UPGRADING INFORMAL SETTLEMENTS BY SECURING PUBLIC SPACE
Case study on Informal Settlements in Blantyre City, Malawi

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by

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Dedicated

to Desire, my beloved son and source of encouragement,
to my father, who always saw a better tomorrow for me and
to Richard, for making a chapter in "the life's and time's of Mercy"

Abstract

Informal Settlements in the urban centres are a growing phenomenon in the developing world. Half the world's population is housed in them. The cause of Informal Settlements has been explained as being due to increase in number of the urban poor through migration from rural area, natural population growth and lack of affordable serviced houses in the urban centres. This has led to the invasion of public and private land by low-income groups without prior planning. It has also led to acquisition of land through unauthorized and unregulated means with no land tenure security and in areas where basic social services and infrastructure are lacking.

The problem of informality has been addressed through several methods. One of these methods is the upgrading of the settlements through regularization of tenure and by provision of basic social services and infrastructures.

This study explores the evolvement and development of Informal Settlements using case study from the city of Blantyre, Malawi by looking at:
- how tenure perceptions influence the development of individual housing
- the availability, security and development of Public Spaces.

Using data collected from ground survey and spatial data derived from (time series) aerial photographs it was established that households have "informal secure means" of acquiring property and that they do not concern themselves with formal tenure security. Development on individual houses was found to be incremental while Public Spaces were inadequate, under developed and remain "informal".

This study proposes that for sustainable upgrading projects to be undertaken in the future, tenure security of Public Spaces for the flow of collective goods and services is paramount. It recommends an active role of the planners, land administrators and local authorities in ensuring that the current Public Spaces are secured through registration and development, a process that could be facilitated by liaising with local leaders and residents.

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1. CHAPTER ONE

1.1. Introduction

Poverty is a problem that developing countries have not been able to overcome successfully. In the urban areas, poverty has led to the growth of Informal Settlements which are basically, but not necessarily so, residential areas for the low-income groups. The UN-Habitat (1996) estimated that 30 to 70% of the urban growth in developing countries is informal.

Informal Settlements arise when people build on land they have no legal tenure to or by not conforming to planning, registration and/or the building regulations of the respective local authorities in which they are located (Abbott, 2001). The degree and definition of informality differs from one local authority to another, one country to the other (Payne, 2001) and it is determined by what factors are in consideration. In some countries it is the high density and lack of adequate basic services leading to slums while in others it is the invasion of public and private land and unapproved developments resulting into squatter settlements (Srinivas, 2002).

Informal Settlements have undergone a historical process starting with denial of basic services by respective governments to accepting that they are social and economic entities in their own right and should be supported and encouraged to grow (Abbott, 2000). It is in this regard that governments with the assistance of donor countries and international organization have embarked on housing and formalization programmes to the present day on site upgrading schemes.

1.2. Background

The most noted cause of Informal Settlements is high migration from the rural areas by people who are in search of job opportunities and better living conditions than what is available in the rural areas. Natural population growth over the years and continued extension of urban boundaries to areas where customary tenure existed has also led to increased informal phenomenon (Baken, 1991).

The migrants come ready to earn income and to consume the services not available in the rural areas. So, the city offers hope as an economic centre. Unfortunately the cities are not planned for these magnitudes of growth in population that never stops to flow in nor do they in reality have the required jobs and facilities (Srinivas, 1999). The results are people without employment or of low-income who cannot afford available houses when they are there or land in the market for putting up a house.

This leads to squatting on available vacant government, private, religious or customary owned land. This is done through invasion regardless of these ownerships or environmental suitability. Initially these invaded settlements were characterized by own built structures for family residence, (Amis, 1984).

However, increased demand for low cost houses has made these settlements havens for rental units (Okpala, 1999), while general commercialization of urban land markets, and persistent lack of planned

affordable vacant land by governments has resulted into illegal subdivisions. On the other hand, strict high planning and building regulations that are beyond the reach of the growing number of low-income groups leads to search for housing outside the legal and planning framework (Baken, Nietied, Pettenburg and Zaaijer, 1991).

In the end as noted by Payne (2002) and MacAuslan (1985), it is a situation of settlements said to be informal and characterized by:

- Poverty
- Lack of basic services and infrastructure.
- Lack of formal tenure.
- Poor housing.
- Exposure to environmental hazards by building on marginal lands and flood prone areas.
- High density.

Informal Settlements in some countries like Malawi, trace their existence to three main factors. High rate of population growth due to rural-urban migration leading to low-incomes and unemployment (National Plan of action 1995-2000), financial constraints that prevent the government from building conventional houses to meet the demand (Chilowa, 1996); and government extension of municipality boundaries to hitherto traditional villages without compensating and removing the indigenous occupants but subjecting them to planning by laws.

1.3.   Interventions

Public authorities in the beginning, viewed Informal Settlements as undesirable which led to eviction and demolition. Eviction was common more so in the periods between 1920s and 1950s and was backed by law (Payne, 1984). Demolitions still happen in some countries like India and elsewhere in Africa more because these settlements occupy some of the best located sites in terms of commercial developments and due to political interests on these sites.

The period between 1950 to early 1960s was dedicated to re-development that saw the rise of the housing programmes, many of which were launched after 1960 but did not last long due to the cost involved that "meant that public housing almost always missed the intended target groups" (Tebbal and Ray, 2001, pg 1)". In Malawi, the Malawi Housing Corporation (MHC) was started in 1963 to develop and construct houses for all income groups (Chilowa, 1996).

Then came the site and service schemes of mid 1960s to early 1970s that aimed at providing better housing to the poor on top of offering opportunity for home ownership with a form of legal tenure. Site and Service approach recognized the ability of the poor to built theirs own housing when provided with a site and basic facilities. The World Bank supported this type of development (Srinivas 2002). The site and service approach has however, not worked successfully for it requires funds that most developing governments do not have and the sites so developed have not in reality benefited the poor. They still ended up being too expensive for the poor due to cost recovery and their isolation from the job opportunities which was an added cost on transport to the poor (De Oliveira, 1996).

The latest has been the upgrading of these settlements from mid 1970s. Upgrading is the improvement of the Informal Settlements without the total relocation of the existing population (Abbott and Doug-

las, 2002). The aim is to improve the living conditions in the settlements. This includes improving and/or installing basic infrastructure such as water, sanitation, waste collection, access roads, foot-paths, storm drainage, lighting, and public telephones among other things. Upgrading also includes regularizing security of land tenure and housing improvements. It involves access to social support programs like education, health and income generating activities.

Since the time upgrading was accepted as a solution to the situation of informality several methods have been used in different projects internationally. It is noted that there is no one upgrading approach that is uniformly applicable to all the settlements (Abbott and Douglas, 2001). Some of the most ap-plied methods of upgrading Informal Settlements involve:

- Sanitation and potable water supply.
- Infrastructure improvement
- Housing improvement
- Community choice projects
- Formal tenure provision
- Integrated approach to planning.

Upgrading of Informal Settlements is therefore the latest effort put across by respective governments and donor countries. Upgrading recognises the need for individual households to access basic services and infrastructure and in some cases, the right of ownership of the properties each household owns by giving secure tenure. Upgrading can directly relate to *individual space* where a house stands by giving tenure and basic service for self-improvement or the *Public Space* where utilities and services for the general community are located.

1.4.   Research problem and justification

Formal residential planning generally creates two distinct spaces in an urban setting. Those that are for individual house developments and those for public use. The different upgrading methods mentioned earlier, target theses spaces in different ways. Exploring the nature of tenure security and development that has taken place on theses two spaces is of interest to this research. Understanding how they have been developed will help in determining future upgrading methods.

The activities carried out in upgrading incorporate several components as a package in that there is the physical planning, provision of infrastructure depending on identified needs and tenure in some cases. Though these activities are many, they can be categorized into two as:

1. Those aimed at directly improving the physical condition of the settlement. They include the physical layout planning, provision of the most needed basic facilities in terms of infrastruc-ture, public facilities and income generating opportunities.

2. The official land legalization that aims at securing legal tenure to the informal residents. It is hoped that titles issued in the process would be used as collateral, reflected on house im-provements and income generating activities. Eventually, the settlements' physical condition would improve. This is advocated by the World Bank (1996) and the UN-Habitat (1996).

These two categories of upgrading have generated differences especially at local actors level. Land and public administrators who include planners and surveyors view formal tenure through registration of properties as a solution to informality. With this, it is believed that utility providers would be able to penetrate to provide the needed facilities. Besides the settlers have a document to negotiate for loans for housing improvement.

On the other hand titling is seen as a sector based approach that is not realistic to the needs in the Informal Settlements by those who advocate for basic services approach (Abbott, 2000; Fourie, 2001). These are mainly people who are within the housing engineering fields and basic infrastructure providers. These two approaches are shown by figure 1.1

Professional approaches to upgrading informal settlements.
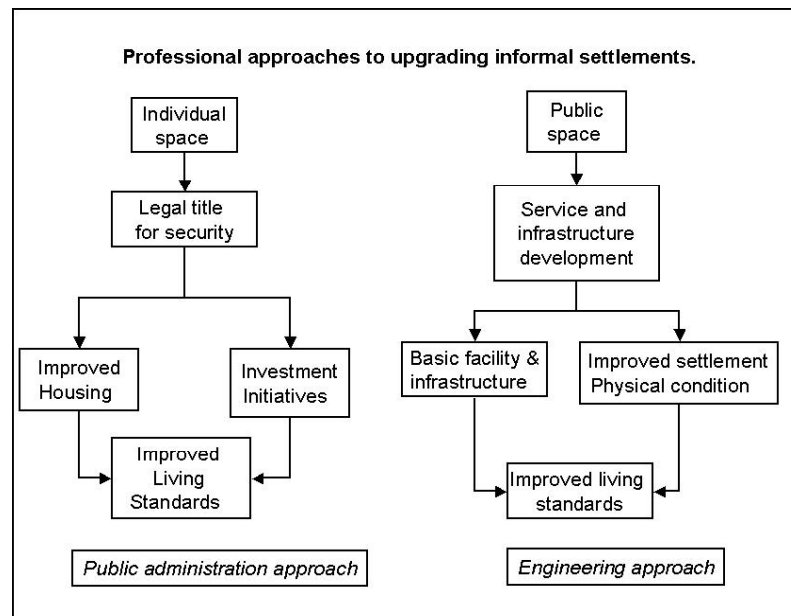
Figure 1.1 The two ways of professional approaches to upgrading of Informal Settlements

By titling individual plots, households are expected to have the will to develop better houses besides accessing lending organization for self-economic development. If Public Spaces are developed, services like health and education will be readily available, households get connected to basic infrastructures and the general physical condition of the settlement is improved. The two approaches are in line with the global campaigns for adequate housing and security of tenure for sustainable urban development.

1.4.1.   Global campaigns on adequate shelter and secure tenure

The World Bank and United Nations Human Settlement Programme (UN-Habitat) have dealt with problems in the Informal Settlements and slums widely. Over the years in urban centres, World Bank has funded housing programs and introduced site and service schemes. Having not achieved the goal in reduction of slums and Informal Settlements growth, formal tenure through titling and upgrading projects were introduced. Titling is based on a model developed for rural land reforms where increased farm productivity, efficient land markets and land distribution were put into consideration (World Bank's Land Reform Policy Paper). However, benefits of formal titling have been questioned in most rural areas (Bruce and Migot-Adhola, 1994) and the success is even less in urban areas.

UN-Habitat strives for adequate shelter. In the Slums and Informal Settlements it recognises the need for increased housing stock, improvement of physical housing condition, supply of services and infrastructure and physical environmental improvement. To achieve sustainable shelter, it attaches the need for secure tenure. In 1999, it launched the global campaign for secure tenure, to push forward government's commitment to adequate shelter for all. The search for solutions to housing and associated problems in the Informal Settlements has led to several world summits on sustainable development, Habitat agendas and Millennium development goals; all by UN-HABITAT and UN affiliated bodies. What comes out of these campaigns is the need for tenure security to households and the need for provision of basic services and infrastructure to improve households living conditions.

While titling gives security to individual plots, Public Space security has not had thorough consideration. In planned formal areas, Public Spaces are known to be allocated to individuals for purposes rather than those of community use. (Siddiqui and Khan, 1990). Existence, quantity and quality of Public Spaces determine service delivery. Engineering and public administration approaches determine the type of upgrading method and the impact in the improvement of living conditions in the settlements. The problem lies in knowing the most appropriate method to apply in upgrading Informal Settlements going by the failures in the past and considering that Informal Settlements are still on the increase in developing countries.

1.5.   Research Objectives and questions

The *main* objective of this research is to investigate how Informal Settlements evolve and develop. This will be done through case study of two Informal Settlements in the city of Blantyre in Malawi.

1.5.1.   Specific objective

To examine the importance and role of land tenure security in Informal
Settlements with regard to development of private properties and Public Spaces by:
- Individual households
- Government agencies

This will be done through investigating the development of informal settlement,
- from a household perception
- from a community organization perception
- from a general public administration perception
- from utility providers perception.

1.5.2.   Research questions:

1. How and why do Informal Settlements develop?
2. Do households perceive land tenure security as an important factor for:
   - Improvement of their houses?
   - Improvement of basic facilities?
   - Improvement of Public Space?
3. What are the limiting factors for the households to realize their aspirations in the settlement?
4. What role do community organizations play in the settlement?

5. How do public administrators perceive informal settlement development spatially and tenure wise?
6. How do providers of basic services and infrastructure approach increased demand?
7. What physical changes can be detected from aerial photographs in the settlement?
8. What policies exist for informal settlement upgrading?

1.6. Working definitions

1.6.1. Individual space

For the purpose of this study, individual space is the plot where a structure(s) or a house(s) stands. It is "private property" that could be owned and developed by one or more identifiable persons and can be issued with a title. Within the text it will also be referred to as a plot.

1.6.2. Pubic space

Public Space in this study is any developed or vacant piece of land that has been set aside officially, unofficially or by people's consensus understanding for community use. It includes roads of access, schools, hospitals, markets, and others that people understand to be for communal use without restriction and should therefore not be allocated for any other purpose.

1.6.3. Informal Settlements

This study takes Informal Settlements to be those residential areas by the official definition of the Malawian government which are either developed on private registered land, government land, are untitled, unplanned or have developed without following the building and development control regulations. These include the traditional villages within the gazetted municipal boundaries that the government feels are subject to planning by–laws .In the report, unplanned settlements have the same meaning as Informal Settlements.

1.6.4. Tenure security

For the purpose of this study, tenure security is referred as the formal guaranteed ownership acquired through property registration with the government. A title could be issued or not issued but the government authority recognizes the ownership.

1.6.5. Perceived tenure

Payne defined land tenure as the mode by which land is held or owned, or the set of relationships among people concerning the use of land and its product (Payne, 1997). In this document, perceived tenure is the confidence expressed by respondents on the ownership of their plots. It is viewed from the trust people have on the mode of acquiring land that they express on feeling of threat that could necessitate seeking of formal tenure.

1.6.6. Village head

The societal structure of Malawi is one of different ethnic groups that were organized around the leadership of a single leader in charge of several villages. The leader who is referred to as traditional leader is assisted by village heads in charge of each specific village. This type of leadership is passed on in the family. The village heads in this document are also referred to as chiefs as that is how most respondents called them.

Though ethnicity is not a factor in the urban areas, some elements of traditional culture govern and control development in what were once traditional villages but are now within the city boundaries and hence urban.

1.7.   Organization of the thesis

This chapter sets the scene of the study topic, justifies the statement of the problem, the research objective and research questions. It includes as well the working definitions of some of the terms used in the study.

Chapter two critically looks at the literature on Informal Settlements upgrading methods that have been employed over time. The argument developed in the chapter traces the historical evolvement and development of Informal Settlements and interventions that have been there.

Chapter three gives a broad overview on the location and urbanization process that has given rise to Informal Settlements in the City of Blantyre .It presents an overview on land administration issues, the status of land within the city. It also describes the study settlements and the Public Spaces available.

Chapter four details the research methods that were used to collect primary and secondary data. It presents the criterion that was used to select study settlements and the population sampling process. Variables considered in determining tenure perceptions; the development of individual space and the state of Public Space in Informal Settlements.

Chapter five presents the analysis of data and findings of the research with regard to land accessibility and evolvement of Informal Settlements, tenure security perceptions, incremental development and the spatial temporal growth.

Chapter six discuss the findings from chapter five against the background of the literature review in chapter two and the information on Blantyre as presented in chapter three. The arguments raised in the discussion are used to support the conclusions of the research and the formulation of an upgrading model based on Public Space.

Chapter seven makes the conclusion from the analysis done on chapter five in relation to the research objectives and questions. Finally the chapter recommends the likelihood of upgrading living standards in Informal Settlements by securing and developing on a systematic sustainable way Public Space and the facilities meant for these spaces.

2. UPGRADING INFORMAL SETTLEMENTS PACKAGES AND THE METHODS APPLIED

2.1. Introduction

Human activities take place in two distinct places. In the rural areas and in the urban areas. Thus giving the rural and the urban land use. The rural land use is mainly dominated by agricultural related activities while the urban land use is where manufacturing and service-oriented activities take place. Man has divided these two spatial areas by his activities and for maximum utilization; he plans the activities that should take place on each.

Cities differ in size, in activities, in available services and in population. Land is an important commodity in cities and its use is regulated through physical planning, which is the planning of land to be used in the (near) future by people to provide their needs. (Van Lier, 1994). The needs are diverse and planning determines what activity should take place where, when and how. It is on these lines of use that the city authorities determine, who should own what land, how much and where it should be located. Ownership is regulated through decided upon laws and arrangements just like use is regulated through physical planning and enforcement laws. Any piece of land acquired and developed out of ownership and planning regulatory laws of the respective cities is termed informal. If it is for housing, it gives rise to informal settlement commonly found in the developing countries.

This chapter will be looking at how Informal Settlements have been upgraded once they are accepted as human settlements that have to be in the cities. It will look at what components in terms of planning, ownership (tenure), infrastructure and services have been availed and by whom through case examples. The components in this article will be referred to as packages.

2.2. Informal Settlements

Informal Settlements are defined as residential areas of the urban poor more often in the cities of the developing world. They are found on public, private or customary land accessed by invasion or developed against planning, building and ownership regulations (Abbott, 2001). They lack basic social services and infrastructure facilities. Baken (1991) classifies Informal Settlements as those settlements that:

- Occur due to (un) authorized invasion and development of public and private land,
- Are through subdivision that are not registered officially or subdivisions that do not conform to planning regulations,
- Are within areas covered by customary tenure which have been made part of the city through cities expansion,
- Are built without permits from the local authorities.

Informal Settlements are therefore unauthorised residential areas.

The rise of the urban poor is caused by high migration rate from rural to urban areas in search of job opportunities and better living conditions and natural population growth. The migration process is termed as urbanization (Schmid, 1994). Thus, poverty in the cities has been attributed to rapid urbanization. People are still coming into these cities, children are being born in these cities, because people believe that better life lies in front of them. But many of these cases are being cheated and many continue to be cheated (Hall, 2000).

According to Srivinas (2000), the cities are not prepared for the high magnitude of growth nor do they in reality have the jobs and facilities. The migrants find themselves with no or low paying jobs and with no affordable shelter. This leads to squatting on available vacant government, private or customary owned land. The squatted areas are called squatter settlements. Natural population growth, unavailability of land and affordable housing lead to densification and over utilization of facilities in once planned areas giving rise to slums (Cities Alliance: Upgrading Urban communities, 2001). Slums are highly congested urban settlements. Slums form the Informal Settlements in the cities dealt in some of the upgrading projects.

Migration to cities according to Hall (2000) is due to several factors that differ from country to country. He identified industrialization as one contributor in the 20th and 21st century. Transport revolution is another contributing factor in that people are able to move from the rural areas to the cities far easier and cheaply than before. On the other hand, political transformation in the developing countries has opened hitherto restricted urban areas to all (Jere, 1984). The political transformation is in the former colonised countries where the colonisers restricted the locals from entering and residing in urban areas. This was the case with colonies under the British rule. However, Urban growth has brought sharp rise in urban poverty with half of the world's poor living in the cities (Hall, 2000) and in the Informal Settlements.

To review Informal Settlements upgrading packages, short sub-headings will be introduced to help in understanding the process Informal Settlements have undergone. Specific upgrading cases that have taken place, the actors and the upgrading components involved will be reviewed. One of the documented methodology of carrying out an upgrading project is found in Payne's Urban project Manual (1983). Critical review of upgrading packages in comparison with what Payne recommends will be done.

2.3.   Spatial planning in cities

Land use in the urban areas is regulated through site planning. Planning determines what should take place and where (Van Lier, 1994). Spatial planning (physical planning) mainly aims at economic use of land, orderly settlements and permanent safeguarding and maintenance of physical environment. Spatial planning covers all activities of man in its spatial aspect (Schmid, 1994) This is what professionals in planning wish to fulfil through zoning plans, master plans and land use plans. Formal city has a development sequence as per planning and building regulations. The sequence as Baross (1990) puts it is; planning, service provision, building and occupation (PSBO).

However, implementation of plans has not been easy as seen through the phenomenon of informal settlement. The aspect of economy to land means that land goes to its most profitable use while zoning limits some activities to certain areas. Cost limits the poor from accessing land for housing. High rents

in the public and private sectors makes developed houses unaffordable. Access to land for housing by the poor is through invasion of public and private land and construction of unauthorized houses. The process of development in the Informal Settlements is by occupation, building, servicing and planning last (OBSP) (Baross, 1990).

2.4. Tenure

Payne (2002) defines tenure as the mode by which land is held or owned, the set of relationships among people concerning land or its product. He adds that tenure as a concept is difficult for it incorporates several meanings and situations for example, cultural, historical, legal and economic associations that affect peoples perceptions and behavior. In cities, tenure is guaranteed by registration of rights of ownership. Right to land can also be determined by customs (Dale and McLaughlin, 2000). Squatters settle on land without right or title. The component of tenure and its security is said to be important in house improvement (Habitat, 2001). According to Angel (1983), people left on their own gradually improve their shelter. They invest considerable amounts of energy and ingenuity on the construction and improvement of their housing. The improvement can only be done if there is tenure security and no fear of eviction.

For the urban poor the right to use land may be more important than the legal ownership (Baross 1983), resulting in forceful occupation of unoccupied land, rental arrangements and buying through unapproved subdivisions. (Dale and McLaughlin, 2000). As Dale (2000) points out, use rights may entitle the occupier to some or all the profits that arise from using the property. Statutory framework regulate the formal city, de facto rules regulate Informal Settlements, concludes Angel (1983). Informal rights exist in the community in the form of agreement amongst members as to where and how each can exercise the given rights. The social basis of informal ownership is often clearly defined (Dale 2000)

2.5. Historical Aspects of Informal Settlements

As noted before, Informal Settlements are as a result of various reasons. In most developing countries they have a historical aspect dating from the colonial period. Cities by then were exclusively for the colonizers. The locals were allowed in for the services they could offer and were housed in certain localities with no free means of acquiring land. With independence, the flow of locals to the cities was and has been too large for services planned for a small number of people (Jere 1984).

Besides the above, rural poverty and opportunity differences have contributed to mass movements from rural to urban areas. There are other factors like influx of refugees common in Africa and some Asian countries, natural calamities associated mainly with weather and economies that do not seem to improve (Hall and Pfeiffer, 2000). Poverty as noted by the World Bank (1996) is a real challenge in the 21st century. The urban poor have resulted to living in the Informal Settlements where they build their houses with their own hands with no title or official permission and depend on informal economy (Hall and Pfeiffer, 2000). The unofficial occupation makes them lack support from authorities for the provision of basic social services and infrastructure. The official reaction was originally eviction and clearance of Informal Settlements.

2.5.1. Eviction

In the very beginning, government's reaction was to evict and destroy the settlements. Laws supported evictions. The dwellings being on private and public land and others on physically unsuitable areas

helped to enforce the laws. Eviction however, has not succeeded as Informal Settlements have continued to increase in number and size from country to country and have ended up housing the majority of the urban dwellers. Besides the urban poor have through time consolidated their resources and number and tried on their own to improve their dwellings (World Bank, 1996). Though evictions still occur in a number of countries, other alternatives had to be sought.

2.5.2.   Housing programs

Some governments started housing programs to replace the earlier programs of slum clearance. Mass housing on the other hand requires resources in terms of funds and skills. This is in short supply in developing countries and most of them are said not to have had housing policies, which contain clear and effective measures to deal with major housing constraints (Payne, 1984). It is also noted that most governments cannot afford to house large number of the urban poor. Present level of public investment in housing is inadequate in relation to demand and private housing agencies are building very slowly (Shah; 1984 and Acquaye and Asiama, 1986). In any case the programs by most governments targets the public employees and not the informal employed persons who cannot afford the rent.

2.5.3.   Sites and service schemes

The urban poor have never stopped the struggle for housing. With or without services the settlements have continued to spread and the density in them has increased. From being initially dwelling units for owner-occupiers they have become commercialised for rental purposes (Amis, 1984; Okpala, 1999). With self-help groups, community organizations and Non Governmental Organizations (NGOs) some have acquired a level of improvement leading to recognition by the government officials.

It is in recognition of these efforts to house one-self that the governments and World Bank came up with the sites and services schemes. Hall and Pfeifer (2000) rightly put it that the poor have built their own city, without any reference whatsoever to the whole bureaucratic apparatus of planning and control in the formal city next door, and they are rightly proud of what they have achieved.

Sites and service are meant to provide the low-income groups with serviced plots that have tenure security, which they should develop on their own with their own resources or soft loans from governments. The location of the sites is on the other hand discouraging for it means having them on the city peripheries far from job locations. The standards of expected development is still beyond the means of the poor and they end up not with the target group but with government employees' and those with regular incomes. Alongside site and services, the World Bank further noticed the advantages of having on site improvement by availing those basic services that Informal Settlements lack. This new shift is referred to as upgrading and often is carried out at the same time with sites and service schemes when World Bank is the sponsor of the project.

2.5.4.   Upgrading

According to World Bank (1996), upgrading at its most basic level involves improving the physical environment of the slums and squatter settlements. This includes improving and installation of basic infrastructure like water, sanitation, waste collection, access roads, footpaths, storm water drainage, lighting, public telephones and land regularization among other things. The Cities Alliance (2002) put it slightly differently by saying that upgrading consists of physical, social economic, organizational and environmental improvements undertaken cooperatively and locally among citizens, community groups, and local authorities to ensure improvements in quality of life for individuals. To Abbott

(2000) it is the improvement of the settlements ensuring minimal relocation of the residents. What is emphasized through these definitions is the on site improvement by provision of basic services and through the participation of the residents.

Informal settlers have accessed land and build their houses on their own. With the help of self-help groups and NGOS, they have acquired some basic services. The issue of what to provide in an upgrading project so as to improve the living condition of the residents and to give the settlements a legal outfit becomes the main question.

There are those services, however, that individuals cannot afford to do on their own outside the formal government set up (Payne and Davidson, 1983) These include expensive undertakings like building roads, schools, legal tenure and planning among other things. These are the ones that the World Bank aims to meet in housing projects.

Informal settlers have incrementally been improving their dwellings and the environmental state of the general settlements for a long time (Silas, 1984). Settlers organize themselves along Church bodies and other small area groups for this purpose (Abbott, 1996). To find out how successful upgrading has been it requires looking at some specific upgrading cases. The packages offered are in terms of tenure, physical site planning, social services and infrastructure provision.

2.6.   Upgrading packages and case examples

2.6.1.   The Kampung Improvement Programme (KIP) in Indonesia.

Jakarta and Surabaya are some of the cities in Indonesia where upgrading has been done. Within the boundaries of the cities are rural villages that are neither squatter settlements nor slums by official definition. These villages lack the necessary social basic facilities and infrastructure that should be provided by the city authorities. Through urban planning a number of villages are grouped together to what is referred to as Kampung. The Kampungs are subjected to development by laws. (Silas, 1984).

Up to 1975, Indonesia had not established a national housing organization. Provision of housing was by individual families and mostly for owner-occupier. Two types of right to land exist. The customary and the western-based type. The customary right of tenure allows people to rent out land from a landlord and build a house for own occupation or for commercial purpose. Hence a difference exists between land tenure and house tenure among Kampung members. Any upgrading project intending to offer legal statutory tenure then faces the complications of defining ownership and dealing with several interest groups. Upgrading of these villages was introduced through the Kampung Improvement Programme (KIP). The KIP projects have no tenure component.

Jakarta is the capital city of Indonesia. It has a more thriving economy than Surabaya and attracts a high number of migrants due to job opportunities. Its growth rate as of 1984 stood at 3.99% (Silas 1984). Its good financial state enabled the council to undertake improvement of infrastructure in the Kampungs as part of the development program. This was by improving access roads and public health facilities. The council had a boost from the central government and by 1974 when World Bank got involved in the projects, an estimated 1.2 million people had benefited from improved infrastructure. Additional funding by the bank led to expansion of the upgrading.

The Jakarta approach to upgrading is the formal top down type with little participation from the residents. This reflects the financial stability of the authorities, hence the capacity to dictate projects and to carry them out. The top down approach favors the workings of the World Bank, which prefers sectoral-based type of funding and project identification. (Project planning, formulation and funding lecture notes, 2002).

Surabaya on the other hand, had a growth rate of 2.93% by 1984 (Silas, 1984) and is a relatively poor city with most of the residents engaged in the informal sector. Improvements of the Kampungs dates back to 1924 with the famous sewerage and storm water drain system. Contribution from official authorities is not noted and the success lays in the residents' participation in approving the type of work to be done, carrying out the actual activities and contributing funds. This further led to more systematic improvements on roads and footpaths. Surabaya had a bottom up approach, which was adopted by donors by 1976 to facilitate expansion to several aspects of social services and infrastructure.

The tenure component is not included in the two cities' upgrading. However, there are differences in approach and actors. The KIP aimed at improving urban infrastructure and social services.

2.6.2. Upgrading of Gecekondus in Ankara city of Turkey

Gecekondus is the name given to Informal Settlements in Turkey. It means built over night (Tokman, 1984). Ankara is the capital of Turkey. It has a high proportion of unauthorized settlements that house about 51% of the city's population. The growth of Informal Settlements has several causes:
- Migration as a result of social economic and regional imbalances.
- Good road transport that favour access for settlements spread in the periphery.
- Multiparty government system, with more people participating on political decisions and less pressure on eviction and development control.
- Shortage of housing. Housing is supposed to be provided by the municipality but usually the demand has always been far greater than the supply. Tokman (1984) says that the housing policy was aimed at the government employees and not the low-income groups.

Official demolition of developments without titles in early days was common. In 1924, a demolition law was passed but implementation was difficult due to lengthy court procedure. So the settlements continued to grow. The start of Informal Settlements in Ankara is aided by politicians who support land invasion, illegal sub-divisions and later the lobbying for the provision of services and regularization of properties..

Upgrading in Ankara has tenure security as a major component, and rallying behind political powers to get titles is common. Services are supposed to be connected by the municipality and the voting power of the settlements play a great role in having the needed services. Authorities have over time tried to improve the living standards by site and service schemes targeting those people on marginal lands and by enacting laws to facilitate registration of prior unauthorized sub-divisions. Public participation is through organizing groups for political lobbying, approval of layout plans for relocation and infrastructure development. The actors are residents, local community leaders, politicians, and municipality.

2.6.3. Ismailia upgrading project in Egypt

Ismailia is a city in Egypt that was rebuild after the Israel conflicts in 1967-1974 Arab.
Generally, public housing by the government mainly targets the civil servants and accounts for about 20% of the housing stock in the city (Davidson, 1984). Individual family housing and the private sector house development contribute in the provision of housing to the city residents.

Access to land is determined by the availability and the cost. Majority of the private sector prefers land from the formal areas acquired through unapproved sub- divisions. Though officially illegal, it offers some form of security. Land in these sections is very expensive and so is the construction that is dominated by flats. The owners are high-income groups.

Low-income groups access land by invading vacant government land and occupying marginal desert lands. Informal Settlements built in these areas have low quality houses and lack in basic social and infrastructure services. Informal Settlements form 50% of the housing stock in the city (Davidson, 1984).

Upgrading in Ismalia was introduced through a demonstration project. The aim was to find out the best approach to upgrading. Payne (1983) however notes that there is no one best approach as conditions differ from one area to another. The Egyptian Government in partnership with the British Government sponsored the project. The dominant factor in the settlements was unapproved subdivision thus affecting planning and tenure issues and provision and improvement of basic service.

The upgrading project therefore incorporated physical planning, tenure, and provision of infrastructure and social services as packages. The outstanding aspect of this project is the nature of detailed preliminary studies involved to determine people's needs, social economic data and the role and extent of public participation. This kind of approach may not be possible where funds are limited and time is a factor especially in the settlements that are very dynamic. Besides, with all the participation and people's choice of affordable houses, the government's involvement meant insistence on some standards beyond the reach of the common poor (Payne, 1983).

It can then be said that wherever the government is involved tenure component is a priority and standard of planning maters unlike where residents with the help of NGOs work on basic affordable services and infrastructure.

2.6.4. Upgrading project in Lusaka, Zambia

Migration from rural areas to urban centres after independence in Zambia resulted in the government's inability to provide adequate housing. This led to growth of Informal Settlements in Lusaka the capital city. The growth of Informal Settlements increased in such way that by 1972 the government recognized the need of upgrading the existing settlements by giving legal tenure and providing basic service and infrastructure. Tenure process was facilitated by the government's involvement as stipulated in the Second National Development Plan of 1972-76 (Jere, 1984). Having a housing policy allowed the entry of the World Bank that funded the upgrading and the site and service schemes that went hand in hand with the onsite upgrading.

The major packages in Lusaka Informal Settlements upgrading were tenure, planning and infrastructure. Households were to improve their houses incrementally with loans or own funds. Participation in planning, decision-making and implementation of the projects by the beneficiaries was important.

2.6.5. Tondo urban Development Project in Manila-Philippines

Tondo upgrading program is an example of participatory upgrading where tenure component is assured along side provision of basic services. The project was started as an alternative to unsuccessful resettlement programs by the government.

The aim was to have less disruptive projects that were to cost less than "low cost" homes provided in resettlement areas. With tenure security and basic infrastructure provided for, the residents were expected to gradually over time build and improve their own homes. The World Bank funded this project. Despite the long period of nine years it took instead of the expected four years, it is considered a success. It is an appreciation on the incremental role of own house development/improvement under enabling environment especially when the public facilities in terms of infrastructure are brought close to the people (Mit, 2000).

2.7. Overview on upgrading packages

Available literature is very rich on informal settlement upgrading projects. The most interesting aspect about upgrading is the knowledge that it has evolved out of recognition of the poor's own capacity to house themselves against all odds. It also narrows down to authorities accepting that they are incapable of housing the large population in the cities with limited resources available at their disposal. This chapter has tried to trace the development of Informal Settlements from a historical point to the current debate of upgrading.

Though upgrading is a methodology derived from peoples' capacity of improving own shelter and settlements this chapter has traced several actors. The actors differ depending on the upgrading packages introduced in a project. Baross (1990) puts the difference between the formal city and the informal on the development process. The formal starts with planning, servicing building and occupation with a guaranteed secure legal tenure. The informal starts with occupation, building, servicing and then planning with no secure legal tenure guaranteed. Upgrading packages are addressed in the form of physical planning, servicing and secure tenure that lack in the Informal Settlements.

2.7.1. Planning as a package

From the cases given in this chapter, it can be concluded that upgrading packages depend on the actors playing the major role in projects. The only common package is the physical planning. However, the extent of planning is also dependent on actors. Where NGOs and local community are the main actors, planning package is limited to people's identification of their immediate needs and their capacity to meet the needs. When donors and governments are involved, physical site planning is at a higher level with master plans and standards of some kind. This clearly comes out in the Ismalia upgrading project.

2.7.2. Tenure package

Provision of legal tenure in upgrading projects stems from believing that poverty and housing condition can be addressed through legal ownership of property. It is supported by the World Bank and by respective governments whose excuse of not giving services to informal settlers is based on their ille-

gal occupation of land. Almost all projects funded by the World Bank, therefore have a tenure component and so are the projects by governments.

2.7.3. Basic Social Services and Infrastructure

In all the upgrading projects whether from a local perspective or by external actors, the main concern is the availability of basic services. At local level with the help of the NGOs and through community based self-help groups provision of clean water is an identified need together with basic health facilities. Appearance of external funds however widens the scope of needs that can be met at ago. Theses include provision of infrastructure like roads, electricity, drainage systems, schools and hospitals among other things that are beyond the informal settlers' meagre resources. All projects have these components though at different levels.

Payne and Davidson (1983) in "Urban Projects Manual" note that the responsibility of the government should be to all the residents. This has not been the case especially in the illegal housing areas of the poor. Through a demonstration project in Ismalia, they looked at how upgrading should be carried out with a feasibility study, detailed study, developing project options, detailed development proposals and finally project implementation.

This type of upgrading is basically academic in that it goes through formal project phases of feasibility study, main study, identification of beneficiaries, funding agents, and identification of actors. It recommends adequate preparation in terms of feasibility study and site planning in conjunction with the target group is vital if sustainable upgrading is to be realised.

However, this kind of upgrading process can only apply to projects by donor actors. The danger lies in the projects being too professional oriented, expensive and time consuming against the philosophy of adapting to peoples initiative to improve their dwellings and physical condition incrementally. For local NGOs and self-help groups the manual on upgrading is only realistic on the role of participation and the identification of needs and affordable standards of services against imposed standards by officials.

2.8. Conclusion

Third world cities are characterised by rapid urbanization, general poverty and housing policies that keep low -income from residing in the formal parts of the of city. However, the large number of low-income earners and the inability of governments to provide ready affordable housing or serviced land has led to a policy change towards the acceptance of Informal Settlements as part of the city.

Policy makers now appreciate the role played by informal settlers in provision of housing and their 'own initiatives and efforts' to improve housing and services that are hitherto unavailable through formal means. In this recognition upgrading of Informal Settlements was initiated with the aim of improving the settlements living conditions by providing basic social services, infrastructure, site planning and provision of legal tenure. The assumption is that if governments provide those services that individuals cannot have on their own, people's efforts and little income will be concentrated on improving the houses. The government and the people share the responsibility of improving and providing shelter.

Upgrading involves the provision of those services that make the Informal Settlements different from the formal parts of the city. Planning and provision of basic facilities though at different levels and standards is common in all projects. Tenure security is only on those schemes funded by the World Bank and respective governments, for it is a complex exercise that requires institutional backing. Tenure provision is mainly in settlements on government land or when clear policies on land acquisition and housing are enacted as in Zambia and Turkey. Upgrading success depends on people's participation. In most government driven projects, the role of participation is limited to acceptance of physical layouts while on NGOs driven projects, participation could range from identification of project, physical planning of the site to implementation.

Since upgrading is born out of what informal settlers have been doing on their own for survival, it should driven by informal settlers irrespective of the interveners to avoid exaggerated needs, standards and expenses. Upgrading should actually be as incremental as the settlers' efforts to acquire land and consequent development have been. Thus the packages involved should be determined by the settlers and not dictated to them. Authorities should as a matter of priority, revisit those policies and laws that lender settlements informal and make them as accommodating as possible to the needs and means of the low-income groups.

3. BACKGROUND TO THE STUDY AREA

3.1. Introduction

This chapter gives an insight to the study area. A broad overview of the location and urbanization process that has given rise to Informal Settlements in Blantyre City will be presented. Land administration issues, the status of land within the city; along side the major actors will be viewed against the current Malawi land policy. It will finally present the two study settlements namely Ndirande and Chirimba from a historical perspective, house development trends, accessibility to basic essential services and the availability of Public Spaces.

3.2. Location

Malawi formerly known as Nyasaland is a long and narrow landlocked country in the south-eastern Africa. It is bordered by Tanzania to north and northeast, Mozambique to the east, south and southwest and Zambia to the west (see map 3-1 below). The country covers 118,480 square kilometres of land of which 20 % is water bodies. The country population in 1998 was approximately 9.8 million with an average growth rate of 1.9 % per annum (NSO, 1998).

Map 3-1 Location of Malawi and Blantyre City

Source:http://www.infoplease.com/ce6/world/A085941.html 11/9/2002.

Blantyre City is situated in the southern part of Malawi with an area of 228 square kilometres. It has a history dating back to the time of explorer Dr. David Livingston in 1876 and a population estimated to be 520,000 as of 1999 (Blantyre City Assembly, 1999). Blantyre is older than most of the cities South of Sahara region (Stockholm Partnerships, 08/11/2002). Being the commercial and industrial capital, it is connected to other parts of the country and neighbouring countries by a communication and trans-

portation network. Its early history and development has made Blantyre one of the fastest growing cities in Malawi.

3.3. Rapid urbanization

Malawi is among the world's least developed countries, with most of the population involved in subsistence agriculture in the rural areas (Infoplease, 2002). It has four main urban centres: Blantyre, Lilongwe, Zomba and Mzuzu in order of size. Of the national total population, 15 % reside in urban centres with Blantyre having the highest rate of urbanization of 8.5 % against a national growth rate of 4 % (Blantyre City Assembly, 1999).

The National Statistics Office and estimates from City Assembly give the population figures as being 16,000 in 1947,109,000 in 1966, 219, 000 in 1977, 332, 000 in 1887, 478, 000 in 1998 and 520,000 by 1999 (Blantyre City Assembly Structure plan, 1999) as well illustrated in figure 3.1.Even though other centres have been absorbing population, it is evident that, in each 10 year period Blantyre has had to cater for more than 100,000 persons. The urbanization process is well understood when a comparison of the growth trends of the four major cities is made
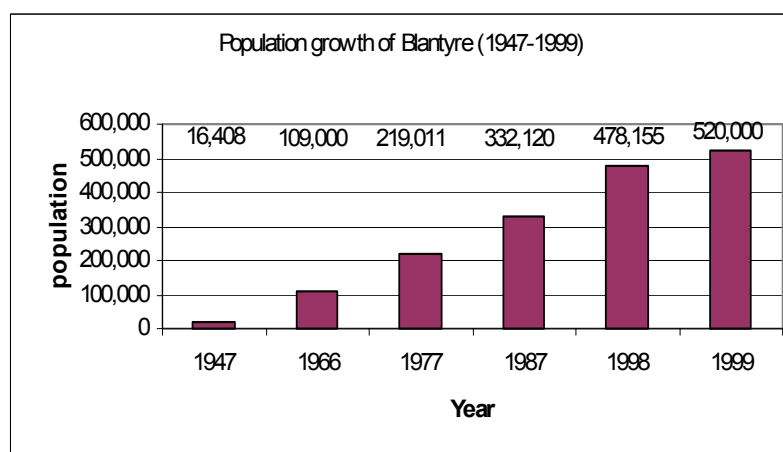
Figure 3.1 Population Growth of Blantyre City 1947 to 1999

Blantyre has competed equally with Lilongwe in the last 30 years. Although Blantyre is the commercial and industrial centre, Lilongwe is a capital city where most of the governments offices are situated and hence an employments centre.

Mzuzu, which is located on the central northern part of the country, absorbs migrants from the northern part. This is reflected by the gradual growth it has witnessed over the years. Zomba, which a former capital of the nation, has had a slower growth maybe due to the relocation of the capital to Lilongwe and its close proximity to Blantyre. Table 3-1 below shows the population growth of the four main cities in the last 30 years.

Name of the city.	1966 population	1987 population	1998 population
Blantrye	106,640	331,590	502,050
Lilongwe	45,380	233,980	440,470
Zomba	19,670	42,880	65,920
Mzuzu	*8,490*	*44,240*	*86,980*

Table 3-1 Population of Malawi's main cities

Source. National Statistical Office (NSO) Report, 1987 and 1998.

Since majority of migrants are from rural areas, they come with needs that demand immediate attention like income generating opportunities, housing, medical care, sanitation, and transport among other services. The respective city authorities have failed to meet these needs that include ready housing or serviced land for individual house developments. Blantyre city has had its share of these problems arising from rural migration and natural growth that has led to growth of unplanned settlements, lacking in basic services and infrastructure as elaborated in section below.

3.4. Rise of Informal Settlements

Malawi has an agricultural based economy. The exploits from agriculture have not been extensive for much of it is subsistence farming. Besides, this kind of farming is weather dependent hence the nature of poverty in the rural areas. The little manufacturing and service economy is dominantly in the cities. Poverty in rural areas and employment opportunities in urban centres have led over the years to rural-urban migration. This has led to demand for housing that can be viewed better from a historical perspective.

During the colonial era, housing in Blantyre was no problem for the government-controlled migration. Each employer was to provide housing for his servants within his compound (Chilowa, 1999). For other low-income workers, the villages surrounding the city acted as alternative housing areas with the traditional chiefs then, offering land for housing use. Informal Settlements in this case are areas developed with no development control by virtue of not being planned. Map 3-2 below shows the spread of Informal Settlements in Blantyre City.

With independence, in early 60's the city was opened up for job seekers. The situation in the rural areas was already desperate with low farm incomes, lack of infrastructure, low education and poor living conditions that became strong push factors. This has resulted in less supply of housing units, pragmatic housing policies, and uncoordinated supply of basic services and infrastructure.
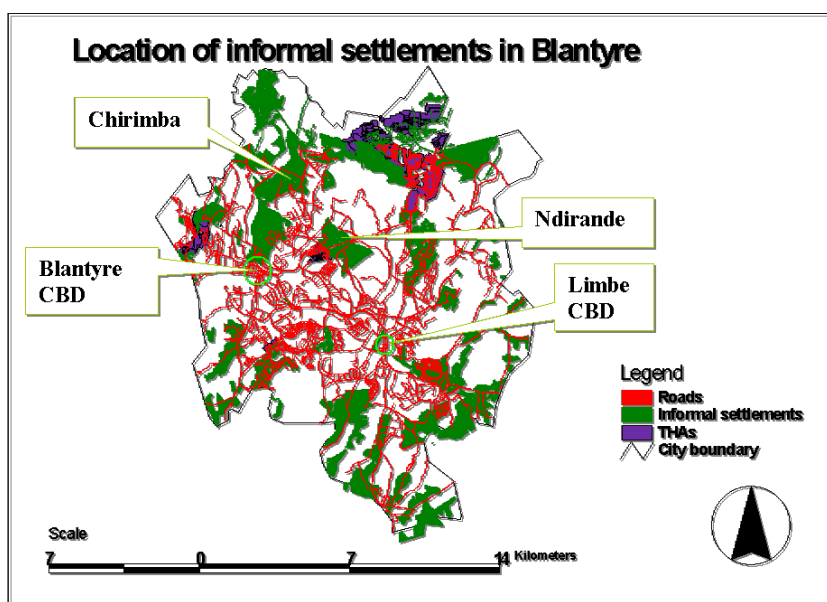
Map 3-2 Location of Informal Settlements in Blantyre

Source: Blantyre City Assembly Urban Structure plan, 1999.

3.4.1. Short supply of housing and serviced land

The provision of housing and serviced land has been inadequate especially since the 1980s.The need for proper housing in 1977 was 16,015 whereas in 1999 it was 63,380 (See table3-2). People resulted into finding land for housing on their own through the traditional methods of going to the chiefs leading to unplanned settlement development.

Year	Population in Informal Settlements	Housing demand	Percentage of the urban population in the Informal Settlements
1977	65,660	16,015	44.0
1980	98,900	23,548	43.0
1982	163,000	37,907	54.3
1999	285,210	63,380	55.0

Table 3-2 Housing demand between 1977 and 1999 and population percentages in Informal Settlements.

Source: Blantyre City Assembly, 1999 Background Structure Plan Report

3.4.2. Pragmatic Housing Policy

The Government initiated a pragmatic policy where people were allowed to build their own houses according to their means in what was the equivalent of Site and Service Schemes (THA). These are side by side with the rest of the unplanned settlements and have not met housing demand due to the slow rate they are made available. The cost recovery involved is way above the incomes of the low income groups and generally, they hardly differ from the Informal Settlements.

3.4.3. Uncoordinated management and control of Public Land

Most squatted land is the public cum customary land within the city. This is the case because of split management and control of the public land between Blantyre City Assembly and the chiefs. The chiefs tend to illegally allocate or sell land to the people looking for cheaper land and this conflicts with the City's policies and planning strategies leading to informal settlement development.

3.4.4. Uncoordinated supply of basic services and infrastructure

Planning regulations prohibit coordinated supply of infrastructure in unplanned areas with the hope of discouraging Informal Settlements. Even though this is the case, residents always have a way out in getting basic needs. This is done on the basis of affordability and, shrewdness. Those who can afford approach the utility companies for facilities while the utility companies find most clientele in the informal settlement.

Several authorities in Blantyre control implementation of land policy, land administration and management. This has resulted in uncoordinated services and overlap of roles.

3.5. Land Administration

Growth of urban centres is dependent on availability of land, how that land is used and owned. How this land is administered influences the nature and extent of the urban centres growth. The United Nations defines land administration as "the process of determining, recording, and disseminating information about the ownership, value and use of land when implementing land management policies, Economic Commission for Europe 1996,pg 6". In Blantyre, several actors are involved in land administration issues and policy implementation. The main ones are the City Assembly, the Central Government, Malawi Housing Corporation and the Traditional Leaders.

3.5.1. Blantyre City Assembly

Blantyre was declared a Town council in 1897, becoming the first local authority in the country. In 1956, Blantyre and the near- by Limbe centre were joined to become one township and in 1959 the Township became the Municipality of Blantyre and Limbe. The city body in charge of the municipality is referred to as Blantyre City Assembly.

The first Town Planning Act was introduced in 1948.It gave the local authority the mandate of preparing development plans and ensuring that development was carried out according to the plans (City of Blantyre memo: The New Blantyre Civic Centre pg 2-9). However, in due course the Town and Country Planning Act conferred the task of Physical Planning to the Ministry of Lands, Housing, Physical Planning and Surveys. The role of urban planning in Blantyre therefore rested with the Commissioner of Physical Planning in the Central Government (Blantyre City Assembly Urban Structure plan, 1999).

The responsibility of development control remained (and still is) with the City Assembly. Besides it is responsible for the coordination, maintenance of infrastructure, sanitation and provision of basic services.

In 1992, the Commissioner of Physical planning delegated the planning powers to the City Assembly. (Blantyre City Assembly Urban Structure Plan, 1999). At around the same time, the management of Traditional Housing Areas (THA) was removed from Malawi Housing Corporation to The City As-

sembly. THA refers to areas mainly occupied by low in-come earners with no access to formal housing provision.

There are two types of THA identified in Blantyre. The Planned THA, which are the conventional Site and Service and Upgrading Schemes. These were until 1992 under the management of Malawi Housing Corporation. Within these areas one can get a serviced plot and develop a house using locally available materials so long as the layout plan is respected. One does not have to have a building plan, and building is gradual. In the same areas, constructed houses can be allocated through grants that are gradually recovered.

The other type of THA is the unplanned area, normally termed as "Informal Settlements".

Blantyre City Assembly now faces the difficult task of ensuring that housing is provided to all class of people, that development land is availed in a state compatible with planning requirements, that adequate services and infrastructure are provided and maintained. Though these tasks may be shared out with other governmental bodies, it is directly accountable to the state of the city as the planning authority.

3.5.2.   Malawi Housing Corporation

Malawi Housing Corporation (MHC) was started in 1963(Office of the President Report, 1993) with the objective of developing houses and housing estates. This is achieved through State sponsored projects and government supported private sector projects. The corporation is the main housing provider for the government employees and private organizations, thus being the implementer of the housing policy with quite a substantial amount of land under its control. Over the years, it has developed low, medium and high-density residential areas that include the THAs. These three categories of housing were found not to be accommodating to the large number of low in-come group that was living in the unplanned areas.

With the aim of addressing unplanned and under-serviced residential areas (traditional areas), the government through MHC introduced the Site and Services Schemes, where by land was set aside, planned and basic services provided for within manageable distances. The beneficiaries were expected to build using local materials. Malawi Housing Corporation had the responsibility of developing infrastructure in these areas until 1992 when the City assembly took up this role.

Blantyre as a fast growing city required very active housing provision methods to meet the demand. This was not the case as the demand kept on rising especially from low-income groups. Between 1971 and 1982 the demand rose from a likely manageable number of 512 plots, to a not easily manageable figure of 10,630 plots (Chome, 2002). Between 1984 and 1992 when City Assembly took over, MHC had not developed any THAs plots within Blantyre apart from 300 houses in the intermediate Traditional Housing Areas (ITHA). Table3-3 below shows a summary of serviced plots and house provided by MHC from 1986 to 1993.

Medium density		High density Permanent		ITHAs		THAs
Houses	Plots	Houses	Plots	Houses	Plots	Plots
32	276	218	50	301	0	0

Table 3-3 Number of house and serviced plots availed by MHC, 1986-1993

Source: Office of the President and Cabinet Report, 1993.

3.5.3. Central Government

The central government is the overall body in charge of land administration and land management in the country. It formulates the land policy and delegates the implementation to other bodies. For example, housing provision and plot development is delegated to the MHC while planning is delegated to city authorities.

The government however does provide housing to civil servants and statutory bodies besides allocating land to developers. Provision of infrastructure and services is shared amongst several institutions and statutory bodies.

3.5.4. Traditional Leaders

The historical growth of Blantyre presents a picture of a city that has grown in area and population. Blantyre's growth has led to expansion of boundaries to include hitherto rural villages where customary tenure and traditional authority has been dominant. Through the application of statutory laws, these villages became public land under the administration of the Lands and Valuation Department (Blantyre structure plan, 1999). Officially, they are the high-density residential areas referred to as squatter settlements and/or unplanned THAs.

Although the law prohibits the traditional leaders from exercising their authority on land within municipalities, the de facto management still is under them. All access to land and development decisions in unplanned areas is through the traditional chiefs or village heads. These areas house over 70% of the city's Population (Chilowa, 1996).

In Blantyre City, going by type of residential land use and the management, there are two distinct residential areas categories. 1) The formal areas which include the low, medium, high density and the THAs all managed and serviced by the MHC and Blantyre City Assembly (BCA).
2) The unplanned and semi-rural settlements, which are managed by traditional leaders and supposed to be serviced by BCA.

Table 3-4 indicates the authorities in charge of land issues in the main residential categories in Blantyre and the size of population. The existence of several authorities being in charge of land matters is embedded in the various land tenure systems that are found within the city.

3.6. Land Tenure

In the city of Blantyre, three forms of land ownerships are evident. These are the private land, public land and customary land. These are held under different interests namely, freehold, leasehold and customary interests. Freehold and leasehold confer the statutory right to own and use land. Customary tenure on the other hand confers use rights to beneficiaries.

Settlement Category	Authority in charge of land (de facto)	Authority concerned with services delivery	Population (1999)
Formal planned	MHC	MHC and BCA	169,339
Unplanned (Informal)	Traditional Leaders	BCA	285,210
Semi-rural (Informal)	Traditional Leaders	BCA	64,484

Table 3-4 Main residential categories and the authorities in charge.

Source: Blantyre City Structure Plan, 1999.

3.6.1. Private land

Private land, for the purpose of this study, refers to land held through adjudication of rights by private individuals, companies, incorporated bodies like the Malawi Housing and other institutions. This land is held through freehold or leasehold tenure. This is the formally registered and rateable land over which the City Assembly has planning and development control.

There is however very little control on freehold interests, especially if the holder decides not to develop the land. MHC, one of the major private landholders has freehold interests on all its land. This has led to quite an amount of undeveloped land, in the city, that even the planning authority (BCA) has no access to.

3.6.2. Public land

Public land refers to customary land, which is covered by the planning control Act through the extension of the city boundaries. It also includes land acquired from customary land under clause 27 of land Act and individual plots owned by the Ministry of Lands and used for government purposes.

3.6.3. Customary land

These are the parcels of land within the city that are public land by application of the Town planning Act and supposedly to be currently under the jurisdiction of Blantyre City Assembly but have remained under the de facto management of the traditional leaders (Blantyre City Assembly Urban Structure plan, 1999). The Chief act states that no Chief has control over land within the city boundary without express authority of the respective local authority. The land Acquisition Act demands that land acquired for government use or for planning purposes should be through actual compensation and resettlement of the affected persons. The government while extending city boundaries to rural villages has done no compensation and resettlement to previous owners under the local leaders. This has led to existence of customary controlled land in Blantyre. These customary lands within the city are referred officially as the informal or squatter settlements.

3.7. Land policies

Malawi's government revised land policy was realised for implementation in the year 2002. The policy objective is to promote tenure reforms that guarantee security, instil confidence and fairness in all land transactions. The Ministry of Lands in Malawi is responsible for the overall formulation of the land policy. All other land sector institutions and agencies are to perform their statutory duties in conformity with the Ministry of Lands guidelines.

The planning and development control of land in urban cities remains the responsibilities of the local authorities for formulation as per the structure plans. The policy on the other hand recognizes country

wide the role of traditional leaders. It is however, silent on the working relationships between the traditional leaders and local authorities in urban centres It only recommends for identification and recording for extinguishing of land rights that contravene planning requirements and for clearing third parties interests in planning areas before allocating that land to someone else for development.

As indicated in section 3.4, the spread of Informal Settlements and therefore informal interests is so wide in Blantyre for the implementation of this policy. The policy still proposes to regularize land tenure in the unplanned traditional areas and to provide services and infrastructure. It maintains the old tradition of designated planned areas for low quality housing and for upgrading projects by the local authorities. Planning Act under the implementation of local authorities requires settlements to be planned before development and provision of infrastructures. The policy then does not remove overlap of roles nor does it try to incorporate the initiative of traditional leaders in land management that has seen consistence growth of Informal Settlements over the years.

On the protection of public open spaces the new land policy recommends the registration of all Public Spaces to respective local authorities, community groups, NGOs and agencies that are capable of developing them. To avoid encroachment on these Public Spaces, the policy allows the use of police powers by the planning officers.

Laws and politicians in a country support policies implementation. At times the laws requirements may differ so much from policy statements that the policy becomes difficult to implement. For example, when compensation in an acquired area is not done as required by law, planning and development control in the affected area (as per structure plan) is impossible. In Blantyre land policy requires that no services before planning but the politicians advocate for services to their voters irrespective of policy. This has made policy implementation and development control very difficult and informal growth continues as given in the study settlements.

3.8.   Study Settlements

This research was done in two Informal Settlements in the city of Blantyre, namely Ndirande and Chirimba. Ndirande is the oldest settlement recorded in the history of informal settlement in Malawi. The location of the two settlements is shown on map 2 above.

3.8.1.   Ndirande Informal Settlement

Ndirande Informal Settlement is located to the northeast of Blantyre Central Business District and north of Makata Industrial Area at the foot of Ndirande Mountain on its northern part and the Chirimba Industrial area on the northwest. To the south is Ndirande Ring road, which separates it from the formal high density and Traditional Housing Area. It is three kilometres from Blantyre City Centre. As stated earlier, Ndirande is the largest and oldest informal settlement in the city.

By 1870s when the Scottish Mission came to Blantyre, Ndirande was in existence as a collection of six villages under different Chiefs .It had a larger area than today having lost much of it to city projects. The nearness to the Mission had an impact on Ndirande in that villagers were protected against slave trading practiced chiefs. Besides the Mission introduced work for pay to the residents, which was a new phenomenon (Village Head, Ndirande). In the earlier days it was the availability of work within the mission that attracted people to Ndirande.

Though Ndirande became an urban area, it still retained the traditional authority and practice on land access and ownership. This was never interrupted by the introduction of the Planning Control Act. Today, it is the most densely populated settlement in the country with a population estimated over 85,000 (Blantyre City assembly, 1999).

3.8.2.   Chirimba Informal settlement

Chirimba is part of a continuous chain of Informal Settlements that are to the north of Blantyre central business area. (See map 2). It is neighboured to the north by the Kameza informal settlement with river Chirimba as boundary between them. On the west is Michiru informal settlement and Nyambandwe on the southeast. To south is Mbayani informal settlement. It is about 6 kilometres from the city centre.

Though not much has been written about Chirimba, the residents claim that it had been in existence since early 1940. It had retained a rural setting due to in accessibility from the city and distance. Even though the government established Chirimba industrial centre in the early 1970s, growth still went on at a slow pace until late 1980s when Zalewa road was opened. Zalewa road connected Chirimba to the City and all other Informal Settlements that had been pushing up from the city. Thus Chirimba has retained a rural setting with the traditional authority in charge. The population of the settlement in 1999 was over 15,000 (Blantyre City Assembly Urban Structure Plan, 1999).

No comprehensive demographic and socio economic study is available. When in 1992, the Malawi Housing Corporation handed over the management of traditional areas to City Assembly; Chirimba was left out (Blantyre City Assembly Urban Structure Plan, 1999). This meant that the traditional authority continued to be in charge of land matters and that there was very little interaction with the formal organizations. At first glance, Chirimba resembles any other medium or high-density formal settlement especially viewed from the Zalewa main road due to the investments done on housing and commercial premises by private individuals.

3.8.3.   Public facilities in the study Settlements

In every residential place availability of housing and public facilities in terms of services and infrastructure is important. In any normal situation, physical planning of a residential area is supposed to facilitate the flow and installation of these facilities. Though the governments have moral obligation to provide basic services they have always used lack of planning and formal tenure as an excuse to not providing the services in Informal Settlements. While housing and services is dependant on affordability by intended recipients, the governments have been unable to provide them at affordable rates to the low-income groups. The low-income groups then tend to seek for cheaper housing in the Informal Settlements where development is uncontrolled and gradual.

In unplanned settlements of Blantyre house quality and basic infrastructure are on the basis of affordability however, there are facilities that have a strong communal element like solid waste management, health, roads of access, education, security amongst other services that a government should provide and promote. These are the ones that are in adequate in informal settlement.

3.8.4.   Availability of education and health facilities

Ndirande and Chirimba being Informal Settlements lack adequate educational and health facilities. A good comparison is found in chapter five. The problems range from lack of development and protec-

tion of the available sites, large catchments areas for available services to simply having no facility to cater for different needs.

3.8.5. Refuse Collection

The council in its effort to take services in the unplanned areas placed garbage skips in Ndirande and Chirimba. In Chirimba there is only one skip placed within a school compound but near the public market. It is rarely emptied. In Ndirande the two available skips overflow with garbage and dumping in the rivers is common. This has led to disease outbreaks especially cholera (Environmental profile, 2000).

3.8.6. Access Roads

Ndirande and Chirimba are accessible by National roads, which are maintained by the City assembly and central government. Accessibility is a problem with the inner settlements minor roads. These are hardly graded or maintained.

3.8.7. Community organizations

Community groups exist where a group of people reside together. Their role through the leaders is to identify the residents' needs, mobilise the residents and solicit for funds from government's organizations and NGOs for projects implementation.

Ndirande and Chirimba settlements lacks recorded active community groups activities. Technically, the Community Development Committees (CDC) initiated through central government and expected to be people's representatives exist. These committees are supposed to be a go between the community and the City Assembly.

3.9. Summary

Majority of the residents of Blantyre live in Informal Settlements. The settlements started as villages managed by traditional leaders and have grown out of the proportion that conventional planning could address. Added to this is the inability of the government and its agents to provide planned serviced land or built houses for the ever-increasing urban population. While this is so, the informal sector is catching up on this deficiency by increasingly being a housing provider by rental units. There is a large number housed and claiming de facto ownership of land in Informal Settlements. This complicates official development control by the City assembly.

What cannot be ignored is the need for improved and maintained basic facilities and infrastructure to improve the living conditions in the settlements. These have nothing to do with individual spaces that de facto rights are protecting; it has to do with community space availability, development and protection for continuous flow of public goods. How well this is to be done is the challenge the City Assembly faces in an area where its input has never been felt before.

Accessibility to land for housing in Informal Settlements of Chirimba and Ndirande, the incremental developments done on individuals plots over time, tenure perceptions and the state of public facilities was established through a study as indicated on the following chapter.

4. STUDY METHODOLOGY

4.1. Introduction

This chapter details the research methods that were used to collect primary and secondary data. It briefly presents the criteria that were used to select study settlements and the population sampling process. Variables considered in determining tenure perceptions; the development of individual space and the state of Public Space in Informal Settlements are presented.

4.2. Field Process

The objective of this research is to investigate the evolvement and development of Informal Settlements. This is done in three stages.
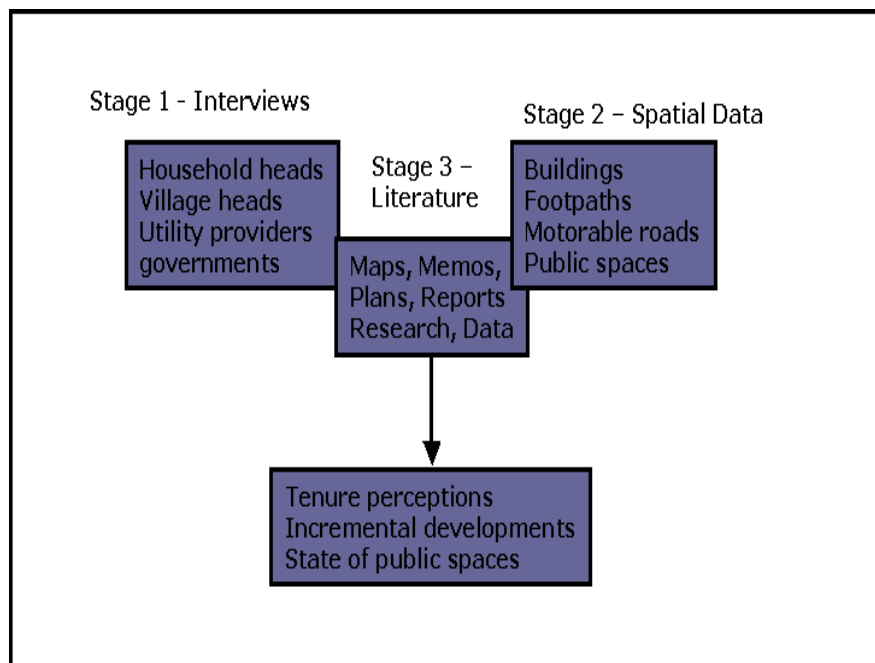
Figure 4.1 Research Field Process

The first is the use of qualitative data to help establish the informal settlers perceptions on tenure and how these perceptions influence the development of the individual's house on the own plot. This will be accomplished by use of non-spatial data collected through interviews on household heads, local leaders, utility providers and government agents.

The second stage involves spatial data analysis using aerial photographs of 1987, 1990 and 1998, to establish the spatial growth of the settlements over time and the state and availability of Public Spaces.

Thirdly, secondary data in form of maps, memos, physical plans reports, available relevant literature on Informal Settlements and other research data will be used to complement the findings of stage one and two. Figure 4.1 above summarizes the stages of field research.

4.3. Selection of study settlements

Informal Settlements have profound differences resulting from their historical background, different development stages and their location. This study was done in two settlements selected to give both cross-section and longitudinal data for the analysis of evolvement and continuous developments.

The objective was to have different settlements in terms of time and location which are subjected to the same official views and policies and replicate common aspects in their development, thus providing a base for generalizing the phenomenon of informality in the municipality.

The two settlements selected are Ndirande and Chirimba. Ndirande, which is the oldest settlement in Blantyre, is closest to the CBD and still remains unplanned with land being administered by village head. Chirimba is further from the CBD and started later than Ndirande and remains unplanned with village head in charge of land matters.

4.3.1. Criteria used for settlement selection

a). Historical background
The people that start a settlement determine who occupy, the mode of accessibility to land, level and pattern of development and service provision. The two settlements selected have the same background of rural villages controlled and administered by traditional leaders.

b). Age of settlement
It is assumed in that age of a settlement will have a bearing on perceived tenure (Payne, 1997) and therefore the consolidation levels, development pattern and service provision. The settlements selected are of different ages as recorded in available literature.

c). Distance to central business district (CBD)
CBD's by being commerce and administration centres attract investments that are commercial and industrial thus offering job opportunities. To determine what other factors may influence the growth of a settlement, the selected settlements are located at different distances from the CBD.

d). Recent Government infrastructure investments
A new development though not targeted on the settlement is expected to have a profound aftermath on the choice and development pattern of an existing settlement. Chirimba, which is one of the selected study settlements, had an industrial centre constructed near by in the early 1970s and later a major road traversed through it in late 1980s.

e). Existence of public facilities
The availability of public facilities like hospitals, schools, roads, recreation spaces among others influence the general pattern of development, the flow of public goods and therefore the choice of a settlement for residential purpose. Though it was difficult to tell the type of facilities available, aerial photographs were used to determine spaces that looked vacant and those that had development other than residential.

f). Utility provision

Essential services like water, electricity and telephone are prohibited by government policy in an attempt to discourage growth of unplanned settlements. The availability of these services against prohibitive policy will determine the development of an area. The two settlements selected are exposed to the same government policy on provision of services but have managed to have access to these services.

4.4. Data sources and method of inquiry

The research questions were answered through the collection of both primary and secondary data. Primary data was done using semi-structured interview with open-ended questions with household, village heads and different officials as shown on table 4-1 below.

Source	Respondent	No. of interviews
Ndirande Settlements	Households	25
	Village heads	1
Chirimba Settlement	Households	25
	Village heads	1
Utility companies officials	Blantyre water board	1
	Electricity supply commission	1
Government officials	City Assembly Roads Engineer	1
	City Assembly Physical Planner	1
	Community Officer	1
	Commissioner of lands	1

Table 4-1 Sources of data and respondents

4.4.1. Household interviews

Preparation and actual undertaking of household interviews was done in phases. These included first the engagement of a research assistance who understood the local dialect and was familiar with the research methods.

The research touched on land and land ownership that is a sensitive issue and required the authority of the local leaders for it to be undertaken. The local leaders are referred to as village heads and were visited by the research team in their residences for permission to work in their settlements. Permission was sought for both pilot interviews and actual interviews. A pilot interview was done in settlements adjacent to the study areas. The purpose was to test the applicability of the questionnaire which was designed with closed and open-ended questions. It was to identify likely problems, obstacles and solutions where necessary.

The pilot was therefore going to test if the research instrument would provide the necessary information to answer the research questions and if there were weakness and omissions. With the large number of questions that were intended to be covered, it was necessary to determine time spent per respondent and the usefulness of coded answers. The material collected in the pilot was evaluated and observations and lessons learned were used to modify the questionnaire to the one shown in Appendix 1.

4.4.2. Sampling

The actual interview was administered to 25 households in each settlement. The time available and the mapping that was later to be done in the analysing stage determined the size of the settlement and the number of interviews. The sampling points from the entire settlement were selected through stratified random sampling. The sampled households' locations are shown in maps 4-1 and 4-2.

The sample size was determined through systematic sampling. Orthophotos of the study area taken in 1990 at a scale of 1:2,500 were acquired. This was divided into segments by drawing grid lines at a distance of 100 meters apart. A 100 meter distance gave a convenient number of points to sample from which were not less or many for the areas under consideration. The intersections points of the grid lines were numbered and the map coordinates were noted down. These coordinates were corrected to reflect the Global Positioning System (GPS) coordinates. From these points, the sample size of 25 was to drawn. Due to the large number of listed points a decision was made to enter into the GPS only co-ordinates of old point numbers (intersections) unless that point seemed to be on a road, river or Public Space. See appendix 2 and 3.

The assumption was that at every recorded intersection there was a dwelling house and if not the next point was considered. Where a dwelling was locked or the head of the household was absent, a next house was selected by use of a clockwise movement at every quarter of an hour position. The respondents were household heads as understood by the people of Malawi and could either be tenants or (structure) owners and it did not matter whether it was a man or woman for as long as they could answer the questions.

The GPS was used to locate the households that fell at entered intersections. The advantages of the use of GPS were:
- It reduced the element of bias in the selection of the sample units as it limited any tendency of picking households that were more accessible or those that could more easily provide the information sought in the questionnaire.
- Made decision making easy on the next sample to be visited.
- Locating the sample unit by giving direction and distance.
- The best part of it is that we never had to explain how we decided on a household.

We only had to tell residents that the machine directed as it had records of all houses within a distance of 100 meters from each other. In a settlement where people are suspicious and very sensitive about their private lives, this method turned out to be the best because it removed any feelings of selections with a motive from the respondents. No question of who referred whom to whom. More so the residents were so excited with the GPS that they gave the information in a relaxed manner. The GPS use set the right mood for the interviews.

4.4.3. Village heads and officials interviews

Focused interviews were done with the village heads. The aim was to seek more insight into issues mentioned during household interviews, cross check information and to collect missing data. Officials from utility companies and government officers were interviewed lastly after preliminary analysis of the field results in order to clarify and confirm issues raised by house heads and village heads. The questionnaires used are in appendix 4,5 and 6.

4.4.4. Spatial data

The development of the settlements over time was analysed from aerial photographs of 1987, 1990 and 1998 for Chirimba and 1990 and 1998 for Ndirande. These were the only ones available at the time of research. The variables considered are shown in figure 4.2 below.
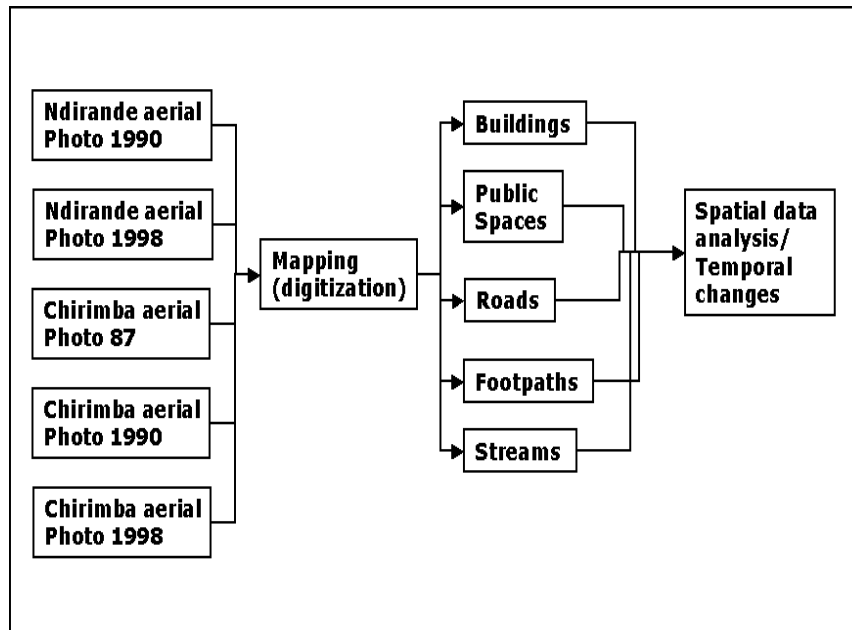
Figure 4.2 Spatial Data Processing

The indicators considered for the perception of tenure included the increase of buildings over time. In an area where tenure perception is low, the spatial growth of the settlement will be lower as people fear being there. Incremental development was determined by the size of the house, quality, improvements done at specific periods and any additional investments in form rental units.

The state and security of Public Spaces was considered through the existence and development level of those that facilitate provision of basic services and infrastructure.

Maps 4-1 and 4-2 show the ground position of households that were interviewed while figure 4-3 on page 38 summarizes the research methodology.
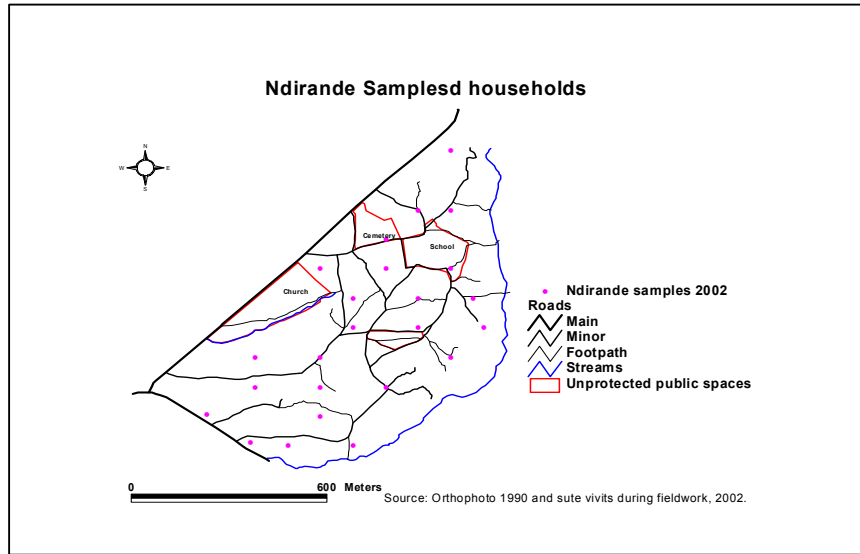
Map 4-1 Ndirande sampled house holds

Source : Field data, September, 2002
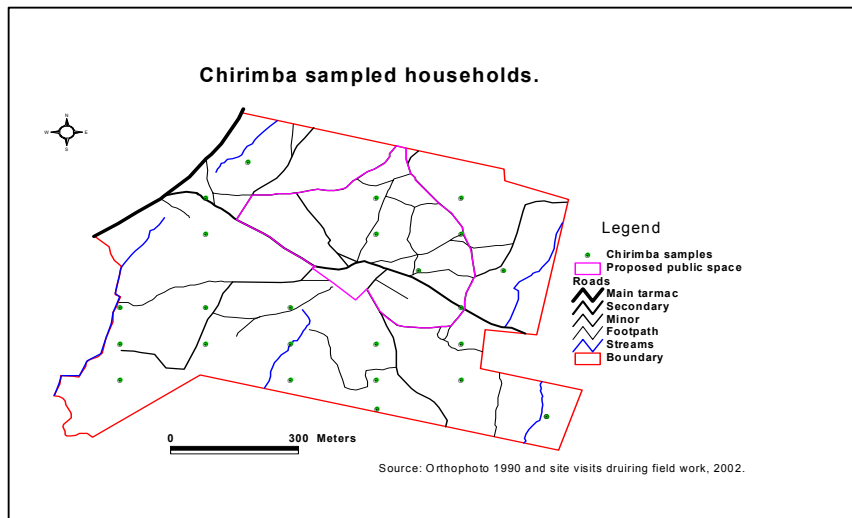
Map 4-2 Chirimba sampled house holds

Source: Field data, September 2002

4.5. Research Methodology: Field
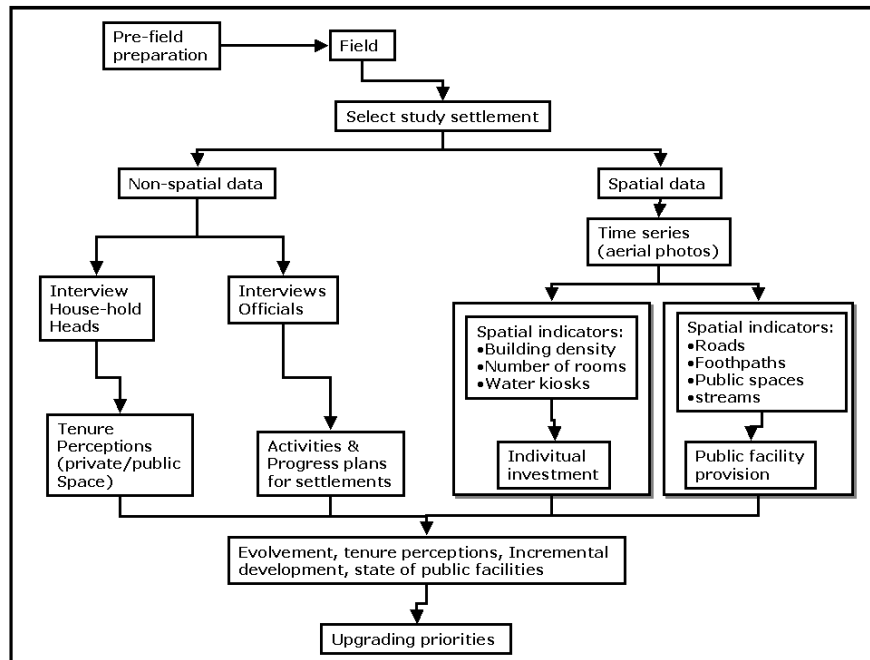
Figure 4.3 Research Methodology

5.   Analysis

5.1.   Introduction

This Chapter presents the findings of the research as undertaken in chapter 4. The non-spatial data analysis shows how land is accessed and gradually developed with necessary infrastructure being connected to households. The spatial data analysis presents the increase of buildings for residential purpose over time, spaces available for public purpose and the developments in these spaces.

5.2.   Land Accessibility and evolvement of Informal Settlements

The government through the ministry of lands officially owns all Land in Malawi. It is the government that decides who owns what, size, purpose, where and how that land is developed (Malawi Land Policy). This is the ideal situation. In its decision on how to share out land to different individuals, companies, organizations and institutions the government has agents like planners, land officers and surveyors. Allocations are therefore to be systematic with planning prior to any development. This method gives two categories of ownership. Private land that is registered to individuals and Public land that is government.

Government is supposed to ensure that urban residents are housed in decent serviced houses. It does this directly, through parastatals mandated to construct houses or by creating an environment conducive to individual private house developments. In Blantyre, like all other cities of Malawi, the government has delegated the housing responsibility to Malawi Housing Corporation (MHC).

MHC however, over the years has not been able to supply housing to all the residents and especially the low-income groups. Its inability is so much that about 67% of Blantyre's population is housed outside the formal MHC areas (Matope, 2000).

While the MHC is not delivering as expected, the government agents responsible for delivery of serviced land to private house developers have not been successfully doing so. It is therefore a situation of lack of ready to occupy houses and lack of planned and or serviced land.

What has been the alternative?

As presented on Chapter three, Blantyre grew in the neighbourhood of existing traditional villages, the nearest being Ndirande. By extension of boundaries it included far ones like Chirimba. These villages headed by traditional leaders with village headmen[1] in every cluster of settlement always had their customs on land distribution. These are the customary areas, unplanned and therefore informal where land for housing is easily accessible without having to follow the planning and development controls. The research established that the people moving into the Informal Settlements are mostly new migrants from the rural areas.

Out of 25 respondents in Ndirande 17 (68%) had come from the rural areas and 19 (76%) were seeking employment. Chirimba had 20 (80%) out of 25 respondents as migrants from rural areas with 19

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[1] The interview respondents often refer to village headmen as chiefs

(76%) having come to search for employment. These are the poor needing cheap housing that is only available in the Informal Settlements.

5.2.1. Access to land for housing in unplanned settlements

4 out of 16 respondents in Ndirande, got land through chief's direct allocation, 7 bought from individuals who owned land while 5 inherited from relatives. (See table 5-1).

Mode of access to land for housing		
Mode	Number of respondents in Ndirande	Number of respondents in Chirimba
Free allocation by chief	4	3
Buying from individual	7	8
Inheritance	5	4
Buying from Chief	0	5
Total	16	20

Table 5-1 Means of acquiring Land

Source: Field data, September 2002.

Ndirande is the oldest settlement and closest to the CBD. The number of respondents that got land from the chief is lower than that of buyers indicating the decrease of available land for free allocations. The settlement has a high number of second and third generations as reflected by the percentage of those who have inherited land.

In Chirimba as shown in table 5-1, of the 20 respondents (who own land and house), 3 got land through normal traditional chief's allocations, 8 bought from other land owners, 4 inherited while 5 indicated that they bought land at market value from the chief.

Land buying from individuals is dominant in Chirimba. Unlike Ndirande, some respondents have bought from the chief against the tradition of free allocation. This could be an indication of erosion of the customary norms and creeping of corruption with the increase of land value. During the interviews with households, respondents reported the area chief's trend of selling public land that was supposed to be under the council for development of schools, market, hospital, police post, and post office.

The chief explained the high occurrence of sale of land in Chirimba as a result of the second generation having to sell land to improve their dwellings. That is the reason they give when they approach the chief for authority to sell a sub-plot of what they have inherited from their parents.

The chief put it this way "the growth of the City and demand for land for housing led to commercialisation of land in Chirimba with sons of the first residents sub-dividing land and selling it to improve their houses (Village head Mwachande)". Both Chirimba and Ndirande chiefs indicated that they now witness more land sales, as there is no more land to be allocated. They however pointed out that sales are more with the buyers than the original allottees. Figure 5.1 shows the means of getting land in both Ndirande and Chirimba presented as percentage of the total respondents in each settlement.
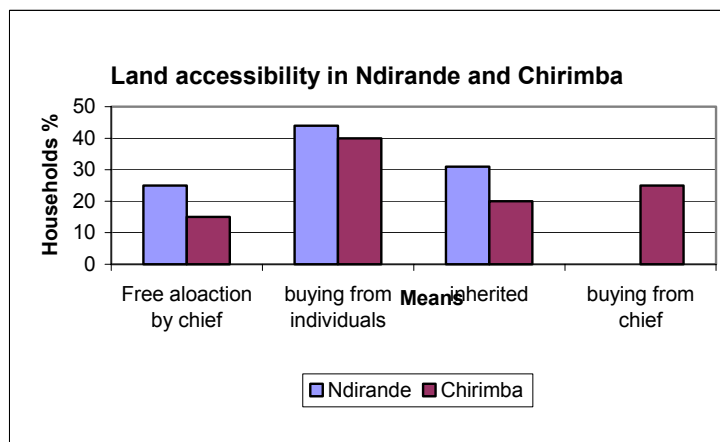
Figure 5.1 Means of acquiring land in Ndirande and Chirimba

Source: Field data, September, 2002.

5.2.2. Interest on Land for housing

From the research it was clear that most people go to the settlements with the intention to own land for development. Table 5-2 shows the percentage and number of the respondents who are owners of their dwelling against those respondents who are tenants. Few respondents indicated the wish of ever moving out of the settlements. The tenants are therefore living in the hope of consolidating their resources to buy land and build own homes. A settlement like Chirimba, which is still more spacious, may attract those willing to buy for own housing.

	Ndirande Settlement		Chirimba Settlement	
Interest	No. of respondents	Percentage	No. of respondents	Percentage
Owner	16	64	20	80
Tenant	9	36	5	20
Total	25	100	25	100

Table 5-2 Interest on Land

5.2.3. Settlements attraction

Further need for ownership is indicated in the choice of settlement for housing. When asked what attracted the respondents to Ndirande settlement, 40 % indicated near work place as the reason with 20 % having considered availability of affordable land (see figure 5.2). In Chirimba, 44% considered the availability of affordable land while 28% considered near work place. This is the opposite of Ndirande and could be explained by the fact that there is still more land for sale in Chirimba than Ndirande.
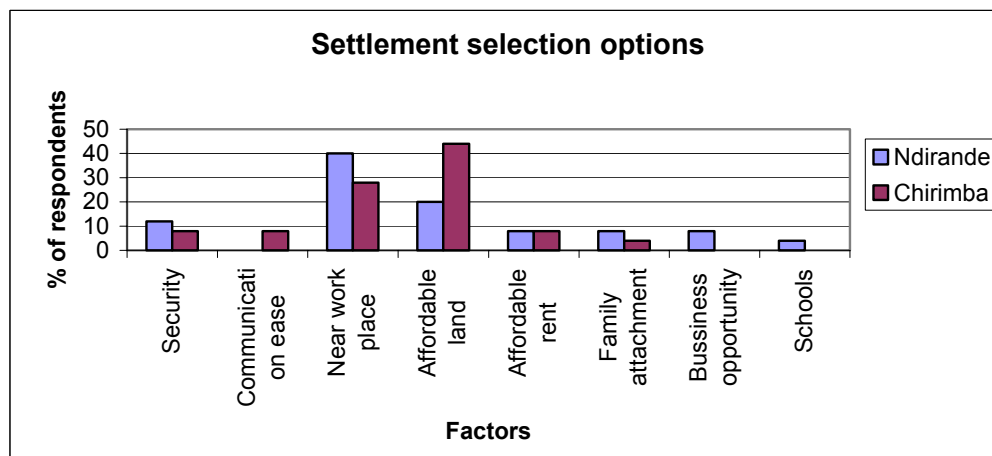
Figure 5.2 Factors considered on settlement choice.

Source: Field data, September 2002.

Although the data collected from households did not bring out the impact on the construction of a trunk road through Chirimba, the Chief pointed out that before the road much of Chirimba was bush and gullies. After the road construction buyers came in and put up some of the best residential houses and commercial enterprises. Chirimba viewed from the main road resembles any medium and high-density formal area due to the quality of developments. The road also led to an increase in land prices and to more land sub-divisions (Village head, Mwachande).

5.2.4.   Status of land at acquisition

Further insight on how people acquire land and how the settlements have continued to grow is provided by information collected on the status of land at acquisition. Of the respondents who own their houses, 62.5 % of Ndirande respondents and 80% of Chirimba got their land as vacant plots. A number of those that acquired land and developments, reported having demolished the old structures they bought to put up new and better houses.

All respondents in both settlements have had a land relationship with the Village Chief. This is during the allocation period or when buying the land. Though in Ndirande, developments from 1995, when multiparty politics came into being have been reported to political party officials, it is optional. Chiefs have to record all developments in the village register for only they hold the right to burial sites (Chome, 2002). Figure 5.3 shows how Informal Settlements evolve from existing traditional villages with the chief allocating land or monitoring new developments through sales or inheritance that ensures security of ownership to new home developers.
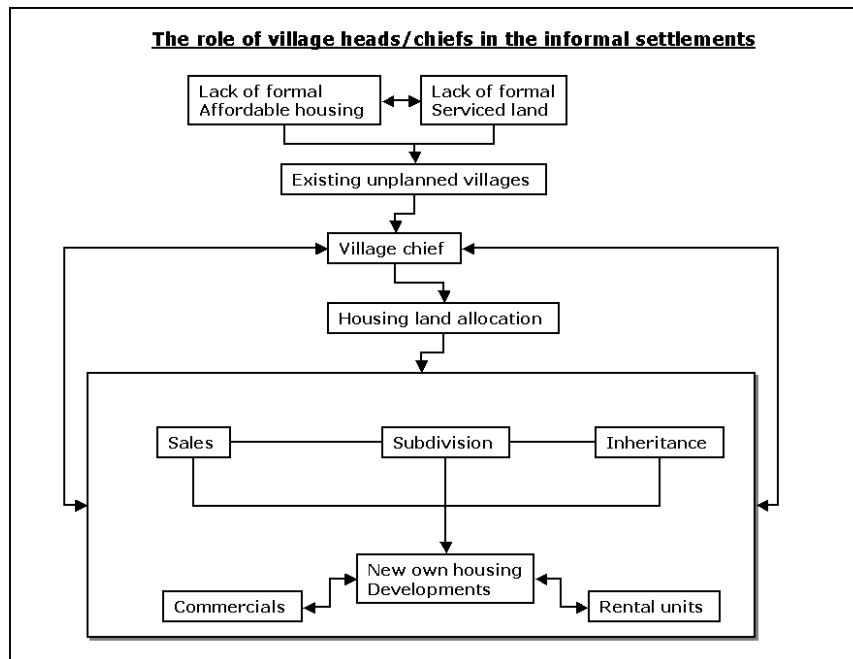
Figure 5.3 Evolvement of Informal Settlements and relationships that exist

5.3.   Tenure security perceptions

Respondents in the two settlements did not express insecurity in the form of ownership they have on land. The reasons they cite for the confidence is the procedures they followed when acquiring land. The village head awareness and one's neighbours are sufficient prove of ownership. They simply could not imagine any government removing them from the settlements nor did they indicate ever wishing the council as a development authority controlling them.

In a later interview with the physical planner, he reported that officials of the council are received with either open hostility or suspicion. Residents are not interested in official intervention in land owner-ship and development. Figure 5.4 shows to which authorities developments are reported.
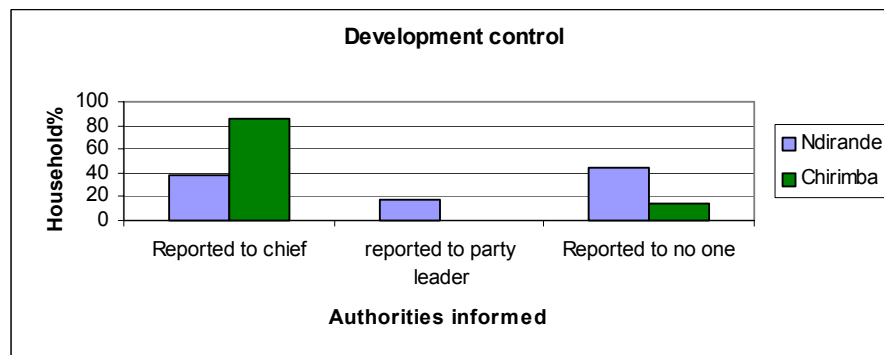
Figure 5.4 Development control in unplanned areas.

The lower number of people reporting development to the chief in Ndirande does not mean that the chief did not know the respondents as property holders. Having gone through the chief to acquire land

respondents saw no reason to further report developments. On the other hand Chirimba shows a higher number of chiefs involvement because of the vibrant land sales.

When questioned on intentions to ever move out of the current settlements the results were as shown on figure 5-5 and 5-6 in the next page. 80% of the respondents in Chirimba indicated no intentions of moving out. The 20% who were uncertain said their stay in Chirimba depended on their jobs. Investments in permanent home were given as an indicator of the wish to remain in the settlement. In Ndirande, 4% of the respondents were certain to move while 28% were uncertain with 68% declaring Ndirande their permanent home.
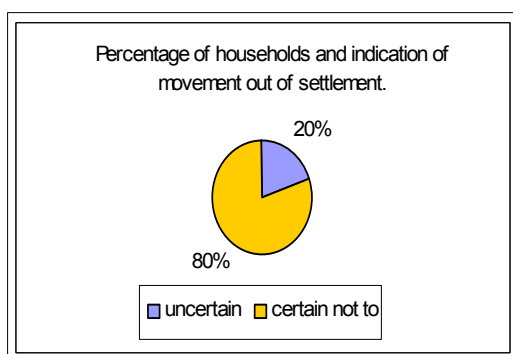
| Figure 5.5 Chirimba's households intentions | Figure 5.6 Ndirande households' intentions |
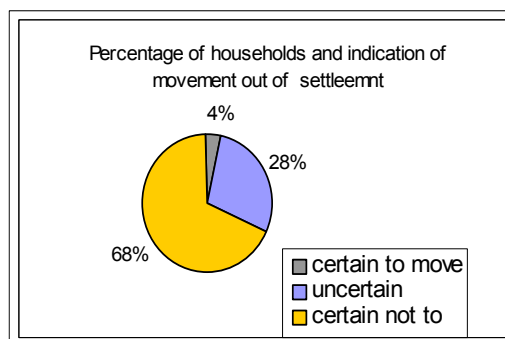
In the two settlements the Chiefs were of the opinion that titling is a luxury of the rich and not a concern of the majority of residents. Chome (2002) reports that though residents in Informal Settlements do not feel insecure without formal titles, those who have invested a lot often seemed to want additional formal tenure security through titling. None of the chiefs indicated having residents question the non-existence of titles nor do people discuss how to get titles. According to the chief the properties are owned in a bidding manner and the government should spend money on provision of basic services rather than in a titling programme.

5.4.   Incremental development

If poor people are left on their own with their own resources, without any threat of eviction, they improve their dwellings overtime (Angel, 1983). This research found out that household development is a continuous exercise. In most cases, a dwelling house is put up and inhabited with some of the finishing not yet done. Building materials could be semi-permanent but later improvements that include getting connected to basic infrastructure such as water and electricity are done. Photograph 5-1I and 5-2 below shows houses that are occupied while improvement and extension are done gradually. Table 5-3 indicates the physical and socio-economic characteristics for Chirimba and Ndirande respondents.

Photo 5.1 Ndirande   Photo 5.2 Chirimba

5.4.1. Improvements on the physical housing structure

From table 5-3 it seems that most houses have their roofs done by iron sheet from the very beginning. This could be so because in an urban set-up thatching grass may be difficult to get. However, there are still houses that were thatch roofed but later got iron sheets roofs. Those without have the owners intending to do so in future.

Item	Number of respondents per aspect	Ndirande	Chirimba
1	Male household heads	15	22
2	Female household heads	10	3
3	Household owner occupiers	16	20
4	Household tenants	9	5
5	Income above K5000	3	15
6	Income below K5000	22	9
7	Formal employment	14	13
8	Informal employment	4	4
9	Self-employment	5	6
10	Temporary employment	2	2
11	Corrugated roof	25	23
12	Grass roof	0	2
13	Burnt bricks wall	7	10
14	Unburnt bricks wall	18	15
15	Cement floor	20	20
16	Earth floor	5	5
17	Kiosks water use	22	16
18	Own tap water connection	3	9
19	Electricity Pit latrines	8	12
20	Pit latrines	25	23

Table 5-3 Physical and socio-economic characteristics for Chirimba and Ndirande

The permanent material for house construction in Malawi is burned bricks. A building with unburnt bricks that later gets its walls plastered is also considered to be a permanent. (Chilowa, 2000). In the two settlements a large number of houses are made of unburnt bricks walls, which explains the big number of respondents intending to improve on wall in the future.

The research found out that most of the houses in the two settlements have cemented floors. (76%of the households interviewed in Chirimba and 80% of those in Ndirande). Improving the floor of the houses was also mentioned as one of the intentions by a number of those whose floors were not yet cemented as indicated in table 5-4.

	No. of houses improved in last 10 years.		Houses intended for improved in next 10 years	
House Characteristics	Chirimba	Ndirande	Chirimba	Ndirande
Roof	3	1	2	1
Wall	2	2	9	6
Floor	4	3	9	5
Additional rooms	3	4	16	9
Electricity connection	6	2	11	4
Water connection	5	1	11	2
Telephone connection	1	0	2	0
Toilets.	2	1	2	1

Table 5-4 House Improvements and intentions

Source: Field data September, 2002.

By having a look at the data on roof, walls and floor, the settlements can be said to be more permanent than one would be expect of Informal Settlements where the poor reside. They differ in no way from those in the THAs (Blantyre City Assembly Urban Structure plan, 1999). Viewed from the main tar-mac road, Chirimba does not look like the conventional picture of informal settlement besides having buildings of different sizes, type, finishing and varying in connection to infrastructure. It is all "on site" incremental development like the chief said, older residents sell their land to improve their houses while new ones start by small houses that are extended with time.

5.4.2. Connection to basic infrastructure

In the last 10 years, a number of households have had electricity and water connection. In the next 10 years, a large number of them intend to have water and electricity especially in Chirimba as the table 5-4 above shows.

The assumption has always been that basic infrastructures like water and electricity may not be in the informal settlement due to existing policy by central Government and City Assembly of no delivery before planning. However, water and electricity were found in a number of households. Out of 25 in-terviewed, 12 used electricity for lighting in Chirimba which 48% of the sample population while in Ndirande was 28%.

What came out of the interview with Electricity Supply Commission of Malawi (ESCOM) was that electricity is supplied to all residents no matter where they are as long as they can afford it. ESCOM is not obliged to follow existing policies of non-supply to unplanned areas as they feel those policies

have been overtaken by time. Most of their potential clients are increasingly in the unplanned settlements. Besides, the composition of the residents in unplanned settlements is such that some of the senior government officers and citizens reside there and cannot be denied services. (See photograph 5-3 and 5-4). Furthermore, the residents use politicians to push their requests when denied as reported by ESCOM official.
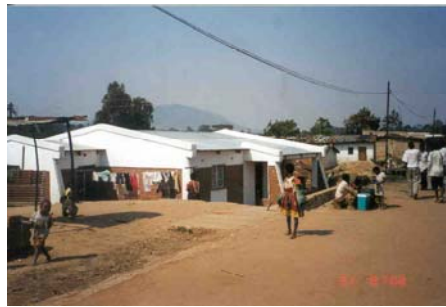
Photo 5.3 Ndirande   **Photo 5.4 Chirimba**

The photographs above show a mixture of house quality in the settlements. The section of Ndirande in photo 5-3 shows electricity lines in the background and modern houses next to temporary ones while in Chirimba modern houses that will later be connected with electricity and water are being put up.

To reach the very poor of the settlers in unplanned settlements, ESCOM has embarked on a pilot scheme in Mbayani whereby electricity is connected to thatch roofed houses made of unburned bricks and could even be of one or two rooms. The wiring system has been simplified to a one-board socket connection. Development control officers from City Assembly physical planning department however, do not view this kind of development favourably. An officer interviewed sees this as a violation of building standards where to him security of the households is compromised in case of a fire while informality is being encouraged.

The Blantyre Water Board (BWB) operates on the basis of the level of income of its clients. Like ESCOM, BWB supplies water on the basis of affordability. But to make sure that they reach all their clients in the unplanned settlements and considering different levels of income, they apply a group 'pooling' policy. In this policy either the individuals, BWB or City Assembly, take water to strategic points in the settlements. It's under this policy that community water kiosks[2] operate. They are considered a cheaper method of supply. Besides, those that can afford private direct lines to their compounds are encouraged to do so.

The field interviews show a wide difference in the improvements done on water supply and the intended ones between Chirimba and Ndirande. In Chirimba, of the 25 interviewed household, 5 had water connected in the last 10 years, 11 expect to connect water in future; while in Ndirande only 1 had water connected and 2 intend to do so. These differences are well shown in table 5-3 and 5-4 above.

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[2] Water Kiosks are communal portable water points constructed with one or more water taps where the public draws water at a price.

In Ndirande, Community water supply is very popular unlike Chirimba. The reasons could be due to community water supply done in Ndirande. In 1999, UNICEF (United Nations Children Education Fund) did a settlement wide construction of water Kiosks. Each water kiosks is 200 metres away from the other giving a very convenient supply that does not necessitate private connection. Respondents in Ndirande wondered why they should spend money on house connections when water was all over and in plenty. In addition to UNICEF, Malawi Social Action Fund (MASAF) a government organization has added more community water kiosks in the area.

In Chirimba, at the time of the interview, only six kiosks were said to be communal with the rest being private. No wonder most residents of Chirimba have tried to have water connected to their homesteads and others still plan to do so. The level of supply of the basic infrastructure influences incremental development by households through prioritising their immediate needs.

In these two settlements developments towards one dwelling unit is continuous and it extends to commercialisation of housing by building rental units. Thus we have tenants and landlords all who have various common needs besides housing. These are the basic social facilities that can hardly be availed by an individual. They include education, health, sewerage, waste collection, security, and access roads among others. These facilities are found in designated Public Spaces.

5.5. Public Space perceptions

The Informal Settlements are being developed and improved overtime. However living standards are still poor especially viewed at a higher level than the household. It is in the availability and development of the most basic public facilities that this poverty is more prominent. Every settlement requires, roads that are motorable, schools, health centres, security through law enforcement, trading centres, play grounds, worship places, burial spaces among others. Basic social services and facilities supplement and compliment individual households efforts.

Frequency of availability and state of Public Spaces.

Type of facility	Chirimba Settlement			Ndirande Settlement		
	Fair state	Poor state	Total	Fair state	Poor state	Total
Public School	3	22	25	12	13	25
Public hospitals	0	25	25	5	20	25
Cemetery	25	0	25	25	0	25
Roads (motorable)	2	23	25	4	21	25
Markets	0	25	25	25	0	25
Religious places	25	0	25	25	0	25
Public play grounds	0	25	25	0	25	25
Public water points	8	17	25	25	0	25

Table 5-5 Perceptions of Public Spaces/Facilities

Source: Field data, September 2002.

Respondents in the settlement were quick in declaring Public Spaces as important or very important. In Chirimba 16 out of 25 find Public Spaces very important while 9 say they are important. Perception on Public Spaces being very important in Ndirande was by 7 and important by18 respondents. Chirimba

chief reported hospital as the place where live in the settlements is taken care off while schools are the future of the settlement. The respondents were requested to give a general view on the condition of facilities, the availability or the quality of service in Public Space. Table 5-5 summarises the results of the interview with households on public facilities. Religious places and cemetery were satisfying but the problem was in the availability and state of hospitals, schools market, roads and play grounds.

5.5.1. Health facilities

From table 5-5 the difference in public facilities investments comes out clearly for the two settlements. In Chirimba there is no single public hospital. The nearest treatment is about 15 kilometres away. In Ndirande, most respondents have low opinion of public health because of the congestion and shortage of drugs (reported in the field). Lack of small health facilities within the settlement, rather than a central hospital that caters for all the Informal Settlements was reported as a problem to health.

5.5.2. Public schools

The state of public schools was reported as poor due to congestion in all the primary schools. The shortage is in both settlements and it is for both under age, primary, secondary and technical institutions. Students in primary schools learn under trees or in the open sky, sitting on the floor and using their laps to place writing material. This was observed in Chirimba in the course of the interviews. This is so even though there is a Public Space big enough for developing both primary and secondary streams. Instead very little development has been done over the years and the chief for other developments is selling the land. Residential houses being used as secondary schools and technical training purposes were observed. In Ndirande students go to class in shifts (reported by respondents).

5.5.3. Public Markets

Both settlements have a council market. Ndirande market is big; well constructed with sheds while in Chirimba every respondent was negative about the state of the market that they say is very congested, with no sheds and gets flooded. A number of businesses are done outside the market on the roadsides extending into the school compound even when the outside learning is on session.

5.5.4. Roads of access

The state of the roads was reported as poor in the two settlements. This is more with the access roads in the settlements. The City Assembly department that is in charge of roads maintenance was of the opinion that under the given circumstances of wide spread Informal Settlements the council has been doing its best. Grading and other services are given on an annual   schedule that covers all the areas in the settlement. Respondents maintained that they are not graded as required and only during presidential visits and campaigns of which the city Engineer sees as part of service under constrained resources and political pressure. Ndirande respondents complained of buildings on the road. The water Board overcomes lack of clear access while laying water pipes by requesting interested users to acquire accesss from neighbours by signing an agreement witnessed by area chief.

5.5.5. Waste management

The interview revealed several ways of managing household waste and the minimal role the council plays. In Chirimba the council has one solid waste skip at the market, which no household reported to have used. Most residents' use private garbage pits located in their compounds as indicated in figure 5-7. A number of the respondents burn their solid waste as others dump in the rivers and by roadside.
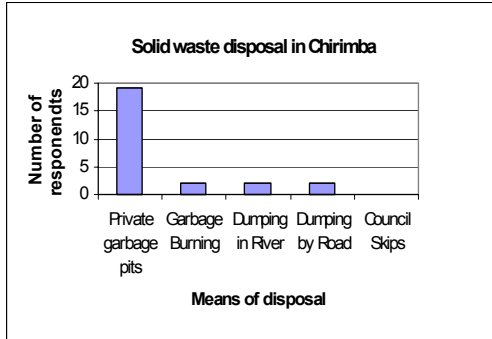
Figure 5.7 Chirimba disposal means   **Figure 5.8 Ndirande disposal means**
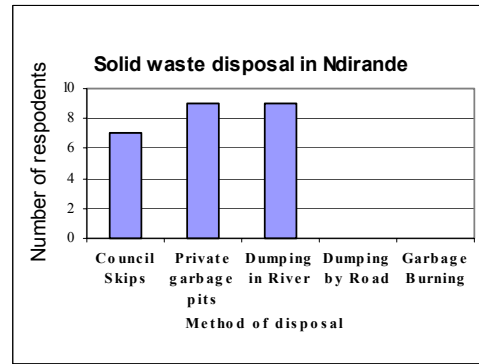
Ndirande residents on the other hand have two skips and waste disposal methods are as shown by figure 5-8. While residents have tried to manage household waste the council has failed them at settlement level by not emptying the skips giving rise to heaps of waste by the roadside as indicated by photograph 5-5. The council has failed to curb disposal into rivers even though the UNICEF water project of 1999 included the cleaning of the river. Photograph 5-6 shows the extent of waste disposal in the rivers in Ndirande.

The community officer in the City Assembly's office reported the annual occurrence of cholera in Ndirande even though water supply is no longer seen as the main problem. Lack of waste management at settlement level where all residents use pit latrines and where flooding occurs frequently was mentioned as the reason why the fight against cholera is low by both residents and the chief. Ndirande and Chirimba have no sewerage connections.

Photo 5.5 Roadside dumping   Photo 5.6 River dumping

Residents perceived shortage of Public Spaces and under development as settlement problems that need to be addressed by public or local authorities. Public Spaces tenure security was given as insecure for future settlements needs. The respondents were requested to indicate their development priorities if something were to be done at community level. Figure 5-9 below show the respondent's priorities choice in the two settlements.

In Chirimba, most respondents would prefer to have a hospital first as there is none at the present. They would wish the council to expand the current market and to construct well-roofed stands for

traders. The improvement of schools came third even though this is one area where students take lessons under the open sky.

In Ndirande most respondents would wish to have the health facility improved by having smaller clinics set in the settlement. Development by expansion of the current schools and setting up of new ones was indicated as a second priority while grading and maintenance of roads came third.
The availability of Public Spaces and the type of development done was further indicated through spatial temporal analysis of the settlements under study.
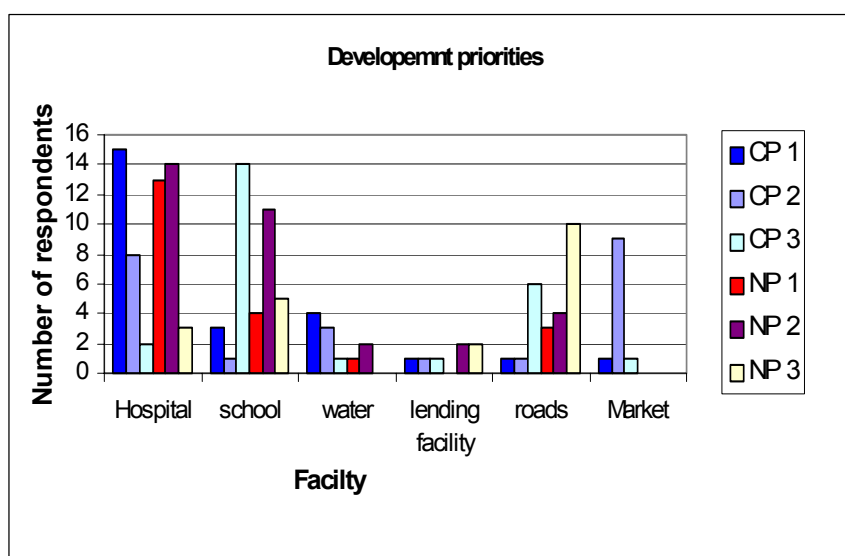
Figure 5.9 Development priorities in the settlements

5.6.   Spatial temporal changes in the settlement

The spatial growth and pattern both at household and settlement level were viewed from a macro level by use of aerial photographs as described in chapter four. The increase in number of buildings for residential use was noted and the negative and positive changes that have taken place on existing Public Spaces. Spatial changes are supported by household interviews and information from village heads.

The two-time series analysis done for Ndirande revealed that by 1990 the settlement was densely populated as shown in Map 5-1. About 4000 structures were captured of which 3950 are residential. In an area where over 3000 households are, the development of Public Space is shown to be very minimal with only one public primary school and the rest of the services being found in the neighbouring sections of the settlement. Ndirande has public land reserved for institutional purpose but due to under development and lack of protection residential houses and commercial buildings are slowly being put up.

5.6.1. Spatial Temporal Series Maps Of Ndirande And Chirimba
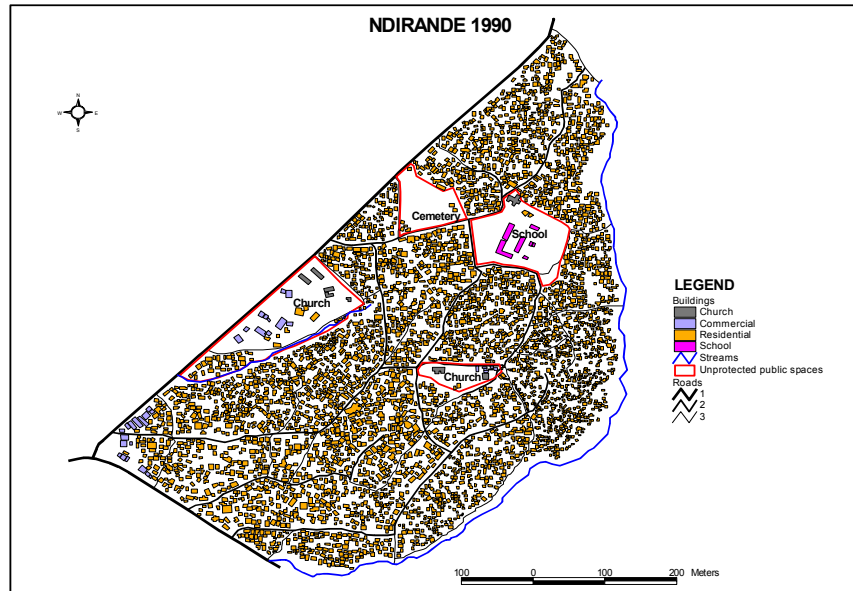
Map 5-1 Buildings and Public Spaces in Ndirande in 1990

Source: Produced from aerial photo of 1990.

Ndirande 1990 to 1998 developments as captured from aerial photos.

Year	Total no. of buildings	Residential buildings	Commercial buildings	School buildings	Church buildings
1990	4000	3950	35	7	8
1998	5637	5585	36	11	5

Table 5-6 Building increase in Ndirande

Ndirande population has continued to increase as indicated by the increase in number of buildings captured from aerial photo for 1998. Of the total structures 5585 are residential yet the school buildings have not increased substantially nor have other basic services been put up on the Public Space available. Table 5-6 shows a break down of the developments as analysed for year 1990 and 1998 while map 5-2 shows the spatial pattern for 1998.

The increase in population has led to congestion in Ndirande and although infill through sub-divisions and construction of rental facilities may have contributed, residents claimed there are numerous buildings on road reserves through allocations by political party chiefs. Analaysis for years1990 and 1998 indicate that although developments on institutional public land has not been explosive with 52 residential structures in 1990 to 70 in 1998, constructions on road reserve is on the increase.
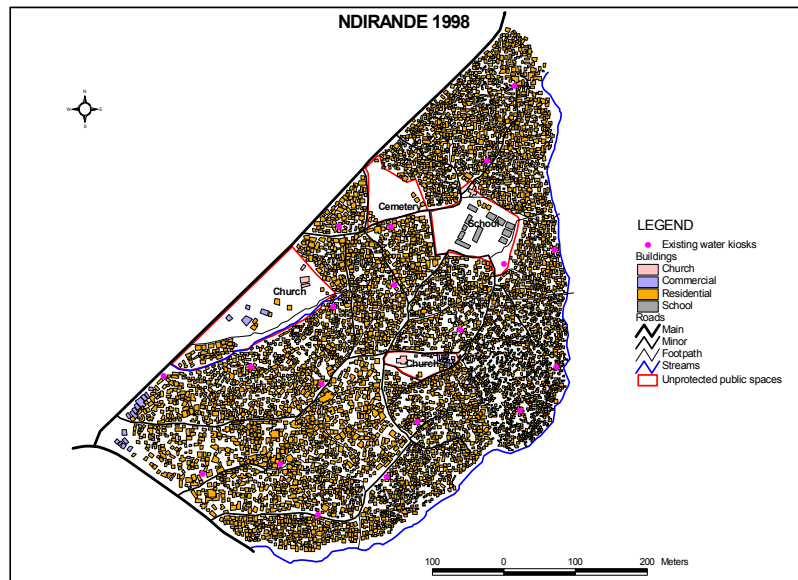
Map 5-2 Buildings and Public Spaces in Ndirande in 1998

Source: produced from aerial photo of 1998.

By 1990, 7 structures were on road reserve but by 1998, there were over 300 structures on road reserve resulting to closure of some road segments as shown on map 5-3. The protection of Public Spaces is the responsibility of the local chief. In Ndirande the chief blamed the erosion of chief's authority by various political regimes as the contributor to the illegal developments now coming up more so with the introduction multi party system in 1995 where authority on who was in charge of what was not clear. Some respondents in this settlement claimed to have reported development to the political party head. The chief is of the opinion however that the developments are illegal and should not stop any development project from being undertaken.

Chirimba had for so long remained a sparsely populated settlement until the main tarmac road known as Zalewa road (Office of the President report, 1993) to Lilongwe was constructed. According to the village head, Chirimba was mainly bush with gullies that discouraged development. The passing of the road through the place however, changed everything at around the time the city was growing tremendously. Many people came in after 1987 when the road was officially opened. Between 1987 and 1990, residential buildings increased by about 60%, which could be credited to the opening of the tarmac road. The increase has continued as indicated by table 5-7 while maps 5-4, 5-5,5-6 and 5-7 shows the spatial temporal changes in the settlement.
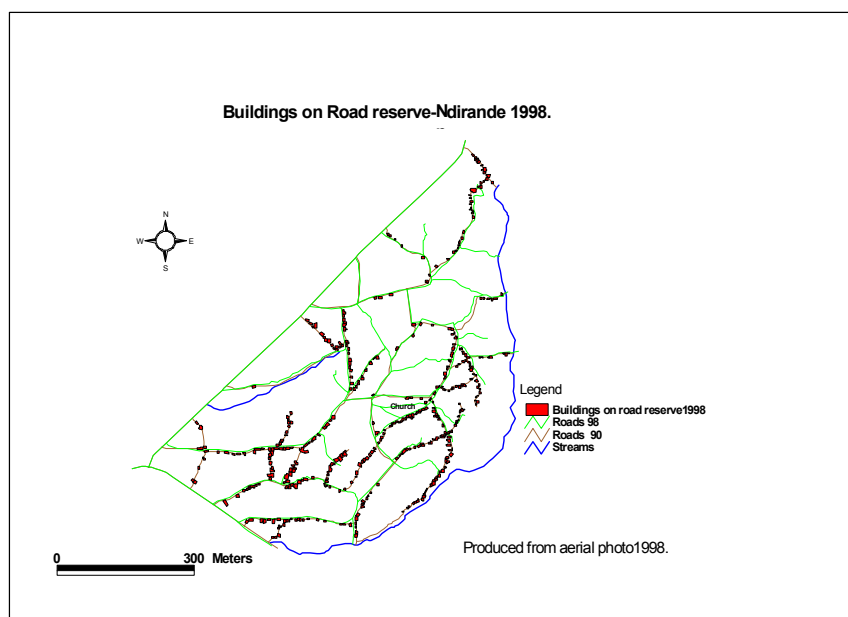
Map 5-3 Buildings on road in Ndirande in 1998

Source: Field data, September 2002.

Year	Total no. of build-ings	Residential	commercials	School buildings	religious	Under 5 clinic	Residential on Public Space
1987	954	933	8	9	1	2	38
1990	1562	1532	12	9	1	2	60
1998	2259	2226	16	10	4	2	123

Table 5-7 Building Increase in Chirimba over time
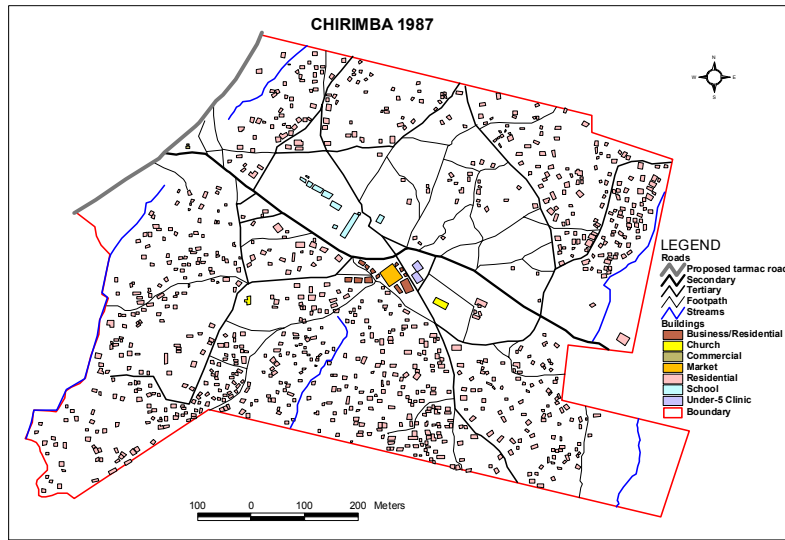
Map 5-4 Chirimba informal settlement 1987
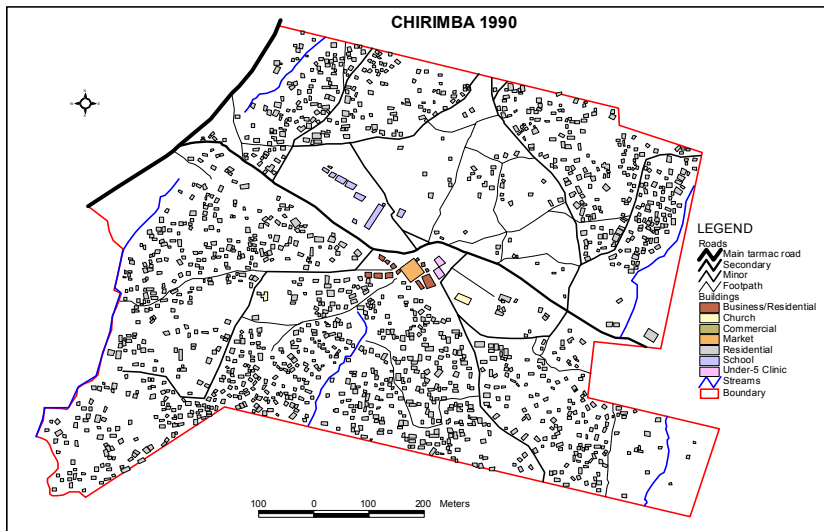
Map 5-5 Chirimba 1990
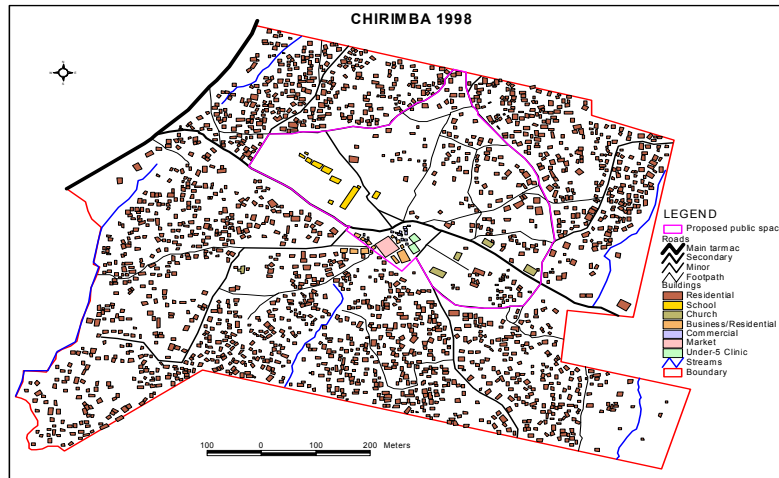
Map 5-6 Chirimba 1998
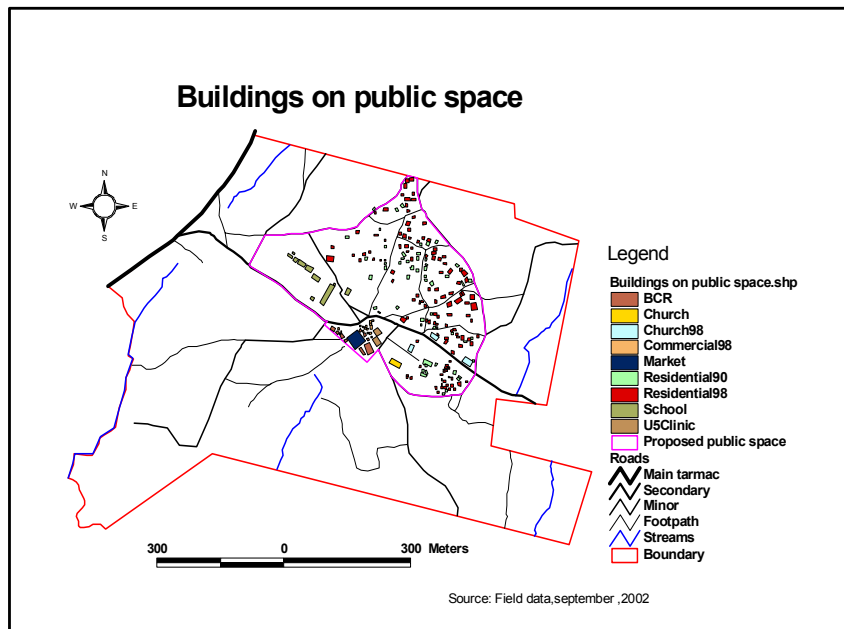
Map 5-7 Chirimba developments on Public Space 1998

City Assembly officials admitted that they have not been able to enforce development control in the area nor do they know the extent of what should be public land. The chief while claiming that the allocations were by predecessor however said the government is to blame for not developing the land for the purpose it was for.

In 1987, 38 structures on what is Public Space were residential. Chirimba is one of the settlements that were acquired by the government and allocated to MHC for development without prior compensation to the locals who never moved out. The 38 dwellings may have been for the original resident. The 1990 aerial photo showed an increase to 6o residential structures while that of 1998 gives 123 structures. The increase of residential buildings by 1998 is supported by the claim made by residents on sale of public land by the chief. The Public Space is portrayed as very insecure.

5.7. Statistical Analysis

Descriptive and spatial analysis done in the previous sections have identified several main variables. The variables explain evolvement, development of Informal Settlements, land tenure security perceptions and the state of Public Spaces. These variables include means of acquiring land, interest on land, settlement attraction, incremental development and Public Space perceptions. The conclusions made have not been compared to results that could arise from further statistical analysis in a detailed manner. This is because the research was designed for qualitative data and the sample size is too small to infer into meaningful quantitative statistical analysis.

Bivariate analysis was applied to test some of the variables relationships. For example, a correlation between means of acquiring land and status land during acquisition period had a strong positive relationship of $r = .599$ in Ndirande. This relationship is not there in Chirimba. In the two settlements, means of acquiring land, though weakly, correlates positively with income ($r = .281$ for Ndirande and .201 for Chirimba). This may explain the number of respondents that reported having acquired land by buying from individuals.

Tenure security in Chirimba was found to have a strong positive relationship ($r = .622$) with reasons for moving into a settlement from previous resident. In the same settlement development control had a moderate positive relationship with tenure security ($r = .421$). This could explain the role of the chief in development control, land transactions and allocations. However, these same variables had no significant relationship in Ndirande.

Further trial in inferential statistics did not yield satisfying results. Assumptions based on descriptive analysis may be misleading but it requires a research methodology designed for wide statistical analysis to make inferential relationships and further data explanations.

Besides having the household views on tenure security and growth of Informal Settlements. Public officers and utility providers had their own perceptions that may reflect on the development of development that has taken place in the Informal Settlements.

5.8. Public administrators perception of Informal Settlements

5.8.1. Ministry of lands

This research was fortunate to interview a senior officer from the commissioner of lands office. The conclusion made from the interview is that central government still views Informal Settlements as undesirable developments. The local authority being in charge of building control was reported as not doing much. The office was of the opinion that political interference makes officers work in fear and policy implementation difficult.

The solution to informal settlement is seen in having to re-locate some of the settlements outside the city. In some cases, planning and titling could be done. Central government would wish the council to control the supply of services in oncoming new settlements to reduce their spread. The utility providers were reported as working against development control policies by supplying the settlements. Informal Settlements being illegal and unplanned the ministry of lands has little knowledge of the Public Spaces. All the development and protection in them should be by the traditional chiefs and the council

The present land policy is seen as one tool that would make development control possible for it has no role of traditional chiefs in urban centres. The ministry of lands would like to have the chiefs stopped from administering land in the urban areas to reduce dual roles.

5.8.2.   Local Government

The mandate to plan and control development in the city is on Blantyre City Council. The council's officers from planning department reported very little involvement in the Informal Settlements. This was blamed on the dual responsibilities where the Ministry of Lands controls allocations in the formal areas while traditional leaders control customary lands. Until Informal Settlements are planned they are not officially in the councils records of development control. There is no clear way of dealing with the spread of Informal Settlements in terms of policy in the council besides that legal tenure may be implemented. A pilot project is under way in one of the cities Informal Settlements.

On the other hand the council is supposed to provide serviced plots under the theme of THA. This is a new responsibility, which is slowly being implementing given the problem of funds and skilled personnel. Between 1992 and 2002, the council has only been able to do about 800 plots. The World Bank funded about 500. Connecting infrastructures in the Informal Settlements was reported as encouraging their growth and that makes working relationship with utility companies difficult. The residents were reported to call for support for public facilities through politicians. Ndirande water project was implemented after politicians complained of cholera outbreaks due to the council not supplying or allowing water installation. While this is so, the roads department in the council has a working programme that includes the Informal Settlements. The constraint in doing the roads was attributed to lack of funds and the fact that Informal Settlements being illegal are not a priority.

5.8.3.   Utility providers

The utility providers concern themselves with services to all on the basis of individuals' affordability. They view the council and central government as organizations, which have failed to plan the city and yet keep o applying retrogressive regulations. Though they do attend council planning meetings, they only seek authority for development on new projects and not on individual connections.

The Water Board has a "pool" policy where water kiosks are provided to the community through NGOs, groups of people or individuals so long as payment is done. UNICEF supplied water in Ndirande by implementation of the pool policy. Where lack of planning would have hindered lying down of water pipes due to lack of access, the offices advises applicants to acquire right of way from neighbours with chiefs having to endorse agreements.

The Electricity Commission prefers people to group together to cut down on the cost of installation. Normally, the office does not refer to the council or any other organization while providing services in

the Informal Settlements. The office views Informal Settlements as places where majority of their clients reside. To utility providers Informal Settlements are there to stay and the only way is to give the services that would make living in them comfortable. None of the officers interviewed saw regularization as a solution. They however would wish pre-planning were done in the settlements before development. The advice is to have the council plan all other vacant land and protect unauthorized growth.

5.8.4.   Community Organizations in the settlements

In areas where people have to get together to pull resources for development, community groups are normally established. This research did not encounter any community group in the settlements of study. In Chirimba none of the respondents had ever been involved in any community group. The reasons were given as lack of awareness, poor leadership in the known groups, residents' lack of cooperation and the financial involvements in the groups. Though in Ndirande 2 persons had been involved in community work, it was for pay by World Vision. The residents were non-committal on the usefulness of groups and the areas chiefs did not emphasize on them.

The community officer from the council associated low establishment of groups to individualism nature of the residents, the culture of provision by the government and the wish not to be involved in any financial committing activity. This could be the cause of low development of community facilities like schools and hospitals and also the blockage of storm water drains which residents of Ndirande are supposed to clean communally as explained by the community officer.

5.9.   Summary

Informal Settlements have grown side by side with the formal residential areas. In time, they have become the housing areas for the majority of residents of Blantyre who include all categories if income earners. This is due to the shortage of housing from the formal sector and lack of planned land in the market. As of the year 2000, MHC reported a backlog of 253,000 housing units (Ministry of Housing. National plan, 2000). Traditional ways of accessing land have given a sense of tenure security that has led to gradual incremental development. Public utilities have continued to tap the clientele in these areas and hence, the problem is not really lack of services that can be sold out at household level but lack of funds. This reflected by the incremental development witnessed. On the other hand the settlement show inadequate availability and development of Public Spaces to support provision of basic services and infrastructure for the benefit of all residents. The Public Space is the most insecure in the settlements.

6.   DISCUSSION

6.1.   Introduction

This chapter will discuss the findings from chapter five against the background of the literature review in chapter two and the information on Blantyre as presented in chapter three. The arguments raised in this chapter will support the conclusions of the research and the formulation of an upgrading model based on Public Space.

The research has followed an exploratory approach from a historical perspective of Informal Settlements growth. This is because informal settlement have grown and spread over time taking into account events and different circumstances of particular developing countries. Ways of controlling informality also have a time span that follows a historical trend.

6.2.   Informal Settlements

In chapter two (section 2.2) Informal Settlements are described as residential places in the urban centres created by poor rural migrants in the developing countries through invasion of public and private land. They therefore have no legal tenure security, do not adhere to planning and development control, the housing condition is poor and they lack basic services and infrastructure. While this is true in many regards, recent studies have disapproved some of these long standing views as will be brought out in this discussion.

Conventional ways of dealing with Informal Settlements have ranged from eviction, mass house developments, site and service schemes, planning and titling to present upgrading schemes. These methods have not reduced the growth of Informal Settlements in any significant form due to increased urbanization in the developing countries.

The phenomenon of urbanization was introduced to many developing countries during the colonial period. After independence these developing countries inherited the western models of city planning, development control and registration (Payne, 2001). What is significant is that the colonial governments had been able to restrict "unnecessary" migrants to cities through coercion means. After independence there were flows of migrants to cities greater than the capacity to house and provide employment. To date, rural migrants still contribute the highest number of residents in the Informal Settlements. In Ndirande and Chirimba majority of the respondents in the interviews are migrants from rural areas that came to the city in search of employment. As a whole, Informal Settlements by 1999 comprised 55% of the residential areas in Blantyre (Blantyre City Assembly Urban Structure plan, 1999).

Laws inherited during the colonial period defined land in urban areas as public, private or customary owned. Unauthorized settlements in the first two categories lead to informality in the context of law. But considering that the settlers do not displace anyone or any public project, then the legal tools that justify public and private land and therefore define informality are not appropriate.

Chirimba is public land according to government officials through extension of city boundaries and land acquisition procedures. However locals were not re-located elsewhere as required by law. Ndirande is customary land but is covered by the Physical planning Act that demands development control. The traditional practices of managing land have continued in these settlements and are considered secure by residents while government officials still claim the land is informal These traditional means are not considered as invasion of public and private land nor informal or insecure by the migrants in urban centres. They support the concept of perceived tenure security (Fourie, 1999) against formal tenure.

It would then be right to argue that from a historical perspective on how urban centres developed in the third world, the adoption of western legal instruments of land use, development and registration led to the problem of informality as seen today. These instruments have been applied so rigidly that they have failed to appreciate the culture and traditions of the people they are supposed to manage land for. Thus informality lies in the acts of the lawmaker (Gilbert in Baross and Van der Linden, 1990). These legal instruments and procedures are however, the ones applied globally by international organizations in the provision of housing, secure tenure and Informal Settlements upgrading.

6.3. Global campaigns

Housing programs, site and service schemes, titling programs and upgrading schemes are all introduced and wholly or partially supported by donor agents. The World Bank and UNCHS (Habitat) are the major supporters.

Habitat global campaign on "shelter for all" led to the initial formation of housing departments in the developing countries to address the housing problems. The required finances for house projects came mainly from World Bank. However some the projects were beyond sustainability as seen through Malawi Housing Corporation (MHC) and had to be abandoned. If the standards and cost in housing projects were a hindrance, even the less demanding site and service schemes have not provided shelter to all because they are too expensive for the target group.

One would then imagine that the on site upgrading would be easier to implement especially if services and infrastructures are all that is required. However, tied to housing, the donors have always put secure legal tenure as an important factor. Access to land and security of tenure as a condition for sustainable shelter and urban development is supported by donor countries (Habitat 11, 1996). The access to housing through security of tenure is favored by the World Bank under its current shift from specific project funding in the developing world to institutional reform where broader issues of accountability, transparency, revenue generation and good governance are addressed.

Secure tenure is then one of the upgrading packages and it has been implemented in some cases as indicated in chapter two (sections 2.6.2, 2.6.3 and 2.6.4). It is a top down approach and it is argued against in that, it is based on agricultural production models suited for rural areas. Based on titling, it has not covered much of the registrable parcels (Fourie, 1999) nor been put into use for collateral purposes as envisaged. Where dispute solving was seen as an advantage, it has not been the case for formal registration has created in some cases more disputes than before (Barry, 2002). In Blantyre, Chome (2002) discovered that no titled residents ever sought grants for house improvement. Devel-

opment and other transactions were carried out locally through the chiefs. Titling requires planning, involves procedures, introduces development control measures and has official administrative links. It has a "public administration professional approach" as presented in chapter one (figure 1).

Shelter is not all about secure tenure. It involves the improvement of the physical environment and provision of basic services and infrastructure (chapter two, 2.6.1). These are components in upgrading and they work well where institutional formality is not a necessity, hence a favorite of non-governmental organizations (NGOS). This success of this approach lies in local participation and ownership of projects. The danger is in having uncoordinated projects that cease to be with the withdrawal of the donor agencies. This is the case with Ndirande water project with regard to storm water drains, river rehabilitation and solid waste collection that UNICEF did with the hope of reducing cholera incidences.

Donor governments have gone ahead to declare "cities without slums" campaign where specific local authorities should liaise with donors for development projects (Cities Alliance, 1999). Slums are a result of some of the old uncoordinated projects where continuity in provision of proper housing ended with one or two residential areas that later had more residents than the services were planned for. The provision of services is however an important component of upgrading and those who support service provision belong to "engineering professional approach" as referred in this research (chapter one, figure 1).

What we have are solutions after solutions that have not met their objectives. Donors introduce every now and then new measures and development control, either because they worked in the Western countries or because studies elsewhere have shown they are applicable. Presently the World Bank is coming up with privatization of services and infrastructure and all other projects will have to be formulated in due course under this theme. Strangely, the recipients' government have no choice because they need the funds.

Donors have addressed poverty by attending to some "needy" communities or sectors by direct projects. Still, there is need to address poverty from a national level not through sections of the communities. The sub-sections (sectors) are a reflection of the national governments inability to grow economically to provide employment, housing and other services. Each new attempt to poverty reduction should take into consideration the institutional capacity for implementation at local level, against the background of actual beneficiaries. If governments cannot manage housing programs or site and service schemes, what of privatization of services in areas where private entrepreneurs may have no interest in or where investments may not pay out? There is the danger of marginalizing the low-income groups or over burdening them thus reducing their capacity to self-improvements.

Of the global approach to housing through provision of basic services and secure formal tenure, which are the main packages in upgrading methods (chapter two, section 2.7); housing programs and site and service schemes have had a lengthy application in Blantyre. These methods have been attempts to reduce the growth and spread of Informal Settlements by providing ready to occupy houses and planned, serviced plots for individuals house construction.

6.4.   Applied upgrading packages in Informal Settlements in Blantyre

Malawian government has applied several methods dealing with informal settlement control. Chapter three section 3.4.2 detailed the formation of MHC for the provision of *houses* to all categories of income groups. Housing projects having not met the increasingly housing needs, *site and service schemes* were introduced under what is referred in Blantyre as the Traditional housing Areas (THA). THA were the responsibility MHC and the success was very minimal (as indicated in chapter 3, table 2). Though the MHC through government later handed over in 1992 the THA to Blantyre City Assembly (BCA), the output is still very low. Information from the BCA officials during the research indicated that City Assembly had undertaken only three projects between 1992 and 2002 with less than 1000 plots.

Site upgrading has been applied very sparingly in Blantyre. The settlement that has benefited most is Ndirande through a water project by UNICEF, which included the construction of water Kiosks (Kabanga, 2002). In additional to water kiosks, UNICEF has rehabilitated the river passing through Ndirande by cleaning and building bridges. The result of this project as per household interviews is that Ndirande respondents do not consider water provision as one of their immediate basic need. Satisfaction with current water kiosks was 100% fair with 88% of the respondents using community kiosks. In Chirimba, where there is less community water supply facilities only 32% of the respondents considers the current situation as fair with 36 % depending on community kiosks. About 40% of Chirimbas' residents wish to invest in water connection while in Ndirande 8% consider doing so with majority not seeing the need to. This leads to the conclusion that the level of service provision determines the individual households future financial commitments.

Upgrading incorporates the regularization of *tenure* and in Blantyre this has been applied in one of the Informal Settlements named Mbayani (Chome 2002). Unfortunately this was not widely extended in the whole settlement or to others. By the time this research was carried out the City Assembly Planning officials implied issuance of formal titles as one of the intended formalization mechanisms. A pilot project is being under taken in a different settlement (other than Mbayani) with site layout *planning* being done first.

From the above issues on housing and serviced land it is evident that formal housing with legal security is a far-fetched goal of the authorities if it is to be through the present laid down procedures. MHC and BCA are incapacitated by lack of funds to carry out projects. MHC is administering its current housing stock and not building new houses. Development in low unplanned areas has shifted to the local authority yet residents cited no contact with the local authorities officials. In essence the government has given up. This does not mean that the general public has not tried to meet their own housing demands and basic services access.

6.5.   Residents contribution

Residents have shown their capacity to meet their housing needs on their own and even to take advantage of the shortfall in the housing sector by extending their buildings with rooms for rental purposes. 36% of Ndirandes' respondents were tenants and 36% of plot owners intend to construct rental rooms. In Chirimba the percentage of respondents tenants is 20% but 52% of plot owners wish to construct additional rooms for rental purposes. This is their contribution to housing shortage and does not call for projects or privatization. In Blantyre, because the formal sector is not providing enough housing

and serviced land, middle and high-income groups seek alternatives in the informal sector. Chirimba has middle class inhabitants as indicated by the income category in chapter five and the type of buildings that are being built.

When it comes to self-development, residents under enabling environment will always improve their conditions. Ndirande and Chirimba have shown progressive improvements on dwellings, leading to connections with basic infrastructures whenever possible. This type of incremental development is determined by the amount of income in each household and the level of provision of services and infrastructure by the government or other agents. Though there is no correlation in the two settlements between connection to electricity and income, 48% of Chirimba respondents reported using electricity for lighting against 32% of Ndirande. Those who were not connected to electricity cited lack of funds as the reason.

The limiting factor to incremental development is income and type and amount of service/infrastructure that are availed in the settlements. The initiative by the Water Board and the Electricity supply commission where "pooling of resources" type of policy has enabled water kiosks construction and electricity supply at a level not expected in Informal Settlements should be encouraged. Believe that Informal Settlements are basically for the poor and lack in basic infrastructure and services is disapproved to some extent by the case of Chirimba. However the poor are in the settlements and the access, supply and amounts of services differs from household to household and settlement to settlement.

Taking into account the Informal Settlements residents secure sense of tenure, their incremental developments and the local authority (BCA) attempts to provide housing, it would be right to propose that a working partnership can be established. It is a working relationship that would leave the informal settlers to continue with their own means of accessing land and utilities for as long as the local authority takes charge of public facilities where services and utilities are located for continued supply, maintenance and accountability. It is in this regard that this research proposes an Informal Settlements upgrading model by way of securing and developing Public Spaces through the local authorities.

The model of figure 6.1is based on the fact that:
- the formal sector has failed to provide adequate housing,
- that solutions through tenure security and low housing schemes not worked,

but;
- that people left to their own social means, are secure and improve incrementally,
- that basic services and infrastructure should be given in a continuous progressive way guided by enabling policies,
- that provision of services occur on Public Spaces,
- and that the search for solution to poverty reduction and informality is still on,

this research proposes upgrading Informal Settlements through securing and development of Public Spaces by the local authorities as a likely sustainable method.

6.6.   Public Space Upgrading model
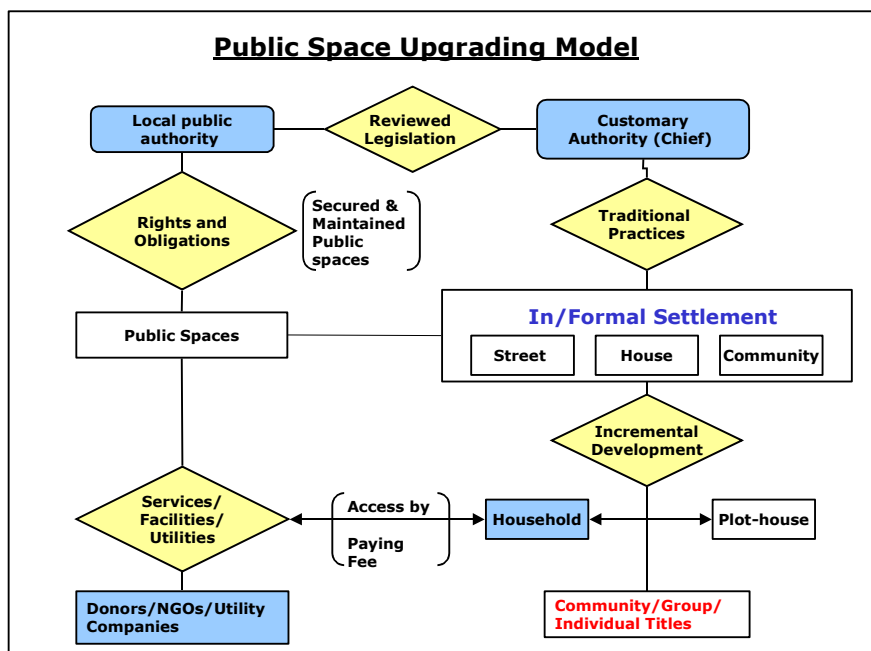
Figure 6.1 Proposed Public Space informal settlement upgrading model

How would this work?

Public Spaces are the avenues for collective supply of goods and services and provision of collective goods and services contribute to the goal of improving quality of life (Massam, 1993). There is nothing *new* about the proposal of upgrading through provision of public services as Angel (1983) proposed upgrading by public facilities and opening of new sites for low incomes people to develop. What is *emphasized* in this model is the *security and ownership of Public Spaces* that the services are located on by a *public body* that is responsible to its residents and the *continued supply and maintenance*. As put by Massam (1993) "public facilities should provide goods and services which are available to all to enjoy to their required levels" This is what the respondent in the study settlements pointed out as lacking.

On protection of Public Spaces, the new Malawi land policy recommends that Public Spaces get registered to appropriate authorities including local Community Based Organizations, NGO's and others who will be required to develop and maintain these sites in accordance with the intended public use (Malawi Land Policy, 2002). Government planning and development officers are to be authorized to use police powers to ensure that sites set aside for public activities in towns and urban areas are protected from encroachment by illegal developers and that they are used for their intended purpose.

While this is well framed, implementation is difficult due to the dual administrative roles of traditional leaders in Informal Settlements and the council. Furthermore the councils do not have the enforcements personnel especially in new upcoming towns. Registering to clusters of NGOS, Community organizations and other developers is equal to alienating public land indirectly without an applicable overall policy for protection of vulnerable consumers.

What is required is a public authority to take up the *rights and obligations* on Public Spaces. The model starts by recognizing that Informal Settlements have *social interactions* (traditional practices) that legitimize their existence and development. In Blantyre it is the *role of the traditional chiefs* in allocations, approving sales and sub-divisions of land and management of sacred Public Spaces like graves that hold people cohesively and securely. This being so, the earlier efforts of large donors on *tenure security* and household directed *housing projects* should be diverted to development of public facilities through the local authorities. This is because some of the services given ensure the growth of a society that is able to meet its future needs. For example unless the youth in the Informal Settlements gets well educated, they will never be able to get well paying jobs nor make informed decisions. That's why the chief in Chirimba termed education as the "future of the settlers". Health facilities were referred to as "life."

The local authorities need to get to the Informal Settlements and with local leaders *identify, reserve and register the Public Spaces* and then take up the development and maintenance responsibilities. This should be done disregarding the official standards of planning. The local leaders reported lack of interest on the side of the government on the development of the facilities. The council should take this desire to have public facilities developed as an excuse to penetrate the Informal Settlements as *development partner*.

Appropriate people friendly and people oriented *policies* accompanied by easy to implement *legislations* that recognize the *traditional practices* and the *customary authority* will facilitate the interactions. However political institutions support is needed to act as link between people and their traditional leaders on one hand and the local authority with its officials on the other hand. After all, politicians use public facilities and services as campaign tools. In this case, the concept of good governance comes in through public facilities.

The *large donors* should then fund projects through the local authorities in line with decentralization theme. It is up to local authorities to design and negotiate for projects that have a city wide application, that would have a continued impact in the future of the residents and that they can maintain and upgrade when need arises. This would make the local authorities accountable on the state of the projects to the residents and the donor bodies. It also means that the local authorities should be in a position to get funds from the central government for continued management of the facilities whenever necessary and applicable. This will make provision of services part of the *obligation* the council has on its people irrespective of land rights and locations.

The model does not suggest that NGOs will not work directly at household level. On the contrary there are those projects that are individual and group oriented that will always be undertaken without the participation of the local authorities. Households will continue to *access land, construct own houses and pay for service and utilities* as they have done with the Water Board and Electricity Commission. This will result in incremental development that may lead to requests for either *community/group tiles or individual titles.* However other collective needs will be availed in an adequate and qualitative manner to ease the burden of searching for them from far or doing without them. This is the development *partnership* that is needed by upgrading Informal Settlements through development of Public Spaces and cannot be there unless Public Spaces are *secured* for future projects and households own development.

The most important thing is that Public Spaces will be secured, are likely to be developed and the local authorities have an obligation on them. For a council like Blantyre City Assembly this offers the chance of marketing itself in the settlements and other peri-urban areas where land sub-divisions are likely to continue. Information on the actual development needs will enable the council to negotiate strongly for funding and capacity building in the decentralization process and donor funding. This research finds this upgrading approach applicable in Blantyre.

7.   CONCLUSIONS AND RECOMMENDATIONS

7.1.   Introduction

This research has explored the evolvement and development of informal settlement through a case study of Ndirande and Chirimba Informal Settlements in the city of Blantyre, Malawi. Open-ended questionnaires were used to interview household heads in the Informal Settlements. Semi-structured interviews were held with the government agencies and traditional leaders. With these two types of interviews, it was hoped that land tenure security perceptions and the developments on both individual and pubic spaces would be realized. To have an overview of the spatial structure pattern in the settlements, time series aerial photographs were analyzed.

This chapter will try to draw conclusions based on the research findings and by so doing answer the research questions in chapter one. It will also make recommendations based on the conclusions and the proposed upgrading model in chapter 6 (section, 6.5).

7.2.   Evolvement and development of Informal Settlements

Findings from the research indicate that Informal Settlements have evolved and developed over time. The growth and spatial sprawl is attributed to several factors which include:

a). Migration from rural areas in search for employment. About 80% of the respondents in Chirimba and 68% in Ndirande indicated that they migrated from rural areas in search of employment. Once in the city, lack of adequate housing and serviced land forces migrants to seek housing facilities in the traditional villages within the cities boundaries. Ndirande being the oldest and nearest to the CBD has ended up being highly populated.

b). Inability to supply housing and serviced land by government agencies. MHC and BCA have not met the housing demands and not just for the low-income groups but generally for all categories. This has made the middle and high-income groups to seek for land for home development in the Informal Settlements. With improved transport network, spacious settlements like Chirimba are now being developed by well earning residents and buildings are no different from those in the formal high-income class areas. Affordable land for own house construction is a pull factor to Chirimba with 80 % of the total respondents in this settlement being owner-occupiers.

c). Traditional means of land delivery. Traditional chiefs allocate customary land for use in the rural areas of Malawi. This practice has extended into the cities because of incorporating rural villages into city boundaries without replacing traditional practices with statutory procedures. Initially chiefs allocated land free. With time by buying from individuals has taken over as indicated in chapter five figure 5. Natural population increase has also led to second and third generations that acquired land by inheriting.

In summary, continuous rural urban migration, natural urban population growth, the inability of the formal sector to provide housing and serviced land has resulted in uncontrolled, unauthorized land delivery and constructions leading to the development of Informal Settlements.

7.3.   Land tenure security perceptions and state of Public Spaces

Formal land delivery in Blantyre is inadequate. BCA officials during the research interviews reported having released less than 1000 serviced plots in a period of 10 years. In this period of 10 years the population of Blantyre increases by about 100,000 persons. The Informal Settlements accommodate this large increase not by invasion of private or public land but through socially accepted traditional means. These traditional means are perceived so secure that none of the respondents reported having had any official legal land dealings with the government. They are involved in direct land allocations by traditional chiefs or the chiefs witnesses and consent to various land transactions that involve subdivisions, buying and selling. Majority of new developments are reported to the chiefs with just a few rare cases where in Ndirande political leaders were informed. Even then, the chiefs were made aware of the developments.

None of the chiefs in the study settlements reported having had residents enquire on how to get land titles. This is so even though some households have invested heavily in permanent big houses, rental and commercial facilities. This means that residents do not consider their settlements informal nor do they see any threat to their properties in the future. However at a settlement level, respondents did not seem to appreciate the allocation of what they commonly understand as public land to individuals. The chief in Chirimba has allocated land reserved for school and other public purposes and in Ndirande, political party leaders have allocated road reserves.

Respondents' were willing to discuss the dissatisfaction they had on the quality and quantity of public facilities and services. They seem to perceive the protection and development of Public Spaces as a responsibility of the government and local authority. In the choice of their immediate needs none of the household heads desired roofing material, school fees, transport or those aspects of life that are associated with one's household. Instead they complained about congestion in schools and in hospitals, poor roads, dirty and small market facilities and poor sanitation all of which the council or other government agents are expected to take care off.

In Chirimba, respondents felt that it is the duty of the council to intervene on public land allocations since it took over settlements responsibility from MHC. In Ndirande, the Chief felt that the central government and council have failed to control politicians from interfering with land in the settlements at a time when the only available land is road reserves. On the other hand, government officials did not want to acknowledge responsibility for public facilities in Informal Settlements because they are unplanned, unregistered and illegal according to them. It is a scenario in which informal settlers know what they should do for themselves given time and resources, but they feel helpless in other areas that they expect the government to help, while the government ignores total responsibility to them because it does not recognizing their land tenure status.

It can then be concluded that at a household level, land tenure is perceived as secure. Individual investments continue without undue fear. Public Spaces face the danger of continuous encroachment and

inadequate services and facilities in theses Public Spaces make the future at a settlement level very insecure.

7.4. Household improvements and limitations

House owner occupation is popular in the settlements of study. Most respondents get their plots vacant through allocations by the chiefs, through buying or inherance from families. Construction starts with the basics with one improving and extending while in occupation. Improvements are in terms of roof, walls, floor, additional rooms, tree planting, and connection to utilities like water and electricity. The improvements observed and reported differ in the two settlements with the highest common wish to improve being on additional rooms. Differences in already reported and intended improvements could be attributed to:

a). Location of settlement. Ndirande is close to the city. It is attractive to job seekers for residence purpose. This could explain the investments in additional rooms by plot owners. 36% of respondents were tenants while 40% of owners intend to add rooms. Additional of rooms was reported to be limited by lack of space. Chirimba has a lower percentage of tenants (20%) but 52% of plot owners reported intentions adding rental rooms.

b). Income related limitations. Chirimba has a larger number of respondnents wishing to be connected to utilities like electricity, water and telephone than Ndirande. The income levels of Ndirande are lower than those of Chirimba and though the wish to have utilities is there, respondents gave financial constraints as a factor. Generally, telephone connection is low in both settlements. 38% of respondents in Ndirande have electricity against 48% in Chirimba. On a whole, the quality of housing in Chirimba is better than that of Ndirande.

c). Government/NGOs facilitation. Where utility facility has been supplied in the settlements, the wish to invest in that facility is low. Since water supply by kiosks is well covering in Ndirande, respondents reported a low priority for improvement in water connections while in Chirimba 48% wish to have water connected and about 24% have invested in water connections already. Though the percentages are low, they are an indication of progressive household developments.

Thus, development in the settlements is incremental and it ranges from basic immediate improvements on physical aspect of the house to the connection of utilities .The limiting factor to connection, is the financial capacity of each household and the extent of supply of basic utilities by the government.

7.5. Community organizations and public administration perceptions

One would expect strong rooted community groups in Informal Settlements mainly to act as link between residents and authorities in the quest for social services and basic utilities. This was found not to be the case in both settlements of the study. A majority of residents reported unawareness of any existing groups and to some extent poor leadership by group leaders. Group formation facilitation is the role of the central government and the local authority in Malawi.

The problem in Blantyre is that government officials have distanced themselves with the activities of the informal settlers because by law, they do not exist. Religious developments and cemetery facilities that are the responsibility of the community are adequate but those services that require more funding

and are expected to come from the government are poorly supplied, under developed or unprotected. These include the construction of schools, hospitals, roads, and solid waste collection among others. These are the facilities that community groups could request for from the government. They are all "public goods" that go beyond the capacity of individuals or groups to provide for themselves. They require government budget planning and continuous maintenance.

It can be concluded that there is official negligence in the provision of services under the pretext of informality even though the settlements house more than half of the city's population. There is no strong official wish to bring people together through community participation in the study settlements.

7.6. Utility connections and upgrading policies

The fact that to public administrators Informal Settlements are illegal does not mean there are no utility connections. The Water Board and Electricity Supply Commission who do not concern themselves with tenure issues have delivered services in the settlements on the basis of affordability to any needy applicant. The continued spread of Informal Settlements means that a large number of clients are in there. Building in these areas by the rich has also increased political push for facilities against the non-provision policies of the council and central government.

To meet increased demand, the Water Board introduced the "Pool policy" approach, which is implemented by way of community Kiosks. UNICEF to provide water in Ndirande used this pool approach. The Electricity Commission advices people to group together for cost sharing and to guarantee each other right of access in the unplanned settlements where access is not clear. Further to this, they are experimenting on how to supply electricity to grass roofed, mud-plastered houses of the very poor.

From the interviews it was clear that public administrators do not appreciate the non-adherence of policy by utility providers or the political backing they use at times to provide services in Informal Settlements. To public administrators, service provision encourages Informal Settlements sprawl. To utility providers, public administrators have failed in their role to plan the city and to come up with proactive implementable policies. Respondents reported having no direct dealings with public administrators but since a number are connected with electricity and water, it means there are interactions with utility providers. This questions the public administrators approach in upgrading through legal procedures against the engineering approach for delivery of services.

The central government and the local authorities seem to be stuck with the standard formal planning and registration approach to upgrading. Even though the central government was unable to control informal growth through the lowered traditional houses of site and service schemes (THA) that were being done by MHC, the local authority (BCA) proceeds with the same approach to date. The output is too low and slow to have an impact on serviced land provision. To add to this, BCA is experimenting on titling programs even though the residents in the Informal Settlements do not consider legal tenure as an important factor to development. Although the new land policy mandates the local authority to control development, the rooted traditional practices and the shortage of funds and personnel would not allow the council to implement the policies as they are today.

In summary, the Informal Settlements are on the increase in Blantyre spatially and by densification in each settlement. The expected insecurity of tenure is not there due to traditional practices that are

trusted by people enabling incremental upgrading of households on their private properties. What is lacking is adequate governments support in provision of basic services and infrastructure. These services occur on Public Spaces that the residents are losing to private developers thus, limiting future upgrading projects. An upgrading approach that puts emphasis on the protection of Public Spaces so that any future community project can go on is recommended. This would therefore mean that development and accountability of Public Spaces should be a responsibility of the local authority through which any other agent should pass.

7.7.   Physical changes in the settlements

GIS and Remote Sensing Technology was useful in detecting and mapping the densification of household buildings. Using aerial photographs, it was possible to estimate the number of buildings that have been put up over a period of time. GIS was also used to show the location of Public Spaces and the physical developments that have taken place on them. GIS analysis enabled the visualization of the extent of illegal developments on Public Spaces in the study settlement to support the household interviews. For this research, remote sensing helped in random sampling of the study population through stratification of settlement orthophotos and in faster location and accessing of households by entering coordinates of sampled points into a GPS.

7.8.   Recommendations

From the research finding, tenure security and individual housing were not seen as a problem in the settlements of study. What came out was the need to have improvements in the supply of basic social services and infrastructure, security and protection against illegal developments in Public Spaces. Blantyre City Assembly (council) should try to alter its approach to upgrading by getting actively into those factors that are more appreciable at a community level. This would enable it to popularize its presence and role as a development partner, a thing that is lacking presently. For this to happen a few things need to be done being:

a) To revisit the current land policy for clarity on the administrative roles of traditional leaders and the central government when in an overall reference, the council ought to control developments through planning. The council presently seems to have very little control on freehold land in the city thus not being able to monitor sub-divisions. It therefore needs to renegotiate the land policy to reflect current social–economic trends backed by statutory laws that are easy and inexpensive to implement. With creativity on people friendly strategy approaches like the Water Board and Electricity commission, this can be done.

b). In the decentralization process it should be remembered that the central government was neither able to provide for housing nor control the growth of Informal Settlements. Thus when all development responsibilities are being pushed onto the council, the council should be able to negotiate for direct funding by the central government for continued city management. This will not happen unless there is:

General Public support. Most of the residents are in the Informal Settlements and what they need are those services and utilities that they cannot provide on their own. The council should take up the provision responsibility actively and continuously in order to relate with the public.

Active strong community groups. Whilst the informal residents come together to acquire utilities, there is a need for groups that are continuously coordinating activities between the council and the residents are necessary. The groups should be independent of the Development Committees by the central government. They should be involved with issues like construction and upgrading of public facilities in general, taking advantage of their interactions with and role of traditional leaders in the settlements. The traditional leaders should be allowed and facilitated to attend local councils development and planning meetings actively. This will introduce partnership and mutual understanding in the development and improvement of Informal Settlements between the people, traditional leaders and the council.

Political goodwill. Politicians link central government, the local government and the people. During the interviews respondents never referred to the local authority councillors. They do not seem to be active enough to be referred like the political party leaders and the traditional leaders. The councillors can either help popularize the council (or de-popularize it) especially where policies have to be understood by people and implemented. A working relationship of all leaders should be established.

Donor support. Though most of the cities projects are donor funded, the council wastes lots of money through lack of support in maintenance. An example is where donor funds (UNICEF) clean up rivers and build storm water drains only for the council to neglect them and have them turned into solid waste dumping places. Donor confidence in times of accountability and good governance for further funding is a necessity and this they can show by maintenance and control of projects already implemented.

c) The council needs to have information on the availability and quality of public facilities and be able to convince the public, the central government and the donors that it is committed to improving the quality of life in the Informal Settlements. This will happen only if it actively gets involved with the provision and maintenance of basic services and utilities. For this to be so, it has to establish a working relationship with people and their trusted traditional leaders. By liaising with the traditional leaders it will be able to record all the Public Spaces surrendered as roads and for other uses during continued sub-divisions of land. It may also be possible to acquire new sites for future development.

While personnel will be required, high technical skills may not be necessary. It should start by public awareness on the importance of Public Spaces through a close working relationship with the traditional leaders and the councillors. For Blantyre where GIS (Geographical Information Systems) has already been introduced, simple participatory GIS where they map out Public Spaces, roads and foot paths through use of aerial photographs may help. It may even help to adjudicate group and individual property rights if needed by use of general boundaries.

d) The council should ensure that it negotiates with development agents on the continued maintenance of public facilities. That is why Public Spaces should be reserved and protected primarily by the council so that all developments proposals go through it. Otherwise it may continue to inherit projects that may not last and hence continue losing public trust.

Upgrading Informal Settlements through development of Public Spaces.

Public Spaces are the avenue for public facilities and goods. If these spaces are not reserved, future projects for Informal Settlements will be problematic with unnecessarily funds being used to acquire

land that ought to be there. Under-development of some of the facilities limits the chances of a healthy, educated future generation and forces households to over spend scarce resources that should go into own house and self-improvement. Public Spaces and accompanying facilities are also field for political maneuvers and the only way accountability and transparency is reflected. Public Spaces are therefore part of the means in which the council can participate in the improvement of living conditions, poverty alleviation and control of development in the Informal Settlements. *This research therefore recommends upgrading by securing and development of Public Space.* Public Spaces should be titled to local authorities.

7.9.　　　Future research recommendations

1. Further continuation of this research is recommended where by a research methodology is designed to collect quantitative data with a sample size large enough for statistical analysis. Though this research applied non-parametric correlation analysis, the results were unsatisfactory.

2. While the proposal for upgrading Informal Settlements by securing and development of Public Spaces is recommended in this research, it remains to be seen how the quality and quantity of Public Spaces in the Informal Settlements of Blantyre City may reflect on the improvement of living standards and future upgrading projects. A research covering several settlements needs to be done to relate the influence and impact of/lack of services in one settlement to others. A socio-economic survey that incorporates geo-spatial data analysis would assist in planning location of facilities and formulation of development policies in Informal Settlements.

3. There is need to investigate how Public Spaces could be secured without falling back to standard planning requirements. Consideration should be put to the fact that Informal Settlements are very dynamic in their setting and development and that they incorporate different interests at each particular time depending on location, historical beginning and age.

4. There should be more research on the provision of legal tenure vis-à-vis the provision of basic services to be able to support or reject the global campaigns on tenure security for housing in developing countries where titles may not have that much impact on the general public.

8.　　References

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9. Appendices

9.1.   Appendix 1: Household guide questionnaires

SETTLEMENT NAME……………………………………………………………….

NAME OF INTERVIEWER……………. ………………………………………...

DATE…………………………………………………………………………………...

SERIAL NO. …………………………………………………………………………

INTERVIEW GUIDE QUESTIONS FOR HOUSEHOLD SURVEY.

1.   What is your relationship to this property?
    a)   Owner
    b)   Tenant

2.   When did you come to live in the city? (Probe into years)

3.   Where did you leave before you came to this settlement?

3(a)   Why did you leave the rural area or above place (Which ever is applicable)?

4.   What most important factors attracted you to this settlement?
    a)   Schools
    b)   Good roads
    c)   Health facilities
    d)   Potable water availability
    e)   Electricity
    f)   Security
    g)   Land availability
    h)   Affordable rent
    i)   Near to work place
    j)   Others
    (If tenant go to 10)

5.   In what form was the property at acquisition period?
    a)   Vacant land
    b)   Land and developments
    Did you do any further construction? (If the answer is b).

6.   How did you get to acquire this property?
    a)   Through the Chief
    b)   Through central government (lands department)

c)   Blantyre City   Assembly

d)   Malawi Housing Corporation

e)   By buying

f)   Inheritance

g)   Through political patronage

h)   Others

          (Household interview questions)

7.   Did you think of land tenure security when you were acquiring the property?

a)   Yes   (Explain your answer)

b)   No   (Explain your answer)

8.   Do you have to report to anyone like the city council or lands department whenever you want to carry out any development on your property?

9.   Who were involved in the construction of the house?

a)   Own household

b)   Own household and relatives

c)   Own household and community assistance

d)   Own household and hired labour

e)   Hired skilled labour

10.   Existing house characteristics: (Both tenant and owner)

a)   Roof type   ☐ Corrugated iron   ☐ Grass thatched ☐ Other

b)   Wall type   ☐ Burnt bricks   ☐ Unburnt bricks ☐ Other

c)   Floor type   ☐ Earth   ☐ Cement   ☐ Other

d)   Number of rooms   _____

11.   What is the source of water for the household?

a)   Tap inside the house

b)   Private tap outside the house

c)   Borehole

d)   Wells

e)   Communal water kiosks

f)   Private water kiosks

12.   What form of lighting does the household use?

a)   Electricity

b)   Paraffin

c)   Other

13.   What is the source of energy/fuel for cooking and heating in the house?

a)   Electricity

b)   Firewood

c)   Briquettes

d)   Paraffin

e)   Charcoal

f)   Other

14.   What are the reasons for not being connected to?   (Not for tenants)

		Water	Electricity	Telephone.
a)	Lack of finance	-------	-------	------------
b)	Main line far away/non-existent	-------	--------	-----------
c)	No need for connection	--------	---------	-----------
d)	Others	--------	---------	-----------

          (Household interview questions)

       (Questions 15-18 for both tenant and owner)

15.   What are the methods the household uses to dispose off solid waste?
        a)   Collected by the council trucks
        b)   Using skips which are then removed by the council
        c)   Garbage pits   ☐ Private   ☐ Communal
        d)   Burning
        e)   Dumping the wastes by the road sides
        f)   Dumping into the rivers
        g)   Others

16.   What type of toilet is used by the household?
        a)   Private Pit latrine
        b)   Flush toilet   ☐ with septic tank   ☐ connected to sewer system
        c)   Communal toilet
        d)   Others

17.   What is the main source of your income and support for your family?
        a)   Formal ☐ Permanent   ☐ Temporary
        b)   Informal   ☐ Permanent   ☐ Temporary
        Location of employment: _____

18.   Is your monthly income?
        a)   Below MK5, 000.00
        b)   Between MK5, 000.00 and MK10, 000.00
        c)   Above MK10, 000.00
        d)   Not known
        e)   Unwilling to disclose

        (For tenants go to number 22)
19.   What improvements have you done to your property in the past 10 years?
        a)   Roof   g) Painting
        b)   Walls   h) Additional rooms
        c)   Floor   i) Fencing
        d)   Water   j) Tree Planting
        e)   Toilet   k) Others
        f)   Electricity
20.   What improvements do you plan for your property in the near future?
        g)   Roof   g) Painting

h)	Walls	h) Additional rooms
i)	Floor	i) Fencing
j)	Water	j) Tree Planting
k)	Toilet	k) Others
l)	Electricity	

(Household Interview questions)

21. What are the reasons for not planning to improve? (If none at above)
   a) fear of eviction
   b) received eviction notice
   c) rumour of eviction
   d) no need to improve
   e) do not want to remain in the area
   f) plot size small
   g) lack of funds
   h) other

22. Do you have plans to move out of this settlement?
   a) Certainly not
   b) Uncertain
   c) Certain
   Please explain your answer.

23. How would you categories the availability, in this settlement, of the public spaces listed spaces listed here below:

		Fair	Poor
a)	Public schools	----	----
b)	Public health facilities	----	----
c)	Cemetery	----	----
d)	Roads	----	-----
e)	Markets	----	----
f)	Religious places	----	----
g)	Play grounds not attached to schools	----	----
h)	Public water points	----	----

24. In your opinion, how important are Public Spaces in a settlement?
   (Please elaborate your answer)

25. In what community organization activities have you participated in as a resident of this settlement?
   (If in none, explain why)

26. Are there obstacles encountered in trying to carry out community activities?
   a) Lack of finance
   b) Cooperation
   c) Political interference
   d) Lack of government support
   e) Poor leadership
   f) Other

27.   As a matter of urgency, what would you wish the government/council to do for the settlement?

9.2.   Appendix 2: Chirimba sampled point coordinates

	CHIRIMBA SAMPLES SEPTEMBER 2002			
SERIAL-NO	SAMPLE-ID	X-COORDINATE	Y-COORDINATE	
1	1	716068	8258835	
2	3	715968	8258735	
3	7	716368	8258735	
4	9	716568	8258735	
5	11	715968	8258635	
6	15	716368	8258635	
7	17	716568	8258635	
8	27	716468	8258535	
9	29	716668	8258535	
10	31	715768	8258435	
11	33	715968	8258435	
12	35	716168	8258435	
13	39	716568	8258435	
14	41	715768	8258335	
15	43	715968	8258335	
16	45	916168	8258335	
17	47	716368	8258335	
18	49	716568	8258335	
19	55	716168	8258235	
20	57	716368	8258235	
21	59	716568	8258235	
22	61	716768	8258135	
23	51	715768	8258235	
24	65	716368	8258135	
25	69	716768	8258135	

Table 9-1 Chirimba sampled point coordinates

9.3. Appendix 3: Ndirande sampled point coordinates

	NDIRANDE SAMPLES, SEPTEMBER 2002			
SERIAL-NO	SAMPLE-ID	X-COORDINATE	Y-COORDINATE	
1	1	718568	8256135	
2	3	718568	8255935	
3	5	718468	8255935	
4	9	718368	8255835	
5	11	718568	8255835	
6	13	718168	8255735	
7	15	718368	8255735	
8	17	718568	8255735	
9	21	718268	8255635	
10	23	718468	8255635	
11	25	718668	8255635	
12	29	718268	8255535	
13	31	718468	8255535	
14	33	718668	8255535	
15	35	717968	8355435	
16	37	718168	8255435	
17	41	718568	8255435	
18	45	717968	8255335	
19	47	718168	8255335	
20	49	718368	8255335	
21	53	717768	8255235	
22	57	718168	8255235	
23	61	717868	8255135	
24	63	718068	8255135	
25	65	718268	8255135	

Table 9-2 Ndirande sampled point coordinates

9.4. Appendix 4: Utility providers questionnaire

Date of the interview   _____
Organization Name.   _____

Questions.

1. What policy does your organization have on taking services to unplanned settlements?

2. Are you aware of the city planning requirements that no services should be taken to unplanned areas?

3. How does the policy of no services before planning and regularization affect your activities in these settlements?

4. What is your driving force considering the requirement of no services to unplanned settlements?

5. How do you gain access to your clients in these areas where public purpose spaces are not defined?

6. How do you protect your way leaves?

7. In which ways do you think your work of taking services to residential areas would be made easier?

8. Whom would you blame for the sprawl of Informal Settlements in Blantyre?

9. What working relationship is there between your organization and other service giving bodies involved in Informal Settlements?

10. In your opinion what do you think is the best method of upgrading the settlements?

11. What's your organizations future plans for these settlements?

The above questions were asked to all utility providers but elaboration and emphasis differed depending on the organizations policy on Informal Settlements and the way the questions were answered. This was due to probing that was necessary in most cases for clarity and meaning implied in the answers.

9.5. Appendix 5: Departmental officials questionnaire

9.5.1. Questions to City Assembly's Roads Engineer.

1. What policy is there in the department on unplanned settlement?

2. Is the council doing the much it should for residents in these settlements?

3. Would one be justified to say that services by your department are only when the president is in the areas and campaign times

4. How does the community go about getting services from your department?

5. What are the main problems in these settlements according to you

6. What method of upgrading would you recommend for these settlements?

7. Do these settlements have a future according to you?

9.5.2. Questions to City Assembly's Community Officer.

1. Which are the communities based organizations operating in the unplanned settlements?

2. How are they formed?

3. What do they normally concern themselves with?

4. How active are they?

5. Do they hold public meetings?

6. Would you term public participation as satisfactory?

7. My observations were that community organizations whether from within the settlements or without are very unpopular. May I have your comment on this?

8. What limits Community participation in the settlements?

9. What would you term as the real problems facing the residents of unplanned settlements?

10. What method of upgrading would you as a person recommend for these settlements?

9.5.3. Questions to City Assembly Physical planner.

1. What are the processes that lead to unplanned settlements in Blantyre city?
2. Who are the actual developers in the unplanned areas?

3. What obstacles are encountered while trying to avail planned land to developers?

4. What relationship is there between your department and the traditional leaders?

5. Why has the council not taken full control of Public Spaces for management on behalf of the residents in the settlements?

6. Do you think the council is doing the much it should do for these residents?

7. What are the main problems in these settlements according to you?

8. How do you think the living conditions in these settlements should be improved?

9. Utility companies, accuse the council of having policies that try to prohibit services in these settlements. What's your comment on this?

10. Do you think the recent land policy has clarified the place of City Assembly in land management against that of other authorities?

11. What future plans does the department have on unplanned settlements?

12. As a person, what would you wish to see done in the Informal Settlements?

9.5.4. Questions to Officer in the Commissioner of Lands department.

1. What policy is there about Informal Settlements?

2. How do people access land for housing in the city?

3. Is the formal method very inclusive of all income groups in the city?

4. Who should be blamed on the increasing sprawl of Informal Settlements in the city?

5. Does the city Assembly have a free hand on development control in the city?

6. What is your comment about the role of traditional leaders in these settlements?

7. What do you think should be done to improve living conditions in the settlement?

8. Utility companies claim land policies are too negative especially on the supply of services to Informal Settlements. What are your comments**?**

9. What upgrading method would you recommend in the Informal Settlements?

10. Has the recent land policy addressed the problem of Informal Settlements in a manageable way?

9.6. Appendix 6: Village heads questionnaire

Date of the interview: _____

Name of the settlement _____

Name of the village head _____

Interview Questions.

1. Would you please give us a brief history on how the settlement started?
2. Is there any period when you have had more people coming in the settlement than would normally be usual?
3. Do you have enough Public Spaces that are for community purpose development and use?
4. How did these spaces come to be?
5. Who is supposed to protect these spaces against illegal developments?
6. Are they in any danger of being encroached on?
7. What stops people from having good houses with the necessary connections to infrastructures?
8. Are there community groups that concern themselves with the settlement welfare?
9. Which are the issues that they concern themselves in?
10. How active are they?
11. Do you as a leader hold community meetings?
12. Which are the issues that normally come up in the meetings?
13. Who is in charge of land matters in this settlement?
14. Do people voice insecurity for not having the right papers to land?
15. Are you aware that the settlement is within the municipal boundaries?
16. What is the role of the council in this settlement?
17. Is the council performing to your expectation?
18. Are you normally invited to attend meetings by the council on matters concerning this settlement?
19. Which are the people's immediate needs according to you that would go along way in improving there living situations in the settlement?
20. Between having the government embark on a titling program on one hand and giving services on the other hand what would you choose?

The above questions are to be asked as best as possible in order of the listing however elaboration and probing will differ depending on the answers given and the settlement in question.