CHAPTER 3 – LOW INCOME HOUSING DELIVERY AND CONSOLIDATION

1. **INTRODUCTION**
    This research is based on consolidation, as such; the following chapter serves as the theoretical framework of international and local research and experience in consolidation. The theoretical framework will aim to answer questions listed below:
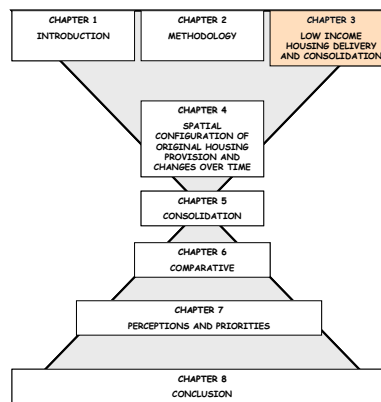
    - What is consolidation?
    - What are the origins of consolidation?
    - What is the status (type of housing provided, problems, etc.) and background of housing in South Africa?
    - How does consolidation fit within the context of South Africa?
    - What are the factors that affect consolidation?
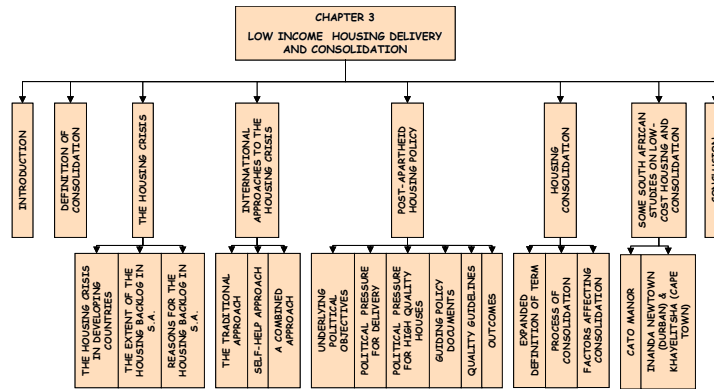
FIGURE 8: STRUCTURE OF CHAPTER

This theoretical framework firstly defines consolidation **(refer to figure 8)**. It is necessary to understand the background of housing in both international and local contexts, as well as consolidation and its origins. As a result, the housing crisis is presented followed by the traditional and self-help approaches, (discussed at great lengths within international and local contexts), detailing the advantages and disadvantages of both, and finally illustrating the implementation of these two approaches, in both international and South African contexts. The South African housing environment is expanded upon in terms of policy, legislation, and the background to housing from 1994 until 2004 (Post-apartheid Housing Policy).

Consolidation and its influencing factors are further discussed. The last section illustrates studies that have been done in the field of consolidation in South Africa upon which this research is largely based.

FIGURE 9: POSITION OF CHAPTER WITHIN DISSERTATION

Figure 9 illustrates the exact position of this chapter within the broader framework of the dissertation.

2. **DEFINITION OF CONSOLIDATION**
    *'The word **consolidation** is used to describe the development of the initial house towards completion either in extent, finish, or level of servicing. Consolidation is most commonly used in the discussion of informal settlements to describe the gradual improvement of housing from impermanent shack dwellings to permanent, conventional houses'* (Napier, 1998).

3. **THE HOUSING CRISIS**
    3.1. THE HOUSING CRISIS IN DEVELOPING COUNTRIES
    The housing crisis in developing countries is caused by aspects such as the process of urbanisation, migration, high birth rates, increasing population growth, poverty, unemployment, insufficient resources, and the inability of governments to deal with this problem on their *own (South African Housing White Paper, 1995)*. People migrate to urban areas in search of employment, and upon arrival, find themselves homeless and jobless. Consequentially, squatter settlements develop because of the low rates of formal housing delivery that have to cope with providing for the naturally

increasing population growth as well as for the migrating population. The renting out of backyard shacks in low-income housing areas also begins to proliferate. This aggravates the issues of poverty, unemployment, and housing where the resources that are already at its minimum, need to be spread over a broader spectrum of people.

3.2.   THE EXTENT OF THE HOUSING BACKLOG IN S.A.

In South Africa, the estimated backlog in 1995 was 1.5 million units, estimated to increase by 178 000 units per annum *(South African Housing White Paper, 1995)*. Two years later (1997) the National Housing Department estimated the backlog at 2.2 million with an increase of 204 000 every year *(National Housing Code: User Friendly Guide, 2000)*. The difference in the backlog estimation with a mere two years apart indicates the severity of the problem and the consistent increase despite efforts made by government to rectify the imbalances of the pre-democratic era.

The physical consequences of this were reflected in overcrowding, squatter settlements and increasing land invasions in urban areas, and poor access to services in rural areas. Socially and politically, this backlog contributes toward individual and communal insecurity and frustration, as well as high levels of instability and criminality *(South African Housing White Paper, 1995)*.

3.3.   REASONS FOR THE HOUSING BACKLOG IN S.A.

The housing environment inherited by South Africa after democracy is characteristic of policies and political turbulence of the period of apartheid where geographic segmentation of living areas was done according to race and class. Housing for the non-white residents was planned and built great distances away from facilities, services and work opportunities. The damaging effects of the illogical and fragmented policy of apartheid are physically visible in urban and rural areas in the dislocation of society.

In 1995, the Housing White Paper stated that although there were no accurate statistics, many households (in formally or informally housed areas) did not have access to social-cultural amenities within the neighbourhoods (schools, health care facilities, parks, etc). According to the South African Labour Development and Research Unit, 1994, a quarter of all functionally urban households did not have access to a piped potable water supply, whilst approximately half of the population had no access to electricity. The status quo of sanitation provision reflected 48% of all households with no access to flush toilets or ventilated improved pit latrines, 16% of all households had no access to any type of sanitation system compared to rural households (85% had some form of sanitation), and approximately 49% of farm workers relied on the veld.

According to the Housing White Paper of 1995 South Africa was faced with a relatively small formal housing stock, and decreasing rates of formal and informal housing delivery that have resulted in a large number of households seeking refuge in informal settlements, backyard shacks and in the overcrowded conditions in existing formal housing. Part of the existing housing stock required upgrading attention to meet the minimum standards of accommodation. Coupled with the housing shortfall and status quo, increasing pressure is felt by the escalating population growth rate and urbanisation rate that demand more housing.

South Africa is also plagued with a declining GDP and large-scale unemployment in the formal sector of the economy. Therefore, unemployment is set to increase even further. This has two impacts, i.e. it reduces affordability levels of households even further which contributes to the negative impacts on the investment made toward housing, and it diminishes Government's resource ability to assist the poor and unemployed. Affordability is a limitation felt by both government and the poor *(South African Housing White Paper, 1995)*.

Constraints to resolving South Africa's housing crisis lay within the traditional system of housing delivery imposed by the pre-democratic era.

4.   **INTERNATIONAL APPROACHES TO THE HOUSING BACKLOG**

4.1.   THE TRADITIONAL APPROACH

4.1.1.   **BASIC ASSUMPTIONS**

There have been many different approaches to address the housing backlog, one of which is the traditional approach, also known as the modern, formal, or conventional approach. In order to know where to begin to attempt to resolve the abnormalities of the pre-democratic era and to realise the importance and origins of the incremental approach, it is essential to understand the traditional approach.

The traditional approach is identified by Angel and Benjamin (1976) as the **technological transfer**, where modifications of solutions to housing in the *developed world* are used for the *application in the developing world*. In the case of the developing world, problems regarding the scale and affordability of the approaches were important. The large housing backlogs required approaches aimed at housing many in as short a period as possible. Coupled with this are the increasing poverty and unemployment levels that require affordability to be a major consideration when housing is provided.   The traditional approach was financed by the State (National Housing Fund) with the construction initiated, administered and controlled by government agencies. All the housing that was constructed had to comply with the standards and provisions of the Housing Code. This Housing Code laid down standardised production systems and nationally uniform standards, which resulted in the use of standardised building materials *(Dewar, 1982)*.

The conventional approach of housing was identified as the provision of mass housing schemes where the homes

produced were of high quality *(Finlayson, 1978)*. The focus of this approach was on producing modern, complete homes, where emphasis was on the speed of delivery and the number of units produced. Because of aiming for such homes, large contracts utilising industrialised, capital-intensive techniques were used *(Dewar, 1982)*. However, the number of units produced was compromised by government's need to produce high quality, complete homes. All the investment was focussed on the unit. The result was that of a limited number of high quality homes being produced, insufficient to meet the needs of the large number of homeless people. Consequently, the backlog continued to increase despite the efforts made.

4.1.2. DISADVANTAGES

The traditional approach to the housing problem is crowded by myths, principles and beliefs that are essentially the obstacles to the housing solution. Before discussing the failures of the traditional approach, it is pertinent to understand the attitude that was cultured against the squatters by such myths. From perception, it can be surmised that the failure of the traditional approach stems indirectly from the attitude that was stressed toward the squatter settlements. Many researchers have identified such myths. Some are characterised as technical and professional whilst others relate to the middle class and elite values. One such researcher, Mangin (1967) identified these myths. The first was that settlements were **chaotic and unorganized** *(Ward, 1982)*. Settlements have indeed shown that they have an organised way of managing their own particular situations by means of establishing community organisations. These community organisations, stated by Finlayson (1975), undertake the necessary procedures and requirements essential to ensure the satisfaction of the community members that invest their time in their community. Settlements are therefore not chaotic or disorganised.

It was also perceived by the elite that the **social organisation of settlements conformed to the 'rural peasant village reconstructed in the city'** *(Ward, 1982)*. Whilst this perception might be true in respect of some areas, there is a simple explanation for this type of organisational behaviour, which is simply that households are used to living their lives in this manner. Residents of settlements are generally people from the rural areas that moved to the city in search of employment opportunities. Upon arrival to the city, these rural dwellers were forced to settle in informal settlements because of the housing shortage, unemployment and little or no income. The lifestyle of a rural area does not disappear upon arrival to the city. The lifestyles of the settlers are therefore quite fixed. The third myth was that squatter and rural settlements are an **economic drain** on the nation *(Ward, 1982)*. Fourthly, **social pathologies** such as crime, delinquency, prostitution and drug addiction were perceived to exist in such settlements *(Ward, 1982)*. Such pathologies may or may not exist, but this remains to be proven. The following myths were that **squatters do not participate in city life,** are **poorly educated,** and were the **breeding grounds of radical political activities** *(Ward, 1982)*. It was feared that people within squatter areas would join together and take what is rightfully theirs, i.e. the right to live where they pleased, to be a bigger part of the city life, to be recognised and respected, to be unrestricted. Because of these fears, drastic measures were taken to prevent this take-over. The two solutions were to prevent migration via legislation; and the second required the eradication and resettlement of the population in housing projects *(Ward, 1982)*. People would therefore not rebel because they would receive benefits from being moved into new homes.

However, experiences with settlements by other researchers have proved most of these myths to be incorrect. For example, Mangin had experienced settlements and their activities in Peru where it was found that people lived in areas of the city before they began to invade further areas in an organized and shrewd manner. Even social pathologies such as crime, prostitution and delinquency were low, the internal structure of these settlements was clearly laid out, and there were mostly nuclear families. Attitudes of households toward the future were generally very optimistic.
In cases such as Peru, the government had assisted in improving the physical structure of the settlements, over time via interventions, which included the installation of services with a mixture of self-help and mutual aid at household level. Such interventions by government in settlements demonstrate the need for interventions and assistance from government over time as opposed to the once off provision of housing practiced by South Africa and other developing countries. It was also evident that most households had regular employment *(Ward, 1982)*. It is therefore apparent that this attitude was founded on face value perceptions. This attitude had led to further problems where misconceptions were made.

Central in all these myths to follow is the actual attitude toward squatters. Within this, there are many different myths. Firstly, the poor people are seen as **less mature, less experienced, and less responsible, less organised and less reliable**. Therefore, their problems must be solved for them *(Angel & Benjamin, 1976)*. The poor have been treated in a condescending manner. This perception of them will dissipate simply by attempting to understand them; their history and the dynamics at play in their lives that affect their choices/decisions and behaviours. Further, in the conventional banking world, the poor are seen as **bad security risks**. They have little resources to hold as collateral, low savings and frequent debts, and they are unreliable in making regular payments. The poor therefore, need a financing system to meet their needs – small amounts, for long periods, and secured by the house itself *(Angel & Benjamin, 1976)*. The attitudes of the banks also need to change.

The modern equivalent to charity is welfare. People become dependent on the government and in doing so lose their self-respect and self-reliance. Many feel that it is much more advantageous to remain charitable rather than face the demands and rights of the poor. This charitable attitude discourages the poor from organising into communities that could take effective action *(Angel & Benjamin, 1976)*. In the eyes of those other than the poor, charity is seen as something good, but in this circumstance, it is an act of betrayal and deception. The ultimate aim viewed, is to

prevent the poor from realising the rights that they have, by sweetening them up with rewards.

It is further perceived of the middle-class that ***squatters are untidy, dirty, and disorderly***. The solution sought was for removal without considering the reasons behind the situation. Squatter areas look the way they do because construction is continuously taking place. Looking at this debate in context: the middle class have solid structures/homes to live in, therefore, the smaller issues become a concern, i.e. untidiness, disorderly, etc. For a poor family, a roof over their heads is of vital importance compared to being tidy, etc. A lack of funds also means that the intermediate phase (construction) lasts much longer than those that can afford it. Moreover, shelter is in short supply and the consequence of removal of squatters will result in a net loss in housing at a large expenditure of money.

Although squatter settlements are negatively perceived, they serve a purpose that must be recognised. A guarantee that their homes would not be destroyed would spark some investment in the homes. Nevertheless, this guarantee cannot be given if the law is upheld. Providing these illegal occupants with the same privileges as law-abiding citizens was seen to be an insult to the very principle of law. This will inevitably lead to further law breaking. However, if the squatters are expected to respect the law, then the law must be changed to respect the circumstances in which these squatters find themselves. Squatters also have a traditional view of land ownership. They believe that people have the right to land they use, and by use, ownership is established. Because of land scarcity and the majority being landless, the government cannot protect their unused land from trespassers *(Angel & Benjamin, 1976)*.

Further failures of the traditional approach lie in the definition of housing. It was merely seen as the provision of a unit/s, where the housing problem would be solved once enough units were provided. The developmental role inherent in housing was not seen. This role encompassed:

- Having the overall aims of fostering human development and improving the quality of life,
- It must be moulded by the overriding and fundamental developmental realities of South African society.

As a result of ignoring its developmental role, development realities were not clearly defined, which led to incorrectly defined policy objectives. The actions taken, which were based on short term perceptions of the problem; i.e. the shortage of units, were therefore inappropriate *(Dewar & Ellis, 1979)*.

People are of the opinion that enough technology plus time and money will result in the 'modern solution' to low-income housing *(Angel & Benjamin, 1976)*. However, is this the answer? New technologies are always fascinating but its application needs to be contemplated intensely beforehand. Is technology the answer? Is it really required? Is it appropriate? The answers to these questions can simply be answered by asking a few more questions: what is the end-result that we are aiming for? What is required to achieve it? Who are we providing for? Who are going to be affected? How can we help? These questions will narrow down what the actual approach should encompass. Instead, the desire to test or apply a new technology becomes very tempting. As a result, temptation wins, and instead of identifying the more appropriate approach, an inappropriate new, untested approach is used. Needs are mismatched, people are dissatisfied, the new technology becomes a failure, and inevitably the people who are supposed to be helped actually become the ones to blame for the failure. What we are left with are these modern homes with construction costs that put low-cost housing out of reach of the poor, unless of course these modern construction methods are supported heavily by subsidies. Housing needs to be an informed process.

However, the fixation on modernity is not strictly bound to the desire to use high standards and high standard materials. Amongst the broader spectrum of issues linked to 'modernity' is the aesthetic desire to produce finished products. Government feels the need to provide complete homes. The lack of provision of complete homes is felt to reflect badly on government. In reality though, communities take shape incrementally over long periods, but the needs of the people for shelter is immediate *(Angel & Benjamin, 1976)*. They therefore need immediate basic shelter, which can be improved on later (expandable). Nevertheless, because of this need to provide complete homes, we find that the approach taken consumes a lot of time in which planning is done - time in which people remain homeless, shelter-less. The poor cannot wait for years of planning. Immediate action is required.

The myth of **professionalism** is also prevalent here. Most of the squatters in the Third World build their shelters on their own but this method is not accepted simply because professionals are not involved. There are two aspects related to this. Firstly, the professionals are poorly trained to deal with housing people in the developing countries, considering majority were trained in the developed world. In addition, even if they were adequately trained, there are not enough of them to go around. There are other fields of concern apart from housing and the volume of problems being experienced is increasing at a rate faster than professionals are qualifying *(Angel & Benjamin, 1976)*.

The final myth stems from the **responsibilities within government**. Everyone in the government has well defined responsibilities and cannot overstep its authority. Low-income housing falls outside everybody's jurisdiction. Therefore, nobody wants to take responsibility for the housing problem. There also tends to be an extreme overlap of responsibilities, which creates further complications *(Angel & Benjamin, 1976)*.

Although this traditional approach had the advantage of fitting in well with the aspirations of the elite middle class it **failed to recognise the realities** of the people they are providing for *(Angel & Benjamin, 1976)*. Because of this approach, the needs of beneficiaries are misinterpreted and the scarce available resources are used poorly. The needs and expectations of the people trying to acquire adequate shelter were not being met. They were not satisfied and the backlog continued to build up. The social pathologies associated with this became aggravated, e.g. crime.

Many, many more results that are consequential became unravelled. People were housed in homes that they could not afford, they were housed in areas that were quite a distance from their place of work, and the facilities and services were inadequate. The environments produced were therefore monotonous, boring and wasteful. It was wasteful in terms of the natural resources that were being used for the conventional approach. People living in such areas become impoverished and restricted. This often leads to crime. With the increasing backlog, people were becoming more frustrated. Increasing problems of poverty, inequality and unemployment were growing. People were also becoming aware of the fact that housing was not contributing to the solution of the problems *(Dewar & Ellis, 1979)*.

The myths are never-ending. The point of views projected from different researchers reflect the beginning of an understanding, and the realization of exactly what is required to assist people in low income housing.
Essentially, what is called for is a change in attitude considering that the squatter problem is not going away *(Angel & Benjamin, 1976)*.

4.1.3. EXAMPLES

The examples gathered are meant to be representative of cases where the traditional approach was applied. The outcomes, in this case, denote negative outcomes, which also contribute to, and form part of the **disadvantages** of the approach.

A. Failure of the Traditional Approach

In the response to the need for housing for the low-income category of people, some parts of the world tended to adopt the provision of high-rise buildings. With limited resources in mind, the provision of housing needed to be cheap to ensure the procurement of as many units as possible. There is also a perception that there is insufficient land in cities and that squatters are making things worse. These buildings have been perceived to offer savings on land by increasing densities and savings on construction by using modern methods. All these assumptions were proven incorrect. The actual problem of land scarcity lies in making land available at an acceptable price *(Angel & Benjamin, 1976)*. Further, studies have shown that building densities of multi-storey towers are the same when compared to three and four storey buildings. Maintenance costs of such towers far exceed the maintenance costs of low buildings. In Third World countries it is found that costs are higher because of the import of equipment and materials, the high level of skills and precision needed, and the extensive use of capital (often foreign sources). These lead to social costs because smaller units will be built. People will experience a further loss of contacts, small business opportunities and manufacturing work that could be done if families were close to the ground *(Angel & Benjamin, 1976)*. One can therefore, scratch out the high-rise alternative, because the perceived benefits were in fact disadvantageous. Apart from proving that these benefits were incorrectly assumed, other drawbacks restrict people even further.

In connection with this, we find that large projects were also perceived to have benefits of savings because of repetition, shorter planning and construction time, buying materials in bulk, and industrialisation. Again, the result was not cheaper housing. Small projects are seen as more successful as opposed to large projects that require high management and maintenance costs, high administration and organisation costs, as well as the costs of inexperienced management in developing countries. Large projects also tend to deteriorate quicker because of vandalism. Small projects involve small groups of houses each owned and built by one or several families and are better kept, liked and cared for *(Angel & Benjamin, 1976)*. The reason for this is that beneficiaries were part of the construction process of homes. The beneficiaries played a significant part in putting a roof over their heads and therefore earned the ownership rights to their home. In essence, being part of the process made the residents feel as if an achievement was made that was vitally important to their lives. A part of the residents became entrenched in the houses and thereby characterised the homes in a way that set it apart from the rest. Beneficiaries were allowed to build for their own particular requirements and their traditional family structure, maintained. These kinds of developments often improve over time *(Angel & Benjamin, 1976)*.

As mentioned previously, the focus in South African housing was and remains on the speed of delivery, the number of units that could be delivered, and on modern, high quality homes. High building standards and standardised building materials characterised the focus on **physical standards** rather than on **performance standards**. Such houses put housing out of the reach of the poor in terms of affordability. A limited number of people were involved in the development of the housing areas which resulted in sterile, monotonous areas and in comparison to older areas, proved to be of inferior environmental performance.
The conventional approach was a uniform line approach where there were limited housing choices, context and environmental diversity *(Finlayson, 1978)*. It did not allow for flexibility, change or choice. Taking into consideration the diversity of people and the contexts that they live in, it would require the housing approach to be flexible enough to accommodate change. There were also often long delays in getting projects off the ground even when funding was available *(Dewar & Ellis, 1979)*. Other problems encompassed the scale of the housing and services backlog, and the rapid growth in housing demand. This remains an immense task for future housing *(South African Housing White Paper, 1995)*.

4.1. SELF-HELP APPROACH

'Self-help housing is the process where the people that are to be housed take responsibility for the planning, organisation, and implementation of particular tasks leading to the provision and maintenance of houses and residential infrastructure. Self-help housing implies the mobilization and self-management of various resources including time, personal savings, and individual and co-operative labour. These resources are consumed during the process. This process does not exclude the use of paid labour provided the contractor is organised by the self-help builder'

(Hart & Hardie, 1983).

Self-help may involve individual and group inputs and corresponds to a system of production, financing, and maintenance in which a significant part is organised and carried out by that particular group or individual. It usually involves the invasion into functions that are the responsibility of the public or private sector, but who are either unwilling or unable to carry them out. Two levels of self-help are identified. The first level refers to the specific and unrelated actions in which an individual or group take partial responsibility for organising and carrying through the installation of a particular work, building and financing their homes, services and maintaining an object. The second level is where a group may involve itself in several actions integrated vertically and aimed at transforming the local social and economic structure in a dramatic way. An example would be a group that not only constructs dwellings but also produces the basic materials such as bricks, tiles, cement, etc *(Ward, 1982).*

The origin of the self-help approach stems from the inadequacies of the conventional approach. **Self-reliant technology** is the reliance on traditional methods of people to build for themselves. It is used widely by squatters but was not acknowledged as an acceptable solution because it did not conform to the elite values of having neat and tidy environments, modern homes constructed with high standards, having a professional involved and approve of such development, etc *(Angel & Benjamin, 1976).*

In South Africa, previous models that involved the devolution of decision-making were avoided. However, eventually in the late 1980's, progressive housing strategies were taken seriously, where the people's potential to become involved creatively and personally in the housing process was acknowledged. It was thought that government should take on a **facilitative role** as opposed to its role as **provider**. The approaches taken thereafter permitted residents only the level of participation that suited the professionals and officials. Before the change of government in South Africa, certain types of self-help were attempted. Among them were site and service schemes, core housing schemes and upgrading of informal settlements *(Napier, 1998).*

The search for alternative approaches to Black housing was conducted in parallel to the growing advocacy of various forms of self-help housing. There were also many contributions made on the benefits to be gained from harnessing the participation of those seeking housing. Mangin and Turner began to champion the unrecognised resourcefulness that characterised the urban poor *(Hart &Hardie, 1983).*

These were the principles upon which the incremental approach was based:
- People can manage their own housing requirement and improve their living requirements over time;
- Authorities can make use of the existing community decision-making and back-up institutions to assist the community;
- People are better able to determine what their priorities are in respect of what they can afford;
- People's involvement in decision-making increases the level of satisfaction with the housing policy;
- People's needs and requirements change over time;
- Housing provision through the incremental approach is much cheaper than through the conventional approach because there is capitalisation of the homeowner's labour, and the use of localised materials, which are non-standardised *(Dewar, Andrew & Watson, 1981).*

Internationally, the 'principle' of self-help was seen as a priori positive, taking into consideration that housing was produced and that it was assumed that it lead to greater independence. It was therefore proposed that it should be the basis of a solution of the housing problem as well as other social problems *(Ward, 1982).* Internationally, it was argued that funds should be redirected toward infrastructure, the provision of construction materials and technical advice, and the regularization of tenure. This was seen as a method to ensure that a wider proportion of people were accommodated and their participation and investment in housing stimulated. Housing policies took into consideration the needs, priorities and behaviour of squatters. Hybrid alternatives of self-help were proposed: site and service schemes and core units *(Ward, 1982).* Although stereotypes persisted, squatter upgrading and self-help became actively or implicitly accepted strategies in the many Third World housing agencies and governments *(Hart & Hardie, 1983).*

In South Africa, there were two reasons why self-help was accepted in the previous government. Firstly, because of the success of projects implemented under a non-government organization, government was persuaded to allow participation. Secondly, aspects of self-help were used by government because of the pressure to change and with inadequate resources that make full provision unfeasible. So there was a gradual acceptance of this progressive approach. From 1994, a housing subsidy was introduced for people earning less than R800 a month. They were entitled to a subsidy of R15 000. It was a small grant, and it was recognized as such with the acknowledgement that further resources would be required. The governments' role would remain as **enabler** and not **provider**. With this in mind, the private sector was encouraged to contribute to low-income housing projects. This subsidy scheme favoured width (the broad availability of assistance) over depth (the delivery of an adequate product). As a result of the rising building and infrastructure costs, developers began to provide smaller homes, or even incomplete homes. The size of these homes ranged from 10 square meters to 30 square meters. The alternative was to allow beneficiaries to use this subsidy to build for themselves. In this way homes could be built to the required size with the amount of savings made. Government has set out to put in place support mechanisms for this approach *(Napier, 1998).*

There are a number of different kinds of self-help approaches. In a study conducted in U.S.A in 1969, where the

surveying and performance of self-help and mutual-help programmes were evaluated, archetypes of self-help approaches were identified.

- Firstly, there is *independent self-help*. This kind of self-help is carried out individually without external sponsorship, supervision or financial support except as solicited by the self-helper himself. Everything is done by the individual.
- The second type is *Organised Self-and Mutual-Help*. This kind of self-help is sponsored or supervised or supported or all three by agents other than the participant. Mutual help refers to working by a group in any or all phases of the process for the benefit of the individuals or the group. Beneficiaries enter a programme and go through a pre-construction orientation and training period. Thereafter construction takes place and occupancy. Upon occupancy, title and mortgage is transferred to the homeowner. A contractor can also initiate mutual-help. The developer may provide his services for a fee of ten percent or more of the construction costs. He may offer land or the opportunity of land acquisition, building materials at a reduced cost, house design, financing arrangements, and all the arrangements necessary for securing building permits. The technical process of construction is carried out in a variety of ways *(Ward, 1982)*.
- *Employed Self-help* is where people participate in a program initiated and run by one or more organisations. Participants are employed for the construction of houses and a salary is paid *(Ward, 1982)*.

Self-help housing was implemented in South Africa prior to being accepted. It took the format of site and service schemes, core housing schemes, and informal settlement upgrading.

- *Site and service* is the provision of a site with services such as sanitation, storm water drainage, lighting, electricity, drinking water, etc. The construction of the dwelling itself is left to the occupant.
- *Core housing* involves the construction of the basic structure with the intention that it be completed at a later stage. Completion is done by either the inhabitants or their direct agents. There are, however, further categories of core housing.
- A *habitable core house* contains all the main built components and is therefore habitable from the outset. It can take the form of a shell house, a small core house or a multi-storey core house *(Napier & Meiklejohn, 1997)*. .
- A *non-habitable core* house has one or more of the major built components missing and therefore requires some input from residents before becoming habitable. These take the form of floor houses (slab only) and roof houses (normally a frame and roof) *(Napier & Meiklejohn, 1997)*.
- *Service cores* are either built as freestanding elements or attached to core houses. The provision of water and sanitation and other services may be included, sometimes services are provided at a point on the site. One may also find combinations of these types *(Napier & Meiklejohn, 1997)*.
- *Upgrading* involved the improvement of already established settlements. Improvements included the provision of services such as water borne sewerage, tarred roads, electricity, etc.

However, for the research proposed, the only self-help types considered are the site and service and the non-habitable core (roof structure). The two areas selected for the case studies are an example of a site and service scheme and a 'roof structure' scheme.

4.2.1. ADVANTAGES

There are many reasons why, internationally, governments began to appreciate the common sense behind the self-help approach. **Firstly,** it offered an alternative housing policy considering the failure of countries to obtain industrial and economic development over the 1960's. **Secondly,** attention had been drawn to the basic contradictions of the production process, which lead to further contradictions. The adoption and sponsorship of self-help offered a partial let-out that would benefit a larger proportion of the urban population than ever before without major increases in the proportion of investment allocated to housing. **Thirdly,** the serious consideration given to associated concepts such as *'intermediate technology'* and the emphasis on qualities of local-scale production and organisation created an environment suitable for self-help policies to grow. **Fourthly**, self-help has acquired some very powerful backers, such as the World Bank. **Lastly**, the growing scarcity of low-priced land, the rising costs of materials, the growing low-income populations and declining opportunities for access to the productive employment sector, together with the failure of traditional approaches to development, all demanded that greater institutional commitment now be undertaken *(Ward, 1982)*.

Self-help allows a much larger population to be catered for. It also offers advantages of greater social control that is achieved through the organisation and the dissemination of benefits *(Ward, 1982)*. The value of self-help to the user is greater than centrally provided housing. There are three benefits of this aspect. **Firstly,** the users are better able to mould the housing stock to their own requirements and priorities: there is a direct correlation between the mismatch of needs and the housing stock with increasing centralisation of housing systems. **Secondly**, the user can tie up expenditure on housing to income more closely. Thirdly, the user can utilise housing more effectively to improve his financial and credit rating. In this way, he/she has the ability to improve his/her condition by subletting and raising capital to develop further. One also finds that user satisfaction is greater under the self-help systems than under publicly provided housing. When people are responsible for their own homes, the imperfections become tolerable. Another benefit is the resultant improvement in environmental activity. *'Greater freedom results in greater richness of the physical fabric' (Dewar, 1982)*.

In 1968, the Housing and Development Agency (HUD) in America made a grant available to conduct a study of

self-help in construction. A report in this regard was produced by Turner and The Organisation for Social and Technical Innovation (OSTI). In this report, economic arguments were put forward in support of self-help and mutual aid in housing. **Firstly,** it was thought that self-helpers could reduce construction costs through unpaid labour ('sweat equity') *(Dewar, 1982)* and unpaid management ('enterprise equity'). **Secondly**, it was thought that through self-help methods voluntary unpaid labour time could be converted into 'capital', where the use value of the home also has an exchange value on the market. **Thirdly,** it was thought that self-help could reduce monthly cash payments to banks over the mortgage period; and **finally**, that mutual aid could transfer a large part of the public costs of housing for low-income people to the 'private sector' *(Ward, 1982)*. The concept of networks as opposed to hierarchies also gave a reason why savings should be accrued in the self-help systems. Hierarchies imply centrally administered systems of supply, whereas networks imply many routes to reach the same destination. Hierarchies of supply meant increased costs, whilst the self-help system is dependent upon a network of supplies that reduce costs *(Dewar, 1982)*.

A self-build approach was conducted in Germany and the opinions of the participants in the process were taken into consideration. **Firstly**, many believe that self-build is the only way in which they can own a home. Taking into account the scarcity of housing, the only way to find a home would be to build one on your own. The self-build option provided that for these people. **Secondly**, the approach also offered them the ability to live undisturbed and without paying rent. **Thirdly**, they needed more space. The **fourth** reason is that it provides something for the children, not only for the present state of affairs, but also for years to come. One or two of their children might choose to raise families in that home in the future. It also provides the owners with a secure home in their old age. The **fifth** reason is that many prefer to live in the country and to have a higher quality house *(Ward, 1982)*. Not only is the countryside visually more appealing but it also provides a safer environment in terms of fresher air. There are also fewer cars around to endanger the safety of children as compared to the city center as well as all the accompanying dangers associated with the city.

People were very happy with the social relations that developed through group work as well as the skills acquired and the experience of successfully achieving something *(Ward, 1982)*. The building process is much more than just building a house. The most important thing to the participants is the education achieved the personal accomplishment, and social cohesion *(Ward, 1982)*.

There were more lessons to be learned from the Third World. Turner and Serageldin (1972) conducted some research in Peru where self-help was introduced and a financing system was put in place to assist lower-income households to build their own erven, or to complete unfinished houses. Turner learned that the economy of their own forms of self-help were based on the capacity and freedom of individuals and small groups to make their own decisions, more than on their capacity to do manual work. In comparison to the self-help approach, the conventional approach proposed homes that people could not afford. Others that could afford them were persuaded to make use of heavy subsidies that they do not need. Turner summarised the two approaches: '<u>SELF-HELP</u> – *NEVER BEFORE DID SO MANY DO SO MUCH WITH SO LITTLE*; <u>CONVENTIONAL APPROACH</u> – *NEVER BEFORE WAS SO LITTLE DONE FOR SO MANY WITH SO MUCH* (Ward, 1982:102).

4.2.2. DISADVANTAGES
A.   South African
In South Africa, even after the inclusion of the self-help approach with the change in policy with the new government in 1994, concerns were stressed. Government could not deal with the low-income housing problem on its own. The government required assistance and the utilization of the private sector finance seemed to be the answer. This, however, created more speculation. It was thought that the governments' responsibility to house would be passed over to the private sector. This brought to light two other aspects. **Firstly,** if responsibility were passed on to the private sector, the problem of affordability would be aggravated. The private sector is profit driven and as a result, people will be taken advantage of. **Secondly,** if the approach is properly applied, it should lead to a better environment. Governments' involvement is therefore required. It should not cut back on expenditure, but should rather attempt to redirect resources and energies to carry out the public functions well (*Dewar, 1982*).

Another critique of self-help was that it was seen as a **substitute** for the conventional approach and that there was a perceived 'benefit' to using the approach, which was to reduce the state expenditure when this is exactly what it wanted to avoid. If it were to simply replace the conventional approach then there would be no 'choice' provided. It would become as impositionary as the conventional approach (*Dewar, 1982*). The self-help approach would merely be a 'new name' for the conventional approach. It would be seen as a restrictive state measure that was designed to force people to use their own energies and time to provide housing for themselves at a cheaper rate. As such, the approach would obviously be rejected. The self-help approach must therefore be seen as a supplement to the conventional approach and not a replacement.

The state also attempts to implement self-help through the existing financial, decision-making and control institutions. Due to the confusion between self-help and self-build, self-help was interpreted as being just another form of physical delivery implemented through the same centralised institutional framework as the conventional approach. If self-help were to be implemented under the present financial, decision-making and control mechanisms and institutions, the result would be chaotic. The reason for this is that the self-help approach hinges on the decentralisation of decision-making, down to the local level. Large-scale implementation of the principle of self-help will therefore depend on innovative institutional design. The financial, decision-making and control institutions therefore need to reflect the

approach of concern (*Dewar, 1982*). Self-help is also seen to contribute toward the growing centralisation and oligopolization in the building material industry. The centralisation of the building material industry is essentially taking place because of the high building standards, which reject the use of localised building materials. These materials could be adapted through locally specific techniques to produce adequate levels of shelter. If the standards remained the same and the self-help approach were accepted, then it would be a different way to use the same materials; this would bring little cost benefits. The success of self-help rests on the use of locally produced building materials *(Dewar, 1982)*.

The phasing out of subsidies sees a further danger. It was believed in the previous policy that the subsidy system should be phased out. This assumes that the poor can afford to pay rates and taxes, etc. There are, however, people at the very bottom that cannot afford to get access to housing. Removal of the subsidy system will trap these people in a cycle of poverty and exploitation. There is a second argument that subsidies are abused. The problem experienced here is that subsidies are attached to the unit and not to the family. This can be solved through the provision of grants to families, based on the family income. It could also be provided for the purpose of construction of the unit. In this way, the focus of providing the grants will be strictly for the improvement of the homes. There is also a danger that subsidisation may affect the return on investment from the private sector *(Dewar, 1982)*. With subsidies in place, the private sector will not be able to compete, and will therefore loose interest. This will result in the investment made in low-income housing.

Another precondition for the successful implementation of the self-help approach is the security of tenure. People will not invest in their homes if they think that their homes are going to be removed *(Dewar, 1982)*. Therefore, in order for people to consolidate, they will need some sort of assurance that their investments made in their homes will not be demolished or removed. At present people are living in fear of removal. If this fear can be removed then people can make the next step toward making their current home their permanent place of residence. Investment toward housing will thus increase. Security of tenure is thus vital toward motivating people to invest in their homes.

Not enough consideration is given to location. Housing costs would be cheaper if inhabitants were closer to their place of work, shopping areas, transport facilities, etc. The self-help approach should also be conducted in small packages on small parcels of land *(Dewar, 1982)*. If savings can be made on other daily requirements, then the investment in housing will increase. The choice of location is also very important when considering housing people.

B.   **International**

Traditional society built their homes for their 'use value'. With the introduction of capitalism, this 'use value' changed to 'exchange value'. The tendency became that of transforming any production into commodity production for exchange in the market. From this an interesting theory was put forward for the reasoning of the use of self-help approaches in capitalistic society. It was proposed that self-help emerged as a policy solution to housing problems when there was a crisis in capitalism. The major reason for self-help housing began in the late 1950s and early 1960s with the crisis of urban development in the Third World. From analyses it was brought to light, that government in most countries have intervened in situations related to workers' housing only in crises such as epidemics, economic depression and political unrest. In Latin America, self-help housing and site and service schemes were used as tools of crisis management. The aim was to contain existing or potential social movements in the squatter population. Self-help housing was used as an inexpensive policy for housing provision without changes in resource allocation or structural changes *(Ward, 1982)*.

In America, self-help housing emerged against a background of the poor having certain choices because of the limited supply of public housing and being forced out of the market. People could double up with families, move into dilapidated housing of lower rent, and pay a higher percentage of incomes on housing. People could also build homes through self-help where land prices were low and building regulations were less strict or were not enforced. The final option was to organize collectively to put pressure on the dominating power group for basic changes in the prevailing system of housing provision, or they could just disrupt the housing system *(Ward, 1982)*.

Organised self-help was promoted in Pennsylvania during the Depression of the 1930s. In the context of very high unemployment, social unrest broke out. The unemployed had also set up mass organizations to take action. The Local State agencies, instead, reacted by initiating a few examples of self-help projects in an attempt to reduce social strife. In the 1940s, Puerto Rico experienced major restructuring of agricultural production where labour-intensive methods were being replaced by capital-intensive techniques, which exacerbated the unemployment situation. Concern was raised for a potentially volatile political situation. Aided self-help programmes were therefore, initiated. These attempts did succeed for a little while until these residents later became redundant as a work force. Initiatives were then put in place to stimulate the 'private initiative' with a small plot of poor agricultural land and a promise of future home ownership. In essence, the combination of subsistence farming and self-help housing was an attempt to reduce the social costs of reproduction of labour in the context of high unemployment *(Ward, 1982)*.

From these examples illustrated above, it can be concluded that the increase in importance of self-help programmes coincides with periods of crisis in capitalism (theory put forward by Hans Harms). The application of the self-help approach in the past was based on it being used as a tool to control political unrest and social conflict. In its application, however, we have come to realise its value, not only to us as the implementers but also the participants. Through experimentation, the benefits of the approach have been realised. Now the approach should be implemented under circumstances other than to prevent potentially political situations.

4.2.3.   EXAMPLES
A.   **Success of Self-Help**
          CABRILLO VILLAGE CO-OP (CALIFORNIA)
          The lemon growers originally developed the Cabrillo Village Co-op in California to house farm workers and families in 1937. By 1975, the Californian State Government insisted on improvement because of safety violations. The owners decided to tear down the development and sell the land. These farmers decided to mount a campaign to stay and then to buy the buildings. The farmers eventually bought the land with the buildings with the help of relatives, friends and a Co-operative Corporation that was formed to handle the purchase. Residents were offered packages to suit their needs, which involved the upgrading of the homes first. Over time, more funds became available and more land was purchased. Consequently, more homes were built. People were also taught skills to build and to do farm work. Other skills were taught by outside contractors that were hired. Eventually, the cooperative purchased trucks to carry their building materials, opened up a ceramic tile factory, etc. This became the source of work. Further along, people opened up workshops to build cabinets. This project turned out to be a great success and the local government was willing to help because of this. Sometimes self-help is a success because of the willingness of the inhabitants *(Koeppel & Tuck-Primdahl, 1989)*.

          LONDON
          An architect in London (1976), Brian Richardson, had convinced the council of his method to house people with no building skills, cheaply in their own constructed detached homes. Initially the availability of land was a problem, so a handful of people were selected for the project. People were of low or moderate incomes. A financing scheme was developed, which enabled the selected few to build homes without capital. The families had no savings and did not qualify for traditional home mortgages. Upon the construction of the homes, the council owned one half of the equity and the family the other. The council also made available low-interest mortgages for the repayment for land and materials. Labour was deducted from this because people built their own homes. Families could also pay rent on the council's share of the equity and the option of purchasing the council's equity was made possible over time. A second phase was also initiated, which allowed people to build at their own pace and people could help one another. From this example, it is evident that the councils' involvement is quite crucial. However, what is also required is the willingness of the people to build for themselves *(Koeppel & Tuck-Primdahl, 1989)*.

B.   **Failure of Self-Help**
          The failures of the self-help programmes seem to stem from poor administration due to the lack of enthusiasm of local authorities. In Nairobi (Stren, 1975), the government managed to spend less than one-fifth of its site-and-service budget between 1969 and 1972. Tanzania (Stren, 1975), on the other hand, managed to build only 795 site-and-service units between 1969 and 1974 with the annual target set at 5 000. Papua New Guinea (Oram, 1976) and Bogotá (Gilbert, 1981) also denoted characteristics of slow progress. Between 1965 and 1971, Kuala Lumpur (Wegelin, 1977) tried nine schemes, which were reported as not being happy experiences. Bad administration also resulted in people waiting too long for their lots (Oram, 1976) and services (Hollnsteiner, 1974) or reduced the number of lots available *(Gilbert & Gugler, 1982:105)*.
          Further, in Kenya, the reluctance to lower standards kept costs up, which were not affordable to the recipients. Failures were also reported in Port Moresby due to over-strict building standards demanded of site owners (Oram, 1976) *(Gilbert & Gugler, 1982)*.

          Stren (1975) reported about a site-and-service project in Nairobi, where concrete slabs were used for foundations. With the high standards of infrastructure as well as the cost of those slabs, government were obliged to provide subsidies quite heavily to enable the inhabitants to repay loans for building materials *(Gilbert & Gugler, 1982)*.

          A squatter resettlement scheme in Zambia was argued by Tipple (1976) to be unsuccessful because it was based on the false assumption that squatters would want to move to a new serviced area and pay for services rather than living in an unserviced area and paying virtually nothing *(Gilbert & Gugler, 1982)*.

4.3.   A COMBINED APPROACH
          There are both positive and negative aspects to both approaches in the aim to satisfy the housing backlog and the poor. From the critique above, it can be seen that one approach cannot be implemented on its own, i.e. the replacement of the traditional approach with the incremental approach would appear impositionary on the recipients and would be rejected. It would also be a failure. A combined approach that capitalises on the positives of both approaches would be recommended. Dewar, Andrew & Watson (1981) had recognised the need for a combined approach:

          'The challenge of housing at the basic level is to provide security of tenure, adequate levels of shelter and services at prices that people can afford' (Dewar, Andrew & Watson,1981).
          The incremental approach was viewed as a supplement to the traditional approach in meeting the housing challenge. The next steps of building up what has been provided (options available were tenured sites, site and service plus a firewall, etc) will depend on the encouragement of recipients. Assistance would also be required from the authorities to upgrade existing housing resources.

          • Households would be better able to match their needs, priorities and what they can afford with more choices in housing.
          • The use of different delivery systems in combination through the acknowledgement of self-help will enable

will enable the production of a better final product. Different agents can undertake task that they are best equipped to do.

The benefits to be accrued if the conventional approach were supplemented with the self-help approach:
- Capital: would be spread over many more recipients since each unit will require less money invested.
- Better fit: *there would be a closer fit between what people can afford and their priorities, and between the housing supply and the ability of people to afford housing (Dewar, Andrew & Watson, 1981).*
- Environmental quality: *of housing would improve (Dewar, Andrew & Watson, 1981)..*
- Job Creation: *The fourth benefit would be the creation of more jobs, finance would be spread over a broader section of the population and self-reliance would be promoted (Dewar, Andrew & Watson, 1981).*
- Reduction of stop-start: *With the use of more small builders, the fifth benefit would be the reduction of the 'stop-start' problem and evening out the rate of supply. Again, there would be a higher level of satisfaction through greater local control of individuals and communities over their own affairs, and a greater degree of choice' (Dewar, Andrew & Watson, 1981).*

Incremental approaches to housing should not be seen as a universal panacea to the housing problems or a cheap way for the state to absolve their responsibility to provide proper housing for the poor. It should not be viewed as an alternative to the traditional approach either, but rather as a supplement, that allows for greater choice for the recipients of housing *(Dewar, Andrew & Watson, 1981).*

This is the point at which South Africa is now, i.e. taking a combined approach to housing.

5.   POST-APARTHEID HOUSING POLICY

5.1.   UNDERLYING POLITICAL OBJECTIVES
Between the late 1940s and the early 1960s, the housing policy permitted final structures to be built, which didn't allow for expansion possibilities. The focus was to provide for the moment without consideration of the future. The period between the early 1960s and early 1970s was characterized by a move of people to the homelands, to the cities and into backyard shacks. Prior to the 1980s, riots had broken out, which stressed government into doing something about it. As such, a political decision was taken to address housing with the handing over of ownership to the Black middle class. This was a political decision aimed at creating a divide within the Black communities.   However, government, at this point, did not have the same amount of money that it did in the 1950s. Therefore, a parastatal, The Independent Development Trust (IDT) was established by government to provide housing to the citizens of South Africa. Private developers were used to build for the middle class whilst site and service was provided for the poorer. The result of the incremental approach around the late 1980s and early 1990s was a landscape of toilets built everywhere across South Africa and were in complete isolation. No one had occupied these sites. The beneficiaries of this attempt at housing were against it.

5.2.   POLITICAL PRESSURE FOR DELIVERY
The ANC felt this type of housing provision to be politically unacceptable. With the ANC as the new government (1994), houses HAD to be built. Top structures and starter units were provided where a commitment was made to produce one million low-cost houses in five years. A commitment was made to quality and quantity due to the pressure for delivery to address the backlog. In aiming to fulfill the commitment problems were experienced, i.e. the quality of the houses produced was in question. There were media reports of RDP houses where roofs were blown off in storms; houses had crumbled after a flood, etc. There were also complaints made about the location of these housing areas on the urban periphery, away from economic and social activity. Expansion possibilities were also not looked into. Millions of houses were built and expansion was not possible. Housing was not adapted to the people. The quality of houses was compromised to produce the numbers.

5.3.   POLITICAL PRESSURE FOR HIGH QUALITY HOUSES
Thereafter, government made changes to protect the integrity of the houses produced by developing the National Housing Code (contains norms and standards for housing). The norms and standards were adjusted to enable the housing subsidy readjustment for more money to be spent on the top structure. An emphasis was also placed on the people's housing process. Government perceived this approach to produce better quality homes. A change in policy was made from quantity to quality.

5.4.   GUIDING POLICY DOCUMENTS
The National Housing Policy was formulated and implemented since 1994 with the aim to address and normalise these problems characterised by the irregularities resulting from the pre-democratic period *(National Housing Code: User Friendly Guide, 2000)*. The National Housing Policy has five central themes:
- *'**Harnessing the energy of the people:** The housing policy is designed to unleash the energy of ordinary South Africans. This refers to programmes such as the People's Housing process, as well as to the roles of developers, financiers, and home seekers, professionals and others in the housing community.*
- ***Partnerships:** A fundamental prerequisite for the sustained delivery of housing and to address the inequities created by past policies is a working partnership between the various spheres of government and the private sector and communities. This partnership requires each party to argue for their rights as well as accept their responsibilities.*

- *Quality and affordability:* The policy is about **ensuring good quality homes** for all South Africans on a sustainable basis at an **affordable price. An affordable price includes both the price paid for a dwelling unit and the long-term costs associated with rates and service charges, maintenance etc.**
- *Assisting the poorest:* The policy is aimed at providing as much assistance as possible to the most needy of South African households. In this regard the very poorest receive the greatest assistance and this assistance is applied so as to reach as many households as possible.
- *Opportunities for creativity:* The Housing Policy is formulated so as to facilitate opportunities for **creativity in delivery,** for gearing resources and for building new approaches to housing in South Africa'.

The research proposed will attempt to test the affordability of housing provided and whether it assists the poor to house themselves. Although it is stated that there are opportunities for the creativity of delivery, this remains to be seen. Housing practice is characterized by the delivery of limited options to housing, which were placed arbitrarily on the erven.

The National Housing Policy was formulated and set out in a number of documents:
- The *Constitution of the Republic of South Africa*, 1996 (Act no. 108 of 1996)
- The *Housing White Paper* (1995)
- The *White Paper on Reconstruction and Development* (No. 1954 of 1994)
- The *Housing Act* (No. 107 of 1997)
- The *Growth, Employment and Redistribution Strategy* (GEAR)
- The *Urban and Rural Development Frameworks*
- The *White Papers and policy frameworks pertaining to Local governments and the Public Service.*

The aim of this section is not to go into detail of all the relevant legislation, policies, frameworks, etc. A few of them were selected instead.

5.4.1.   THE **CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA, 1996 (Act No. 108 of 1996)**

The *Constitution* is the supreme law of the country and is the basis of all activity in the Republic of South Africa. It defines the fundamental values, such as equality, human dignity, and freedom of movement and residence, to which our housing policy must *subscribe (National Housing Code: User Friendly Guide, 2000)* – these notions are contained broadly in the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996):

- Section 26 of the Constitution states that everyone has the right to have access to 'adequate housing' and that it is the states responsibility to ensure the achievement of this right on a progressive basis with legislation and other measures within its available resources. According to the Constitution, adequate housing is measured in terms of the legal security of tenure, the availability of services, materials, facilities and infrastructure, **affordability**, accessibility and location.
  Previously in the pre-democratic era, and at present houses did not conform to the definition of adequate housing as put forward by the constitution, i.e. houses were built distances away from services and facilities, security of tenure wasn't offered, and housing wasn't affordable to the poor. What is set out by the constitution in the bullet above is an attempt to rectify the wrongs of the past. At present security of tenure is provided to housing settlements, planning is done to ensure the access to services and facilities, accessibility and location are being planned better. Nevertheless, whilst issues of tenure, accessibility and location are being addressed to a certain extent, affordability is still a major issue that needs attention. The proposed research proposal aims to address this aspect of affordability.
- The Constitution also permits that the right to adequate housing **cannot be achieved immediately but over time**. In this regard, government has to show that it has worked effectively as possible toward achieving this right: 12).
  The traditional approach attempted to provide a large scale of completed products immediately, failed in providing quality houses, and didn't meet the numbers required whereas the incremental approach demonstrated satisfaction of producing good quality houses over time whilst addressing the large numbers of houses needed. Attempting housing over time will ensure that the limited resources available will be spread over a wider audience of households. Interventions can be implemented over time to upgrade and assist with improvements and additions made.

5.4.2.   THE WHITE PAPER ON RECONSTRUCTION AND DEVELOPMENT (No. 1954 of 1994)

The RDP is an integrated, coherent socio-economic policy framework that seeks to mobilise all our people and our country's resources toward the final eradication of apartheid and the building of a democratic, non-racial and non-sexist future. In terms of housing and services, this is stated:

Right to housing: within the RDP housing is viewed as a **human right** where all South Africans have a right to a secure place in which to live in peace and dignity. As such, one of the first priorities of the RDP is to provide for the homeless. The responsibility of providing housing to all resides in the government, via the creation of policy and legislation, irrespective of the delivery agent.

To ensure the **affordability** of housing to even the poorest of the South Africans, subsidy funds were to be allocated by the government from the budget to reach a goal of no less than five percent of the budget by the end of the five-year RDP. The approach to housing, infrastructure and services, as stated within the RDP, must involve and empower communities; be affordable, developmental and sustainable; take account of funding and resources constraints, and support gender equality.

The RDP is also committed to establishing viable communities in areas close to economic opportunities and to health, educational, social amenities and transport infrastructure *(White Paper on Reconstruction and Development, 1994)*.

In terms of **housing standards**, the minimum requirements set out by the RDP were:
- must provide protection from weather,
- a durable structure,
- and **reasonable living space and privacy**.
- a house must include sanitary facilities,
- storm-water drainage,
- a household energy supply (whether linked to grid electricity supply or derived from other sources, such as solar energy),
- convenient access to clean water.
- **secure tenure** in a variety of forms.

These minimum standards must also be taken into consideration when upgrading of the existing housing stock is undertaken. Community organisations and other stakeholders must establish minimum basic standards for housing types, construction, planning and development, for both units and communities.

All that has been stated within the RDP (listed above) is relevant to the research proposed. However, specific focus is on the affordability of housing, security of tenure and the reasonable living space and privacy. Whilst the constitution focused on the affordability and security of tenure amongst other aspects, no mention was made regarding the living space and privacy of households, which is also an important aspect in providing housing. The traditional approach provided restrictively small erven that didn't cater for flexibility or expansion of houses. The research proposes to determine how the allocation of space (accompanied by the housing unit) has affected the abilities of households to consolidate.

5.5.   QUALITY GUIDELINES
5.5.1.   THE NATIONAL HOUSING CODE, 2000
The Housing National Code sets out the National Housing Policy of South Africa in one comprehensive document and is not intended to replace the key legislation and laws relating to the National Housing Policy. It is rather, a statement of present policy and provides and overview and confirmation of the existing policy that is in place. With the continually changing National Housing Policy, the Housing Code will change. Housing development within the Code is defined as follows:

" *(vi)*   *"housing development" means the establishment and maintenance of habitable, stable and sustainable public and private residential environments to ensure viable households and communities in areas allowing convenient access to economic opportunities, and to health, educational and social amenities in which all citizens and permanent residents of the Republic will, on a progressive basis, have access to-*

  *(a) permanent residential structures with secure tenure, **ensuring internal and external privacy** and providing adequate protection against the elements; and*

  (b) potable water, adequate sanitary facilities and domestic energy supply' (National Housing Code: Annexure A, Chapter 3, Part 2: 1 - 2).

Whilst permanent residential structures are provided, security of tenure is provided; potable water, sanitary facilities and energy supply are provided from a service and structure point of view, the assurance of internal and external privacy, as stated above, remains a challenge. **Firstly,** the size of erven provided is too small to cater for external privacy. **Secondly,** the structures provided are placed arbitrarily on the erven, which limits the flexibility of the use of space. Manoeuvrability on the erven to cater for privacy is restricted. The research proposal will investigate this aspect in respect of the two case study areas selected.

A.   **Norms and standards**
The norms and standards set out in the Housing Code – Annexure A, Chapter 3, Part 2 (provided as Annexure E), range from the form of the top structures, to physical standards of durability, strength and stability, to the provision of good lighting and ventilation, and the provision of services such as water, sanitation and drainage. An environmental approach was taken regarding certain aspects. However, two aspects require some attention regarding the study

CATEGORY	FINANCE (R16 000 SUBSIDY)	SERVICE (MINIMUM LEVEL)	MEC EMPOWERED TO PERMIT DEVIATIONS
Municipal Services	Maximum R7 500	Land acquisition and township establishment	
		Water: single metered standpipe per erf	
		Sanitation: VIP per erf	
		Roads: Access to erf with graded road	
		Stormwater: lined open channels	
		Street Lighting: Highmast security lighting (subject to conditions)	
Top Structure	Residual of R8 500	Top Structure: 30m² (gross floor area)	

FIGURE 10: Summary of Norms and Standards in respect of Permanent Residential Structures *(National Housing Code: 120)*

As stated within the Housing Code – Annexure A, Chapter 3, Part 2:

- **FORM**
  The buildings must be simple in form and straightforward to construct.

  The form of housing requires a structure that is simple and easy to construct which results in the unimaginative types of housing provided. It provides little choice to the beneficiaries.

- **DIMENSIONS**
  The minimum size of the completed structure shall be not less than thirty square metres. Any room or space must have dimensions that will ensure that such room or space is fit for the purpose for which it is intended.

  From the table above and the immediate bullet above, it is apparent that more money is spent on the top structure, but the size of the structure is very limited. This is unsuitable for large families. One of the case studies within the study proposal was provided with roof structures with 55m² of space. The research proposal will ascertain its success or failure in light of residents' satisfaction levels and the usage of space.

5.5.2. GUIDELINES FOR HUMAN SETTLEMENT PLANNING AND DESIGN

Guidelines for Human Settlement Planning and Design, otherwise known as the 'Red Book', was developed to assist professionals in producing townships that are efficiently serviced and to create sustainable and vibrant human settlements.

In the subdivision of land, consideration is given to:

The range of housing types

It is accepted that housing types differ in many ways, i.e. materials, permanence, design etc. It is also stated that determining the type of housing to be provided depends on certain factors:

- Residents or households in terms of the age structure, gender, opinions, beliefs and skills.
- The dwelling and how it is used by the households
- The existential context of the household (includes the qualities of the site and climate, access to resources, and relations to various social groupings;
- *'The individual dwelling within the broader settlement, with qualities of form, substance, function, meaning and locality' (Austin & Biermann, 1998, Chapter 5.6:2).*

As a result, it is motivated that ranges of residential lot sizes be provide to suit the different housing and household types with dimensions that meet the user requirements. A variety of lot sizes and housing types would provide diversity and choice to meet the different requirements and housing needs of people *(Austin & Biermann, 1998)*. The study will identify the dynamics within households, i.e. households structure, income, expenditure, gender, opinions, etc.

Cultural features

No population group or community is completely homogenous. There are different people with differing needs, preferences, family or household structures, income levels, etc *(Austin & Biermann, 1998)*.

All these factors should be taken into consideration when land subdivisions are made, implying that choice is important. Choice is a factor missing in low-income housing provision, which is as essential for satisfying the needs, preferences and characteristics of households, as creating a sustainable settlement.

Accommodate change

At a settlement level, it is stated that flexibility to change over time is necessary.   As such, motivation is made for a variety of house types to ensure adaptability over time *(Guidelines for Human Settlement Planning and Design, 2000)*.

The problem, generally, is the ability to expand the housing types provided in low-income areas. Therefore, housing types also have to be adaptable and flexible to achieve the objective of adaptable settlements.   The study will investigate how residents have begun to expand the initial structures provided.

Apart from norms and standards, there are standards and guidelines that also need to be adhered to that can be found within:

- **Standards and Guidelines** manual – applicable to builders registered with the National Home Builders Registration Council
- **Building Regulations** – municipalities prescribe to this.

5.6. OUTCOMES

In the pre-democratic era, the focus was on producing high quality, complete homes. As a result, the number of houses required to meet the backlog were compromised to ensure good quality houses. Consequentially, government (1994) took measures to attempt to meet the backlog by producing one million houses in 6 years. The aim was to produce quantity. The outcomes were less than desirable. The question of quality became relevant:

- only 30% of housing units produced complied with the standards imposed;
- there were reports of RDP houses that began to crack and crumble during floods; and
- the roofs were being blown off during storms;
- other complaints were of being generally located too far from centres of economic and social activity as well as being located on the urban periphery. (*Rust, 2003)*;

- the repeated monofunctionality of the past became evident *(Finlayson, 1978)l*;
- investment was made in private spaces instead of public spaces *(Finlayson, 1978);*;
- the design of units were still very limited:
  - the actual units built provided little choice;
  - the placing of the units was done arbitrarily.
  - Gross floor area of top structures – 30m².

Government then took steps to defend the quality of the top structures produced with the development and readjustments to the Housing Code (above).

In the comparison of the **RDP approach** to the **traditional approach**, there are some similarities and some differences. Differences:

- Although the provision of high standard homes in the **traditional** approach was too costly and took too long, the quality produced was not questionable, but the number of units produced were,
- The aim of the approach by the **RDP** was on the number of units produced. The quality of the houses produced was therefore sacrificed.

Similarities:

- Houses were also built too far away from centres of economic growth as well as being located on the urban peripheries;
- the landscapes produced from such an approach were monotonous and sterile;
- The design of units provided little choice;
- the type of housing provision was a uniform line approach that allowed for limited housing choices, context and environmental diversity, i.e. it did not allow for flexibility or change. This may be the total opposite of the approach taken above (placing of units was done arbitrarily), but the results were similar – failures.
- the size of the units produced were also very small (30m²).

Although the approach taken by the new government in 1994 was different, the failures coincide with the traditional approach, except for the actual quality of the homes produced. The traditional approach produced homes of quality but was inappropriate in terms of affordability of the recipients. Although the self-help approach has more advantages compared to the traditional approach, there are still problems being experienced in the area of consolidation that requires attention. Negative factors play a role at inhibiting consolidation and need to be addressed by government to be able to resolve the irregularities of the past.

6.   **HOUSING CONSOLIDATION**

6.1.   EXPANDED DEFINITION OF TERM

Consolidation is the process whereby people make a house their permanent residence. People invest in it and make improvements depending on needs and priorities.

Consolidation refers to the process where self-help settlements undergo an incremental physical transformation. In the context of squatter settlements, it may include changes in conditions of tenure, changes in levels of service infrastructure, and the progressive upgrading of dwellings *(Hart & Hardie, 1983)*.

6.2.   PROCESS OF CONSOLIDATION

Within self-help areas, consolidation occurs in a piecemeal incremental way in a number of stages, during which the builder progresses from the basic shelter to a more substantial dwelling. The early stages of consolidation are linked to the need for shelter and that secure tenure is achieved through building. With progress, the more advanced stages of consolidation are linked to the pursuit of secure tenure and the desire to enjoy the benefits seen to accompany further consolidation. Ward *(1982)* puts forward three distinct consolidation phases. The first is the **'incipient'** level of consolidation, where services have not yet been established, tenure is insecure and construction is rudimentary. At the **'consolidating'** settlements level, services are being installed and house construction is taking place. The final phase is the **'consolidated'** settlements. The settlements are finally fully serviced, active house construction has diminished, and a wide range of completed structures is present *(Hart & Hardie, 1983)*.

It has been witnessed within legal townships that consolidation occurs in stages of house construction. At the primary level house, the purpose is for **basic protection and the securing of a site**; therefore, it is limited to basic **rudimentary shelter**. Secondary consolidation involves the **improvement and enlargement of shanties (upgrading and expansion sometimes with the inclusion of tenants)**, and a second **more substantial house** may be built. This stage may be divided into more subdivisions according to the nature of consolidation and the progress made, for example, in some cases newer, legally acceptable dwellings were built to replace the older temporary structures. In other cases, larger substantially structures were built and the older ones were kept. It is therefore context specific and need not be expanded unless required. The final consolidated stage is reached when most building and upgrading ceases *(Hart & Hardie, 1983)*.

One of the reasons behind how and why these stages occur, according to Hart and Hardie (1983) and Serageldin & Turner (1972), relates quite simply to the change in the priorities of the inhabitants. Turner identified three

factors, i.e. location, security of tenure, and modernity *(Serageldin & Turner, 1972)* and illustrates how these aspects change in importance over time. This plays an important role in determining the most appropriate way to provide housing for people, and what influences consolidation.

Large populations migrate from rural to urban areas in search of employment. Because of this, we find that the way in which people still live is a mixture of rural and urban where some farm animals and vegetation are planted to sustain themselves as in a rural situation, whilst also going into the city to work and having to live in smaller spaces compared to that of rural areas. The graph below represents households that have moved from rural areas to urban areas and are representative of an incremental approach to housing.
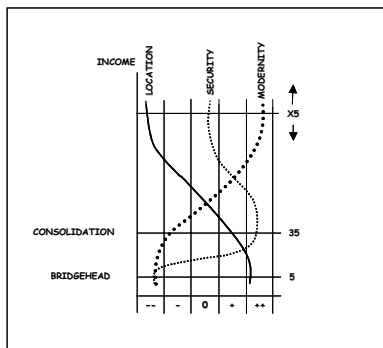
FIGURE 11: Changing priorities
(Serageldin & Turner, 1972)

By focusing at the very top of the graph, it is noticeable how the importance of these aspects changes all together from the initial stage at the bottom of the graph. Of relevance to the South African housing during the pre-democratic phase where the focus was on modernity, is the position of modernity in this graph in terms of its timing in the process of consolidation. When migrants initially settle in an urban environment, the most important aspect to him/her is the location of their home. Once this is established, security becomes important around the consolidation stage. On achievement of security, eventually modernity becomes the aspect of concern. Quite evident, therefore is that modernity takes a backstage position, initially. It gradually becomes important once other urgent aspects have been achieved (security and location). In the past the focus of housing provision has been based on high building standards with high standard materials, which in essence is the provision of modern homes, hence the fixation on **modernity**. As a result, efforts have essentially been concerned with modernity at the very beginning of the transition from rural to urban (bridgehead) before consolidation can even take place and when recipients of housing were initially concerned with location and security. South African attempts were, therefore, ill matched in relation to what was required/ preferred.

It is therefore important to look at the actual needs that people emphasize. Included in the needs of people is the type of people that are dealt with. We have to remember that people come from different backgrounds. In terms of this transitional phase **(refer to figure 12)** *(Serageldin & Turner, 1972)*, people could be at different points in it. This also poses as vital information in beginning to understand the changes that people go through to eventually consolidate and become urban dwellers.
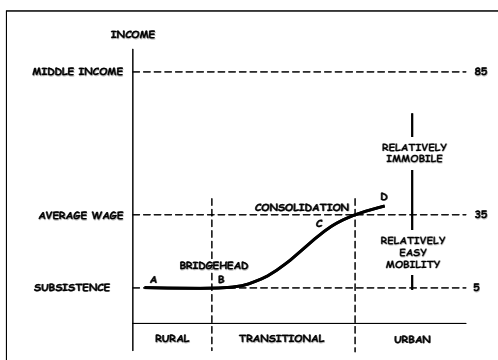
FIGURE 12: Transitional phase
(Serageldin & Turner, 1972)

Interventions need to be made with the appropriate strategies to meet their various needs in a manner that will satisfy the type of people, taking into consideration the position in this transitional phase. Modern homes should therefore, not be provided at the very beginning, not only because it is of least interest to the residents but also because people will not be able to afford such homes. The approach developed needs to be a gradual, enabling one. More people can therefore be accommodated, because the money spent on providing these homes can now be spread over a larger amount of people by focusing on giving them a starting point that is appropriate for their circumstances.

6.3.   FACTORS THAT AFFECT CONSOLIDATION

In a study conducted by Hart & Hardie of four areas namely, Constantia, Manguang, Ngangelizwe and Inanda, it was

hypothesized that self-help consolidation takes place because the potential self-helpers **need basic shelter**; believe that **consolidation is a necessary means to secure tenure**; or desire to partake of the **perceived rewards of owner building** that would be attained by consolidating. Within the study conducted by Hart & Hardie (1983), primary and secondary levels were distinguishable where **primary consolidation** was the early stages linked to the need for shelter and the belief that tenure is party to consolidation. **Secondary consolidation** is characterised as the more advanced stage linked to the direct aim of acquiring security of tenure *(Hart & Hardie, 1983)*.

Although there may appear to be duplication of issues across both primary and secondary consolidation, the context (early stages or later stages) contributes to the differences between them. For example, security of tenure is mentioned in both primary and secondary consolidation. The context within the primary stage is where

security of tenure was offered as an incentive for consolidation to take place. The case for the security of tenure in the secondary phase is where people have already begun consolidation efforts (have invested time and resources) and now feels threatened by the prospect of losing the site and all that has been done on it. Security of tenure is therefore sought.

The sections below, i.e. primary and secondary consolidation, are divided into factors that promote consolidation and factors that inhibit consolidation. In both divisions, positive and negative factors play roles.

Issues may also be repeated as being both factors that promote and inhibit consolidation in the text below.

7.2.3.   PRIMARY CONSOLIDATION
A.   **Factors that promote consolidation (positive and negative aspects)**

In a study conducted by Hart& Hardie (1983) in Mangaung, Ngangelizwe, Constantia and Inanda Newtown, it was shown that primary consolidation took the form of self-help linked to the **need for basic shelter.**   This was set against a backdrop of conditions that have resulted in either untenable accommodation or **homelessness**. There are further issues of the natural population increase and the formulation of new households, migration from peripheral areas, and the numerous forms of population relocation. Threatened tenure had also prompted primary consolidation, especially where administrators have tied legal occupation of sites to the speedy erection of a dwelling *(Hart & Hardie, 1983)*. In this case, security of tenure was used as an incentive to encourage consolidation.

In Constantia, **basic shelter** was induced by **homelessness**.   Constantia was developed as a reception area to accommodate the people that were going to be removed from Marabastad. The retired, disabled, and now unemployed former owners, deprived of rental income, received a minimal compensation for the vacated homes in Marabastad *(Hart & Hardie, 1983)*.

The other factor that has been identified to promote consolidation is **location** *(Serageldin & Turner, 1972)*. People first require location in close proximity to employment opportunities, services and facilities. Upon satisfaction of a suitable location, the next steps toward consolidation take place. Once employment is secured and inhabitants now have an income to supplement his/her family, other factors begin to play its course.

Land prices also have an impact on the ability of inhabitants to consolidate. The **effects of land prices** ensure that public housing is built on land that is cheaper at the edges of the city. This puts the poor out of the land market.

Due to the restricted supply of residential land and state-supported housing in Nganagelizwe and Manguang, the letting of rooms has proven a profitable enterprise. The **rental markets** played a role in stimulating the self-help extension of houses and the erection of backyard rooms *(Hart & Hardie, 1983)*. People erect more rooms in order to earn an income or to supplement their other income. Not only does this rental market assist the government in providing homes that are in demand, but it also increases the income of these families, which enable further consolidation. The internal commerce of the community is improved as well and people are accommodated with shelter, thereby reducing the demand for the interim.

The inhabitants reasoned out that the rigours of primary and secondary consolidation are a small price to pay for gaining entry to a better housing system *(Hart & Hardie, 1983)*. In essence, **the vision and aspiration for a better housing system** also promoted consolidation.

Ninety percent of the residential sites in Ngangelizwe were developed by private entrepreneurial activity *(Hart & Hardie, 1983)*. Therefore, the **efforts of the people** also promoted consolidation.

B.   **Factors that inhibit consolidation**

Consolidation could be retarded if **alternative basic shelter** were provided *(Hart & Hardie, 1983)*. If an alternative were provided that spoon-fed the potential inhabitants without requesting efforts on their part, the initiative toward consolidation would diminish.

If the **link between consolidation and tenure were removed** (specifically related to the cases where local administrators had tied legal occupation of sites to the speedy erection of a dwelling) or believed to have changed, then consolidation would definitely stop *(Hart & Hardie, 1983)*. Secure tenure is what majority of people are aspiring to. If they can achieve secure tenure via another route other than through consolidation, as perceived, then consolidation might not occur.

In other areas such as Kroonstad, residents had constructed shelters on leased land without the promise of tenure security. No incentives were offered to encourage consolidation either, which resulted in the fear of removal.

The uneasy **anticipation of removal** prevents people from making any improvements to the homes. If people were going to be removed from the homes at any time, it would be a waste of effort (labour) and resources at attempt consolidating. Residents of such areas, therefore, live in constant fear. Security of tenure is therefore, important to encourage consolidation.

Miscommunication between authorities and the communities also affected consolidation. A situation was illustrated where an individual on his/her property constructed a wall, which was later broken down. The assumption made by this person and the neighbouring residents, was that the wall was not of good quality. The actual reason for the demolition of the wall was that it crossed a building line *(Hart & Hardie, 1983)*. Failure to convey the reason behind this incident led to these inhabitants employing professionals to do the job or not doing anything at all, because they cannot afford to hire a professional. Either way, consolidation is inhibited. Where the professional is hired, consolidation will take place at a slow pace because people will have to save money over a long period in order to have sufficient capital to pay professionals, whereas they could have saved on this expense by building the houses themselves (use of own labour). More construction materials could have been bought with this capital and therefore consolidation would have taken place at a faster pace. Miscommunication therefore created a tendency in people to discard the benefit of self-help (saving of labour costs).

The private rental market has an advantage and a disadvantage that influences consolidation, i.e. the **private rental market** is the prime source of rudimentary housing *(Hart & Hardie, 1983)* and can also be seen as a factor that prevents further consolidation from happening. It is the prime source of income for residents and depending on the cost; it can pose as a cheaper more convenient form of housing for new comers. Renting would become convenient for the renters, preventing the need to buy their own homes, depending on their priorities.

Whilst the **effect of the land market** assisted in making land available at lower rates, which encourage consolidation, it also has a negative effect. Cheaper land came at a cost of increased travelling expenses to the places of work in the city. Further, government servicing and zoning policies frequently have the effect of valorising land, which increases the land prices even further (Kowarick & Brant, 1978; Gilbert & Ward, 1978) *(Gilbert & Gugler, 1982)*.

6.3.2.   SECONDARY CONSOLIDATION

A.   Factors that promote consolidation (positive and negative aspects)

The secondary phase of consolidation is characterized by the **fear of eviction** and the **advantages and *perceived* benefits (entry to a better housing system)** to be rewarded *(Hart & Hardie, 1983)*. The fear of eviction would presumably prevent people from consolidating, but within the context of the four areas studied (Manguang, Ngangelizwe, Inanda, and Constantia) the **fear of eviction** promoted consolidation. Residents believed that the erection of permanent high standard homes would be the only way to avoid eviction *(Hart & Hardie, 1983)*. Turner (1972) had identified **security of tenure** to be very significant toward promoting consolidation *(Serageldin & Turner, 1972)*. In some cases, security of tenure is needed to stimulate consolidation and in other cases, consolidation is seen as the way toward achieving security of tenure. Cases in different areas are unique.

Exposure to self-help housing systems seems to be one of the most significant factors influencing the tendency to consolidate *(Hart & Hardie, 1983)*. Therefore, the role that self-help systems play in terms of consolidation needs to be promoted.

There is however, further **pressure** being experienced in these settlements to **build better houses,** which contributes toward consolidation. The **housing standards** therefore, influence and direct the tendency to act and shape the course of secondary consolidation. In Constantia and Inanda Newtown, **implied standards,** spread by rumour, have strongly influenced patterns of ongoing secondary consolidation. In Inanda, there is popular belief that **durable permanent shelter is a means of securing tenure**. This has helped to establish the **contractor-built Urban Foundation house as the local standard**. In the course of two years, almost a quarter of the residents had entered into secondary consolidation via the **aid of loans and skilled labourers**. This new standard set places further **pressure** on others to produce houses to that standard *(Hart & Hardie, 1983)*.

Housing loans are promoted in order to stimulate secondary consolidation. Some inhabitants agree with such stimulation *(Hart & Hardie, 1983)*. Some believe it will make a difference in their lives.

Upgrading in Ngangelizwe was associated **by improving or expanding their rental accommodation** in order to improve on their **profits** rather than on the vision to obtain this grand final house *(Hart & Hardie, 1983)*. Attempts were made to curtail such developments but the residents found a way around the restrictions imposed. In Ngangelizwe, where the standards of building density are less restrictive, people have become quite **dependent on the rent** paid by tenants *(Hart & Hardie, 1983)*. Some live entirely on this rent paid.

B.   Factors that inhibit consolidation

In Constantia, there was a **lack of communication and trust** between residents and the Administration Board *(Hart & Hardie, 1983)*. This limited the rate at which loans were negotiated and there seemed to be some reservations about housing loans. People have doubts about the long-term loans and the exploitative interest rates that accompany it. A further aspect that leads to the mistrust is that employers offer their employees interest free loans. In order for the residents to take advantage of the provision of such loans, the mistrust and communication between the

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Board and the residents must be dealt with.

Price increases also impact on the ability of people to consolidate. Wages may stay the same, but the cost of building materials is continuously increasing. As urbanisation continues, more materials are being provided by the market (Burgess, 1978) *(Gilbert & Gugler, 1982)*.

In other circumstances, the **decline in real incomes** could hamper the consolidation process further *(Gilbert & Gugler, 1982)*.

With **urban growth**, land prices increase and the physical growth of the cities will increase. This will lengthen the distance to travel to work. The costs involved will limit the availability of capital to purchase materials. The distance travelled will also limit the time available to consolidate (build). The changing shape of the city will also affect the desirability of certain residential areas *(Gilbert & Gugler, 1982)*.

The rate of settlement consolidation also depends on **the extent to which public agencies are able to provide infrastructure and service** to the spontaneous communities *(Gilbert & Gugler, 1982)*.

Another factor that inhibited consolidation was **the restrictive control of work permits by the Port Natal Administration Board.** With the growing unemployment among their children, parents adopted a pessimistic view of the future of Inanda *(Hart & Hardie, 1983)*. Consolidation efforts were negatively affected.

7.   **SOME SOUTH AFRICAN STUDIES ON LOW-COST HOUSING AND CONSOLIDATION**

The two case studies have been selected to indicate the type of research to be conducted in this study by individually discussing different aspects of it. The first case study, Cato Manor (Durban), focuses on the design of housing based on the daily routines and activities of households, i.e. low-cost housing from a user's perspective. This study addressed four aspects from the study proposal made in chapter 2:

- **Depth vs. width**
  The depth of the study reflects a qualitative method approach where only a handful of households were selected. The emphasis was placed on the level of detail rather than the number of households interviewed.

- **Activities taking place within the erven**
  An investigation was done on the activities present on the erven and the location of the activities. However, the number of activities noted was limited because they were done specifically within the context of the everyday activities of the households.

- **The uses within the houses**
  Investigations were also done within the houses. Uses were noted also within the context of day-to-day activities, but more details were acquired in terms of the arrangement of furniture, etc. The study proposed will not go to such details since the aim of the study differs from the aim of the Cato Manor study.

- **Priorities**
  The priorities of the residents were also considered in the investigation.

  The second case study, Inanda Newtown and Khayelitsha, was focussed on core housing and whether it had supported residents. Although this is not the intention of this study proposal, aspects of the Inanda Newtown and Khayelitsha study demonstrate the nature of the proposed research.

- **Case studies**
  Two case study areas with different housing types were selected.

- **Factors that affect consolidation**
  Conclusions are made on the factors that affect consolidation. However, in the case of the Inanda Newtown and Khayelitsha study, no factors relate to the spatial aspects or the influences on consolidation. The proposed study will focus on socio-economic factors as well as spatial factors.

7.1.   CATO MANOR (DURBAN)

This study was undertaken between September and November of 1997 in Wiggins 5A in Cato Manor. Its focus was on women and the priorities and needs, and how the perspective of these women can be used in the design process of low-cost housing. The process involved fieldwork among people living in the informal settlement with the aim to get as close as possible to the people and their homes. It involved interviews with the women, documentation of their homes and interviews with professionals. The overall aim of this study was to investigate how to design low-cost housing from a user's perspective. It also explores the possibilities for densification. Seven women were selected for these interviews. A detailed analysis of each of their homes and their living conditions were done. Their use of space, in terms of how they arrange their furniture or what activities are carried out in certain rooms is also investigated. They were also presented with ranking cards to determine their priorities *(Eliasson, Hessle & Leonsson, 1998)*.

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From this study, the following conclusions emerged. In terms of **every day activities**:

- **Gardening** was done by most of the women as an alternative source of food and **water** was normally fetched by the women.

- Concerning the **kitchens**, most women were not satisfied because of the lack of space, smoke from the paraffin stove and ants getting into their food.

- There were also problems with the **bathing arrangements**. One woman washes herself in the corner of her house after dark. This is not safe. Most of them are not satisfied with the bathing accommodation because it is located outside and the women are afraid of being raped.

- The **toilets** were also located quite far away from the actual house. This is very inconvenient and dangerous. If the toilet is needed at night, there is fear of snakes or falling down steep terrain *(Eliasson, Hessle & Leonsson, 1998)*.

- Women do their **washing** outdoors. The dust from outdoors often requires them to redo their washing. Further, when it rains clothes have to be dried inside the homes, which create problems, considering that the homes are small with high humidity.

- When it comes to the **sleeping arrangements**, these women are satisfied but would like more space, whilst others would like separate rooms. Space is also not available for the storage of belongings. When visitors arrive, the women do not have a separate space from the kitchen and sleeping areas in which to talk *(Eliasson, Hessle & Leonsson, 1998)*. Overall, we can therefore see that space is a real issue to these women apart from the aforementioned dangers.

From the ranking exercise, it became obvious what the priorities of the women were. The most valuable thing in their lives is the homes, health, work, family, the gardens, and lastly security. The value of these aspects was ranked in that order *(Eliasson, Hessle & Leonsson, 1998)*.

The women however, did see the value of using bricks for the construction of homes. Maintenance and durability were important when these women had to choose the type of materials that they would prefer to use in the construction of homes. Some had good things to say about wood, whilst others differed. Wattle and daub, concrete blocks and corrugated iron was ranked the lowest. When questioned about the type of home they would like to live in, most women chose single or semi-detached houses. These were chosen because of the possibility of extending and big yards that they did not have to share with neighbours *(Eliasson, Hessle & Leonsson, 1998)*.

The most important aspects in a house, to women were water, electricity, ventilation, security and light. Given a choice of activities that are important, ranging from bathing; cooking; eating; sleeping; socialising; toilet; washing and working, the toilet was most important. Second was bathing and working followed by cooking, eating and washing. Sleeping and socialising was ranked the lowest because the waking state was considered more important *(Eliasson, Hessle & Leonsson, 1998)*.

From this analysis, proposals were put forward to deal with the various issues that had arisen to suit the women's situations. The design criteria were developed according to the problems that were noted for example, one woman stated that when she cried, the first that should hear it is her neighbour. She therefore needed security around her home. This was the design that was developed for her situation: It was named the **House of Sustainable Security** *(Eliasson, Hessle & Leonsson, 1998)*.
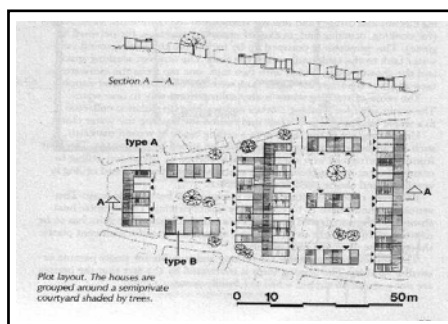

FIGURE 13: Plot Layout
(Eliasson, Hessle & Leonsson, 1998)

The idea behind this house type is to create social interaction apart from creating a secure environment. Houses are therefore, grouped around a semi-private courtyard, which will be the place for meeting and for children to play in. In most informal areas, women gather around a standpipe. The courtyard will now take over the social function of the standpipe *(Eliasson, Hessle & Leonsson, 1998)*.

There are two types of houses proposed, type A and type B. Both cover the same plot and floor area. There is a separate room for living and another for a wet core and a kitchen. The wet core also has an outdoor washing

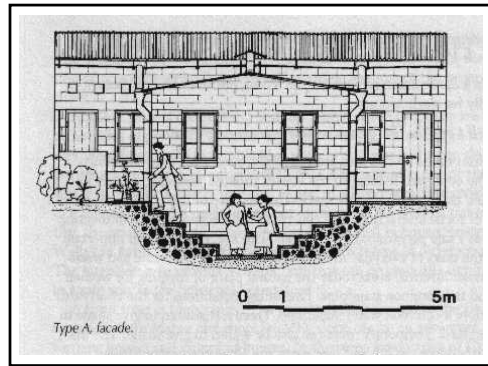space *(Eliasson, Hessle & Leonsson, 1998)*.

FIGURE 14: Housing type A
(Eliasson, Hessle & Leonsson, 1998)

Since the collection of water is important, the wet core is built on top of an underground water tank where rainwater is collected from the roofs. Under the roof are two tanks, one for rainwater and one for communal water supply *(Eliasson, Hessle & Leonsson, 1998)*. The reuse of water is stressed in this type of housing.

Under the roof in the living area, a ceiling is made of reused materials, which can be added on by the tenant to form an enclosure. The indoor climate can be improved by the absorption by the added material of the heat from the corrugated iron roofing. The space between the roof and the ceiling is ventilated. This space can also be used for storage *(Eliasson, Hessle & Leonsson, 1998)*.

Just as this housing type solved a few problems identified, other housing types were developed to cater for the other issues. Each person's existing situation was taken into consideration as well as the resource constraints, to produce the most appropriate housing type for each concern. Further, more than one housing type was developed, which indicates the provision of choice.
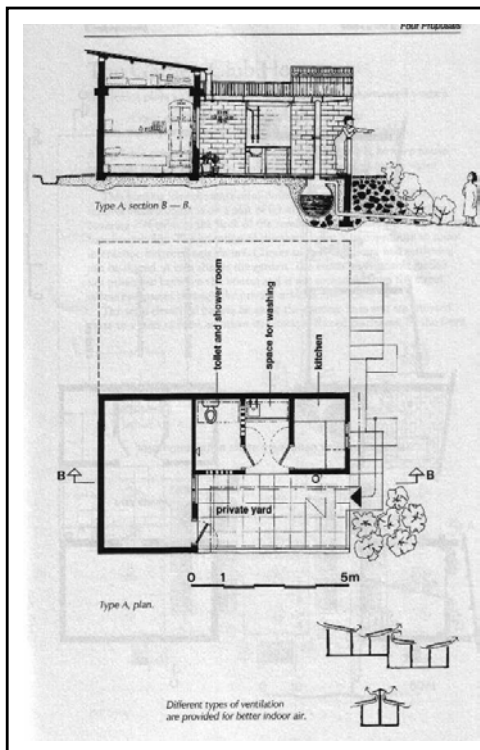

FIGURE 15: Sections of housing type A
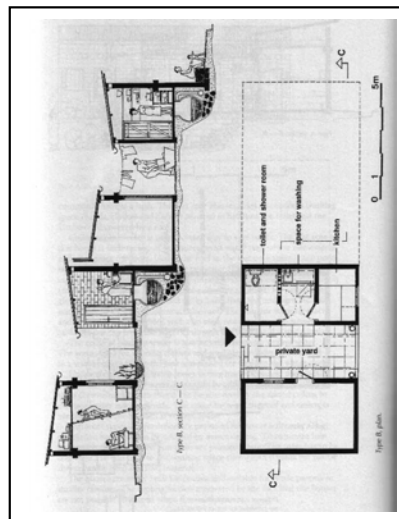*(Eliasson, Hessle & Leonsson, 1998)*

FIGURE 16: Sections of housing type B
(Eliasson, Hessle & Leonsson, 1998)

7.1.1   CONCLUSION

The value of this study is in the importance of consumer participation in the process of the design of housing provision. The needs of the day-to-day activities and priorities of the residents are considered in the planning of the housing designed and the space surrounding the structure. The space around the house is just as important as the space within. Desirable environments and housing are created in this way.

7.2.   INANDA NEWTOWN (DURBAN) & KHAYELITSHA (CAPE TOWN)

This study was conducted to ascertain whether core housing had supported residents. It also set out to determine whether the policies that created the environment in which core housing was likely to become a commonly implemented housing form would achieve the national goal of adequate 'housing for all ' *(Department of Housing, 1994).*

The research methodology implemented consisted of:

- an aerial photography survey of all houses,
- the classification of houses according to the types of extensions,
- stratification of the frame and selection of a random sample,
- the composition of a questionnaire addressed to the residents,
- the formulation of a physical site survey of the house and surrounds,
- the implementation of the household and physical surveys for a 5% sample,
- interviewing of key actors (original project agents and contemporary community leaders),
- the capture of survey data,
- the statistical analysis of the collected data,
- and the interpretation of the data and report on key findings *(Napier & Meiklejohn, 1997).*

7.2.1.   BACKGROUND

A.   Inanda Newtown

Inanda Newtown was initially established as a site-and-service scheme as a response to an outbreak of typhoid in 1979. The Urban Foundation (UF), a non-governmental organisation, became its main project agent. After a screening process, people were given a choice of the type of home they would like to live in. This area had a physical constraint of steep slopes. After five years, residents could obtain full title to their properties. However, with secure tenure, household participation and direct support from the project agents, some consolidation did occur: 20 percent of the residents had added formal extensions, 13 percent added informal extensions, and 5 percent added mixed extensions. 63 percent of households did not extend beyond the boundaries of their own homes because they had sub-divided internally and upgraded *(Napier, 1998).*

B.   Khayelitsha

This area developed as a mass-housing scheme by private consultants. There was insecure tenure and rented accommodation was initially only offered. People, however, chose to remain as renters. The residents were not offered choices when it came to housing types, and the size of homes offered were much smaller than those offered in Inanda. This settlement experienced a lack of commitment from the authorities, limited choice, and continued insecurity. The type of extensions seen here included permanent extensions (24%), informal extensions (42%), and mixed extensions, which added up to 11 percent. The remaining 23% had not extended at all *(Napier, 1998).*

7.2.2.   FACTORS AFFECTING CONSOLIDATION
It was found from this study that the key factors affecting consolidation in Inanda were:

- The varying levels of building skills within households
  Even though many families had financial means to extend, building skills were lacking in many cases.

- **Low levels of consultation with experts for advice and know-how**
  57% of residents did not consult with any experts for advice or support when constructing additions.

- **High costs of formal and informal building by builders**
  The high costs of employing builders prohibited extensions from being built. Instead, families chose to invest in the education of children.

- **Very low utility of end-user finance; varying household income**
  There was a large percentage of under-utilisation of end-user finance to build additions. Only 2% of households had used banks or building society loans to make extensions.

- **Larger core houses (reducing the need to extend immediately)**
  The larger core houses built in this area provided more habitable space from the outset. It therefore made the need for extending less urgent.

- **Differing age structure of households**
  Residents without additions to the houses were households with younger children. The need for independent space for the children was not needed yet and money was spent on education rather than on extending.

- **Physical constraints**
  The topography, shape and size of site platforms, and the form and siting of the core houses influenced the type of extensions made by the residents *(Napier & Meiklejohn, 1997)*.

In Khayelitsha the factors that affected consolidation were:

- **Varying household incomes from employment (formal and informal)**
  The extenders had more income and those with the least income did not extend. It was stated by Napier that to a large extent formal employment determined income, except for mixed extenders that acquired income from self-employment or occasional work.

- **A general lack of building skills within households**
  Approximately 12% of households had building skills. Those with skills had built additions for themselves with the use of temporary materials whilst those with less skills and more money had employed builders. Residents with neither money nor skills have remained unextended.

- **Good access to cheap building materials (leading to low cost informal extensions)**
  It was relatively cheap to access building materials from local building material suppliers and to build informal additions.

- **Relatively high costs of formally built extensions**
  Residents with higher incomes managed to hire builders. Others have used their own building skills.

- **Better use of formal finance for extensions**
  In comparison to Inanda, more banks and building society loans were used to finance extensions (8% of extensions). 4% of households had used money from a savings club, 1% was assisted by employers and 87% used personal savings.

- **Lack of access to advice and support from authorities**
  Institutional support for the residents during the construction of additions collapsed at an early stage. 72% of households did not seek any professional or official support or advice when extending.

- **An absence of choice for, and participation by, residents**
  A mass production approach was employed in this area. There was therefore little choice by the residents in the type of house chosen and its location.

- **The size of core houses as motivator to extend in some way**
  Even though there were high levels of services provided and the public realm was planned, residents were dissatisfied with the size and construction of houses. However, considering the relatively inexpensiveness to build informal structures, many managed to cater for the family needs. A large portion was still unable to extend *(Napier & Meiklejohn, 1997)*.

7.2.4.   **FACTORS THAT INFLUENCE EXTENSION**
Employment and household income were two of the factors that influenced the extension of dwellings. Napier & Meiklejohn, 1997 stated that if people are unemployed they will not have an income, and can therefore not afford

to extend.

It was also found that the size and age of the family also plays a role. Families with more young adults had extended rather than those with younger children *(Napier & Meiklejohn, 1997)*.

It was noted that people who had extended had better access to building skills. In Khayelitsha, 93 percent of people had no access to building skills *(Napier & Meiklejohn, 1997)*.

Household size also promoted extension because of the crowding. With the growth of the families, houses grew. People therefore extend to reduce the overcrowding *(Napier & Meiklejohn, 1997)*.

7.2.5.   SUCCESS AND FAILURE

From the research it was found, that mobilisation of personal finance and other resources is possible. People that were able to extend formally and informally revealed this. Formal and informal sectors could also be combined to maximum effect in the production of predominantly sound, informal rooms for habitation (e.g. Khayelitsha). Finally, a history of being involved in building one's own housing may aid in the household establishing itself in core housing *(Napier & Meiklejohn, 1997)*.

The negative finding of this research is that a large number of people are still excluded. They are unable to add space because of a lack of personal participation; the absence of advice and skills training for residents; little or no institutional support; and the absence of appropriate financing mechanisms *(Napier & Meiklejohn, 1997)*.

These two case studies therefore, show that the aim of achieving incremental growth of initially small houses into larger permanent homes is often not achieved *(Napier & Meiklejohn, 1997)*.

7.2.5.   CONCLUSION

Even though the final statement made by Napier and Meiklejohn (1997) is in opposition to the core framework of the intended research proposal, it is important to note the numerous factors that had lead to the arrival of this statement. The factors that affect consolidation are the factors that need to be addressed to ensure the transition from the small houses into larger permanent houses. In this light, the intention of the research proposal is to extract these factors of consolidation from two different areas to add to this study (Inanda Newtown and Khayelitsha) in an attempt to motivate the appropriateness of the incremental approach to housing the poor, as opposed to the traditional approach.

8.   CONCLUSION

Based on this research, the changes in the way housing has been provided over the past 50 years, and the context of housing provision at present, future adequate housing relies on two aspects:

- Better design of housing
- Overcoming the obstacles to consolidation

Housing policy indicates an incremental approach to providing housing to ensure adequate quality, to reach more people immediately, and thereby to spread limited resources further *(refer to section 5.4.1.)*. The Housing Policy has also made a shift toward the people's housing process, where the emphasis is on the efforts made by the beneficiaries *(Rust, 203)*. However, in order to make this move work and ensure successful housing delivery and occupation, a review of what has been provided in the context of self-help options need to be done to identify problem areas and success stories to assist in this effort. As such, many studies (Napier, etc) have been conducted where the focus has been on consolidation. This is the major problem, where after occupation of the starter units or top structures, formalization does not take place. Studies have arrived at factors that affect the formalization / consolidation of areas. If more self-help options of housing delivery are to be done in future with an emphasis on efforts of beneficiaries, the challenge of obstacles needs to be addressed.

In general, it has been shown that the design and placing of structures on erven, depend mainly on engineering and maintenance costs. This often results in poor environments (monotonous), units were placed arbitrarily on the erven and provided little opportunity for expansion. The study above *(refer to 7.1.)* shows the importance of considering the lifestyles of people before providing housing. If this is done, the environments aimed at in the Housing Code, 1997 will be possible:

*"housing development" means **the establishment and maintenance of habitable, stable and sustainable public and private residential environments to ensure viable households and communities** in areas allowing convenient access to economic opportunities, and to health, educational and social amenities in which all citizens and permanent residents of the Republic will, on a progressive basis, have access to-*

*(a)   permanent residential structures with secure tenure, **ensuring internal and external privacy** and providing adequate protection against the elements; and*

(b)   potable water, adequate sanitary facilities and domestic energy supply' (National Housing Code: Annexure A, Chapter 3, Part 2: 1 - 2).