

**CHAPTER 4: SPATIAL CONFIGURATION OF ORIGINAL HOUSING PROVISION AND CHANGES OVER TIME**

**1. INTRODUCTION**

This chapter aims to provide details of the case study areas prior to and during initial housing provision. It is meant to be demonstrative of the considerations made toward providing housing by government, the processes followed, the date of establishment and completion, the type of subsidies implemented, and the end results (erf configuration and size, and house configuration and size). This chapter addresses sub-problem 1.

The structure of this chapter begins by discussing the case study areas selected in terms of the date of establishment and completion, the type of subsidy, the process of housing provision, erf and house configuration and size, and densities. Plans are used thereafter to illustrate the initial housing provided in each area (refer to figure 17 below). Figure 18 reveals the position of the chapter within the dissertation.

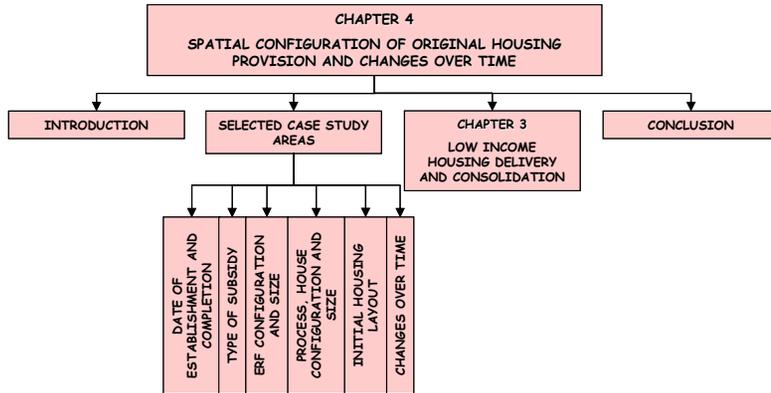


FIGURE 17: STRUCTURE OF CHAPTER

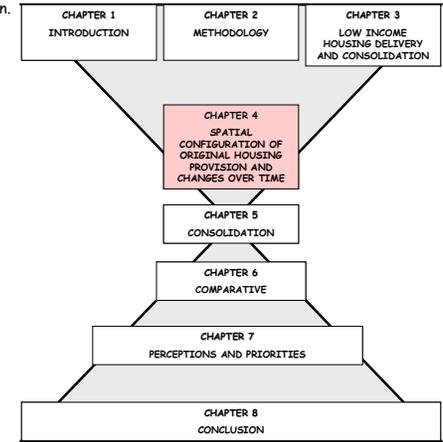


FIGURE 18: POSITION OF CHAPTER WITHIN DISSERTATION

**EXTENSION 10**

**EXTENSION 6**

**2. SELECTED CASE STUDY AREAS**

**2.1. DATE OF ESTABLISHMENT AND COMPLETION**

Housing provision began in 1994 and majority (the provision of roof structures and services) was completed in 2000 (Minty, 2002).

Housing provision began in 1997 and majority (the provision of sites and services) was completed in 1999 (Minty, 2002).

**2.2. TYPE OF SUBSIDY**

The type of subsidy applied in Extension Ten was Mayibuye (consisting of engineering design, township establishment and the transfer of properties) and Essential Services that covered the engineering design and the installation of engineering services, and the Consolidation Subsidy, which made provision for the top structure (Minty, 2002).

The subsidy provided within Extension Six reflects that of Mayibuye (consisting of engineering design, township establishment and the transfer of properties) and that of Essential Services, which covered the engineering design and the installation of engineering services (Minty, 2002).

**2.3. ERF CONFIGURATION AND SIZE**

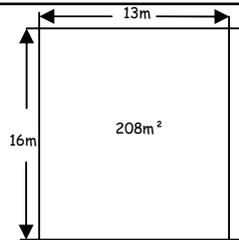


FIGURE 19: ERF DIMENSIONS OF EXTENSION 10

The average erf size within Extension Ten is 208m<sup>2</sup> with dimensions of 13m x 16m.

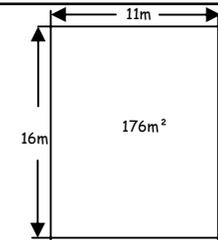


FIGURE 20: ERF DIMENSIONS OF EXTENSION 6

Extension Six is characterised by erf dimensions of 11m x 16m (average value) and average erf size of 176m<sup>2</sup>.

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2.4. PROCESS, HOUSE CONFIGURATION AND SIZE

EXTENSION 10

Residents in Extension Ten were squatting in the area prior to development (since 1990/1991). Recipients had to be moved in order to carry out the provision of the housing, but toilets were being stolen. Therefore, the recipients were moved back in the area during construction for safety reasons. Other problems occurred out of this plan of action where some residents did not qualify for subsidies but were moved back to their properties for safety reasons. The removal of these residents that didn't qualify for subsidies became a difficult exercise. The resolution of this dilemma is ongoing as stated by an interviewee in 2002.

The project was initiated in 1994 and the majority of housing was completed in the year 2000. In total, there are six hundred and fifty five stands. It was decided by the present South African government that Extension Ten be provided with 24m<sup>2</sup> houses with 12m<sup>2</sup> enclosed with a toilet, windows and doors (refer to figure 21).

The developers, on the other hand, decided to provide a roof structure (9x6 - 55m<sup>2</sup>) coupled with the idea that the community would make their own bricks and build up from there. It was in the opinion of the developers that the 24m<sup>2</sup> house with 12m<sup>2</sup> enclosed with a toilet, windows and doors was not sufficient in terms of space. The developers also worked off the premise that people would want more space and would therefore be more enthusiastic about building their own homes. Province (housing department) didn't agree. They were merely carports in the eyes of Province, instead of homes (Minty, 2002).

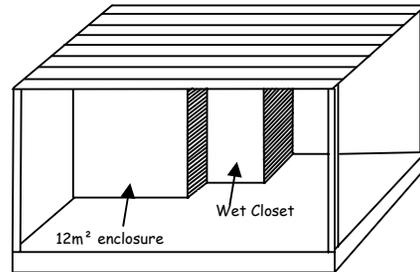


FIGURE 21: TYPE OF HOUSING PROVIDED IN EXTENSION 10

A compromise was reached, after many discussions, where an enclosure of 12m<sup>2</sup> was made (refer to diagram above). Beneficiaries requested that the wet closets be provided outside the roof structure for economic reasons (if they decide to build another extension at the back of the erf and rent out one of them, both the tenants and the owners have easy access to the wet closet without having to encroach on anyone's privacy). The following was provided with the wet closet at the corner of the erf:

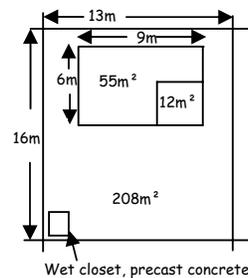


FIGURE 22: DIMENSIONS OF ERF AND TOP STRUCTURE WITHIN EXTENSION 10

Province had refused to pay the subsidy unless the enclosure was made. Initially many people didn't want the enclosure (sixty eight), but now many do. Eighty-nine still refuse to have any part of it and hence are not provided with the enclosure, as per their request.

To date today, seventy-five people have built up or enclosed the shelter provided. Eighty nine erven have no development on it due to requests from the residents and the remainder of the six hundred and fifty five have been provided with housing (roof structures with services inclusive of a wet closet).

EXTENSION 6

Extension Six was an open area prior to development. It was called the Greenfields project. People moved in from phase one of Stanza that was next to a refuse dump.

Housing provision in Extension Six began in 1997 and was completed in 1999. To date today, there are one thousand six hundred and sixty seven stands, one thousand five hundred and fifty six of which have been allocated to people. One hundred of these stands, at present, lay vacant. Out of these 1 667 stands only 1 616 subsidies were acquired (Minty, 2002).

There was one farmhouse on the property, owned by the council but the occupant refused to move. Extreme measures were sought to the point of eviction, but the resident refused to move. As a result, one RDP house was provided for him (Minty, 2002).

All the roads in this extension have been tarred taking into consideration the future monetary implications of maintaining a gravel road as opposed to a tarred road. Gravel roads tend to have higher maintenance costs compared to tarred roads in the sense that gravel roads would require frequent maintenance in comparison to tarred roads, where maintenance would be over long periods. A school is planned in an open area (Minty, 2002).

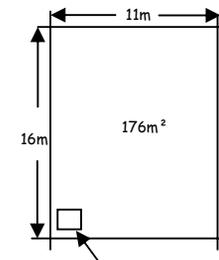


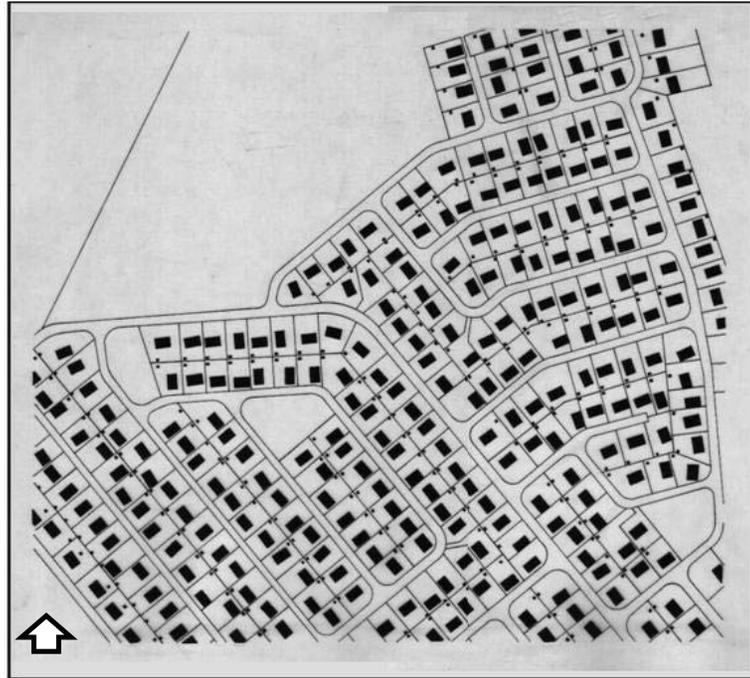
FIGURE 23: DIMENSIONS OF ERF WITHIN EXTENSION 6

The type of housing provided in Extension Six were merely wet cores with services because the subsidy provided by government only covered Mayibuye (consisting of engineering design, township establishment and transfer of properties), and Essential Services (consisting of engineering design and the installation of engineering services).

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2.5. INITIAL HOUSING LAYOUT

EXTENSION 10



MAP 7: INITIAL PROVISION OF HOUSING IN EXTENSION 10

The representation of the initial provision of housing in this diagram has not taken into consideration the shacks already constructed by the residents prior to the provision of housing by government. Therefore, what appears in this diagram is merely a representation of the type of housing provided by government, i.e. roof structures with services.

GROSS DENSITY: 163p/ha  
NETT DENSITY: 266p/ha

The placing of the wet cores seems to take place at the back of the erven in either the left or right corners (influenced by the engineers). The wet closets have been placed in such a manner to save on service costs. The roof structures, on the other hand, seem to follow a different pattern. Although the wet closets seemed not to be influenced, in terms of positioning, by the presence of shacks, the roof structures were. The roof structures were placed in various positions on the erven depending on the position of residents' shacks. The majority appear to be placed away from the back boundary because of the presence of shacks. Most erven have the roof structures placed with the long side parallel to the road frontage. There is no clear consistent pattern as to the placing of these structures.

EXTENSION 6



MAP 8: INITIAL PROVISION OF HOUSING IN EXTENSION 6

The representation of the initial provision of housing in this diagram has not taken into consideration the shacks already constructed by the residents prior to the provision of housing by government. Therefore, what appears in this diagram is merely a representation of the type of housing provided by government, i.e. site and service.

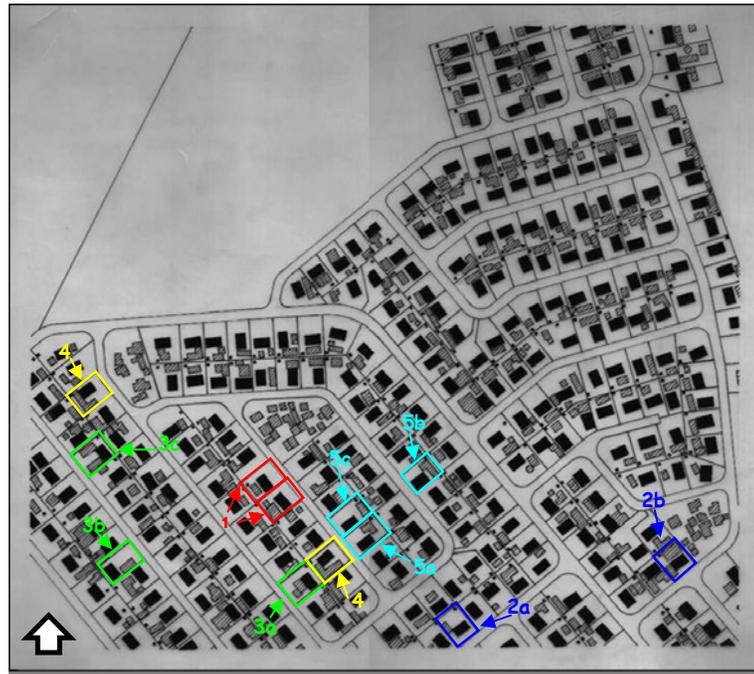
GROSS DENSITY: 219p/ha  
NETT DENSITY: 364p/ha

The placing of the wet closets in this extension also appear to be placed at the back of the erven in either the left or right corners to save on service costs. The placing of the wet closets has therefore been influenced by the engineers.

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2.6. CHANGES OVER TIME

EXTENSION 10



MAP 9: CHANGES OVER TIME IN EXTENSION 10

With the observation of changes taken place on the erven, four typical patterns can be extracted and are numbered correspondingly to the map above:

1. Roof structures placed **centrally** on the erven with the **long side parallel to the street**:
  - a. Temporary structures have been built at the back behind these structures. This creates minimal living space at the back of the erven with more space at the front.
2. Roof structures placed toward the **front** of the erven with the **long side parallel to the street**:
  - a. Structures have been built at the back or along the side of the erven. Privacy is created within the larger living space in comparison to 1 with enough space for a garden at the front.
3. Roof structures placed toward the **back** of the erven with the **long side parallel to the street**:
  - a. In some cases, roof structures have been placed at the back. With the initial placing of temporary structures on the erven, the placing of the roof structures appeared to be a difficult task, i.e. the size of the roof structure made it impossible to fit anywhere else. Two households appear to be fine in terms of living space, i.e. 3b and 3c. All structures have been arranged along the erven boundaries (back and sides). This creates maximum space for living and space in front for a garden. Privacy levels might be a bit lower. In the case of 3a, odd space has been created.
4. Roof structures placed in either **side** of the erven toward the **centre** (in relation to the front and back boundaries) with the **shorter side parallel to the street**:
  - a. Temporary structures have been built along the back and sides of the erven to create space between the structures. The arrangement appears somewhat cramped and creates more space at the front of the erven than between the structures.

EXTENSION 6



MAP 10: CHANGES OVER TIME IN EXTENSION 6

The typical pattern presented here is that of structures built at the back of the erven. This allows the use of space has been optimised for the future houses to be built. In this way, temporary structures would not have to be demolished or disturbed during the process of construction of the future houses.

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5. 5c represent an example that works in terms of creating sufficient living space. Privacy can be created with the construction of additional units in time. The space created is not in small pockets but larger pockets, which is an advantage for future construction and expansion. In the cases of 5a and 5b two alternatives would have improved the size of the living space and would eliminate the odd pockets of space created:
  - a. The roof structure could be placed on the opposite side of the erf to meet the temporary structure extending along the side boundary, i.e. an extension to existing structures. The situation created would resemble that of 5c.
  - b. The roof structure could have been rotated 90° and placed closer to the street. In this way not only is the living space increased, but privacy is also created. Gardening space is reduced. This option could also apply to 5c.

INITIAL PROVISION

- Housing provision began at an earlier stage in Extension Ten (three years earlier, 1994) than Extension Six (1997) and has taken twice as long to complete in Extension Ten (6 years) than in Extension Six. The type of housing provided in each area could have influenced that rate at which they were provided.
- The type of housing provided within the two areas differs, i.e. Extension Ten has been provided with a roof scheme with services and Extension Six was provided with a site and service scheme. The type of subsidies applied within the two areas also differs: Extension Ten has been provided with the same as in Extension Six except for the additional consolidation subsidy, which allowed for roof structures to be provided with an enclosed room.
- In both cases, the wet closets have been placed (back of the erven in either corner) in a manner that has been influenced by the engineers in order to save on service costs. The placing of the wet closets has not been influenced by the temporary structures present on the erven, but the roof structures have been.
- The average erf configuration in both extensions is quite similar (ext. 10 - 16m x 13m, ext. 6 - 16m x 11m) but average erf sizes differ by 32m<sup>2</sup>. Residents of Extension Ten have more spacious erven than the residents of Extension Six. Gross and nett densities are proportionately higher in Extension Six. Coupled with the smaller erf sizes, this implies that more people occupy Extension Six than Extension Ten.
- In both cases, initial housing provision began after people had begun to squat on the land. Therefore, in most cases the process of development involved the building of the shack first, followed by the wet closet, then the roof structures, more shacks and finally, permanent structures.

3. CONCLUSION

CHANGES OVER TIME

Changes over time in Extension Six appear to have taken place at the back of the erven. All households have constructed the temporary structures in this way in anticipation of the construction of the formal, permanent structures in the future. The picture within Extension Ten is different. With the size the erven being approximately 208m<sup>2</sup>, family sizes averaging 5, and the gross and nett population densities being 163m<sup>2</sup> and 266m<sup>2</sup> respectively, space is limited. The amount of space available should therefore be optimised for living space of the occupants. As such, privacy also becomes an issue for the households. It is also important to note, before reading the conclusions, that gardening is generally the activity that tends to happen at the front of the erven:

1. Had the roof structure been placed a bit more toward the street, there would have been ample living space at the back and sufficient space for a garden at the front. Placing of structures has not optimised the use of space, i.e. only the large open area in front of the roof structure can be used. Small side spaces have been created that cannot be functionally used.

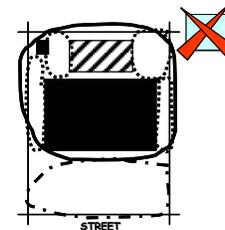


FIGURE 24: Pattern 1

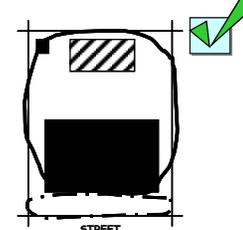


FIGURE 25: Pattern 1 - Alternative

2. This is how space is optimised for living rather than wasteful space created at the front of the erven for gardens. The placing of the structures have also assisted in ensuring that the rest of the space on the erven (not occupied by structures) can be optimally and functionally used, i.e. in 2a the structures (temporary structures and roof structures) have been placed in a manner where little pockets of space are avoided. Instead, larger spaces are created.

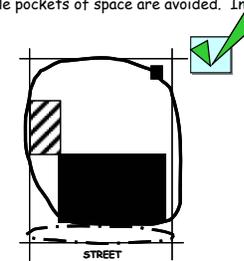


FIGURE 26: Pattern 2a

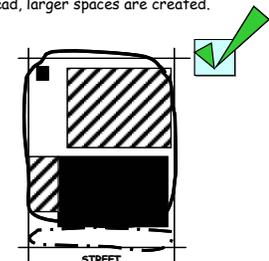


FIGURE 27: Pattern 2b

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3. CONCLUSION

3. Not much could have been done to avoid this situation (3a) except to ask the residents to move structures so that the roof structure could be optimally placed. This would mean putting residents out of a home. However, two situations turned out to provide sufficient living space, but limited privacy levels.

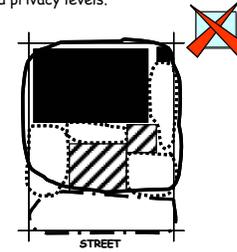


FIGURE 28: Pattern 3a

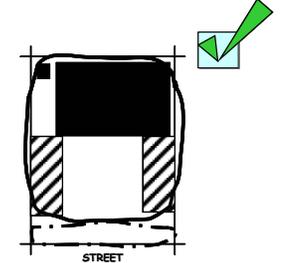


FIGURE 29: Pattern 3c

4. Placing of the structures has allowed an odd space to be created between the structures with a large space at the front. If the roof structures had been placed differently, greater living space and privacy would have been created:

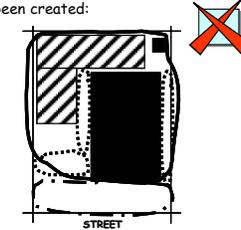


FIGURE 30: Pattern 4

- a. Had the roof structure been placed closer to the side boundary of the erven, more space would have been created between the structures, but space would still have been wasted at the front.

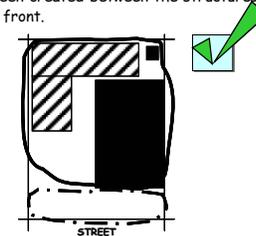


FIGURE 31: Pattern 4 - Alternative 1

- b. If the roof structure had been turned 90° (having the longer side parallel to the street) and placed closer to the street, living space and privacy would be increased to a great extent and the garden space reduced.

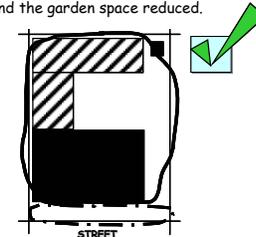


FIGURE 32: Pattern 4 - Alternative 2

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3. CONCLUSION

5. 5c represent an example that works in terms of creating sufficient living space. Privacy can be created with the construction of additional units in time. The space created is not in small pockets but larger pockets, which is an advantage for future construction and expansion. In the cases of 5a and 5b two alternatives would have improved the size of the living space and would eliminate the odd pockets of space created:

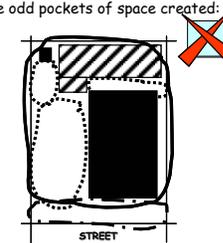


FIGURE 33: Pattern 5b

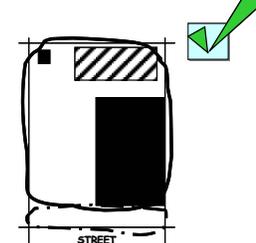


FIGURE 34: Pattern 5c

- c. The roof structure could be placed on the opposite side of the erf to meet the temporary structure extending along the side boundary, i.e. an extension to existing structures. The situation created would resemble that of 5c.

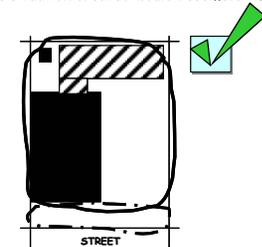


FIGURE 35: Pattern 5b - Alternative 1

- d. The roof structure could have been rotated 90° and placed closer to the street. In this way not only is the living space increased, but privacy is also created. Gardening space is reduced. This option could also apply to 5c.

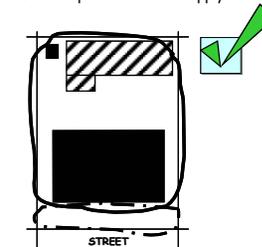


FIGURE 36: Pattern 5b - Alternative 2

The placing of the water closets in Extension Six doesn't seem to be affected by it, i.e. all structures have in any case been placed at the back of the erven. In the case of Extension Ten, however, not much thought was given to the placing of the roof structures. A little time spent on analysing the existing context before providing housing would improve the lives of the beneficiaries. The aim of the National Housing Policy, as stated within the National Housing Code, 2000, is after all:

- " (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 area.** 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),

where the focus is not just on building and adequate housing structure o shelter the beneficiaries, but also to create environments in which South Africans can live prosperously with privacy.