

CHAPTER 5: CONSOLIDATION - 2.1.1. SOCIO-ECONOMIC INTRODUCTION

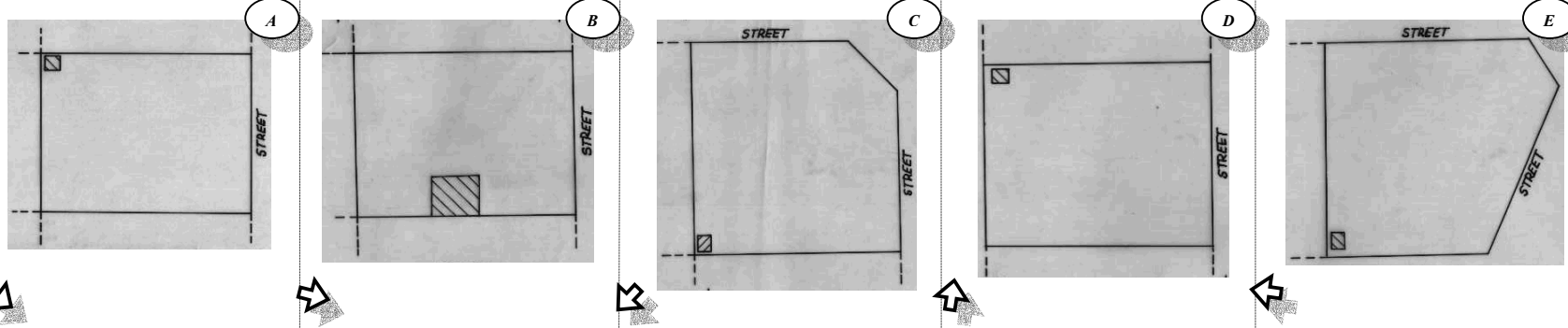
EXT. 10: TYPOLOGY 1

THE HOUSEHOLD	A	B	C	D	E
HOUSEHOLD PROFILE	<p>Family type: <i>Single woman-headed family</i> Family size: 5</p> <p>Tenants: <i>Yes</i> No. of tenants: 4 Household size: 9</p>	<p>Family type: <i>Single nuclear family</i> Family size: 5</p> <p>Tenants: <i>Yes</i> No. of tenants: 2 Household size: 7</p>	<p>Family type: <i>Single nuclear family</i> Family size: 6</p> <p>Tenants: <i>No</i> No. of tenants: <i>NA</i> Household size: 6</p>	<p>Family type: <i>Single nuclear family</i> Family size: 5</p> <p>Tenants: <i>No</i> No. of tenants: <i>NA</i> Household size: 5</p>	<p>Family type: <i>Single nuclear family</i> Family size: 6</p> <p>Tenants: <i>No</i> No. of tenants: <i>NA</i> Household size: 6</p>
EMPLOYMENT AND INCOME	<p>No. of sources of income: 2 Sources of income: <i>tenants</i> Employment: <i>Full-time and entrepreneurial/informal</i> Location: <i>Restaurant in WaterMeyer Park, Taxi owner</i></p>	<p>No. of sources of income: 3 Sources of income: <i>Father and two tenants</i> Employment: <i>Part-time and two full-time</i> Location: <i>Willows, and unknown</i></p>	<p>No. of sources of income: 3 Sources of income: <i>Mother and father</i> Employment: <i>Full-time, part time, and entrepreneurial/informal</i> Location: <i>Johnson Control (Deneboom, in a plaza (Nelstroom), and a spaza shop from home.</i></p>	<p>No. of sources of income: 1 Sources of income: <i>Mother</i> Employment: <i>Entrepreneurial/informal</i> Location: <i>Sells food at a school in extension 7.</i></p>	<p>No. of sources of income: 1 Sources of income: <i>Father</i> Employment: <i>Entrepreneurial/informal</i> Location: <i>Sells vegetables from his home.</i></p>
EXPENDITURE	<p>The expense that is indicated as 'other' refers to other expenses not covered by the expenditure items listed below. All households pay taxes, sanitation, and waste removal as well as for food and education. Water and electricity are also a common expense.</p>				
WATER	x	x	x		x
ELECTRICITY		x	x	x	x
TRANSPORT	x		x	x	x
TELEPHONE			x		x
EDUCATION	x	x	x	x	x
FOOD	x	x	x	x	x
CLOTHING		x		x	x
ACCOUNTS					x
SAVINGS					x
TAXES	x	x	x	x	x
SANITATION	x	x	x	x	x
WASTE REMOVAL	x	x	x	x	x
OTHER			x		x

CHAPTER 5: CONSOLIDATION - 2.1.2. PHYSICAL CHANGES

EXT. 10: TYPOLOGY 1

INITIAL
STRUCTURE



Description: Water Closet
Materials used: Precast concrete
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

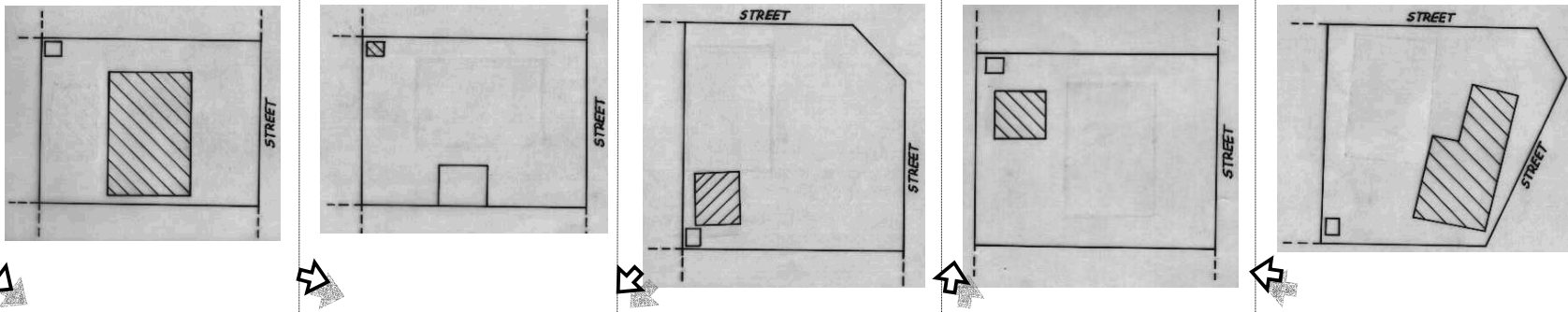
Description: Temporary structure
Materials used: Corrugated iron and metal sheets (temporary materials)
Material supplier: Bought in the neighbourhood.
Cost: R650
Funding: Savings
Builder: Private contractor
Date of Constr.: 1996
Problems: Financing. Savings had to be used to build this temporary structure.

Description: Water Closet
Materials used: Precast concrete
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

Description: Water Closet
Materials used: Precast concrete
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

Description: Water Closet
Materials used: Precast concrete
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

ADDITION
1



Description: Roof structure
Materials used: Steel and corrugated iron structure.
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

Description: Water Closet
Materials used: Precast concrete
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

Description: Temporary structure
Materials used: Corrugated iron (temporary materials)
Material supplier: Phase 3
Cost: R1 500
Funding: Savings
Builder: Owner
Date of Constr.: 1997
Problems: It had to be demolished in order to build the house.

Description: Temporary structure
Materials used: Metal sheets and wooden boards (temporary materials).
Material supplier: Pretoria West
Cost: R1 200
Funding: Savings
Builder: Owner was assisted by friends.
Date of Constr.: 1996
Problems: None.

Description: Temporary structure
Materials used: Corrugated iron and wooden boards (temporary materials).
Material supplier: Informal supplier
Cost: R2 400
Funding: Savings
Builder: Private contractor
Date of Constr.: 1995
Problems: Financing and unemployment.

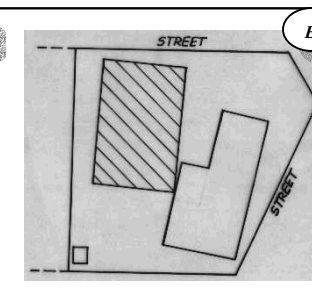
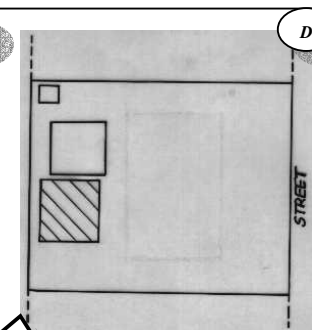
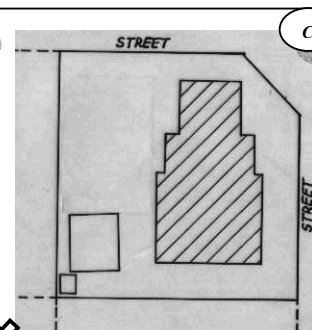
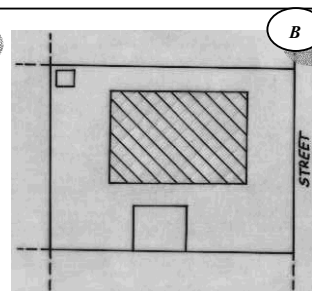
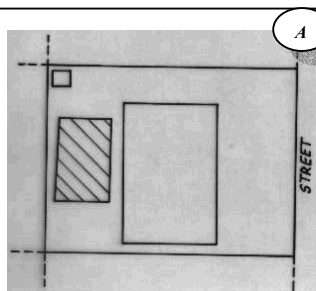
*NOTE

1. Information about the structures is limited, e.g. costs, date of construction, etc. Respondents were reluctant to provide all the information either because of a lack of trust or poor memories.

CHAPTER 5: CONSOLIDATION - 2.1.2. PHYSICAL CHANGES

EXT. 10: TYPOLOGY 1

ADDITION
2



Description: Temporary structure
Materials used: Corrugated iron and metal sheets (temporary materials)
Material supplier: Phase 1
Cost: Unknown
Funding: Savings
Builder: Private contractor
Date of Constr.: 1996
Problems: Leakage of water into the shelter. Rats.

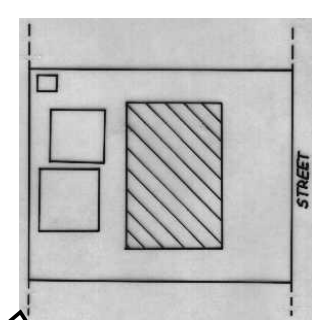
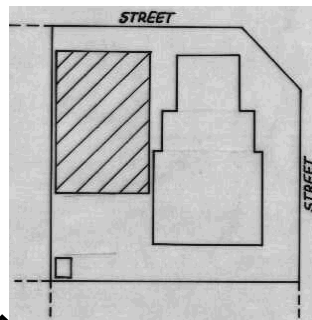
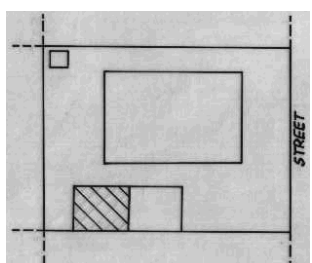
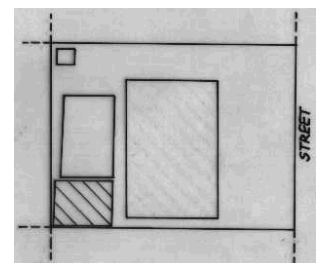
Description: Roof structure
Materials used: Steel and corrugated iron structure.
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

Description: House
Materials used: Face bricks (permanent materials)
Material supplier: Bought in Ernasteen
Cost: Unknown
Funding: Savings
Builder: Private contractor
Date of Constr.: End of 1998
Problems: Financing. The cost of materials results in an incomplete house.

Description: Temporary structure
Materials used: Corrugated iron roofing and wooden boards (temporary materials)
Material supplier: Bought in the neighbourhood.
Cost: R780
Funding: Savings
Builder: Supplier
Date of Constr.: 1997
Problems: None

Description: Roof structure
Materials used: Steel and corrugated iron structure.
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

ADDITION
3



Description: Temporary structure
Materials used: Corrugated iron and metal sheets (temporary materials)
Material supplier: Phase 1
Cost: R950
Funding: Savings
Builder: Private contractor
Date of Constr.: June 2001
Problems: None

Description: Temporary structure
Materials used: Corrugated iron (temporary materials)
Material supplier: Bought in the neighbourhood.
Cost: Between R750 and R850
Funding: Savings
Builder: Private contractor
Date of Constr.: 1998
Problems: None

Description: Roof structure
Materials used: Steel and corrugated iron structure.
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

Description: Roof structure
Materials used: Steel and corrugated iron structure.
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

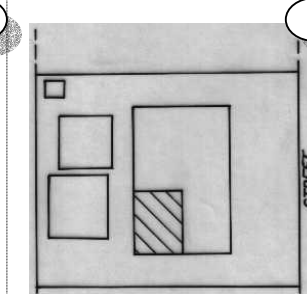
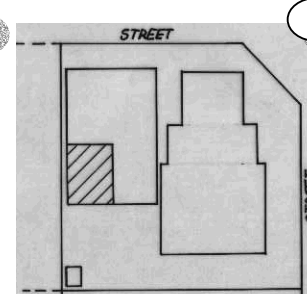
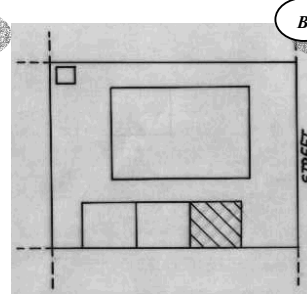
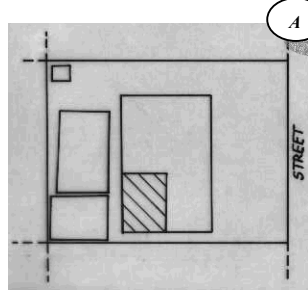
*NOTE

1. Information about the structures is limited, e.g. costs, date of construction, etc. Respondents were reluctant to provide all the information either because of a lack of trust or poor memories.

CHAPTER 5: CONSOLIDATION - 2.1.2. PHYSICAL CHANGES

EXT. 10: TYPOLOGY 1

ADDITION
4



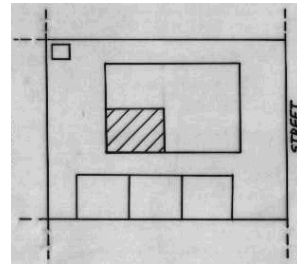
Description: One room under the roof structure.
Materials used: Bricks (permanent materials)
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

Description: Temporary structure
Materials used: Concrete precast slabs. (temporary materials)
Material supplier: Bought in the neighbourhood.
Cost: Unknown. The tenant constructed it when he moved in.
Funding: Unknown
Builder: Tenant
Date of Constr.: 1999
Problems: None

Description: One room under the roof structure.
Materials used: Bricks (permanent materials)
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

Description: One room under the roof structure.
Materials used: Bricks (permanent materials)
Material supplier: Government
Cost: Subsidy
Funding: Government
Builder: Government
Date of Constr.: 1998
Problems: None

ADDITION
5



Description: One room under the roof structure
Materials used: Bricks (permanent materials)
Material supplier: Government
Cost: Unknown
Funding: Government
Builder: Government
Date of Constr.: Unknown
Problems: None

*NOTE

1. Information about the structures is limited, e.g. costs, date of construction, etc. Respondents were reluctant to provide all the information either because of a lack of trust or poor memories.

CHAPTER 5: CONSOLIDATION - 2.1.2. PHYSICAL CHANGES

EXT. 10: TYPOLOGY 1

HOW HAS THE UNIT CHANGED OVER TIME IN TERMS OF:

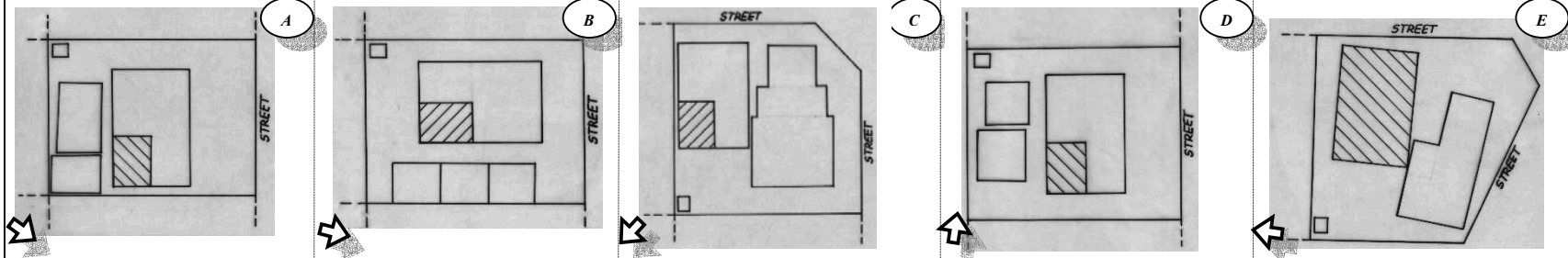
A	B	C	D	E
<p>NUMBER OF EXTENSIONS AND THE TREND IN USE OF MATERIALS There have been two extensions made in total. Both were shacks made of temporary materials.</p> <p>SIZE The size of extension one is approximately 18m² and the second 11m².</p> <p>Erf size: 192m² Total area: 29m² Coverage: 15% Occupational density: 4m²/person</p> <p>SHAPE AND CONFIGURATION Each shack has a rectangular shape. Extension one is 5.4m x 3.4m and extension two is 3.8m x 3m).</p>	<p>NUMBER OF EXTENSIONS AND THE TREND IN USE OF MATERIALS Three extensions were constructed on this erf made of temporary materials (shacks).</p> <p>SIZE All three extensions roughly covered 11m².</p> <p>Erf size: 192m² Total area: 33m² Coverage: 17% Occupational density: 5m²/person</p> <p>SHAPE AND CONFIGURATION Each shack is attached to the next and takes the form of a rectangle but is internally subdivided. The dimensions of each addition are 3.8m x 3m.</p>	<p>NUMBER OF EXTENSIONS AND THE TREND IN USE OF MATERIALS Two extensions were undertaken here. The first extension was a shack (temporary materials) that was destroyed in order to construct their actual home (permanent materials).</p> <p>SIZE The size of the shack is unknown, but the house is approximately 65m².</p> <p>Erf size: 248m² Total area: 65m² Coverage: 26% Occupational density: 11m²/person</p> <p>SHAPE AND CONFIGURATION This large house takes quite an odd shape. At first glance, it looks like a 'stepped' house, i.e. it starts broad and narrows down. The average dimensions are 12m x 6m. The shack took a rectangular shape.</p>	<p>NUMBER OF EXTENSIONS AND THE TREND IN USE OF MATERIALS There are two shacks that have been constructed of temporary materials.</p> <p>SIZE Each shack covers a small area of approximately 11m² and 14m² (in order of appearance) respectively.</p> <p>Erf size: 208m² Total area: 25m² Coverage: 12% Occupational density: 5m²/person</p> <p>SHAPE AND CONFIGURATION They take the form of rectangles. The first is 3.2m x 3.4m and the second is 3.7m x 3.8m.</p>	<p>NUMBER OF EXTENSIONS AND THE TREND IN USE OF MATERIALS There has only been one extension (a shack) made of temporary materials.</p> <p>SIZE It is approximately 41m² in total.</p> <p>Erf size: 236m² Total area: 41m² Coverage: 17% Occupational density: 7m²/person</p> <p>SHAPE AND CONFIGURATION This shack takes an 'L' shape and resembles three shacks that are joined together to form one unit. The dimensions for calculation purposes are as follows: 7m x 4.1m.</p>

*NOTE

- The toilet, roof structure and room under the roof structure have fixed values in terms of area, dimensions and shape. Instead of repeating these values throughout the document, it will be noted here. Toilet - area (1.2m²), dimensions (1m x 1.2m) and shape (rectangle). Roof structure - area (54m²), dimensions (6m x 9m) and shape (rectangle). Room under roof structure - area (12m²), dimensions (4m x 3m) and shape (rectangle).
- Also important to note, when reference is made to extensions, it refers to those made by the dwellers and not by government. This excludes the water closets and roof structures.
- The measurements given are **approximated** from the diagrams representing the situation of the erven and aerial photographs as a cross check. A measuring exercise was not carried out during the interviewing sessions. The measurements are therefore not true representations.
- Information about the structures is limited, e.g. costs, date of construction, etc. Respondents were reluctant to provide all the information either because of a lack of trust or poor memories. As a result, issues of cost and date of construction of extensions have been omitted from this analysis. However, assumptions based on available information have been made.
- All calculations within this section include enclosed structures only, e.g. incomplete roof structures that have been added to the calculation are those that are enclosed but lack internal divisions.
- When discussing privacy, there are two categories, i.e. from the public on the street and from neighbours. In this section, it refers to privacy from the public.
- Reasons for the placing of structures by respondents are mentioned only where reasons were given.

CHAPTER 5: CONSOLIDATION - 2.1.2. PHYSICAL CHANGES

EXT. 10: TYPOLOGY 1



PLACING OF BUILDINGS: With the size of the erven being approximately 208m² and gross and nett densities estimated at 163p/ha and 266p/ha 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.

HOW HAS THE UNIT CHANGED OVER TIME IN TERMS OF:

PLACING OF BUILDINGS

The toilet was placed at the back of the erf. The roof structure was placed in a central position with the longer side facing the road frontage and the two shacks, next to one another at the back end of the erf, along the back boundary line and behind the roof structure.

This leaves lots of space at the front, which is often used for gardens or is abandoned instead of being added to the living space. There is little space at the back of the erven where privacy and larger amounts of living space is needed. The arrangement of the structures has created a narrow strip between them (roof structure and temporary structures).

PLACING OF BUILDINGS

All three shacks were arranged along the east boundary. The roof structure lies parallel to the arranged shacks with the shorter side facing the road and the toilet was placed once again at the back end of the erf.

Odd pockets of space are created around the structures (roof structure in particular) which prevent the optimal use of the erven although privacy is created at the back and there is space for a garden at the front.

PLACING OF BUILDINGS

The house is placed at the front of the erf along one street and the roof structure is placed behind it, with the shorter side closely paralleled to the other street. The toilet was placed at the back of the erf in a northerly position.

The arrangement of the structures has created living space and privacy at the back, behind both structures. Space was also kept for a garden along one street. Space on this erfven appears to be optimally occupied. The roof structure has since the interviewing phase been converted into a garage.

This was the ideal position for their house as expressed by the owner.

PLACING OF BUILDINGS

The shacks are placed at the back of the erf, next to one another and behind the roof structure. The positioning of the roof structure was in front of the shacks in a central position on the erf. The longer side of the structure lies parallel to the street. The toilet was placed at the back of the erf.

A narrow space is created between the roof structure and the temporary structures (limited living space). Odd spaces are also created on the sides of the structures and a large space is made available at the front of the erf, which is occupied by a garden. The use of space on this erfven is not optimal for living space. Too much space is used for the garden.

PLACING OF BUILDINGS

The shack is built close to one of the road frontages on the southern side of the erf (it is a corner property that has two road frontages). The roof structure appears at the back of the property with the shorter side facing the other road frontage and the toilet is placed in the northern corner.

The placing of the temporary structure has allowed for odd spaces to be created on this irregular shaped erven. This, however, has allowed for a garden to be planted along one street. The added placing of the roof structure has contributed to the creation of more odd spaces and the eventual inability to make the optimal use of space. The two structures have also been placed close together with little or no space between them.

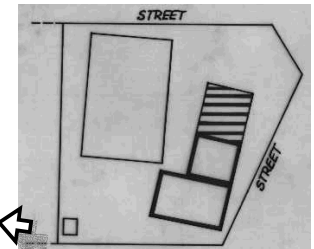
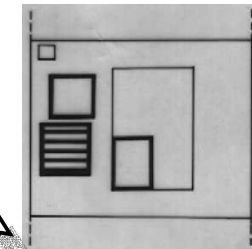
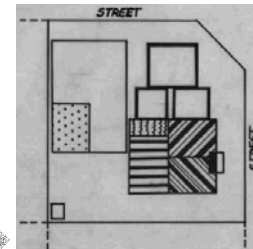
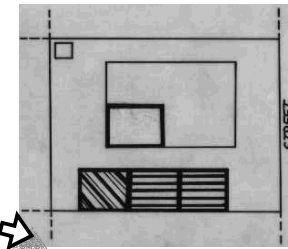
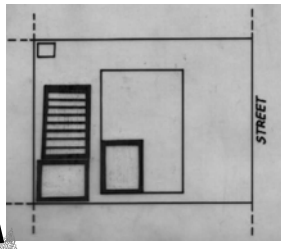
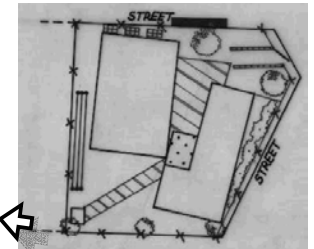
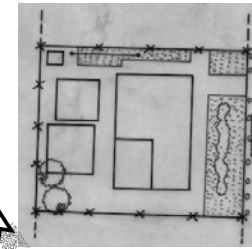
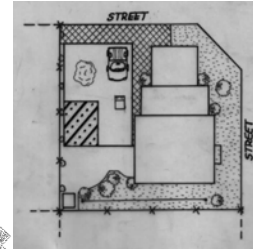
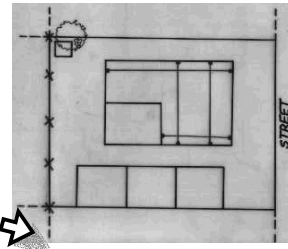
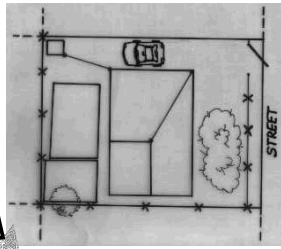
***NOTE**

1. The toilet, roof structure and room under the roof structure have fixed values in terms of area, dimensions and shape. Instead of repeating these values throughout the document, it will be noted here. Toilet - area (1.2m²), dimensions (1m x 1.2m) and shape (rectangle). Roof structure - area (54m²), dimensions (6m x 9m) and shape (rectangle). Room under roof structure - area (12m²), dimensions (4m x 3m) and shape (rectangle).
2. Also important to note, when reference is made to extensions, it refers to those made by the dwellers and not by government. This excludes the water closets and roof structures.
3. The measurements given are **approximated** from the diagrams representing the situation of the erven and aerial photographs as a cross check. A measuring exercise was not carried out during the interviewing sessions. The measurements are therefore not true representations.
4. Information about the structures is limited, e.g. costs, date of construction, etc. Respondents were reluctant to provide all the information either because of a lack of trust or poor memories. As a result, issues of cost and date of construction of extensions have been omitted from this analysis. However, assumptions based on available information have been made.
5. All calculations within this section include enclosed structures only, e.g. incomplete roof structures that have been added to the calculation are those that are enclosed but lack internal divisions.
6. When discussing privacy, there are two categories, i.e. from the public on the street and from neighbours. In this section, it refers to privacy from the public.
7. Reasons for the placing of structures by respondents are mentioned only where reasons were given.

CHAPTER 5: CONSOLIDATION - 2.1.3. LAND USE AND THE USE OF SPACE

EXT. 10: *TYPOLOGY 1*

HOW IS THE SPACE WITHIN THE HOME BEING USED?



BEDROOMS

- Three bedrooms: Owner - 1, tenants - 2

- Four bedrooms: Owner - 2, tenants - 2.

- Three bedrooms.

- Three bedrooms: one in each shack and one under the roof

- Two bedrooms.

KITCHEN

- One kitchen.

- Two kitchens.

- One kitchen.

- One kitchen.

- One kitchen.

DINING ROOM

- One dining room.

- One dining room.

LOUNGE

- One lounge.

TOILET

- One toilet - government provision

- One toilet - government provision

- Two toilets: indoor -1, government provision - 1

- One toilet - government provision

- One toilet - government provision

BATHROOM

- One bathroom.

COMMERCIAL

- One spaza shop.

WHY IS IT USED IN THIS WAY?

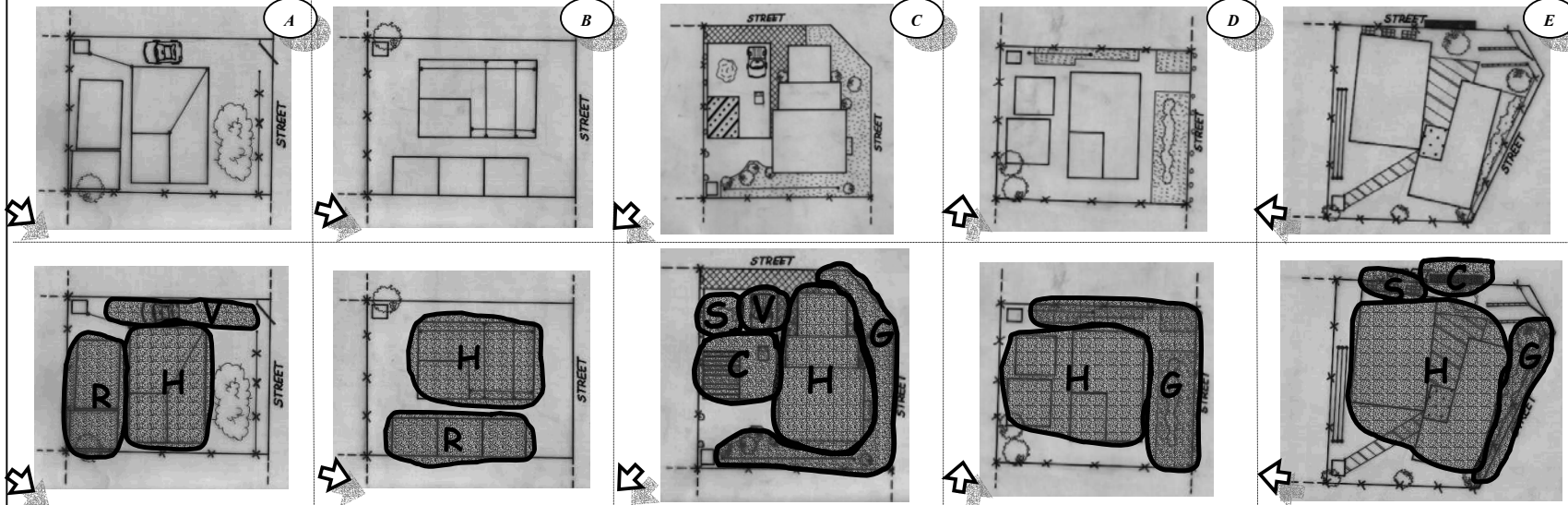
*NOTE

1. No reasons for the use of space within the structures could be obtained.

CHAPTER 5: CONSOLIDATION - 2.1.3. LAND USE AND THE USE OF SPACE

EXT. 10: TYPOLOGY 1

HOW IS THE PROPERTY BEING USED IN TERMS OF:

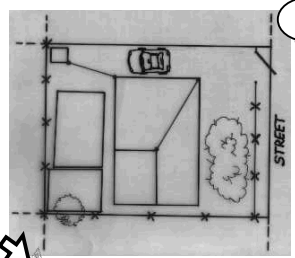


GARDENING			The entire erf is filled with trees and plants. There is a well-kept garden in front.	There is a small garden in front of the house and on the side of the house.	There is a little garden in front of the house with large trees within the erf.
RENTAL HSG	The tenants are housed at the back in two shacks that were brought there by the tenants.	The tenants are housed in shacks that border the left side of the erf, hence forming an edge.			
COMMERCIAL			The commercial activity (spaza shop and game machine) is undertaken from within the enclosure provided under the roof structure and outside it.		Vegetables are sold from the home. A stall was built on the east side of the erf for this activity.
SERVICE					
AGRICULTURE					
PARKING	One of the tenants has a vehicle, which is parked, on the right-hand side of the roof structure.		Vehicles are parked underneath the roof structure.		
OTHER	The roof structure is used to house a clothing line as well as the space between the roof structure and the toilet.	Once again we find the use of the roof structure to be for numerous clothes lines.	There is a clothesline on the side of the erf and building materials that are housed under the roof structure.	There is a clothesline on the erf.	There are numerous trees that border the erf as well with clothes lines along the side boundary and bricks stored along one road frontage. A vegetable stall is built outside the erf, on the pavement.

CHAPTER 5: CONSOLIDATION - 2.1.4. PUBLIC / PRIVATE INTERFACE

EXT. 10: TYPOLOGY 1

PUBLIC/
PRIVATE
INTERFACE

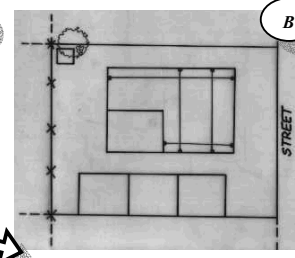


RELATION TO THE STREET:
Street Boundary Definition
There is a transparent wire fence (1m) at the front of the house. Privacy is not created.

PRIVACY:
Side and Back Boundaries
Two other sides of the erf are fenced with the same wire fencing. This attempts to provide a barrier for the creation of private space but doesn't satisfy this requirement due to its weak, transparent nature.

Placing of units
The shacks being placed next to one another do to some degree create some semi-private space between the shacks at the roof structure. A tree has been planted on the west side to create some private socialising space. It is successful to a certain degree. The other side is quite open to street passer-bys and the other neighbour.

Placing of the front door
The entrance to the single room under the roof structure and the shacks face one another. In this way private space is created as well as security.

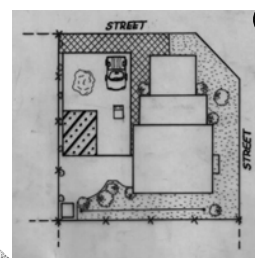


RELATION TO THE STREET:
Street Boundary Definition
There is no fencing in the front of the erf. This opens the erf up to being part of the public space.

PRIVACY:
Side and Back Boundaries
The only fencing appears at the back end of the erf. It is also quite weak and transparent, playing a boundary defining role. No privacy is created.

Placing of units
Privacy is attempted via the placing of the shacks along the boundary. This creates a barrier between the neighbours.

Placing of the front door
The front door of the room under the roof structure faces the street. It is quite open to the street. The doors of the shacks face the roof structure. In this case privacy or security was sought.

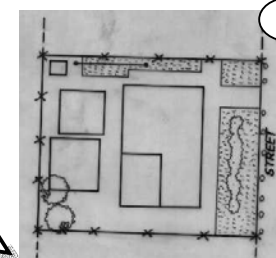


RELATION TO THE STREET:
Street Boundary Definition
The lack of fencing releases the space in front of the home to become public space.

PRIVACY:
Side and Back Boundaries
The both sides of the erf that are shared with neighbours are fenced with wire fencing (tidy) and reinforced with trees. The need for privacy is expressed and achieved.

Placing of units
The roof structure and house have been placed next to one another. The area behind the roof structure and the home becomes the private space and has been facilitated very well by the fencing, trees, and positioning of the structures.

Placing of the front door
The house has two entrances, one that faces the street and one that is hidden at the back of the erf. This facilitates interaction and privacy.

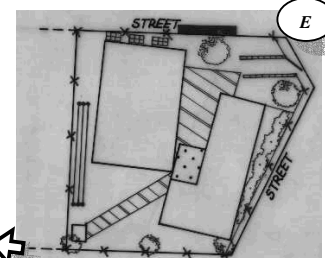


RELATION TO THE STREET:
Street Boundary Definition
A weak representation of a fence is depicted by the placing of stones along the street. No barriers are created and no privacy created.

PRIVACY:
Side and Back Boundaries
All the others sides of the erf are fenced off with wire fencing. Its transparency fails at creating any private space.

Placing of units
A certain degree of semi-private space is created between the shacks and the roof structure. The shacks have been placed side by side with the roof structure in front of them as protection. Security is created.

Placing of the front door
The entrances to the shacks face the street but are buffered by the roof structure and the room under it. Security and a bit of privacy are achieved. The door of the room under the roof structure faces the side of the erf.



RELATION TO THE STREET:
Street Boundary Definition
The common transparent wire fencing (1m) here also fails to define semi-public or private space.

PRIVACY:
Side and Back Boundaries
The boundaries shared with the neighbours are lined with either trees or clothes-lines (when clothes are hung up privacy is created) to create some privacy, but is still quite open. Privacy is not created.

Placing of units
The structures have been placed next to one another. Some private space is created between them.

Placing of the front door
The entrance to the house faces the roof structure. Privacy is created in this way (faces away from the street).

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">1. SOCIO-ECONOMIC STATUS</p>	<ul style="list-style-type: none"> • All families are single and nuclear except for one. There is one woman-headed family. • Family sizes range from 5 to 6 and average of 6. • Two households have tenants (A and B). • The average household size is 7, ranging from 5 to 9. • On average each household has two sources of income. It ranges from 1 to 3. • The dominant employment source is through entrepreneurial/informal activity, follows by full time employment and then part-time employment. • The average number of expenses within each household is 9. • Only one household is able to save (E).
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">2. ADDITIONS</p>	<ul style="list-style-type: none"> • Four out of five initial structures were toilets. One household had built a shack. • Roof structures were provided by government after toilets were provided. This was followed by one room under the roof structure. • Ten additions by residents had been made in total. • Nine additions were shacks and one was a house. • Three households had made two additions (households A, C and D), one household had made three additions, and household E had made one addition. • All shacks were made of temporary materials and houses of permanent materials. • Where information was available, the following was noted: <ul style="list-style-type: none"> ○ Materials for shacks were sought in Mamelodi and materials for houses were sought outside Mamelodi. ○ Costs range from R650 to R2400. ○ In most cases savings was the source of funding. ○ Builders: a large number of private contractors were used. A few owners built their own additions and others employed the material suppliers. ○ The time lapse between additions range from one to four years.
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">3. HOW HAS THE UNIT CHANGED OVER TIME?</p>	<p>NUMBER OF EXTENSIONS AND THE TREND IN USE OF MATERIALS</p> <ul style="list-style-type: none"> • An average of two extensions per household has been made. • All shacks were constructed of temporary materials and formal structures from permanent materials. <p>SIZE</p> <ul style="list-style-type: none"> • Average erf size: 215m² • Average extension size: 21m² • Average area: 39m² • Average coverage: 17% • Average occupational density: 6m²/person <p>SHAPE AND CONFIGURATION</p> <ul style="list-style-type: none"> • Shape: All shacks appear rectangular in shape. The houses constructed take irregular shapes: trellised and 'L' shaped. • Average dimensions: 3.6m x 5.2m <p>PLACING OF BUILDINGS</p> <ul style="list-style-type: none"> • In most cases shacks were placed at the back of the erven and roof structures either centrally or squeezed in next to existing shacks. • One household (C) has optimised the use of space on the erven for living space. The placing of the roof structures on all other erven has limited the optimisation of space for living or any other uses except gardening as a result of the creation of small, odd pockets of space. • The owner of households C had constructed a house and reflected that the location of his house was the ideal position.
<p>*NOTE</p> <ol style="list-style-type: none"> 1. The toilet, roof structure and room under the roof structure have fixed values in terms of area, dimensions and shape. Instead of repeating these values throughout the document, it will be noted here. <u>Toilet</u> - area (1.2m²), dimensions (1m x 1.2m) and shape (rectangle). <u>Roof structure</u> - area (54m²), dimensions (6m x 9m) and shape (rectangle). <u>Room under roof structure</u> - area (12m²), dimensions (4m x 3m) and shape (rectangle). 2. Also important to note, when reference is made to extensions, it refers to those made by the dwellers and not by government. This excludes the water closets and roof structures. 3. The measurements given are approximated from the diagrams representing the situation of the erven and aerial photographs as a cross check. A measuring exercise was not carried out during the interviewing sessions. The measurements are therefore not true representations. 4. Information about the structures is limited, e.g. costs, date of construction, etc. Respondents were reluctant to provide all the information either because of a lack of trust or poor memories. As a result, issues of cost and date of construction of extensions have been omitted from this analysis. However, assumptions based on available information have been made. 5. All calculations within this section include enclosed structures only, e.g. incomplete roof structures that have been added to the calculation are those that are enclosed but lack internal divisions. 6. When discussing privacy, there are two categories, i.e. from the public on the street and from neighbours. In this section, it refers to privacy from the public. 7. Reasons for the placing of structures by respondents are mentioned only where reasons were given. 8. No reasons for the use of space within the structures could be obtained. 	

4. HOW IS SPACE WITHIN THE HOME BEING USED?	<ul style="list-style-type: none"> • An average of three bedrooms per household and a total of 15. • Each household has at least one kitchen. • Two households have a dining room and one a lounge. • One household has a spaza shop. • Another household has a bathroom. • Each household makes use of the toilet provided by government. One household also has an indoor toilet. • In most cases the reason for expanding has been the need for more space for their children.
5. HOW IS THE PROPERTY BEING USED?	<ul style="list-style-type: none"> • Three households have gardens. • Two households make provision for the parking of cars. • Commercial activity is conducted by two households. • Two erven have renters.
6. PUBLIC/ PRIVATE INTERFACE	<p>RELATION TO THE STREET <i>Street Boundary Definition</i></p> <ul style="list-style-type: none"> • Only two households have erected fences in front of their homes. Others have either placed stones defining the front boundary or not erected anything up front. This allows for public space to invade the space of the erven.

***NOTE**

1. The toilet, roof structure and room under the roof structure have fixed values in terms of area, dimensions and shape. Instead of repeating these values throughout the document, it will be noted here. Toilet - area (1.2m²), dimensions (1m x 1.2m) and shape (rectangle). Roof structure - area (54m²), dimensions (6m x 9m) and shape (rectangle). Room under roof structure - area (12m²), dimensions (4m x 3m) and shape (rectangle).
2. Also important to note, when reference is made to extensions, it refers to those made by the dwellers and not by government. This excludes the water closets and roof structures.
3. The measurements given are **approximated** from the diagrams representing the situation of the erven and aerial photographs as a cross check. A measuring exercise was not carried out during the interviewing sessions. The measurements are therefore not true representations.
4. Information about the structures is limited, e.g. costs, date of construction, etc. Respondents were reluctant to provide all the information either because of a lack of trust or poor memories. As a result, issues of cost and date of construction of extensions have been omitted from this analysis. However, assumptions based on available information have been made.
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6. When discussing privacy, there are two categories, i.e. from the public on the street and from neighbours. In this section, it refers to privacy from the public.
7. Reasons for the placing of structures by respondents are mentioned only where reasons were given.
8. No reasons for the use of space within the structures could be obtained.

AFFORDABILITY University of Pretoria etd, Velayutham P (2006)

- **Family structure:** A single, nuclear family is typical within this area with just one woman-headed household.
- **Family sizes:** Family sizes range between 5 and 6, which is quite consistent. Household sizes tend to be much larger because of the presence of tenants in some households (range between 5 and 9). Households A and B have tenants.
- **Sources of income:** On average each household has two sources of income. These sources can be accounted for by entrepreneurial/informal activity (mostly), rent, part-time employment and full-time employment. The family within household A is completely supported by rental money. Affordability of this family will be restricted as a result. The ability of these families to make additions is limited to a certain degree considering the amount of people that have to be supported.
- **Expenses:** These families have numerous expenses (9). Combined with the large family sizes and the limited income sources, the abilities of these families are further restricted.
- **Savings:** The lack of ability of households to save limits the ability to make good quality additions. Only one household is able to save.

Conclusion

Household B would appear to be in the most favourable situation with five family members, fewer expenses and three sources of income. The next household with greater potential for building additions would be a tie between households A and C. Household E seems to be in the worst position. This household's ability is restricted by many factors irrespective of its ability to save.

PRODUCT

- **Number of additions:** In total ten additions have been made. Household B had made three additions followed by households A, C and D with two additions each and household E with one addition. Household B had been the most successful in building many additions, which reinforces the statement made above.
- **Time:** All households had arrived around the same time (1996) except for two households (C and E). Household C had arrived in 1997 and household E in 1995. This shows that time was not a factor in terms of consolidation in this typology, i.e. arriving in 1995 would imply that this household would have either made more additions or consolidated to a greater extent than the others considering being there for a longer period. The total opposite holds true. Household E is the least consolidated and has produced the least amount of additions. Household C had arrived in 1997 (more or less a year later than the majority), which would imply the least consolidated and the least amount of additions. Instead, this household is the most consolidated (permanent structure) with the average number of additions made.
- **Type of structures:** All structures produced were temporary structures except for one produced by household C (a house made of bricks). 90% was therefore temporary structures.
- **Level of formalisation:** The level of formalisation within this typology is low considering that only one household had managed to produce a permanent structure (10%).
- **Size of additions:** Additions have an average size of 21m², ranging from 11m² to 65m². Excluding the permanent structure in the calculation, the average size of additions would be 16m². The size of the additions has been influenced by the large family sizes, limited income sources, numerous expenses and the inability to save. The levels of affordability have had an impact on the size of structures produced.
- **Configuration:** Average dimensions appear to be 3.6m x 5.2m.
- **Area of additions:** On average the total area of additions within each erven is 39m² and ranges between 25m² and 65m². Considering the number of people that live within this space, this is a small area.
- **Occupational density:** On average each person has 6m² to himself or herself.
- **Coverage:** The coverage of these structures on their erven range from 12% to 26% with an average of 17%. This leaves a large amount of space available for other activities. But the placing of the units does not capitalise on this. The placing of units create small, odd pockets of space.
- **Shape:** All structures are rectangular except for the house built (appears 'trellised').
- **Arrangement of structures:** In general temporary structures have been placed either at the back of the erven or along the side boundaries. In response to this, the roof structures have been either placed centrally on the erven with the longer side parallel to the street or along the side boundary with the shorter side parallel to the street. The placing of the roof structures was dependent on the placing of the temporary structures. The placing of the roof structures have resulted in the inefficient use of land in four cases except for household C. Small, odd pockets of land are created and the living space is limited.
- **Type of employment:** The household that has managed to build a house has been supported by three sources of income, which include a part-time job, full-time job and entrepreneurial/informal activity. All other households are supported by income from tenants, entrepreneurial/informal activity mostly with one part-time employment. The type of employment in this case appears to have influenced the ability of these households to consolidate.

***NOTE**

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2. Also important to note, when reference is made to extensions, it refers to those made by the dwellers and not by government. This excludes the water closets and roof structures.
3. The measurements given are **approximated** from the diagrams representing the situation of the erven and aerial photographs as a cross check. A measuring exercise was not carried out during the interviewing sessions. The measurements are therefore not true representations.
4. Information about the structures is limited, e.g. costs, date of construction, etc. Respondents were reluctant to provide all the information either because of a lack of trust or poor memories. As a result, issues of cost and date of construction of extensions have been omitted from this analysis. However, assumptions based on available information have been made.
5. All calculations within this section include enclosed structures only, e.g. incomplete roof structures that have been added to the calculation are those that are enclosed but lack internal divisions.
6. When discussing privacy, there are two categories, i.e. from the public on the street and from neighbours. In this section, it refers to privacy from the public.
7. Reasons for the placing of structures by respondents are mentioned only where reasons were given.
8. No reasons for the use of space within the structures could be obtained.

Conclusion

Household C is the most successful household, managing to build a permanent structure. The factors that have assisted this household appear to be the type of employment and the number of income sources. This household arrived later than the others, has the second largest amount of expenses, and one of the largest family sizes (6), but has still managed to produce a permanent structure.

Household B managed to produce three temporary structures, which were assisted by the type of employment (part-time and rental income), the smaller family size, being one of the few to arrive earlier (1996), and the number of income sources. Expenses were also minimal. In comparison to household C, this household only differs by the type of employment, where household C is at the advantage, but household B has fewer expenses, the same number of income sources, a smaller family size and the advantage of arriving a year earlier. The type of income sources therefore plays an important role in this typology.

Household A managed two additions. The factors that played a role here are the smaller family size, fewer income sources, the type of income sources (rental income), the year of arrival (1996) and fewer expenses. In comparison to household C it has the advantage of fewer expenses, a smaller family size, and a year. It however lacks in terms of income sources and the type of income sources.

Household D has constructed two additions. The factors that have been taken into consideration in comparison to household C, include a smaller family size, a single income source, the type of income source (entrepreneurial/informal), the time of arrival (1996) and fewer expenses. This household also lacks in the number and type of income sources.

Household E produced one temporary structure. It has the largest amount of expenses, the same type and number of income sources as in household D, the same family size as in household C and arrived in 1995).

Quite evident from above, is the fact that none of these factors can be looked at on their own and be stated to be 'THE' factor that has influenced consolidation. It is the interaction between the factors that either creates a suitable environment for consolidation or not. With than in mind, the factors that have influenced consolidation positively were the type of employment, number of income sources, small family sizes, time, and few expenses. Factors that have hampered consolidation are in some cases the number of income sources, the type of income sources and many expenses.

PROCESS

- **Sourcing of materials:** The sourcing of materials were directly related to the type of structures that were built, i.e. temporary structures required the acquisition of materials from within Mamelodi, whilst materials were sought external to Mamelodi for the construction of permanent materials.
- **Cost:** On average costs ranged between R650 and R2 400. Resources were minimal and affordability within this typology is low, therefore not much could be afforded.
- **Funding:** Savings was the main source of funding.
- **Builders:** Three types of builders were involved. The most used was private contractors, and in some cases, material suppliers were employed. In some cases, owners had built their own additions.
- **Time:** The time lapse between additions ranged from one to four years. One household took four years to build another addition. The others had taken between one and two years to make additions. This indicates in general that people had saved for a little while and had built small additions.

USE OF SPACE**Within structures**

- Households A, D and E display characteristics of households that could only afford the necessary uses (Bedrooms, kitchens, and outdoor toilets).
- Household B and C have added on a few more uses (luxuries). Household B displays only one additional use (dining room). Household C has a dining room, a lounge, a spaza shop, and an indoor bathroom and toilet. Household C is the household with the permanent structure.
- As was indicated earlier households B and C appear to be the two most successful households. As such, the uses within their structures also differ from the others. With a movement toward consolidation, the uses become more complex.

Within erven

- **Gardens:** Only three households have gardens, which were placed at the front. These were flower gardens.
- **Parking:** Two households make provision for the parking of cars. The car parked in household C belongs to the owner of the house and is therefore a luxury.

***NOTE**

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5. All calculations within this section include enclosed structures only, e.g. incomplete roof structures that have been added to the calculation are those that are enclosed but lack internal divisions.
6. When discussing privacy, there are two categories, i.e. from the public on the street and from neighbours. In this section, it refers to privacy from the public.
7. Reasons for the placing of structures by respondents are mentioned only where reasons were given.
8. No reasons for the use of space within the structures could be obtained.

- **Tenants:** One of the survival strategies employed in this typology is rental activity. Two households rent out structures as a source of income. Such activities are found at the back and along the side boundary. On average each household makes use of 15% of the erven for income generating activities.
- **Other:** Another survival strategy is commercial activity. Household C runs a spaza shop from the one room provided under the roof structure and household E sell vegetables from a vegetable stall built along the street. Such activity generally occurs at the front of the property.

PUBLIC/PRIVATE INTERFACE

- **Street boundary:** The lack of street boundary definition in most households indicates the openness for interaction with the street. Only two households had attempted to fence the front boundary. Transparent wire fencing was used with the planting of trees and plants.
- **Side and back boundaries:** The transparent wire fencing used does not assist in creating private space. Privacy has only been created in household C with the assistance of the planting of trees.
- **Placing of units:** The roof structures have been placed close to the temporary structures, thereby creating semi-private space between these structures. These households have privacy from the public but not from the neighbours.
- **Placing of the front door:** Most temporary structures have placed their doors to face the roof structures, which in their absence would mean that the doors of the temporary structures faced the street. This could either be the result of wanting interaction with the public or an attempt to keep space for the construction of the future house.
- The roof structure acts as a buffer from the public. Some structures have been placed along the side and back boundaries to create some privacy.

Patterns:

1. Shacks are placed at the back with roof structures centrally placed (longer side parallel to the street). No fence exists at the front.

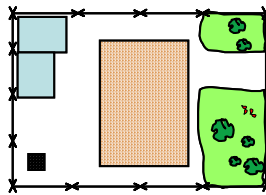


FIGURE 39: Pattern 1

2. Structures are used to block off one road frontage (in the case with two road frontages) and the roof structures have been placed at the back (where one road frontage is chosen as the entrance point) with gardens at the front. One roof structures has been placed along the side boundary (dependent on the placing of temporary structures).

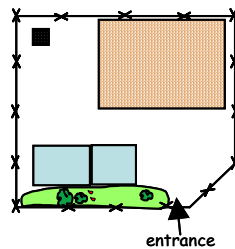


FIGURE 40: Pattern 2

*NOTE

1. The toilet, roof structure and room under the roof structure have fixed values in terms of area, dimensions and shape. Instead of repeating these values throughout the document, it will be noted here. Toilet - area ($1.2m^2$), dimensions ($1m \times 1.2m$) and shape (rectangle). Roof structure - area ($54m^2$), dimensions ($6m \times 9m$) and shape (rectangle). Room under roof structure - area ($12m^2$), dimensions ($4m \times 3m$) and shape (rectangle).
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