and ultimately the creation of sustainable human settlements.

Findings regarding these factors are briefly discussed below in Table 33:

Table 33: Factors of adequate housing

Sustainability	Sustainable development occurs when social-, economic- and environmental factors are encouraged, without negatively influencing one another. Cohesion between these three factors is important to ensure the longevity of housing projects and the protection of the environment.
Location	Location plays a vital role in housing provision. It is important that housing projects are well located, with regards to economic opportunities and social facilitates. Housing projects located on the urban periphery tend to be removed from employment opportunities and usually increase living expenses for residents who are forced to travel great distances to reach amenities.
Density	Increased residential densities have proven benefits with regards to infrastructure provision, the provision of social facilities and viable public transport. Furthermore, increased densities optimally utilise available land, decrease urban sprawl and create vibrant communities.
Basic Infrastructure	Access to potable water and decent sanitation facilities are considered basic human rights in accordance with the South African Constitution. The provision of these basic services is therefore crucial with regards to housing provision.
Affordability	Affordability of a property is extremely important when discussing housing provision for the urban poor. Two aspects of affordability (capital variables and operational variables) were discussed. Operational costs (such as maintenance) should not be disregarded in subsidised housing schemes as beneficiaries often cannot afford these long term costs.
Right to Tenure	Legal tenure of a property (albeit in the form of ownership or a binding lease agreement) is very important in housing provision as it protects the resident of the property from illegal eviction and creates a certain level of security.

Range of Household Types	The need of community members in terms of housing is extremely varied due to differences in cultures, household size and socio-economic conditions. As such, one standardised method of housing provision is not viable. Housing provision needs to flexible and varied in order to adapt to the ever changing needs of the community.

Source: Own creation (2013).

As is evident from the information above, the issue of housing provision is complex. However, these issues cannot simply be ignored when it comes to subsidy housing for the sake of simplicity. It is essential that these elements are kept in mind when implementing housing projects to ensure the longevity of subsidised housing and an improved standard of living for beneficiaries.

It is therefore understandable that policies aimed at housing provision have been adapted over the years in an effort to find an optimal solution to the dire housing need in the country. The most important housing policies and the subsidy programmes formed from them are briefly reviewed below.

8.4 HOUSING POLICIES AND SUBSIDIES

Legislation regarding housing provision in South Africa has changed tremendously in the past 19 years. The three key policies, and related urban subsidies, are:

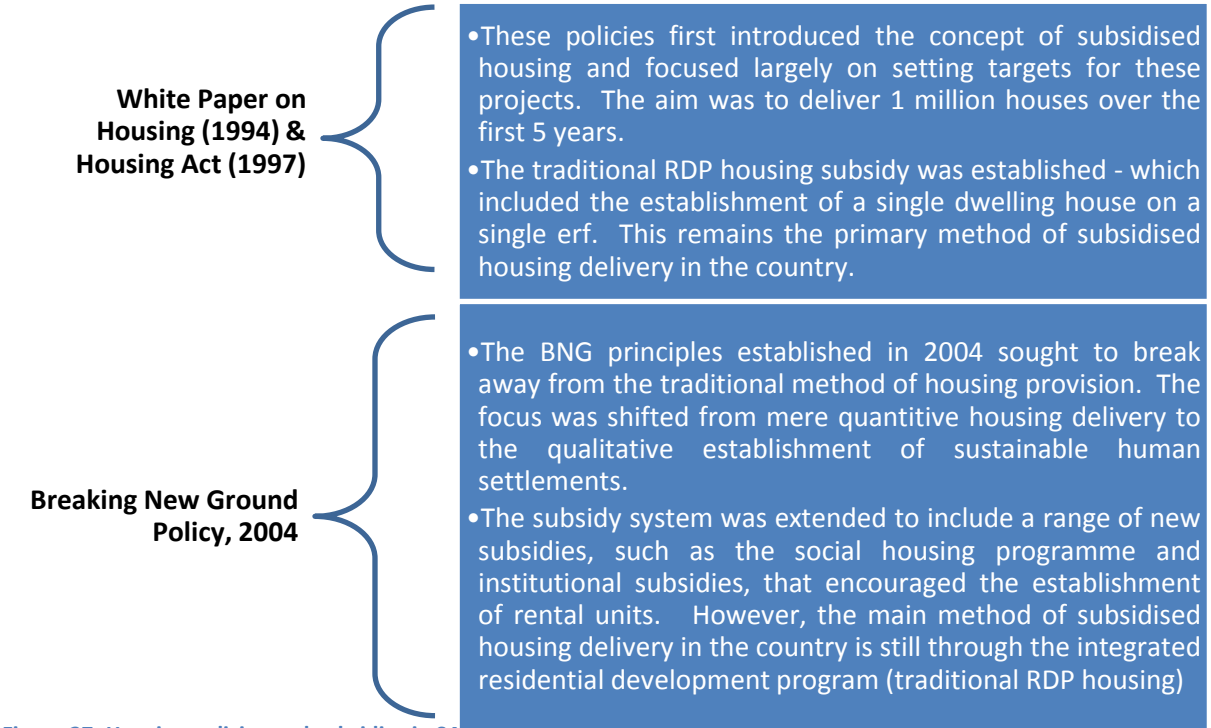

Figure 27: Housing policies and subsidies in SA

Source: Own creation (2013).

Some differences were noted when comparing the South African approach to subsidised housing provision to the approaches used in Brazil and Egypt. Most notably, Brazil includes financing from the private sector, which South Africa does not, and Egypt encourages the development of low-cost housing in new towns, where South Africa encourages the densification of existing urban areas. The implementation of these policies in the form of housing projects was compared in the form of pilot studies, and is discussed in more detail below.

The South African policies and subsidies discussed above have received critique from academic regarding the practicality and sustainability of the proposals made. Although the BNG principles were introduced as a response to the unsustainable nature of the subsidy program established by previous legislation the main method of subsidised housing delivery throughout the country remained unchanged. This method of housing delivery (single dwelling unit of a single erf) was found to be fundamentally unsustainable and has received severe criticisms from academics who work with subsidised housing and the South African planning context.

The following table provides a summary of the critiques against the traditional subsidy system (single dwelling on single erf):

Table 34: Shortcomings of subsidy system

Physical and Socio-Economic Factors	**Shortage of Suitable Land**	The traditional method of subsidised housing provision (single dwelling on single erf) is deemed unsustainable as the model is extremely land intensive and there exists a shortage of suitable, government owned land for these types of projects. Often, the only land available for these developments is vacant land, located on the periphery of towns.
	Economic and Social Segregation	Coupled to shortage of suitable land is the on-going economic and social segregation of communities who are located on the urban periphery. These locations tend to be far from economic activities and social amenities, and neighbourhoods tend to be homogenous with regards to economic and race groups.
	Poor Quality of Life	Academics argue that little is done by developers to improve the quality of life of beneficiaries. The quality of units being delivered is often sub-standard, there is a lack of public participation throughout the process, complementary services are often lacking which leads to purely residential

		developments and beneficiaries are often incapable of carrying the financial burden of home ownership.
Administrative Factors	**Registration of Stands**	According to statistics available, there exists a great backlog with regards to the registration of subsidised houses. This delay in registration is unacceptable, as the subsidy system is founded on the ideal that it provides the urban poor with first time ownership, as a method to enter into the housing market.
	Housing Backlog and Maladmini-stration	Despite the delivery of approximately 3 million subsidised houses over the past 19 years the housing backlog in South Africa remains at an estimated 2.1 million. It is obvious that the demand for subsidised housing far outweighs the current rate of delivery. As such, little headway is made with regards to the growing backlog. The subsidy system has also been widely criticised for maladministration and corruption within the system.
	Issue of Entitlement	A common social criticism of the subsidy system is the increased dependency of the urban poor on the state. A sense of entitlement is created by which citizens rather rely on state subsidised housing than pursuing job opportunities and earning independent incomes.

Source: Own creation (2013).

As can be seen above in the theoretical investigation, several aspects of the traditional subsidy approach have been widely criticised. Research was conducted (in the form of structured questionnaires) to determine whether professionals who work with subsidised housing in the field share the same opinions as academics regarding the system. The perceptions of the subsidy system, as raised by the eleven professionals questioned, is briefly summarised below.

8.5 PERCEPTIONS OF THE SUBSIDY SYSTEM

In addition to criticisms against the current subsidy system made by academics the research included perceptions of the system from planning and other related professionals. The main aim of this exercise was to determine whether professionals who work within the system view it as sustainable.

The response from professionals was that subsidised housing delivery in South Africa, as it is currently implemented, is not sustainable and that alternative methods of implementation need to be examined.

8.6 COMPARATIVE ANALYSIS OF CASE STUDIES

As a method of examining alternative methods of housing provision for the urban poor which are more sustainable in nature, and suited to the South African context, examples of housing projects were investigated, and compared with one another. The examples used for this analysis were:

- Bairro Carioca and Taroni Condiminium in Rio de Janeiro, Brazil
- Haram City in October 6 City, Egypt
- Cosmo City in South Africa
- Community Residential Units and Reconstruction and Development Programme projects in Potchefstroom, South Africa.

The most important observations made during the investigation of these projects are illustrated in Table 35 below*:

Table 35: Observations from empirical research

Use of higher density units	All three international studies use higher density units in the form of apartment blocks for housing the urban poor. These increased densities ensure the optimal use of land, discourages urban sprawl, improves service provision in terms of infrastructure and encourages a greater range of social amenities.
Provision of mixed land uses	Both Brazilian examples are widely criticised as they are purely residential developments and do not include mixed land uses or complementary facilities like Haram- and Cosmo City, who have made provision for varied land uses in their developments. Mixed land uses are essential to creating vibrant communities that are well integrated, and closely located to economic opportunities and social amenities.
Reduced mortgage repayments	The level of financial aid in subsidised projects was found to be varied across countries. Where South Africa typically provides fully subsidised housing units (with regards to full title properties – not rental accommodation) international

	examples require a financial contribution from beneficiaries. These contributions are paid off over several years, at generous interest rates. By including financial responsibilities on the part of the beneficiary, dependency on the state is limited and a sense of entitlement is discouraged.
Alternative forms of tenure	The provision of different forms of tenure in housing projects has been effectively introduced in both Cosmo- and Haram city, which included rental units in conjunction with full title units. The addition of alternative forms of tenure adds flexibility to a housing project, and makes the project accessible to a wider range of people. Rental units are ideal as start-up housing units as they do not carry the financial burden of full title properties, whilst providing the occupant with security of illegal eviction.
Use of alternative building materials	All three international studies use building materials and/or methods specifically suited to their needs/environment. Projects are therefore not standardised across the country, but are flexible and adapted to the specific circumstances of a project. The use of alternative building methods in South Africa warrants further investigation.

Source: Own creation (2013).

*A detailed comparative analysis of these projects, indicating effective and ineffective approaches is provided in Tables 31 and 32 in Chapter 7 of this study.

The table below illustrates the different aspects of sustainable human settlements, as discussed in Chapter 2, and whether or not they are present/implemented in the legislation and pilot studies discussed.

Table 36: Evaluation of policies and pilot studies

Elements of sustainable human settlements	Policies & legislation		Pilot studies					
	RDP approach	BNG approach	Bairro Carioca	Taroni Cond.	Haram City	Cosmo City	RDP, Potch	CRU, Potch
Location	✗	✓	✓	✗	✓	✓	✗	✓

Density	✗	✓	✓	✓	✓	✓	✗	✓
Basic infrastructure	✓	✓	✓	✓	✓	✓	✓	✓
Right to tenure	✓	✓	✓	✓	✓	✓	✗	✗
Range of household types	✗	✓	✗	✗	✓	✓	✗	✓
Sustainability	✗	✗	✓	✓	✓	✓	✓	**TBD***

Source: Own creation (2013).

* To be determined

From these observations, and the lessons learnt about urban structure, sustainable human settlements and the shortcomings of the current subsidised housing projects in South Africa it was possible to come up with the recommendations in Chapter 9 to make subsidised housing provision in South Africa more sustainable.

CHAPTER 9: RECOMMENDATIONS

9.1 INTRODUCTION

The previous chapters illustrated the definite need in South Africa for large scale housing delivery in aid of the urban poor. The chapters also indicated that the main method of subsidised housing delivery at present is insufficient and unsustainable and cannot meet the current demand. As such, recommendations are made in terms of sustainable subsidy housing provision in South Africa. The figure below provides an outline of the following chapter:

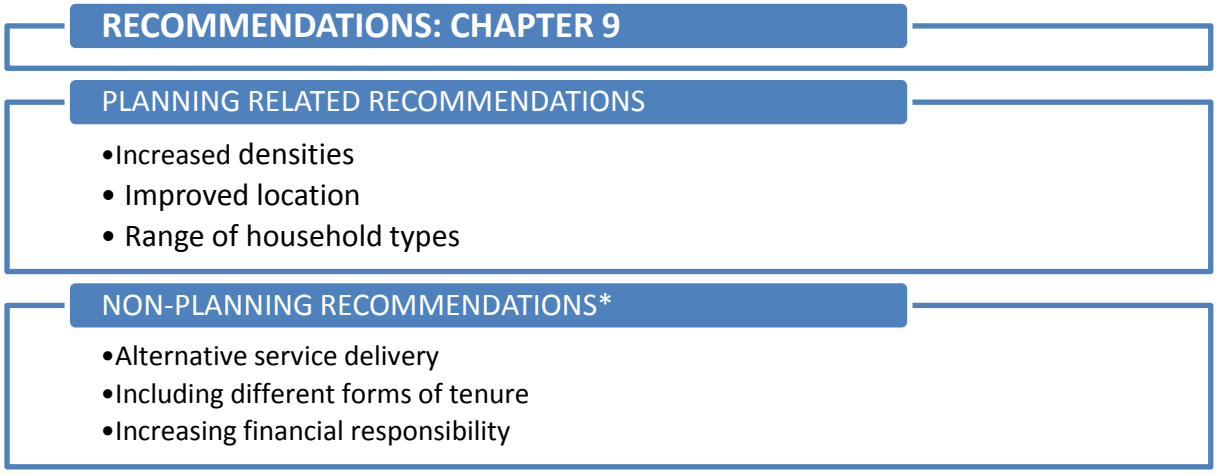

Figure 28: Overview of Chapter 9

Source: Own creation (2013).

* Please note that non-planning recommendations (regarding administrative factors surrounding the system) are not discussed in detail as they are not viewed as a related planning field. However, these factors, and the policies driving them, warrant further investigation.

9.2 INCREASED DENSITIES

Given the large demand for housing, and the limited well-located land available for development, the logical solution would be to increase densities in subsidy projects in Potchefstroom, and similar housing projects across South Africa. It was determined during the investigation of Potchefstroom's housing status quo that the largest housing backlog is found in the Western neighbourhoods (Ikageng, Promosa and Mohadin). However, with the exception of illegal backyard structures, these areas show few signs of densification. For example, there exists a strong contrast between the low density development in these areas (mainly zoned as Residential 1 erven) and the high density

student developments surrounding the North West University Campus (mainly zoned as Residential 3/Residential 4 erven).

Therefore, there exists immense opportunities for densification. As previously discussed, higher density residential developments have several benefits including decreased urban sprawl, improved integration and optimum utilisation of existing services. Based on the findings of this research, the following two methods of densification are proposed as suitable solutions for subsidised housing in Potchefstroom. These methods of densification can also be applied nationally to subsidised housing projects throughout the country.

9.2.1 DENSIFIED PROPERTIES

The examination of the current housing backlog in Potchefstroom indicated a large number (4 130) of informal backyard dwellings in Western neighbourhoods. Densification is therefore already taking place in these neighbourhoods, in an unplanned and improper way. These dwellings often do not have access to basic services, as they are illegally built on the properties. Proper planning in this regard can therefore improve the living conditions of residents.

The densification of existing properties can be accomplished through legally allowing second dwelling units on a property or allowing the subdivision of existing properties. It may be an option to subdivide the available 1 819 stands currently vacant in the Western neighbourhoods before developing them to convert backyard dwellings into smaller, formalised erven.

Unfortunately, the current scheme regulations of the Tlokwe City Council Local Municipality do not make provision for such small erven. If this method of densification is to be investigated amendments to the scheme regulations will have to be made to accommodate these subdivisions in subsidised housing projects. An easier solution to densification however may be the erection of medium-high density residential buildings, as discussed below.

9.2.2 MEDIUM-HIGH DENSITY RESIDENTIAL BUILDINGS

The most obvious method of increasing densities is the erection of medium-high density residential buildings, such as the Community Residential Units project. These apartment style units can offer the same building size as the traditional RDP house (as is evident in the Brazilian examples) but at higher densities. These units can also be easily adjusted to include different size units, as with the Community Residential Units in Potchefstroom.

In developing these medium-high density residential buildings it is imperative to keep in mind the character of surrounding land uses. High rise buildings will not necessarily suit the existing environment in a town. As such, the densities and height of surrounding land uses need to be taken into consideration to ensure that buildings are well-integrated.

The development of high rise apartment buildings comprising of hundreds of units may also lead to a lack of social integration. By limiting the height of buildings, and the number of units per building, social interaction between residents is encouraged. Ideally therefore, buildings should not exceed 3-4 storeys and limit the number of residential units, much like the Taroni Condominiums that comprise of 16 units per building and the rental units built in Cosmo City. By limiting the height to 3-4 storeys construction and maintenance costs are also reduced, in comparison to a high rise building.

9.3 IMPROVED LOCATION

Throughout this study it has been made clear that the location of housing projects in relation to socio-economic opportunities is extremely important to ensure integration in a community. The location of housing becomes even more important when dealing with the urban poor as they often do not have the means to overcome issues created by poor location (e.g. transport costs).

As discussed, the majority of subsidised housing projects in Potchefstroom are located in the Western neighbourhoods, which are far removed from economic opportunities and social facilities. The CRU project is however extremely well located in the CBD, and is a model to be strived towards.

The location of formalised residential functions within the CBD can contribute significantly to urban renewal and diversify the available land uses to create a vibrant city centre. Many opportunities exist to convert or renovate existing buildings within the CBD into residential units for beneficiaries.

9.4 PROVIDING A RANGE OF HOUSEHOLD TYPES

"The need to scale up production must not result in excessive repetition of dwellings and blocks. The projects must be flexible in order to adapt to the needs of future dwellers."

(Magalhães & Di Villarosa, 2012:39)

As established in this study, housing needs is an ever changing phenomenon. The needs of individuals tend to change over years as their personal situation and socio-economic status changes.

For example, the needs of first time home owners tend to differ from middle aged owners with families, which differ again from the needs of elderly people. As such, it is imperative that housing delivery be adaptable to these changes, to accommodate the needs of different owners. One of the best methods to improve the flexibility of housing projects is by developing a range of household types.

The development of medium-high density residential buildings has been discussed as a viable method of housing delivery as it increases densities. The following options can also be implemented as alternative methods of housing delivery:

- Attached housing

  Attached housing usually consists of single storey units that are attached horizontally to one another. This housing can also be referred to as row-housing, and consists of separate units with separate entrances.

  Attached housing is a low-impact method of densification which still allows for private open space in the form of gardens as all units are on the ground floor. As the houses are horizontally attached (see figure below) there are no side building lines. This allows for narrower erven than usual, improving the utilisation of available space. The figure below illustrates the typical layout of attached housing:

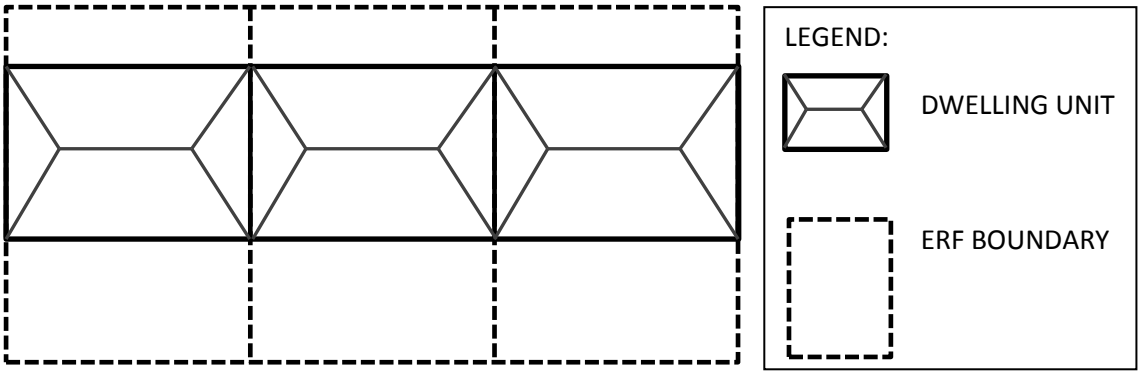

Figure 29: Attached housing

Source: Own creation (2013).

- Multi-unit housing

  Multi-unit housing consists of two or more units on the same property which are also attached to one another, but vertically (i.e. two storeys). This type of housing is often referred to as duplexes and each unit again has its separate entrance.

Multi-unit housing is also a low-impact method of densification where only the bottom unit has access to private open space in the form of a garden. Communal gardens may however be provided for residents who live on the second floor. The figure below illustrates the typical layout of multi-unit housing:

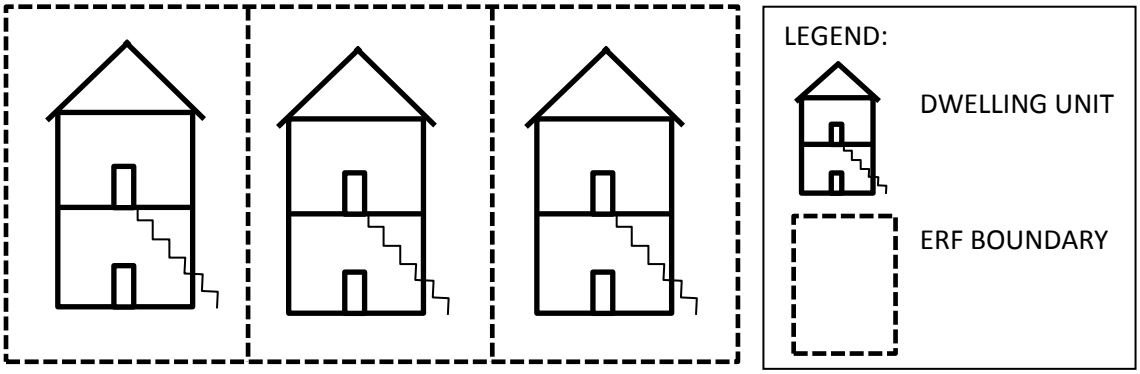

Figure 30: Multi-unit housing

Source: Own creation (2013).

By developing this range of units the property market can become stimulated as owners adapt their living space to their needs. Currently, the gap between a RDP house and private house is too large for most beneficiaries to sell the RDP house and buy a private house. However, by providing a range of units the gaps between units become smaller and owners can gradually climb the property ladder. For example, a beneficiary may receive an apartment in a medium-high density residential building as a first home. This apartment may be sold at a later stage to buy an attached house, or multi-unit house, which could later be sold to purchase a single house on a single stand. If coupled with different forms of tenure (e.g. rental apartment units, sectional title attached housing and full title single residential houses) a vibrant and sustainable housing market can be created.

9.5 NON-PLANNING RELATED RECOMMENDATIONS

The following recommendations are only briefly discussed in order to stimulate discussions and further investigations by experts in the relevant fields. The issues discussed below are more administrative in nature and do not necessarily relate directly to the planning field. However, cognisance needs to be taken of these issues in order to present a holistic approach towards subsidised housing provision.

9.5.1 ALTERNATIVE SERVICES DELIVERY

The use of alternative energy sources (e.g. solar geysers used in Cosmo City and RDP housing in Potchefstroom and gas used in the Taroni Condominium project) can greatly alleviate some of the financial burden of occupational costs on beneficiaries.

Even the slightest structural changes to the standard house can benefit the residents and the community. For example, by providing an adequately sloped roof and a water tank, rain water can be collected for gardening purposes by the owner of the property.

Furthermore, proper insulation and ensuring that houses front North will improve natural heating methods and reduce the need for heating appliances. Prof Andre de Villiers from CSIR (2011) experimented with these simple additions to a standard subsidised house with great effect. These methods, and his recommendations in this regard, warrant further investigation by professional in the construction field.

9.5.2 INCLUDING DIFFERENT FORMS OF TENURE

As with providing different forms of housing types, providing different forms of tenure in housing provision makes for a flexible and adaptable system that caters to the various needs of different individuals. Different forms of tenure include:

- Rental units (e.g. apartments).

  Rental units are ideal for younger citizens who are not yet geographically bound and may prefer a more flexible tenure option that allows them to move in search of better job opportunities. This form of tenure will work well with any of the proposed housing delivery methods.
- Sectional title (e.g. apartments/townhouses)

  With sectional title residents usually own the physical building/apartment that they live in, but not the property on which it is built. The land is generally communally owned by all the affected residents. Levies may be applicable to cover maintenance costs of communal areas.

  This form of tenure will become unavoidable in the provision of multi storey residential buildings, but can also be applied to the multi-unit housing previously discussed.
- Full title (e.g. townhouses/single residential dwelling)

Full title of a property includes ownership of both the building and property and is usually associated with lower density developments. This is the current form of tenure associated with RDP housing developments.

9.5.3 INCREASING FINANCIAL RESPONSIBILITY

An interesting aspect to be noted in all three international pilot studies is their method of financing subsidised housing. In all three examples beneficiaries are required to contribute a certain amount of the construction costs in order to qualify for a house. Although the amount due is a fraction of the costs involved, and beneficiaries are accommodated in terms of interests rates, there still exists a level of financial responsibility.

The sense of entitlement generated by the current South African approach was highlighted in Chapter 4, and reinforced in Chapter 5 in the opinions of planning professionals who agree that the current system is creating a dependency on the state. An effective method to counteract this sense of entitlement would be to incorporate a similar system as used in Brazil and Egypt.

9.6 CONCLUSION

Considering the information above it can be concluded that increased densities, improved location, and a range of household types are planning principles that will contribute to creating a sustainable subsidised housing scheme in Potchefstroom. In addition to this, certain administrative improvements can be made to the system through alternative service delivery, including different forms of tenure and increasing the financial responsibility of beneficiaries.

These recommendations can all make a positive difference with regards to sustainable subsidy housing provision in South Africa. However, certain challenges should be noted concerning the implementation of these recommendations. One of the largest challenges to overcome is the precedent already formed by providing beneficiaries with single residential dwellings on single erven. An expectation has been created that this is the main method of housing delivery. Therefore, changing the method of housing delivery may encounter serious resistance from beneficiaries. In most cases, therefore, a paradigm shift is needed to ensure successful implementation of the recommendations.

Other challenges are briefly discussed in Table 37 below:

Table 37: Challenges regarding the implementation of recommendations

	Recommendation	Challenges regarding implementation in South African Concept	
PLANNING RELATED RECOMMENDATIONS	Increased densities	**Densified properties**	**Medium-high density residential buildings**
		Town planning policies will have to be adapted to allow for smaller erven. Vacant land and/or existing residential properties suited to this type of densification are generally poorly located with regards to economic opportunities.	Expensive method of building. Requires a paradigm shift from traditional housing provision which is focused on single residential dwelling on a single residential erf.
	Improved location	Areas that are well located and in close proximity to economic opportunities are often • already developed • privately owned • expensive. Also, existing buildings in centrally located areas (especially CBDs) are often deteriorated and in need of extensive structural work before they can be used for housing.	
	Range of household types	Both suggested methods (attached housing and multi-unit housing) require a paradigm shift from the traditional housing delivery method.	

NON-PLANNING RELATED RECOMMENDATIONS	Alternative services delivery	Alternative energy sources are usually more expensive to install than regular methods. As the developer, these costs will be for the governments account and not the beneficiaries, which may cause resistance from a budget perspective.
	Including different forms of tenure	Administratively a range of tenure options may be difficult to control and manage. In addition, the state will have prolonged responsibility and involvement in projects, as they may need to act as landlords in the case of rental units.
	Increasing financial responsibility	A monumental paradigm shift is needed as the expectancy of free housing has been built over the last 19 years and will strongly opposed by beneficiaries. As an incentive, the financial responsibility may be coupled to the housing type received. For example, beneficiaries willing to make a financial contribution can apply for a traditional house on a single erf, whereas beneficiaries who do not contribute financially can only apply for attached housing, multi-unit housing or an apartment.

Source: Own creation (2013).

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ANNEXURE A: QUESTIONNAIRE

What do you consider to be the strengths, weaknesses, opportunities and threats of the current subsidised housing projects?

Strengths	Weaknesses
_____ _____ _____ _____ _____	_____ _____ _____ _____ _____
Opportunities	**Threats**
_____ _____ _____ _____ _____	_____ _____ _____ _____ _____

Indicate whether you believe the following factors to be adequate/inadequate with regards to the current subsidised housing system, and to what extent:

Factor	Adequate	Inadequate	Comments
Housing Legislation			
Location of Projects			
Administration of Projects			
Registration of Stands			
Economic and Social Integration			
Provision of Basic Infrastructure			
Density of Units			
Size of erven			
Range of Household Types			
Provision of Social Facilities			

Is subsidised housing in SA sustainable? Explain

_____
_____
_____
_____

ANNEXURE B: LIST OF PARTICIPANTS

Name & Surname	Qualification	Company/Department & Title
Hanneke Pretorius	M.Art et Scien	AGES NW: Town & Regional Planner + GIS Consultant
Dawid P. Stoltz	B.Art et Scien	AGES NW: Town & Regional Planner
Nadia Engelbrecht	B.Art et Scien	Urban Seed: Town & Regional Planner
Len Fourie	B.Art et Scien – Professional Town Planner	Macroplan: Head Town Planner
Charlotte Titus	BA (Humanities) + BPhil (Community Development)	Kai !Garib Municipality: IDP Manager
Barend Scheepers	B.Art et Scien – Professional Town Planner	Macroplan: Town and Regional Planner
Thinandavha Mudziwa	B.Art et Scien	Rustenburg Local Municipality: Town & Regional Planner
Jani Longland	B.Art et Scien	Macroplan: Town & Regional Planner
Msawenkosi Dladla	BA Environment & Development	DAFF Government
Cedric Bosman	NDip Building	Assistant Manager Infrastructure – NC Treasury
Jacobus Treurnich	B.Art et Scien – Professional Town Planner	Macroplan: Town & Regional Planner