

THE RDP HOUSING
SYSTEM IN SOUTH AFRICA

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THE RDP HOUSING SYSTEM IN SOUTH AFRICA

By

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Declaration by student

I, the undersigned, hereby confirm that the attached treatise is my own work and that any sources are adequately acknowledged and listed in the bibliography

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Abstract

Title of treatise : **The RDP housing system in South Africa**

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The Reconstruction and Development Programme in South Africa came into existence to provide housing to the poor. It seems that it isn't always as clear cut as that. Many other factors also need some consideration to make the developments viable and sustainable.

The aim of the treatise is firstly to look current RDP system and its functions and to establish where the system needs improvement. Secondly, to consider factors like socio-economic sustainability, the short and long term effects that the current designs have and also to look at different building methods like prefabricated housing. Thirdly, to look at the role players of the developments and to establish what their responsibilities are and if it needs improvement. The backlog of housing is not only the result of the lack of funds, but managements of the developments and funds form part of the responsibilities of the role players. And lastly to look at the current challenges the system face and how to overcome it.

I dream of the realization of the unity of Africa, whereby its leaders combine in their efforts to solve the problems of this continent. I dream of our vast deserts, of our forests, of all our great wildernesses.

Nelson Mandela

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Chapter 1: Introduction

1.1 Introduction

Government has embarked on a housing program to replace shacks in South Africa with low cost housing for families whose sole provider is unemployed or families who collectively earn less than R3500 per month. It is generally allocated to people with children, even if it is not their own children. RDP housing is mainly built on the outskirts of cities where large portions of land are available at a lower cost. This can create a problem regarding travelling to work and schools or even medical facilities and shops. Only South African citizens can apply for housing. They have to comply with certain requirements, and then their names will be placed on a waiting list where they could wait years for anything to happen. In providing RDP housing, the system in itself is not always fair and effective. In some cases people who already received houses will rent their property out and move back into their shacks where after their spouses or relatives will re-apply for a house and in some instances, get another house. Government is trying to create a fair system, but people working for the government in providing housing often get tempted to accept bribes from desperate people who have been waiting for years.

People are facing many other problems other than obtaining a house. They are not only far from good medical facilities and schools, but they also have to travel great distances to get to work and transport is not cheap. The houses itself are in many cases not build up to standard, which leads to leaking of water, etc.

1.2 The main problem

Has the RDP housing system in South Africa reached its full potential relating to the system in itself, the design, government's role and alternative methods?

1.3 The sub problems

1.3.1 What is RDP housing and how does it work?

1.3.2 What is the design of RDP housing and are there any alternative options?

1.3.3 What is government's role in the supply of RDP housing and are they doing enough?

1.3.4 What are the problems that RDP housing schemes face?

1.4 The hypotheses

1.4.1 What is RDP housing and how does it work?

RDP housing is low cost housing provided by the government for poor South Africans with a combined income of R3500 or less. New houses consist of simple single storey structures big enough to accommodate a single family. It is not only the supply of new houses, but it could also involve the reconstruction of existing buildings. Buildings in the CBD of all major cities are good examples of reconstructing existing buildings

for low cost housing. This is a relatively cheap option, because the superstructure of the building already exists. But, the cost depends on the condition of the building.

1.4.2 Housing designs and its alternatives

The first low cost housing projects were generally a two room brick work structure with corrugated iron roof sheeting. Over the years the design of the house improved a lot. It now consist of a five room brickwork structure with either corrugated iron roof sheeting or clay roof tiles. Lights and electricity are supplied and a geyser for hot water is an option.

1.4.3 Government's role

It is the government's duty to use the tax money and build low cost housing. They also have to establish an adequate system to eliminate any fraud or corruption. It seems that government is doing enough to provide up to standard housing.

1.4.4 Challenges of RDP housing projects

The main problem facing RDP housing is electricity supply, access roads, after market maintenance of houses, distance to medical facilities, amenities and schools.

1.5 Delimitations

This study was done by looking at the core of the RDP system and it was limited to the function, design, government and the private sector's role to establish if better measures can be implemented to enhance the supply of housing to the poor. The study was limited mainly to Gauteng, but other provinces were mentioned briefly in some of the chapters.

1.6 Importance of the study

The result of the study will give a better understanding of the function of the RDP system and where its constraints lay. Knowledge will be gained on methods of saving costs regarding housing and also to shed light on alternatives in its construction. Government's position will be looked at and also other role players such as the private sector.

1.7 The research mythology

- Most of the information will be obtained from the internet
- Articles published in the news paper
- Construction magazines
- Discussions with lecturers

Chapter 2: What is RDP housing and how does it work?

2.1 Introduction

RDP housing is low cost housing provided by the government for poor South Africans with a combined income of R3500 or less. New houses consist of simple single storey structures big enough to fit a single family. It is not only the supply of new houses, but it could also involve the reconstruction of existing buildings. Buildings in the CBD of all major cities are good examples of reconstructing existing buildings for low cost housing. This is a relatively cheap option, because the superstructure of the building already exists. But, the cost depends on the condition of the building.

Figure 1: RDP housing in Soweto



(ign11, 2007)

2.2 The term RDP housing

Reconstruction and Development Programme (RPD) is a South African socio-economic policy framework implemented by the African National Congress (ANC) government of Nelson Mandela in 1994 after months of discussions, consultations and negotiations between the ANC, its Alliance partners the Congress of South African Trade Unions and the South African Communist Party, and 'mass organisations in the wider civil society. (Wikipedia, 2009)

The main focus in the development and implementation of Reconstruction and Development Programme was to address the socio-economical problems that existed due the previous ruling party. The government wanted to alleviate poverty and provide better social services for previously disadvantaged South Africans by allocating tax money for development projects. They also looked at the bigger picture by not only focusing on lightening the burden of poverty, but also to incorporate this Reconstruction and Development Programme to build a stronger macro economic environment.

2.3 Supply of RDP housing

Thousands of houses are being built for the RDP process. Many families get a second chance because of this initiative. Squatter camps are dangerous, not only for children but for the entire family. The crime is very high and the living conditions are unhealthy and can cause the spread of deceases and other health risks. RDP houses provide better

security against crime and it gives protection against environmental factors.

The supply of new low cost living units is designed to house a single family. Its purpose is to meet the basic needs of a family. Every person in South Africa is entitled to have protection from environmental factors such as rain. Every South African has the right to clean water, electricity, health care, sanitation and access to education. The main focus of the RDP housing is to provide such necessities to previously disadvantaged South Africans.

Government is struggling to keep up with the high demand in low cost housing. Developers are motivated to help the government with new projects to speed up the supply of housing. RDP projects are generally done on the outskirts of the cities where large undeveloped land is available at a fairly good price. The only down side to this is that residents have to travel a great distance to get to work. In many cases the program incorporates the supply of schools, medical facilities and shops.

2.4 Reconstruction of existing buildings

RDP housing is not only about the development of new houses, but also the reconstruction of existing building. It is important to use the existing resources. There are so many new developments taking place in the major cities. Every last piece of land is being utilised to form some sort of development. The cities mainly grow horizontally and undeveloped land is becoming less available. The advantage of inner city buildings is that it

already went through the zoning process and less time will be wasted on the rezone process, the renovation phase can commence immediately.

The idea of reconstructing existing buildings is to take some of the older buildings that are still in a fairly good condition and to revamp the interior to suite the new purpose.

2.5 Requirements for RDP housing

Many poor South Africans have been on waiting lists to receive RDP housing for long period, even more than 10 years. Although most of them meet the requirements to receive housing it is a slow process. The applications are done at the provincial municipal offices where the process can take long due to the lack of effective administrative systems.

The following are the requirements for a RDP house if the occupant is the builder and needs governments' help or if they want to be put on a waiting list:

- Certified copy of applicant's ID document
- When the applicant is married or living together a certified copy of the spouse's/partner's ID document is also required
- When the applicant is a widow/widower a copy of the death certificate must be attached
- The house must not be smaller than 40 m²
- The applicant and his spouse or partner must be a S.A. Citizen with a legal ID document

- The applicant and his/her spouse/partner when they are employed must provide proof of income (Payslip)
 - Certified copies of dependants' birth certificates or ID documents
 - Approved building plan and specifications
 - Status of Infrastructure letter from the TLC indicating that there is water, sewerage and electricity provided on the site. (Basic services)
 - Building contract between the Builder and the applicant
 - The builder must be registered with the NHBRC (National Home Builders Registration Council)
 - Building material Quotation
 - Deed of Sale
 - Applicant must sign affidavit
 - Affidavit must be signed by spouse / partner
 - The applicant may use any registered Conveyancer of his choice
 - The applicant that uses a credit-linked subsidy or the amount exceeds the subsidy amount or the purchase price of the house that the applicant want to build then he must attached a bank approval letter
- (Mangaung Local Municipality, 2009)

2.6 Subsidies

A government housing subsidy is a grant provided by the Government for housing purposes. The Government does not give cash to the beneficiaries. The grant is used for housing only. (City of Tshwane, 2009)

To apply for housing subsidies the following is needed:

- ID book
- ID book of spouse (if applicable)
- Birth certificates of dependants (children)
- Proof of income if employed
- Proof, (eg an affidavit) is needed for extended family members (eg your late sister`s child)

(City of Tshwane, 2009)

To apply for housing subsidies the following requirements must be met:

- Applicant must be 21 years or older;
- Must be married or single with dependants or cohabiting with a partner for a long time;
- Must be unemployed or earning not more than R7 000 per household;
- Must either be a South African citizen or a foreigner with a permanent residential permit;
- Must not have received government housing assistance before; and
- Must be a first-time home owner.

(City of Tshwane, 2009)

Table 1: Housing subsidy and qualification criteria

Subsidy amounts for 2005 - 2006				
Income category	Previous subsidy	New subsidy	Contribution	Production price
Individual, Project linked and Relocation Assistance subsidies				
R 0 to R1500	R25 800.00	R31 929.00	None	R31 929.00
R1 501 to R3500	Collapsed category	R29 450.00	R2479.00	R31 929.00
Indigent: Aged, disabled or health stricken R1501 to R3500	R28 279.00	R31 929.00	None	R31 929.00
Institutional subsidies				
R 0 to R3500	R25 800.00	R29 450.00	Institution must add capital	At least R31 929.00
Consolidation Subsidies				
R 0 to R1500	R14 102.00	R18 792.00	None	R18 792.00
R1501 to R3500	New category	R16 313.00	R2 479.00	R18 792.00
Consolidation Subsidy: for Aged, disabled or health stricken R1 501 to R3 500	R16 581.00	R18 792.00	None	R18 792.00
Rural subsidies				
R0 to R3500	R25 800.00	R29 450.00	None	R29 450.00
People's Housing Process				
R0 to R3 500	R25 800.00	R31929.00 (includes an establishment grant of R800)		R31 929.00
Emergency programme				
Temporary assistance	R23 892.00	R26 874.00	None	R26 874.00
Repair to existing stock:				
Service	R11 698.00	R13 137.82	None	R13 137.82
Houses	R16 581.00	R18 792.00	None	R18 791.64
Public Sector Hostels Redevelopment programme			Previous grant	New grant
Family units			R25 800.00	R29 450.00
Individual units (per bed)			R6 400.00	R7 234.00

(City of Tshwane, 2007)

2.7 Summary

RDP housing consists of new developments, such as single storey structures big enough for one family, and the reconstruction of existing buildings. It is governments aim to address socio-economical problems and to build on the macro economical environment. Not everyone can apply for a house; certain requirements must be met. Subsidies are granted by the government. It is for housing only and government do not grant cash. Certain requirements must also be met to acquire subsidies.

2.8 Conclusion

Providing adequate and enough housing will not happen overnight. Government has already supplied thousands of housing, but they still need help from developers. RDP housing does not only consist of construction of new houses, but also the redevelopment of existing buildings. Government also strive to alleviate the socio-economic problems and build a stronger macro economical environment.

2.9 Testing of hypothesis

This hypothesis has been proven to be correct. Low cost housing is a government initiative to alleviate the current housing problem in South Africa. This is done by building simple single storey structures to house a single family. Existing high risers in the CBD are also utilised and reformed to help supply low cost housing.

Chapter 3: Housing design and its alternatives

3.1 Introduction

DRP housing and its design have over the years improved significantly. The focus in the development of the first houses was mainly quantity and cost. The buzz word in construction these days are green building, sustainable development and environmentally friendly construction. These concepts spilled over to low cost housing and reconstruction and development programs as well. Government is now trying to encourage developers to look at these aspects. Measures have also been taken to educate people to develop skills in constructing and maintaining the new developments. Government realizes that it should not only stick to previous designs, but also look at alternative options.

3.2 Physical design of the house

The first low cost housing projects were generally a two room brickwork structure with corrugated iron roof sheeting. Over the years the design of the house improved a lot. It now consist of a five room brickwork structure with either corrugated iron roof sheeting or clay roof tiles. It has lights and people have the option to also buy a geyser for hot water. (Sebenja, 2009)

Many of the RDP housing provided before 1997 does not comply with the National Home Builders Registration Council (NHBRC), because the NHBRC was only introduced after 1997. Inspections done by the department of housing found that these structures were not up to standard. It was revealed that many houses have contraction problems such as loose and/or leaking roofs, doors and windows not properly

fitted; visible cracks and poor sanitation. Theft of the building supplies was the main reason for sub standard work and contractors had to use whatever material was left to finish the project. The department of housing had instructed to rebuild many of these houses due to the poor condition of it. This decision had upset many of the poor South Africans who have been waiting for houses for many years. They regarded this as a waste of government money. The Department of Housing also found that many of the houses were illegally occupied. If there are inspections the occupants of the house must be able to provide a title deed in their name.

The first RDP houses were only 16m². When the NHBRC was introduced, regulations were put into place and the houses had to be extended. These houses were extended with an extra room which increased the floor area to 36m². (SAPA, 2008)

An alternative to this design could be prefabricated housing or it could also be something more environmentally friendly. More consideration is put on sustainable development or green building.

3.3 Materials

Houses developed in different provinces do not necessarily consist of the same building materials. It is more economical to build houses based on locally available material. When government constructed the first RDP houses they did not use recycled material and attention was put on quantity at the lowest cost rather than quality, but in the more recent projects more attention was given to the use of sustainability of the developments by using materials from the local environment and also to involve the local community in the projects.

Latest trends in low cost housing, building material cost tends to be less because of the use of locally available materials and required labour cost due to proper time schedule of work. Cost of reduction is achieved by selection of more efficient material or by an improved design. (Civil Engineering Portal, 2008)

Generally RDP housing consists of strip foundations. The geotechnical ground reports do not seem to be a major concern to the developers. This can create a problem, because the usage of strip foundations will not be optimal at all RDP development sites. For example, many of the cheaper land available on the outskirts of the cities consist of wet lands or clay soil. It would be more advisable to use pile or raft foundations in these areas. This will reduce the latent defects such as wall cracks. The walls are built from clay bricks or block work; it usually depends on what is more readily available in the area. The floor construction is a normal slab. Because of the cost being kept as low as possible the floor finishes are laminated tiles and carpets are regarded as a luxury. Corrugated iron roof sheeting is most frequently used for the roof, but on more and more occasion clay tile roof coverings is being used. Standard steel windows and doorframes are currently being used with hollow core wooden doors. Developments in the coastal area generally make use of wooden doors, doorframes and window. These measures are taken to prevent rust from forming. In some provinces walls are plastered and painted on the internal and external walls and in other provinces only the internal walls are plastered and painted. There are no standards for this.

3.4 Disadvantages of the current design

3.4.1 The houses have no gutters

The result of a house without gutters is that the runoff rainwater falls directly onto the ground surrounding the house. This causes the ground to erode.

Gutters and downspouts were developed to keep roof water from dripping along the foundation. Disadvantages to such a system are erosion of the ground where the water runs off and a possible deep drip line. (Hotton, 2005)

3.4.2 High water tables

High water table can cause the houses to deteriorate quicker. The ingress of water will affect the slabs as well as the walls. It could also increase the risk of flooding in the area.

3.4.3 Soil erosion

The rate of erosion depends on many factors. Climatic factors include the amount and intensity of precipitation, the average temperature, as well as the typical temperature range, and seasonality, the wind speed, storm frequency. The geological factors include the sediment or rock type, its porosity and permeability, the slope (gradient) of the land, and whether the rocks are tilted, faulted, folded, or weathered. The biological factors include ground cover from vegetation or lack thereof, the type of organisms inhabiting the area, and the land use.

Many human activities remove vegetation from an area, making the soil easily erodible. Logging can cause increased erosion rates due to soil compaction, exposure of mineral soil, for example roads and landings. However it is the removal of or compromise to the forest floor not the removal of the canopy that can lead to erosion. This is because rain drops striking tree leaves collide with other rain drops creating larger drops. When these larger drops fall they again may reach terminal velocity and strike the ground with more energy than had they fallen in the open. Terminal velocity of rain drops is reached in about eight meters. Because forest canopies are usually higher than this, leaf drops can regain terminal velocity. However, the intact forest floor, with its layers of leaf litter and organic matter, absorbs the impact of the rainfall. (Anonymous, 2009)

3.4.4 Flooding

Before construction takes place, it can happen that not enough research was done to determine if the site could be affected by flooding. It is not always visible to the untrained eye to see whether or not there are any dangers of flooding. For example, sites that are situated in a valley are more likely to flood. The lack of vegetation in the area can also increase the likelihood of flooding. Flood lines of all rivers and South Africa are available from the Department of Water Affairs

3.5 Possible solutions

3.5.1 Gutters

If gutters are put in place it would minimize the effect of soil erosion. Water can then be channelled to a storm water system or it could be collected and used for flushing toilets and the irrigation of gardens, thus preserving scarce potable water for drinking and cooking. This initiative could also encourage home owners to start vegetable gardens. The increased vegetation in the surrounding landscapes of the dwellings would stabilize the soil and further prevent erosion.

A concrete apron along the foundation can control this problem. The apron should be about 15 centimetres wider than the roof overhang. (Hotton, 2005)

3.5.2 High water tables

The only possible solution in the case of RDP projects is to avoid sites with a high water table. There are measures that could be taken to minimize the water ingress, but it would be too expensive and cost is a major factor in these developments.

3.5.3 Soil erosion

The easiest way to minimize soil erosion is to increase the ground's vegetation. This could create a way that people are more interactive in the maintenance of their environment. Vegetable gardens would not only reduce the soil from eroding, but people could use what they

planted. Although a normal garden is not cheap to begin and maintain, the people could really benefit from that.

3.6 Sustainable development

Those paths of social, economic and political progress that meet the needs of the present without compromising the ability of future generations to meet their own needs defined by the United Nations World Commission on Environment and Development in the 1987 Brundtland Report.

Houses can be built in such a way that the use of electricity is minimized to a great extent. Although the initial cost of the houses will be substantially higher than the current houses the long term benefits will be much greater. People living in such houses would not need to make as much fires to keep warm anymore, because the houses will stay warm in the winter and cool in the summer.

The following are methods to reduce the total household energy usage by up to 70%. This method of design is called passive design:

- Orientate the longest side of your house to face north for light and sunshine.
- As the northern side of your house receives the most sun, the roof overhang should be longer (at least 40 cm to 60 cm) in length. Windows will be shaded in summer when the sun is high, while allowing the sun's rays through the windows in winter when the angle of the sun is low.
- Window shutters, awnings or screens shade rooms by keeping the hot sun rays out during summer.

- A skylight in the roof allows natural light into the house on sunny days and eliminates the use of artificial lighting. Make sure that the sloping glass of the skylight faces north.
- Natural materials (stone, timber, thatch and clay), often obtained locally, are most suited to keeping the home cool in summer and warm in winter. Mud bricks are an excellent source of insulation.
- Floors made out of brick or concrete maintain comfortable temperatures in your house as they are good at absorbing heat during the day and releasing this slowly at night. These floors should not be covered with carpets as a concrete floor absorbs more heat than a floor covered by carpeting.
- Heat loss is ten times faster through glass windows than through insulated walls, so open the curtains during the day (let in the natural light and heat) and close them at night (keeps in the heat).
- Grow a deciduous creeper or tree over a veranda or yard. During summer, these leafy plants shade your house. When the leaves are lost during autumn, the bare tree lets the rays into the house (through the windows) during the colder months.
- Plant trees on the south, east and/or west of your home to provide shade during summer.
- A tin roof loses a lot of heat during the winter and gets very hot in summer. Insulate the roof and paint it white (reflects light and is therefore cooler) or use aluminium or other roofing materials.
- A ceiling and insulation in a small house can reduce your energy requirements by as much as 124 kWh a month – saving currently R50,00/month.
- Install ceiling insulation fibre to keep your house cool in summer (reduces warm air conduction) and warm in winter (regulates the temperature of rooms and prevents heat loss).

- Ensure suitable ventilation for fresh air and cool breezes - rooms can be ventilated using airbricks, forced ventilation or by opening windows.
- Install efficient heating, ventilating and air conditioning (HVAC) systems if required and ensure they are efficiently used. Be sure to shade the air conditioning unit outside with a tree for example.
- Install a solar water heater – these are relatively expensive but result in substantial savings on your electricity bill (water heating is the biggest part of most household’s electricity use profile).
- Install solar (photovoltaic) panels on the roof to provide electricity to run low consumption appliances such as the TV, radio, lights and fridge.
- Install energy efficient light bulbs (CFLs) throughout the house. These are usually more expensive than conventional incandescent light bulbs, but have a much longer life-span and use far less electricity. They pay themselves back in a few months and are a very sound environmental choice.
- Used water or ‘grey water’ from sinks, baths and showers can be directed to water the garden.
- Rain water can be harvested from the roof and stored, or channelled to the garden.
- Eco-friendly building materials can be used, including reclaimed wood, recycled/composite plastic, non-toxic eco-sensitive paints.
- Consider switching to green electricity. Green electricity is generated from renewable sources such as wind, solar and wave power.

(Anonymous, Green building guidelines, 2008)

These are good indicators as to how a house could be built using the passive design system, but not all of these aspects can be incorporated in a RDP house.

3.7 Prefabricated housing

The idea of prefabricated housing is to build the house in components. The components are usually manufactured off site and then transported to site where it will be assembled. This method of housing is more frequently used in the United States. It is not as popular in South Africa. It makes the construction time of a house a lot less.

There are three different types of prefabricated houses; modular homes, manufactured homes and mobile homes. Modular homes are where the house is created in sections. The sections are manufactured in a factory and assemble on site. Modular homes are sometimes less expensive per square meter than site built houses. A well-built modular home should have the same longevity as its site-built counterpart, increasing in value over time. The concept of modular homes is mainly used in America and it not familiar to South Africa. Manufactured houses are also built in a factory. It is built on a non-removable steel chassis. The different sections are transported to the building site on its own wheels. The multi-part manufactured units are then joined on site on a permanent foundation. Manufactured housing is generally less expensive that modular homes. (Wickell, 2008) Mobile homes are prefabricate and designed in such a way so that it can be transported from place to place. Mobile homes a currently more frequently used in South Africa than modular or manufactured homes.

3.8 Summary

It is apparent that there don't have to be only one way to design a RDP house. Different methods are needed for different provinces to suite their climatic conditions. But, the projects could also benefit from a

totally different design method that could increase the liveability of the houses and the long term environmental effects of the houses. Other design methods such as prefabricated housing can also come into consideration.

3.9 Conclusion

When designing a RDP house it is important to take various aspects into consideration. The physical design of the house can lead to energy saving by making use of passive design. When choosing the building material, factors such as the environment and recyclability should be kept in mind. The design of the house should also cater for future environmental factors such as rain and wind. This can cause flooding and erosion which can be minimized by a good design. The idea of prefabricated housing will save time and money if it is used correctly.

3.10 Testing of hypothesis

The hypothesis was correct in stating that alternative measures could be used in the design of RDP housing. The current housing design and materials was also stated correct, but not the use of different designs in various provinces. Not all the houses look the same and they are not all built from the same material. Materials that are readily available in the area are used and the use of wood instead of steel is incorporated in structures near the coast.

The current design of RDP housing does not incorporate factors for environmental sustainability. The main aim behind the construction seems to be to build as many houses as possible with as little money as possible. The outcome of this is houses with a very short lifecycle. The only solution for this is to incorporate socio-economical and environmental sustainability. The short term cost will be higher, but it becomes more viable on the long term.

Chapter 4: What is the government's role in the supply of RDP housing and are they doing enough?

4.1 Introduction

It is the government's duty to use the tax money and build low cost housing. They also have to establish an adequate system to eliminate any fraud or corruption.

Currently the biggest problem with shacks is the safety risk. In the winter people use paraffin lamps to heat up the shacks. In some cases a fire is made inside the dwelling to keep warm. This causes a fire risk and the damage could involve many people. Fires can spread easily where people are living so close to each other. It is the government's duty to alleviate this problem with all its risks. According to the government everyone has the right to have access to adequate housing. This is defined as security of tenure, access to services, access to affordable housing, habitable housing, accessible housing, location and cultural adequacy.

The government's intention, from 1994, was to reduce the housing backlog. The aim is to provide 300 000 houses per year. There were too many constraints, but they did reach their goal of providing 1 000 000 houses. It took them six years. The disadvantage of this goal driven projects are that focus of supplying housing shifts from quality to quantity. Yes, they provided 1 000 000 houses, but how many of these houses were sub standard? (Hall, 2005)

The demand for low cost housing in South Africa is too high and the government is struggling to keep up. Government is trying to involve

property investors, but the profitability on RDP housing projects is low. In some cases the government is trying to force property investors to provide a certain percentage of their developments to be for low income or low cost housing.

4.2 Unlawful invasion of land

Unlawful invasion of land is not only limited to state land, but it also spills over to private land. It is government's constitutional duty to ensure that all citizens' private property is protected against unlawful occupiers. Where invasion on private property occurs on a large scale, private landowners have the right to assistance from the government to protect their land. The next step for the government is to ensure that all citizens enjoy a basic right to have access to land or housing. Unlawful invaders can be evicted from private property and state owned land by the law of Prevention of Illegal Eviction From and Unlawful Occupation of Land Act, 1998 (Act 19 of 1998). This law is currently administered by the Department of Housing.

No person is allowed to occupy any land that does not belong to him. If a person has no access to agricultural land, but wishes to do so, he/she can approach the Department of Land Affairs for assistance to find appropriate agricultural land. The state can also provide subsidies if it is required. The Department of Housing should be approached for help if the person in question wishes to gain access to housing.

Steps to follow to evict unlawful invaders of land:

Agricultural land:

- approach the court for an order to evict unlawful occupiers of state land under its control as long as the basic rights of the unlawful occupiers are not in question
- assist unlawful occupiers of any state or private land who need and have no agricultural land to obtain access to suitable agricultural land
- assist other government authorities to find suitable alternative land for the unlawful occupiers in need of housing, and
- where required and where special circumstances exist, assist private agricultural land owners whose land has been unlawfully invaded to relocate occupiers in need of agricultural land to suitable alternative land.

Private land:

- Where private land has been unlawfully invaded and no special circumstances exist, the land owner must approach the court without delay for an eviction order in terms of the Prevention of Illegal Eviction From and Unlawful Occupation of Land Act, 1998.
- Where private land has been unlawfully invaded and special circumstances exist, the land owner can approach any office of the Department of Land Affairs for assistance if the need that underlies the land invasion is for access to agricultural land.
- Where private land has been unlawfully invaded and special circumstances exist, the land owner can approach the area's local municipality or, if necessary, the provincial or national Department of Housing for assistance if the underlying need is for housing.

Resituating unlawful invaders does have a cost and time implication. The Department of Housing have to find a suitable land and resituate the occupiers. The cost implication differs on case by case bases. Suitable land is not always readily available and in can take a lot of time for the government to find such land.

(South African Government Service, 2009)

4.3 Social housing programme

Government is not only focusing on the provision of RDP housing, but they also strive to provide other forms of housing. Social housing is an initiative that was introduced to focus on low to middle income individuals. It is a rental co-operative housing option in designated restructuring zones. This proposal is not entirely run by the government but only assisted by the government. It usually involves an accredited social housing institution managing the project, but government will provide grants. Other forms of endowment can come from the private sector or equity form the developer. (Anonymous, Human Settlements, 2009)

The main objective behind social housing is to contribute to the national priority of restructuring South African society in order to address structural, economic, social and spatial dysfunctionalities. This will contribute to government's vision of an economically empowered, non-racial, and integrated society living in sustainable human settlements to improve and contribute to the overall functioning of the housing sector and in particular the rental sub-component thereof, especially insofar as social housing is able to contribute to widening the range of housing

options available to the poor. (Anonymous, Social Housing Programme, 2009)

4.4 Informal settlement upgrading programme

The idea behind the informal settlement upgrading programme is not to provide housing to the poor, but rather to upgrade the existing dwellings. Every person in South Africa has the right to access basic services and housing. Government is trying to place responsibility on the tenants to take charge of their own settlements. They must take pride in the dwellings they live in and government is encouraging them to look after and maintain their houses. The programme aims to bring about social unity, stability and security in integrated developments and to create jobs and economic well being for communities. (Anonymous, Informal Settlement Upgrading Programme, 2009)

4.5 The people's housing process

This is yet another way in which the government is trying to help the poor in housing provision. This initiative focuses on households who wish to build their own homes. The government acts as a housing delivery mechanism by supplying households with an enhancement on their subsidies. The process allows beneficiaries to establish a housing support organisation that will provide them with organisational, technical and administrative assistance. The assistance includes training and guidance to the beneficiaries to build their own homes. This process

is only for persons who will build their own houses or for people who will organise among themselves to build bigger houses for less money.

The People's Housing Process allows you to:

- save on labour costs by doing some of the building work yourself or by getting assistance from your family, neighbours, friends and others to help you
- avoid having to pay a profit element to developers, and
- optimise your decisions.

(Anonymous, People's Housing Process, 2009)

4.6 The government and RDP

One of the government's biggest priorities is to transform the South African society and to transform how the government operates. This change will facilitate a basis for the development of a functioning RDP system. The provision of RDP housing is a government initiative and should take the lead role in implementing it. But, the burden is too large for the government to do it by themselves. They need the help of developers to take it on them to provide RDP and even low income housing. This will build the South African society and in the end build the economy.

The Government, through a process of consultation with various stakeholders and the different tiers of government has identified the following programmes as the key medium and long-term programmes to drive implementation of the RDP:

- meeting basic needs
- urban and rural development
- democratisation and institutional reform
- economic restructuring

4.7 Summary

Providing a safe living environment for every South Africa is a big priority for the government. Acts and measures are put in place to protect the people's interest regarding ownership of property. Government prohibits the unlawful invasion of land. Clear instructions are made available as to how to deal with or evict squatters living illegally on someone's property. The provision of social housing came into existence for people in the low income category. They do not qualify for RDP housing, but they can afford rent for social housing. Government do consider existing housing in the provision of housing. It is not always necessary to build from scratch. Upgrading programs are used in these cases. Another initiative by the government is to assist people who are able to build their own houses. Assistance in whatever form they need can be provided. These types of developments are good for the community. It creates work and recourses from the local area are used.

4.8 Conclusion

The government is not just focussing on the delivery of RDP housing, but they have established different needs amongst people. Some programmes will focus grants and others will focus on the supply of knowledge and support. There is certainly more than one way to help the needy. One of their major obstacles is the system. The approval and delivery of housing is slow due to an ineffective system and due to corruption amongst the government's employees. The key obstacle is that the government needs help from the developers, but they are reluctant to help because providing RDP housing does not promise a big return on profit.

4.9 Testing of hypothesis

The study has shown that the hypothesis was wrong. The government is certainly taking enough initiative in providing housing for the poor and/or low income group. Certain programmes are put in place to meet the needs of families and their diverse requirements. Government addresses measures to take in the case of unlawful invasion of land where owners of private property come into the equation. Different housing programmes like social housing programmes, informal settlement upgrading programme and people's housing process and made available by the government.

Chapter 5: What are the challenges of RDP housing and can it be overcome?

5.1 Introduction

The main problem facing RDP housing is electricity supply, access roads, subsequent maintenance of houses and distance to medical facilities, amenities and schools.

Generally the access roads in these developments are adequate. The sites used for RDP housing projects are usually on the outskirts of the city. Proper roads must be provided for access to the national roads and also roads inside the development. All the roads are tarred, but the rest of the area is uncovered soil. There is no pavement around the houses and very little vegetation.

Maintenance of the existing structure is very important. After the rainy season there are usually a lot of potholes in the roads. If this is not maintained it could result in other problems. The physical maintenance of the houses is also important. It is not only the government's responsibility to maintain the house, but also the home owners.

Because of the location of the sites it is important to have a good transport system and road networks in place. The roads should be kept in good condition. There are two main methods of transport, busses and taxis. Busses are the cheaper option, but there are a lot of conflict between the busses and the taxis. In some areas they have access to trains.

5.2 Housing supply

When RDP housing was first introduced in 1996, the Gauteng Department of Local Government and Housing implemented the waiting list database system. This was not a very effective tool to overcome the housing challenges in the province. The RDP housing system was initiated to focus on the poorest and most vulnerable household. In a way, the database created more problems. (Santos, 2009)

Government realized that the needs of the poor were not being met. An investigation on the implementation of the waiting list database system revealed various irregularities. While searching for the problem they discovered mal-administration, fraud and corruption that contributed to the displacement of innocent beneficiaries. Employees working at the government offices accepted bribes from people who were not likely to receive housing because of their financial status. (Santos, 2009)

After government discovered this obstacle they took immediate action to overcome it. The housing waiting list database system was re-engineered into the Housing Demand Database. The new system focuses on the managing and planning of housing demand in the province.

5.3 The site structure of RDP housing

Proper roads must be provided for access to the national roads and also roads inside the development. All the roads are tarred, but the rest of the area is uncovered soil. There is no pavement around the houses and very little vegetation.

In a perfect world RDP housing would be built inside the city parameters where access to medical facilities, schools, shops and job opportunities are easily available. But, that is most certainly not the case. The most economical sites to use for the development of RDP housing is almost always on the outskirts of the cities. Green field land is also the easiest to develop, because there is no need for any demolition to take place which will save further costs.

Figure 2: Ndlovu Village



(Anonymous, African conservation trust: Gallery, 2009)

Access roads to the RDP housing site are built by the municipality. These national roads include storm water systems, sanitation systems and electricity supply. The roads are maintained by the municipality. RDP sites will normally be close to main roads so that connection into these systems can be done. Roads built on the site will also be tar.

In a previous chapter the importance of vegetation was discussed. Vegetation will ensure stable ground conditions and prevent erosion. The use of paving will also contribute to the protection of the site surrounding the house.

5.4 Maintenance

Figure 3: RDP house in Atteridgeville



(Gauteng Department of Housing, 2009)

After a family has gone through the whole process of applying for a house and being on the waiting list for a long time and getting a subsidy grant, they receive a house. It is vital that the families should realise that the house should still be maintained to ensure that it stays in a proper

condition. People should be educated on the importance of maintenance to ensure that these developments are sustainable.

Maintenance must not only be done on housing, but also on existing infrastructure and new infrastructure. The rainy seasons can lead to potholes forming. Municipalities are responsible for maintaining the infrastructure, but the individuals must also do their part to uphold the facilities.

Local authorities must ensure that sufficient resources are made available for the extension and upgrading of municipal services, and for capacity-building to permit community-based structures to assist in local planning and implementation of the upgrading. Local Governments will need additional sources of revenue for operating, maintenance and subsidy expenses, as well as staff retraining and some new capital expenditure. (Mandela, 1994)

Figure 4: Roads in Shoshanguwe



(Gauteng Department of Housing, 2009)

Figure 5: Roads in Shoshanguwe



(Gauteng Department of Housing, 2009)

Many families do not maintain the houses and roofs start to leak, windows are broken, sanitation systems are blocked and many other problems start arising. Families should be well-informed on the maintenance of the dwellings.

5.5 Transportation

People falling in the low income category generally do not have their own transport and relies heavily on public transport. The use of busses and taxis are the most common. Busses are generally used more than taxis, because it is more reliable. Taxis are more expensive and many people feel it an unsafe way of transport.

The only challenges facing the bus and taxi system are that they are unsafe, expensive and unreliable. These challenges can be overcome by focussing on upgrading the existing system. It is not necessary to develop a whole new system.

5.6 Electricity

Electricity as an energy source is a basic need. In 2008 South Africa had major electricity supply problems. Power cuts or black outs became the order of the day as municipalities tried to save energy. More drastic solutions had to be taken and a long term power saving scheme was under construction. Communities were warned about more power cuts taking place if energy usage did not decrease. Communities abided, but it was still not enough. Government came up with a plan B to try and cut back on power usage.

The cost of electricity is increasing. Rumours in news reports are spreading quickly that Eskom is set to seek a 34% hike in electricity tariffs, back from the 88% rise it had been considering due to the global economic slowdown. When granting a tariff hike last June, the power regulator said electricity prices could rise by between 20% and 25% a year over the next three years. In 2008 the household electricity consumption made up 3% on average of the total household expenditure. With the cost of electricity going up like this, this percentage will rise to 10% in the year 2012. (Reuters, 2009)

This can cause a major obstacle for the development of RDP housing. Although the energy consumption in a RDP house is generally not very high, it can put a lot of stress on a household.

There are many different ways to decrease the energy consumption that leads to a decrease in the cost of electricity. Simple things like switching off the lights when it is not being used, switching off the television when no one is watching and switching off the geyser when going away for long periods of time.

This will definitely decrease the cost of energy, but there are more drastic ways to go about saving energy. Little attention has been paid to utilising sustainable energy sources such as solar power. Solar power should be incorporated in the design of the housing. The use of solar water heaters can also be use to the extent that geysers will not have to be used in the summer.

Figure 6: Solar heater



(Monniaux, 2005)

5.7 Summary

The structure and location of the site will have a major impact on the residents. It can affect every aspect of their existence. They need to consider the travelling costs to schools, work and amenities and in case of emergency; they need to be near good medical facilities. It is very difficult to get a house and people need to realise that it takes work to maintain it. The lack of maintenance is what caused some of our major city's central business district to decay.

Some of the most important things to consider when doing a RDP development are to ensure that there is a working transport system in place and that it is reliable and affordable. The second thing that recently became a major concern is the cost of electricity. Developers must go back to the design of the structure and implement ways to save costs and make it more energy efficient. It is also the resident's responsibility to minimize the use of electricity and to save costs.

5.8 Conclusion

The maladministration, fraud and corruption that existed in the supply of RDP housing was discovered by government and measures were put into place to alleviate the problem. They came up with a whole different strategy to boycott fraud and corruption. They now use the Housing Demand Database which is a new system of managing and planning the demand of housing in the Gauteng province.

The site structure and the maintenance of the housing can be obtained by educating the people on the importance of subsequent maintenance and by giving them some of the responsibility so that they can take pride in their house and the environment in which they live.

Transportation will always create some kind of obstacle, but using the existing system and working on a plan to upgrade the system is what is most important.

There are many ways to alleviate the cost load of electricity. The use of solar power and solar water heaters should be incorporated in the design of the housing.

5.9 Testing of hypothesis

The hypothesis was correct in stating current problems such as the great distances from schools, hospitals and amenities. The cost of transportation makes travelling even more difficult. According to the study the maintenance of the housing is an even bigger constraint. Average maintenance of the house is initially very expensive, but on the long run it will save costs. The importance of educating the residents on the maintenance of housing is vital to lengthen the lifecycle of the housing. The study has also shown that there are ways in which the design of the house can cut costs, such as passive design and the use of solar heaters and solar panels.

Chapter 6: Summary and conclusion

6.1 Background

Although many people still believe that the way in which the current RDP system is managed is the only way it would ever be, however, the study has shown the opposite. Many people in South Africa of different walks of life are stepping forward to improve not only the RDP system, but also the wellbeing of the country. South Africa has the resources and potential of becoming a developed country and people are starting to realise it. By focussing on solving problems such as corruption, our goal to enhance the economy and becoming a developed country will be met.

The study has shown that South Africa has not yet reached its full potential in the supply and management of RDP housing. Focus is placed on different aspect of development. The management methods of the housing supply are constantly being scrutinized by government officials to determine the weak links. Once it has been determined actions will be taken to improve the situation. The success of the development relies on many different contributions such as input from the private business sectors, government and the owners or tenants of the RDP developments.

6.2 Summary

Reconstruction and development housing involves the provision of new houses and the reconstruction of existing housing in the CBD areas.

Certain criteria have to be met before houses are granted to families. The study has shown that the provision of new housing involves much more than what meets the eye. Families in need of housing must apply to get subsidies. It is not definite that families applying for housing will receive it.

The reconstruction of the CBD area for housing supply focuses on social housing. This is where rentable flats are owned and managed by the state, by not-for-profit organizations, or by a combination of the two, usually with the aim of providing affordable housing. The study does not focus of social housing as much, but families who do not qualify for RDP housing and who do not fall in that income category can consider social housing which may also be affordable for them.

On researching the government's role in the provision of RDP housing it was found that government is trying to implement a functional system. They came to a realisation that they need the help of the private sector and the integrity of their own employees. This means that the private sector must incorporate philanthropy in their developments or incorporate community upliftment in some way into their corporations to help the government in building up the country to a developed country. The government is not only relying on big corporations, but also on the tax payer's money. Most of the government's income for projects like this comes from tax payers. In this way most working South Africans contribute to the wellbeing of the country. The study showed that the government is trying to succeed, but it is still a slow process.

Not much focus was placed on alternative methods of building. The conventional brick work walls, corrugated iron roof sheeting and screed floor runs through all provinces in the country. The problem was that the sustainability of the houses is under pressure. Other setbacks were the use of electricity and sanitation. The electricity load can be lightened using solar power and solar water heaters. The importance of maintenance is vital in these developments, because the life of the development relies on it. People/tenants need to be educated on it, and they must have pride in the development to ensure that they take responsibility in the maintenance.

6.3 Conclusion

The aim of the study was to determine if the RDP system in South Africa has reached its full potential. The answer is clearly no. The first thing that has to be done is the enhancement of the management system. Government has to implement basic guide lines and indicate the goals that have to be achieved.

Management plays a vital role and without it the long term goals of the RDP system will not be realised. Management must form the backbone of the operation and the government is the only party that has the authority to do that.

Input from the private sector is also essential as the government tries to encourage companies to incorporate low income housing in their developments. The companies are then rewarded by getting access to government owned land to do the developments on. However, the

private sector is driven by profit and the return on investment for low income housing and RDP housing are extremely low. If government wants more input from the private sector, they will have to make it worthwhile for them. The private sector is only driven by profit, but the market for low cost housing does not generate profit. Government can provide developers with land of which a percentage of the land must be for low cost housing. The other way in which government can get more input from the private sector is something they already implemented; a certain percentage of large developments must be for low cost housing, otherwise the development will not be approved for construction.

As far as the physical construction of the housing goes, the use of alternative materials has not been incorporated. The buzz word in construction is 'green' and it will be expected of RDP housing and low income housing to implement these ideas. The study has shown that this proposal is not farfetched. The use of solar power and solar water heaters is the first step. And the next step is then to rethink the design of the building to incorporate passive solar design. This will improve long term sustainability and reduce the operational cost of the dwellings.

Overall, the study has shown that the current system in place is working to a certain extent, but it has not reached its full potential. Improving the system by addressing the current restraints will lead to a more rapid provision of promised housing to the low income communities.

6.4 Recommendations

The study's main focus was on the RDP system in Gauteng. Recommendations for future studies regarding the provision of housing, would be to firstly look at RDP housing in other parts of the county or even similar developments in other parts of the world and secondly to look at other forms of housing such as social housing.

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