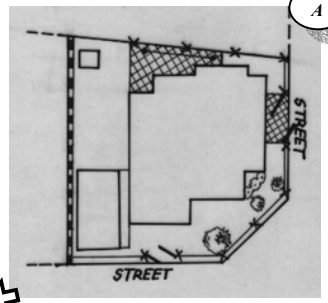
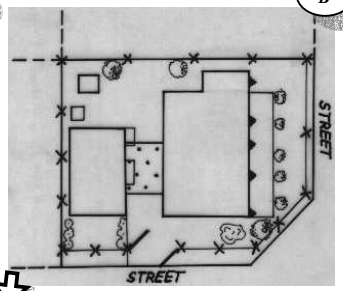
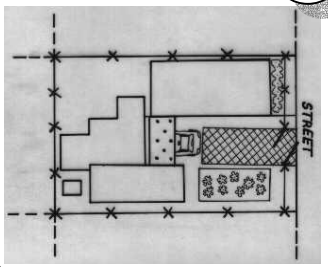
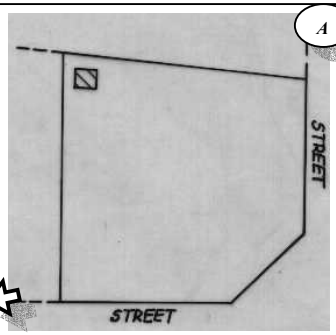
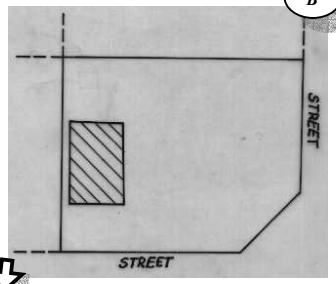
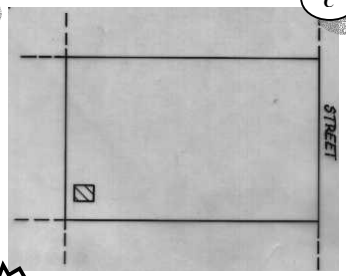
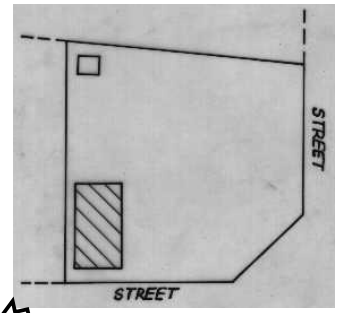
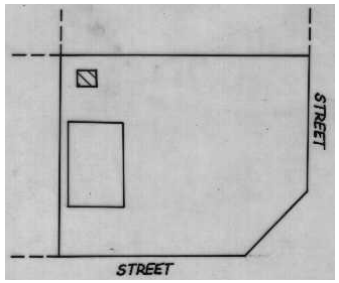
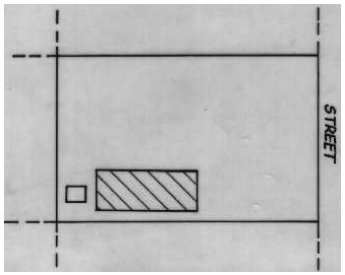
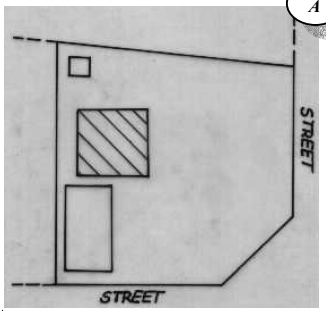
	A	B	C
THE HOUSEHOLD			
HOUSEHOLD PROFILE	**Family type:** *Single woman-headed family + extended* **Family size:** *10* **Tenants:** *No* **No. of tenants:** *NA* **Household size:** *10*	**Family type:** *Single nuclear family + extended* **Family size:** *6* **Tenants:** *No* **No. of tenants:** *NA* **Household size:** *5 (one child resides elsewhere)*	**Family type:** *Single nuclear family* **Family size:** *7* **Tenants:** *Yes* **No. of tenants:** *1* **Household size:** *8*
EMPLOYMENT AND INCOME	**No. of sources of income:** *3* **Sources of income:** *Mother and daughter.* **Employment:** *2 x full time and entrepreneurial/informal.* **Location:** Centurion (as a packer in a factory), in Kilner Park (as a domestic), and snacks are sold from the household.	**No. of sources of income:** *3* **Sources of income:** *Mother, father and extended family member.* **Employment:** *2 x Full time and Entrepreneurial/informal* **Location:** *Salon in Moreleta, catering shop in town, from home.*	**No. of sources of income:** *2* **Sources of income:** *Father and tenant.* **Employment:** *Full time.* **Location:** *In the construction field.*
EXPENDITURE	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 common expenses.		
WATER	x	x	x
ELECTRICITY	x	x	x
TRANSPORT	x	x	x
TELEPHONE	x		x
EDUCATION	x	x	x
FOOD	x	x	x
CLOTHING	x		x
ACCOUNTS	x	x	
SAVINGS	x		x
TAXES	x	x	x
SANITATION	x	x	x
WASTE REMOVAL	x	x	x
OTHER			

	A	B	C
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 other temporary materials ***Material supplier:*** Given to them by family member ***Cost:*** None ***Funding:*** None ***Builder:*** Unknown ***Date of Constr. :*** 2000 ***Problems:*** Water wasn't connected upon arrival.	***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: Temporary structure ***Materials used:*** Corrugated iron and wooden boards (temporary materials) ***Material supplier:*** Mathibestad – phase 1 ***Cost:*** R3 000 ***Funding:*** Savings ***Builder:*** Private contractor ***Date of Constr. :*** 1998 ***Problems:*** Not properly structured. Is problematic during rainy days.	***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 wooden boards (temporary materials) ***Material supplier:*** Phase 1 ***Cost:*** Unknown ***Funding:*** Savings ***Builder:*** Owner ***Date of Constr. :*** Unknown ***Problems:*** None

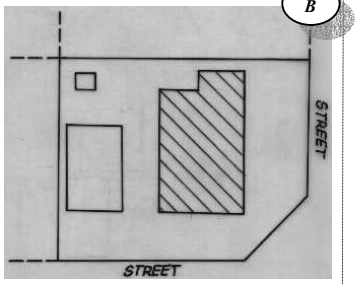
***NOTE**

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.

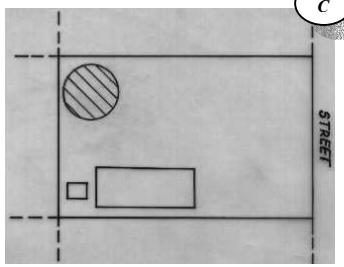
ADDITION 2



Description: Temporary structure
Materials used: Corrugated iron and wooden boards (temporary materials)
Material supplier: Unknown
Cost: Unknown
Funding: Unknown
Builder: Unknown
Date of Constr. : Unknown
Problems: None

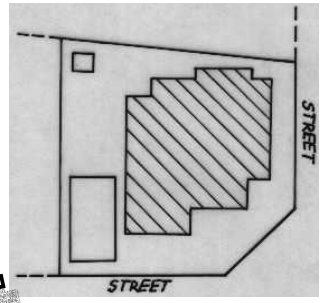


Description: Completed house
Materials used: Bricks (permanent materials)
Material supplier: In the neighbourhood
Cost: R2 000
Funding: Salary and savings
Builder: Unknown
Date of Constr. : Nov 2001
Problems: Funding

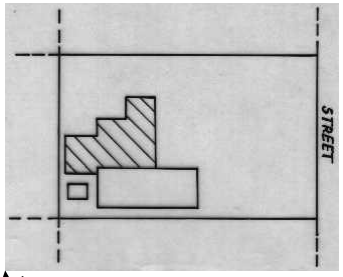


Description: Rondavel
Materials used: Corrugated iron and wooden boards (temporary materials)
Material supplier: Unknown
Cost: Unknown
Funding: Unknown
Builder: Unknown
Date of Constr. : Unknown
Problems: None

ADDITION 3



Description: Completed house
Materials used: Bricks (permanent materials)
Material supplier: Silverton - Silbo
Cost: R100 000
Funding: Savings and loan from work.
Builder: Private contractor
Date of Constr. : 1999
Problems: Construction was slow.



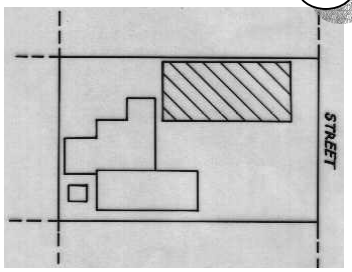
Description: Temporary structure
Materials used: Corrugated iron and wooden boards (temporary materials)
Material supplier: Given to them by father's employer
Cost: None
Funding: None
Builder: Owner
Date of Constr. : Unknown
Problems: None

***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.

ADDITION 4

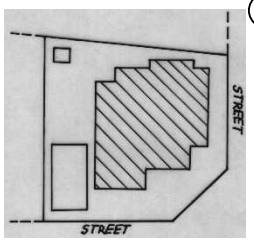
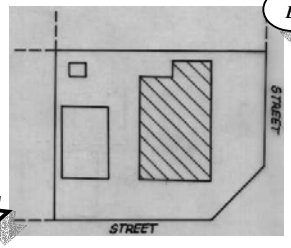
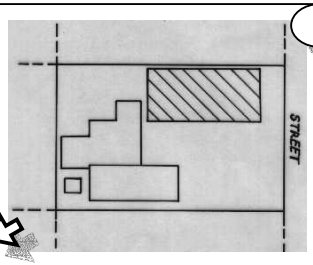
C



Description: Completed house
Materials used: Bricks, paving bricks, etc (permanent materials)
Material supplier: Factory near Vista
Cost: Unknown
Funding: Savings and salary
Builder: Owner
Date of Constr.: 2002
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.

HOW HAS THE UNIT CHANGED OVER TIME IN TERMS OF:

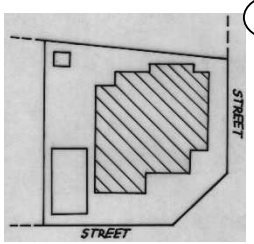
A	B	C
		
NUMBER OF EXTENSIONS AND THE TREND IN USE OF MATERIALS Three extensions have been made. The first were two shacks (made of temporary materials) and the third, a house (built with permanent materials). **SIZE** The size of extension one is approximately 12m². The other, constructed at the same time, was later destroyed. The house occupies and area of approximately 52m². **Erf size: 175m²** **Total area of temporary structures: 12m²** **Total area of permanent structures: 52m²** **Total area: 64m²** **Coverage of temporary structures: 7%** **Coverage of permanent structures: 30%** **Coverage: 37%** **Occupational density: 6m²/person** **SHAPE AND CONFIGURATION** The shack is a regular rectangular shape, but the house has an irregular shape (stepped). It has average dimensions of 7m x 7.5m. The shack has dimensions of 2.6m x 4.7m.	**NUMBER OF EXTENSIONS AND THE TREND IN USE OF MATERIALS** Two additions have been made. First a shack was built from temporary materials, then a completed house (from permanent materials). **SIZE** The initial shack occupies an estimated 18m², whilst the house occupies 44m². **Erf size: 192m²** **Total area of temporary structures: 18m²** **Total area of permanent structures: 44m²** **Total area: 62m²** **Coverage of temporary structures: 9%** **Coverage of permanent structures: 23%** **Coverage: 32%** **Occupational density: 12m²/person** **SHAPE AND CONFIGURATION** An 'L' shape is formed by the house (7.8m x 5.3m + 2.9m x 1.2m) and the shack (3.5m x 5.3m) takes a rectangular shape.	**NUMBER OF EXTENSIONS AND THE TREND IN USE OF MATERIALS** Four extensions have been made of which, two were shacks, one a rondavel and the other a house. Only the house made use of permanent materials. The rest of the extensions were constructed from temporary materials. **SIZE** The first shack covered an area of 16m² whilst the second was demolished (rondavel). The third amounted to approximately 18m² and the fourth is approximately 29m². **Erf size: 173m²** **Total area of temporary structures: 34m²** **Total area of permanent structures: 29m²** **Total area: 63m²** **Coverage of temporary structures: 20%** **Coverage of permanent structures: 16%** **Coverage: 36%** **Occupational density: 8m²/person** **SHAPE AND CONFIGURATION** The rondavel was round. Shack number one and extension four are rectangular and number three is 'stepped' (2.4m x 2m + 1.8m x 3m + 1.8m x 4.5m). Extensions one and four have dimensions of 2.5m x 6.3m and 3.7m x 8m, respectively.
PLACING OF BUILDINGS: With the size of the erven being approximately 208m² and gross and nett densities estimated at 219p/ha and 364p/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.		
PLACING OF BUILDINGS In relation to one street (south), the initial shacks were placed at the back of the erf in a northerly position and the house was placed in front of the shack in a central position but is close to the street. The toilet appears in an easterly position. In relation to the other street, the shack and house appear side by side with the shack being closer to the street.	**PLACING OF BUILDINGS** The toilet was placed in a south easterly position. The shack was placed along the eastern border and the house in a central position facing the street.	**PLACING OF BUILDINGS** The toilet appears in a northerly position at the corner of the erf. The initial structure appeared in a westerly position along the boundary line with extension three attached to the right of it. Extension four is placed along the eastern boundary line. .

*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 x1.2m) 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.

HOW HAS THE UNIT CHANGED OVER TIME IN TERMS OF:

A

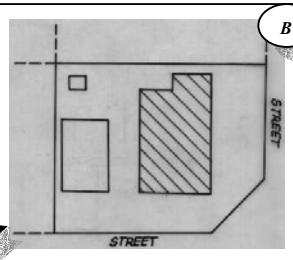


PLACING OF BUILDINGS

Space is created at the front and side of the house (facing the street) for the gardens. A pocket of space is also created at the back where some privacy exists. Space is used functionally and efficiently.

Shacks were placed at the back in preparation for the construction of the home, the positioning of which was informed by the architect.

B

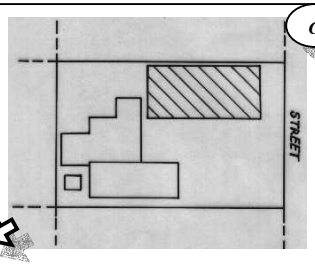


PLACING OF BUILDINGS

Space is created between the structures and in front of them. Too much of space is wasted at the front of the structures (used for gardens) and less is used for living space between the structures. Space could have been used more efficiently but this was the only position for the house that was suitable.

Sewer pipes were running across their property. The house could therefore not be built on such pipes.

C

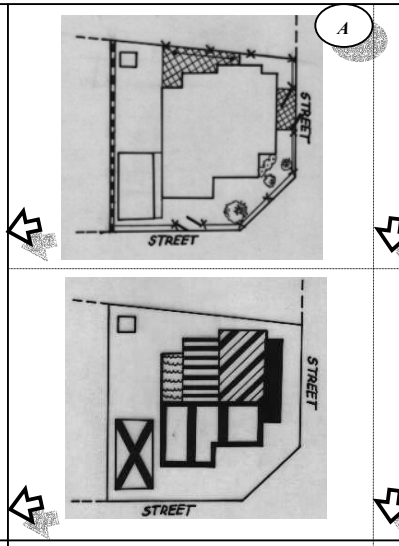
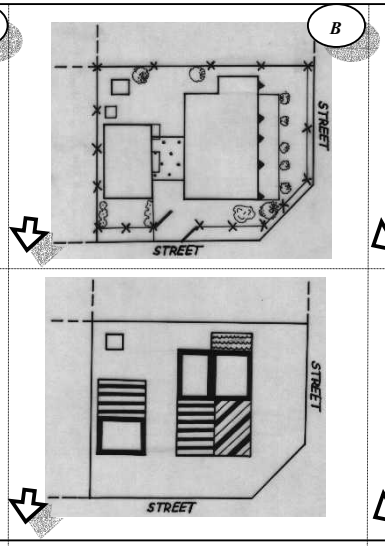
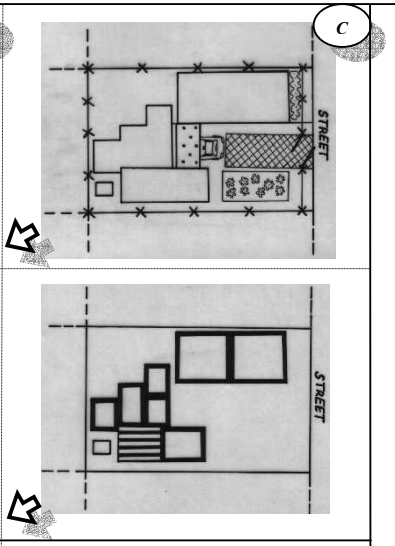


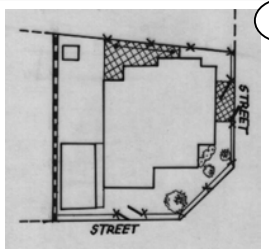
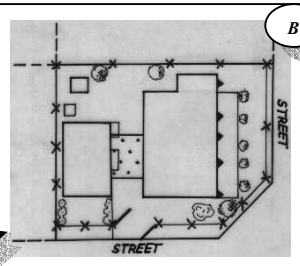
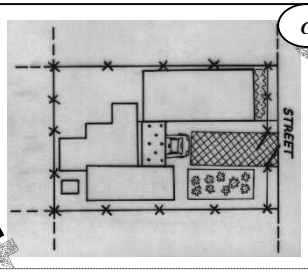
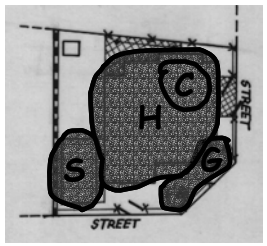
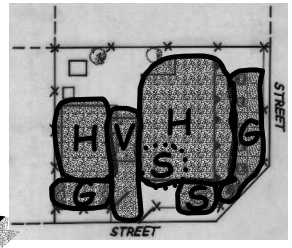
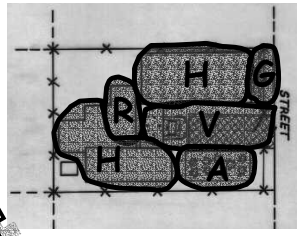
PLACING OF BUILDINGS

A private space is created at the back of the property, but is not used for any purpose. A large open space exists at the front. It is used for gardening (vegetables as well) and for the parking of vehicles. Space is used efficiently.

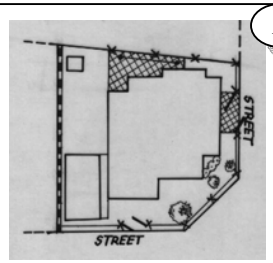
*NOTE

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 x1.2m) 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.

	A	B	C
HOW IS THE SPACE WITHIN THE HOME BEING USED?			
BEDROOMS	• Three bedrooms.	• Five bedrooms, four in the house and one in the shack.	• Four bedrooms.
KITCHEN	• One kitchen.	• Two kitchens – one in the house and one in the shack.	• One kitchen.
DINING ROOM			
LOUNGE	• One lounge.	• One lounge.	• One lounge.
TOILET	• Two - Government toilet and indoor	• Two - Government toilet and indoor	• Two - Government toilet and indoor.
BATHROOM	• One bathroom.	• One bathroom.	
WHY IS IT USED IN THIS WAY?	*NOTE 1. No reasons for the use of space within the structures could be obtained.		

HOW IS THE PROPERTY BEING USED IN TERMS OF:	A	B	C
			
			
GARDENING	There is a small garden in front of the house.	There is a small garden in front of the house.	There is a small garden in front of the house.
RENTAL HSG			The central structure houses a renter.
COMMERCIAL	Goods are sold from the house.		
SERVICE		A service is provided from within the house.	
AGRICULTURE			Opposite the flower garden is a vegetable garden.
PARKING		Vehicles are parked under the tent between the house and the shack.	Cars can be parked between the shack and the house under a carport.
OTHER	A previously occupied shack is now used as a storage facility. A clothesline in built on one side of the boundary.	Building material is stored in front of the erf. The tents are also used for socialising space.	The tents are also used for socialising space.

PUBLIC/ PRIVATE INTERFACE



RELATION TO THE STREET:

Street Boundary Definition

A short wire fence (1m) at the front of the house exists with a gate. It is transparent in nature and thereby facilitates interaction with the street.

PRIVACY:

Side and Back Boundaries

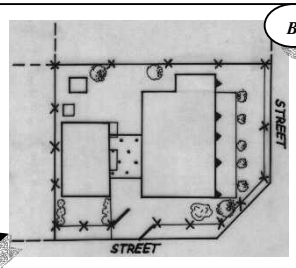
The same type of fencing is used around the entire erf except for the boundary shared by the neighbour to the north. This boundary is a brick wall. Privacy from this neighbour is achieved. It does not succeed in creating privacy from the other neighbour or the street.

Placing of units

The shacks were placed at the back of the erf and the house at the front. The demolition of one shack has allowed for the creation of some space at the back of the erven. This space is not totally private, i.e. the wall built prevents interaction with one neighbour whilst the other neighbour can still intrude. People on the street cannot intrude in this space.

Placing of the front door

The front door of the house faces the street. It is a small distance away from the street and therefore facilitates interaction with the street.



RELATION TO THE STREET:

Street Boundary Definition

The front of the erf is fenced off with transparent wire fencing (1m). Interaction with the street is encouraged.

PRIVACY:

Side and Back Boundaries

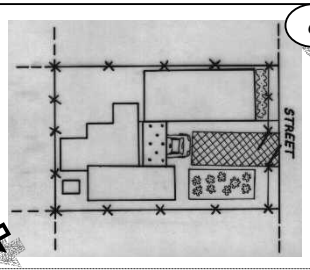
The same type of fencing is used around the remaining three sides of the erf. They do not assist in the creation of privacy due to their transparent nature.

Placing of units

The placing of the units encourages interaction between the shack and the house and not with the street. The structures have been placed parallel to one another. Privacy is enhanced by the tents. Some space at the back of the erf is private from the public but not the neighbours.

Placing of the front door

The door of the house and shack face one another, thereby creating a sense of privacy and security.



RELATION TO THE STREET:

Street Boundary Definition

A short (1m) transparent dilapidated wire fence is present at the front of the erf. It does not assist in creating private space.

PRIVACY:

Side and Back Boundaries

The rest of the erf is fenced off with the same fencing, which does not assist in the creation of private space.

Placing of units

The units have been placed along the side and back boundaries. Such positioning creates a space in the eastern corner that is only accessible once passage through the property is granted. Neighbours can still intrude in this space, i.e. privacy was not created but privacy from the public was.

Placing of the front door

The doors have been strategically placed, i.e. hidden from outsiders. The entrance to only one structure faces the street. All entrances to the structures open into the socialising space created by the tent.

1. SOCIO-ECONOMIC STATUS

- There are three different family types: woman-headed and extended, single nuclear and extended, single nuclear family.
- The average family size is 8, ranging from 7 to 10.
- One household has one tenant.
- The average household size is 8, ranging from 5 to 10.
- The average number of sources of income is 3, ranging from 2 to 3.
- Full-time employment is in the majority with two cases for entrepreneurial/informal activity.
- The average number of expenses is 11.
- Only two households are able to save.

2. ADDITIONS

- Initial structures were mostly toilets. One household had constructed a shack initially.
- 9 additions have been made of which 5 are shacks (temporary materials), 1 is a rondavel, and 3 are completed homes (permanent materials)
- Household A constructed 3 additions, household B constructed 2 and household C, 4 additions.
- Where information was available, the following was noted:
    - Materials were acquired from a number of sources, i.e. some were given to a household, others purchased from within Mamelodi, and some purchased from outside Mamelodi.
    - All temporary materials were purchased from within Mamelodi.
    - Permanent materials were purchased mostly from outside Mamelodi.
    - Costs of temporary structures are approximately R3 000.
    - Costs of permanent structures range from R2000 to R100 000.
    - Sources of funding include mostly, savings. One household had acquired a loan.
    - Owners seem to dominate the actual construction with the employ of a few private contractors. The association of private contractors with the construction of permanent structures is not evident here. Private contractors and owners build both permanent structures as well as shacks.
    - The time lapse between additions seems to range between a few months to a year.

3. HOW HAS THE UNIT CHANGED OVER TIME?

NUMBER OF EXTENSIONS AND THE TREND IN USE OF MATERIALS

- An average of three additions has been made.
- All formal structures were constructed of permanent materials. Temporary materials were used for the construction of the shacks.

SIZE

- Temporary structures total area: 64m²
- Temporary structures average area: 21m²
- Temporary structures average size: 16m²
- Temporary structures average coverage: 12%
- Permanent structures total area: 125m²
- Permanent structures average area: 42m²
- Permanent structures average size: 42m²
- Permanent structures average coverage: 23%
- Combined average extension size: 27m²
- Combined average area : 63m²
- Combined average coverage: 35%
- Combined average occupational density: 9m²/person

SHAPE AND CONFIGURATION

- Majority of extensions take on a rectangular shape except for the houses constructed.
- The houses take on odd shapes, i.e. one appears trellised and the other 'L' shaped to a certain degree.
- Average dimensions of temporary structure are 2.9m x 5.6m and houses are 5m x 8m.

PLACING OF BUILDINGS

- Initial additions were placed at the back of the erven next to or in line with the toilets.
- Houses were placed either at the centre of the erven or at the side.

*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 x1.2m) 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?	• 12 bedrooms in total. • An average of four bedrooms • Each household has one kitchen. • All have a lounge. • Everyone makes use of the government toilet and have an indoor toilet. There is an average of two across all households. • Two bathrooms. • One house was designed by an architect and the other uses space in the way it does because it is sufficient for the use of the family.
5. HOW IS THE PROPERTY BEING USED?	• All have gardens at the entrances to the erven. • Rental housing occurs in household C. • Household A conducts some commercial activity. • A service is provided from within Household B. • One vegetable garden. • Vehicular parking is accommodated in two households. • Building materials are stored on two erven. • Household A has a clothesline.
6. PUBLIC/ PRIVATE INTERFACE	***Street Boundary Definition*** • The use of transparent fencing across all households did not create private space. **PRIVACY:** ***Side and Back Boundaries*** • Side and back boundaries are weak because of their transparent nature. It does not create privacy. • Privacy from the public is created but not from neighbours except for household A. The wall in household A cuts off interaction with one neighbour. ***Placing of units*** • The placing of the units tends to create private space at the back of the erven in all households. • Circumstances made the placing of these structures in household B appear side by side. Some privacy is created between the structures. ***Placing of the front door*** • Doors have been orientated differently. • Household A creates interaction with the street by placing the door in a manner that faces the street. • The other two households attempt to create privacy and security by focussing on a socialising space created by tents.

***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 x1.2m) and shape (rectangle).***
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8. No reasons for the use of space within the structures could be obtained.

AFFORDABILITY

- **Family structure:** Typology three is characteristic of single families but with variances in each. There is one single nuclear family, one single nuclear family with extended family members and one woman-headed family with extended members.
- **Family size:** Family sizes range between 6 and 10. These are quite large families. Due to one child living elsewhere and the existence of tenants, household size ranges from 5 to 10. Household B has the smallest family size and household A the largest.
- **Sources of income:** In relation to income sources, families are supported by two to three sources. For such large family and household sizes, these incomes sources could be insufficient to meet the needs of the family and enable the construction of additions.
- **Type of employment:** The types of employment tend to be full-time across all households with additional entrepreneurial/informal activity.
- **Expenses:** In terms of expenses made, household A has the most expenses. Coupled with such a large family size, this would be an inhibiting factor for consolidation. Household C has more or less the same amount of expenditure and household B has the least expenses. This should place household B in a better position to make additions than the other households, not only because of the minimal expenses but also because of the small family size.
- **Savings:** Only two households have managed to save (A and C), despite their numerous expenses.

Conclusion

Household B would appear to be at a greater advantage because of the smaller household size and fewer expenses. Households A and C seem to have similar affordability levels – expenses and family sizes are similar. However, households A and C have the ability to save.

PRODUCT

- **Number of additions:** Nine additions have been made across all households. Five were shacks, one a rondavel and three were completed homes. In total six temporary structures and three permanent structures were built. Household A had constructed three additions, household B built two additions and household C managed to construct four additions.
- **Time:** Two households had toilets as the initial structure whilst the other had constructed a shack. In this case this does not imply that household B had arrived before the others. Household B had not been provided with a toilet upon arrival. A toilet was connected later on. What had enabled the construction of three additions in household A and two in household B? This can be explained by the time of arrival. Household A had arrived in 1998 and household B in 2000. Household A therefore had more time to save, plan and build. Date of arrival of household C is unknown, but the appearance of the houses seems to be of better quality in household A than the other houses. The fundamental difference between household A and C is the amount of income sources, i.e. household A has three and household C has two. This could be the factor enabling household A to construct such an appealing house.
- **Type of structures:** All households have constructed temporary structures initially with completed houses as the final structures.
- **Level of formalisation:** Not only are there many extensions but the type of housing includes three formal structures. Despite large families and numerous expenses, these families have managed to produce permanent structures. To be more specific, household A constructed three additions of which one was the completed house, household B managed to build two additions (one shack and one completed house), and household C built a house, a rondavel and two shacks. Each household managed to build one completed house. 30% of all additions made were permanent structures.
- **Size of additions:** Average addition size is 27m², ranging from 12m² to 52m². On average temporary structures were 16m² (ranging between 12m² and 18m²). Sizes of permanent structures ranged between 29m² and 52m² with an average of 42m². Permanent structures appeared to be two and a half times larger than temporary structures but are still small in comparison to the amount of people that needs to be accommodated (refer to family size).
- **Configuration:** Temporary structures generally had dimensions of 2.9m x 5.6m whilst permanent structures appeared larger (5m x 8m). Dimensions of permanent structures are larger than temporary structures.
- **Area of additions:** The average area of all additions combined is 63m². Permanent structures on their own have an average area of 42m² (range 29 – 52); whist temporary structures have an average area of 21m² (range 12 – 34). Temporary structures are half the size of permanent ones.
- **Occupational density:** People on the erven have at least 9m² to themselves. This ranges from 6m² to 12m².
- **Coverage:** In terms of coverage of the erven, the average coverage is 35%. This leaves more than half of the property open for development or activities. Temporary structures have coverage of 12% and permanent structures, 23%. Temporary structures occupy less space.
- **Shape:** The houses built take irregular shapes but all shacks were rectangular.

*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 x1.2m) 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.

- **Arrangement of structures:** The shacks were all placed at the back of the erven and houses either in front or in the centre. The reason for each household is different for the structures being placed in such a manner but eventually the centre of the erven was the area of selection. Two households have used space efficiently with the placing of the structures. Household B was forced to use space in such a manner.
- **Type of employment:** In this case the type of employment could attribute to the level of formalisation, i.e. although household C has a full-time employment source plus rental money, households A and B have **two full-time** employment sources coupled with entrepreneurial/informal activity, where the latter two households have managed to produce permanent structures of better quality than household C.

Conclusion

Household A has managed three additions with a high quality permanent structure. Although the family size was large and expenses were large, the presence of three sources of income (two of which were full-time employment sources) and arriving on the erven earlier and having savings has enabled this household to construct a formal structure of good quality.

Household B has also managed to produce a good solid permanent structure after the construction of one temporary structure. The factors that have enabled the transition from temporary to permanent structure seem to be the number and type of sources of income accompanied by limited expenses. Family size could have limited the level of formalisation to standards produced by household A.

Household C also has a large household size with many expenses, savings and two sources of income. Although this household has managed to construct many temporary structures, the permanent structure produced is of less quality than the other two households' houses. The type and number of employment sources become relevant here, where this household has only one full-time employment source that is supplemented by rental income.

The factors presented cannot be isolated from one another and pinpointed as the factor that has assisted consolidation. Each household presents a situation with variances in certain factors (e.g. large family size, few income sources, limited expenses, whilst another household could have fewer family members, greater savings, greater number of income sources, etc.) that either support consolidation or inhibit it. In general, the factors that have assisted in consolidation in some households were the number of income sources, time, savings, the type of income sources, and limited expenses. The factors that appeared to have inhibited consolidation were the large family sizes and many expenses.

PROCESS

- **Sourcing of materials:** Materials for building had been acquired from numerous sources but the interesting observation to note is the acquisition of temporary and permanent materials from almost distinctly different sources, i.e. the trend visible here is of temporary materials being purchased from within Mamelodi and permanent materials mostly being purchased from outside Mamelodi.
- **Cost:** The costs generally ranged from R2000 to R100 000 for permanent structures and R3 000 for temporary structures.
- **Funding:** The costs of these additions were expensive in the case of these families that had used their savings in most cases. A loan had been acquired for the construction of one addition.
- **Builders:** Owners had used their own skills in the construction of their additions. Private contractors had been employed in one or two cases. The level of skills usage within this typology is therefore quite high. The use of private contractors and owners had been used for the construction of both shacks and formal additions.
- **Time:** The time lapse between additions range from a few months to a year. The speed of delivery is fast. This implies that the families are able to mobilise money fast enough to enable the construction of additions. Having construction skills also benefit the time within which additions were completed.

USE OF SPACE

Within structure

- The spaces within the structures are used as follows: bedrooms, kitchens, lounges, toilets, and bathrooms.
- **Bedrooms:** In total there are 12 bedrooms with an average of four per household. This is a large number of bedrooms that attempt to accommodate the large household structures.
- **Kitchens:** Each household has at least one kitchen – four kitchens in total.
- **Lounge:** All households also have a lounge. These households are able to make space for socialising within the structures as well, which is seen as a luxury.
- **Toilets:** The toilets provided by government are use as well as indoor toilets (luxury).
- **Bathrooms:** Two households have the luxury of bathrooms.

*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 x1.2m) and shape (rectangle).***
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8. No reasons for the use of space within the structures could be obtained.

- Households have divided spaces into uses that suit the needs of their families and what they can afford to build. They exceed the basic needs (kitchens and bathrooms) by building indoor toilets and bathrooms, lounges and many bedrooms. Comfort needs of the households are also catered for and many luxuries have been attained.

Within erven

- **Garden:** In terms of use of space on the erven, each household has a garden at the entrance to the erven. One household (C) has a vegetable garden in front of the erven.
- **Survival strategy:** Each household generates other income either via providing a service (repairs of refrigerators, etc), selling goods or renting out a structure. Each of these activities is specific to each household. On average, each household uses 8% of the erven for income generating activities.
- **Parking:** In two households the centre of the erven are used to accommodate vehicles.
- **Storage:** Storage of building materials tend to happen on two erven, one at the front and one at the back. Storage of materials therefore happens where space is available, whether in front or at the back.
- **Other:** Just one household has a clothesline erected at the side of the erf.
- The use of space on the erven is very diverse. The only commonality between all three households is the presence of gardens at the front of the erven.

PUBLIC/PRIVATE SPACE

- **Street boundary:** Fencing at the front of the erven doesn't assist in creating privacy since the fencing used is transparent.
    - **Side and back boundaries:** Side boundaries tend to be weak where privacy is not accomplished. Privacy from the public is created but neighbours can intrude. Household A on the other hand had built a wall along one boundary that creates some privacy from the adjoining neighbour.
    - **Placing of units:** The placing of the structures has facilitated private space at the back of the erven generally. The houses have been placed either in the centre of the erven or at the side.
    - **Placing of the front door:** The orientation of doors in each erven differs. Whilst household A offers itself for interaction with the street by placing the front door facing the street, the other two households prefer to create some privacy. Households B and C have placed their doors on the sides and have attempted to re-inforce this by placing tents in appropriate positions. The use of tents in each case has been used above entrances to structures and attempts to break down the use of space to become more private.

Pattern: *All temporary structures were initially placed at the back with the permanent structures in front leaving space at the back which is private from the public but not from the neighbours. All erven are fenced with gardens at the entrances. Tents are used at entrances to structures to create a break from public to private space and to create some socialising space.*

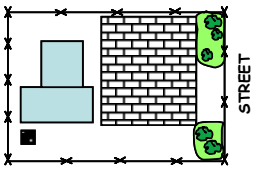

FIGURE 47: Pattern 1

*NOTE

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