EVOLVING STAKEHOLDER ROLES AND PERCEPTIONS OF SUSTAINABILITY OF LOW COST HOUSING DEVELOPMENTS IN MSUNDUZI MUNICIPALITY: THE CASE OF AMBLETON

by

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DECLARATION

The research described in this mini-dissertation was carried out at the Centre for Environment, Agriculture and Development, University of KwaZulu-Natal, Pietermaritzburg, under the supervision of Professor Robert J. Fincham.

This mini-dissertation represents the original work of the author and has not otherwise been submitted in any form for any degree or diploma at any University. Where use has been made of the work of others it is duly acknowledged in the text.

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ABSTRACT

Many development agencies active in South Africa including the Built Environment Support Group (BESG) and Hifab International Ab have voiced concern about the sustainability of common housing production practices for low income housing developments. Since early 1999 when the country reached the one million mark of housing subsidies granted by government from 1994, the drive for numbers was gradually replaced by a dawning concern for the likely impacts on health and the environment of the kinds of settlements being produced. The purpose of this dissertation is to use a case study approach to review and assess the changing policies, roles and perceptions of key stakeholders of the sustainability of government supplied low cost housing. The review and assessment is against the legislative framework of the National Environmental Management Act (NEMA), the environmental requirements within the Department of Housing (DOH) policy and principles of sustainability that need to apply in Msunduzi Municipality. In so doing, the intention is to create an integrated picture that covers a socio-economic profile of the inhabitants of the project area, the quality of housing and the environmental conditions prevailing.

This aim of the dissertation was achieved by (i) identifying the trends in the roles played in the sustainability of the low cost housing settlements by authorities, house occupants, developers, NGOs and CBOs (ii) identifying the perceptions of the sustainability of the low cost housing projects by the above mentioned stakeholders (iii) understanding the perceptions of communities on the use of the open spaces around their homes and in their communities and (iv) creating an integrated picture of trends in roles and perceptions in the form of a systems diagram.

On the basis of the household survey and key informant interviews carried out during the study, the key findings are the following:
(1) There is poverty, low levels of formal education and a lack of social cohesion, making it difficult for the home owners to play a positive role in sustaining their settlement. There is need to organize and educate the residents on housing and

environmental maintenance issues. This can be done by creating Community Based Organisations (CBOs) in the form of Small, Medium and Micro Enterprises (SMMEs) in which both the municipality and Non Governmental Organisations (NGOs) can participate. The SMMEs are already being planned for by the Msunduzi Municipality.
(2) The municipality lacks capacity to fully initiate projects as well as to interpret and implement Environmental Management Plans (EMPs). There is, therefore, a need to train and recruit staff with these skills or engage NGOs with that capacity. On the other hand the indigent policy introduced by the municipality to subsidize basic services will, if well administered, help maintain minimum health standards in the settlement.
(3) The septic tank toilet type in the study area is not compatible with the community needs and geotechnically cannot function properly. This causes a lot of dissatisfaction among the residents and is a health hazard. The toilet problem is a priority issue which needs to be addressed.
(4) There is a break in the chain of communicating between the community and municipality on housing and environmental issues, due mainly to a lack of implementation of the ward committees and a tenuous relationship between the Department of Housing and the municipality. The ward committees should be set up and a positive mutually beneficial relationship between DOH and the municipality should be developed.
(5) The community view about the use of their open spaces is that they should be used for agriculture and business including shops. There is therefore a need to provide agricultural extension services and promote small businesses within the community in order to enhance food security and create employment.
(6) The community lacks a clinic, a police station and shops. These services are critical for the smooth functioning of the settlement. The question of how such services are delivered remains a challenge as financial resources remain scarce.

Finally, environment, participation, futurity and equity being the four principles which make housing policy and practice sustainable will only be integrated into low cost housing settlements if: (i) the EMP is developed and implemented with involvement of the community (environment and participation principles); (ii) in order to make the houses durable, the norms and standards based on the National Building Regulations and Building Standard Act must be followed (futurity principle); and (iii) skills

development, education and creation of jobs will enable residents of the low income settlements to have a share of the national wealth (equity and participation principles).

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TABLE OF CONTENTS

LIST OF FIGURES AND PLATES

LIST OF TABLES

List of Acronyms

ASGISA:	Accelerated and Shared Growth Initiative-South Africa
BESG:	Built Environment Support Group
BNG:	Breaking New Ground
CBO:	Community Based Organization
CSIR:	Centre for Scientific and Industrial Research
DAEA:	Department of Agriculture and Environmental Affairs (Provincial Department)
DEAT:	Department of Environment and Tourism (National Department)
DPLG:	Department of Provincial and Local Government
EIA:	Environmental Impact Assessment
EMP:	Environmental Management Plan
GPS:	Global Positioning System
GEAR:	Growth, Employment and Redistribution Strategy
IDP:	Integrated Development Plan
IEM:	Integrated Environmental Management
KZN:	KwaZulu-Natal
MDG :	Millenium Development Goals
NEMA:	National Environmental Management Act
NGO:	Non Governmental Organization
RDP:	Reconstruction and Development Programme
SANS:	South African National Standards
SEA:	Strategic Environmental Assessment
SMME:	Small, Medium and Micro Enterprises
UDF:	Urban Development Framework
UKZN:	University of KwaZulu-Natal

CHAPTER ONE: INTRODUCTION AND BACKGROUND

The need for the development of low cost housing should not overlook the important issue of sustainability. Sustainable housing is more than just the design, development, and construction of a sustainable building. It is a sustainable home to be managed, maintained, adapted, and inhabited in balance with the environment and community cohesion. Individuals as well as development agencies active in South Africa have voiced concern about the sustainability of low cost housing production practices (BESG, 1999; Hifab International Ab., 1998; Vermeulin, 2006). Housing subsidies granted by government since 1994 led to the development of one million houses by early 1999. Since then, the drive for reaching the target two point five million houses was gradually replaced by concern for the likely impacts on health and the environment of the kinds of settlements being produced. (Republic of South Africa, Department of Housing, 2000:26).

The formation of an Interdepartmental Task Team on Environmentally Sound Low Cost Housing by the Department of Housing has been the government's response to the sustainability concerns (Republic of South Africa. Department of Housing, 2000:31) There is raised concern and discussion about what sustainability for low cost housing in South Africa means as it becomes obvious that the impacts of current settlement design norms such as single houses, on large plots, with full-pressure water supply, water borne sewage, grid electricity, and inadequate insulation, contradicts resource efficiency (Napier and Mulenga, Undated).

Environmental impact concerns have not been a priority because of the pressure to meet mass low-cost housing targets, coupled with the high cost of implementing services (water, sanitation, roads, electricity) within limited budgets (Mathiane, 2001). Because of the limited budgets, sites are usually scraped of vegetation before construction without revegetation on completion (Mattson and Dalzell, 2002). The existing natural environment has in many cases been destroyed beyond repair and that new housing, especially in the state low-cost projects, has turned areas of natural vegetation to desert, with construction activity causing removal of all the trees on site rather than integrating them into the built environment (Donaldson-Selby et al, 2007).

On the other hand housing has also been identified as the best instrument to fight poverty and inequality through the provision of services and development of ownership (Vermeulin, 2006). It is the contention of the researcher that only sustainable housing which takes into consideration environmental, economic and social concerns can achieve the various objectives it is expected to. The Urban Development Framework (UDF) (Republic of South Africa, DOH, 1997, p. 21) defines it as follows; "**Housing encompasses more than just a house. It is a basic need; a productive asset with important macroeconomic linkages; a stake in the urban system; it is shelter in the basic sense as protection from the elements; an asset from which income can be derived through varied uses such as the creation of rental space or productive space in the dwelling; it is security; collateral for access to credit; and an investment for future accumulation of value to be realised in an eventual resale or through intergenerational transfer".**

There is therefore a need to review and assess the changing policies and perceptions of the sustainability of the low cost housing projects by key stakeholders to create an integrated picture which can aid ensuring housing and environmental sustainability.

1.1: Problem Statement

In South Africa, since 1994, perceptions by key stakeholders about housing legislation, and the implementation of resultant policies have been changing (Republic of South Africa. DOH, 2004a: Republic of South Africa. DEAT, 2006). Sustainability of low cost housing projects has been a problem (Republic of South Africa. DOH, 2004b). In the light of these concerns expressed at the highest level, it is reasonable to ask the question, '*What are the changing roles and perceptions (since 1994) of stakeholders on the sustainability of low cost housing in Msunduzi municipality of KwaZulu-Natal (KZN)?'* Although there are many areas of concern regarding sustainability of these housing projects, including location of the houses and quality of construction materials (ibid), the focus of this study will be on the roles and perceptions of key stakeholders on the socio-economic status of households, service delivery and environmental management including the use of open spaces.

1.2: Aim and Objectives

The aim of this study is to understand the changing roles and perceptions of key stakeholders about the sustainability of Ambleton, a low cost housing settlement built in the post 1994 period, against the legislative framework of NEMA and the environmental requirements within the DOH policy.

The specific objectives were to-

a. Identify the trends in the roles played in the sustainability of the low cost housing by:
    1. The Municipality
    2. Department of Housing (DOH)
    3. House occupants.
    4. Environmental consultants and developers
    5. NGOs and CBOs.
b. Identify the perceptions of the sustainability of the low cost housing projects by the above mentioned stakeholders.
c. Engage communities as critical stakeholders in decision making on the use of the open spaces around their homes and in the communities.
d. Create an integrated picture of trends in roles and perceptions of sustainability in the form of a systems diagram.

1.3: Summary and Structure of the Dissertation

In this chapter the problem of low cost housing sustainability in South Africa has been introduced. The aim and objectives of the study are also set out. They are focussed on the roles and perceptions of key stakeholders of the sustainability of low cost housing projects in Msunduzi municipality of KZN. Ambleton, a low cost housing settlement has been selected as the case study.

In terms of the rest of the dissertation, chapter two comprises the literature review and the establishment of the conceptual framework for the study. The context of the study area and the research methodology are provided in chapter three. The findings of the study are presented in chapter four. The discussion and conclusions are made in chapter five. The references used and appendices are set out at the end of the dissertation.

Futurity, environment, equity, and participation are the four principles that are fundamental for a sustainable housing policy and practice (Bhatti, 2001).

This study endeavours to establish the extent to which these four principles are perceived to be applied by key stakeholders in low cost housing in order to establish a view on its sustainability as defined in the South African legislation. In order to understand sustainable housing policy and practice this chapter will explore the definitions of these principles as part of the concepts of sustainability, integrated assessment, participatory development, and sustainable human settlements. The chapter begins with a review of literature on low cost housing policy at the global, national, and municipality level and ends with a conceptual framework of the study.

2.1 Housing Policy

2.1.1 Historical and global context of low cost housing

Housing issues were given low priority by development economists prior to the 1960s. Their investment priorities were in the industry, energy generation and transport sectors. These sectors were viewed as growth generating while housing was viewed as unproductive (Aldrich and Sandhu 1995). These viewpoints brings out the fact that generally in the world at that time there wasn't concern for housing the poor, even beyond the apartheid South African borders. This state of affairs could be attributed to the dominant perspective at the time of valuing economic growth without due consideration of social and environmental issues. In addition, the concept of the culture of poverty which characterised the poor as being fatalistic, helpless, dependent and inferior was used to compel governments not to provide them with housing but to spend the scarce resources on nation building investments such as industry and transportation systems. Turner (1967) and Mangin (1963) argued that the poor were just as rational as the middle- and upper-income classes in terms of their response to a situation and that the squatter shack which had been viewed as evidence of social malaise was in fact a rational step on the way to self-improvement. Turner further argued that if given security of tenure of a plot in a favourable location, then through progressive improvement the squatter shack would be transformed into a respectable

house. The improved dwellings would represent the investments of the particular families involved.

These perspectives resulted in housing policies which compelled governments and international organisations like the World Bank to come up with strategies like sites and services initiatives which encourage participation of beneficiaries and squatter upgrading instead of demolition (Choguil, 2007).

Subsequently, in the mid-1980 thinking shifted towards the creation of an enabling environment within which individual nations could develop policies to solve national housing problems (Choguil, 2007). By 1993 the World Bank adopted a new housing sector policy statement which emphasised enablement, the sector's contribution to macroeconomic development and pro-poor policies involving targeted subsidies. This new policy of creating an enabling environment was seen as directed at removing bottlenecks from the quest for housing provision (Choguil, 2007). It was within this period that the 1994 South African Housing policy was developed.

An international declaration which has influenced housing policy is the Millennium Development Goals (MDGs) of the United Nations which have become a universal framework for development (United Nations, The Millennium Development Goals Report, 2007). This eight goal action plan incorporates the triple bottom line of development which covers economic, social and environmental issues. Housing projects can contribute to the attainment of the MDGs by ensuring environmental sustainability. They can do so by reducing the number of slum dwellers and supplying quality drinking water (MDG VII), helping combat disease and maternal health (MDGs V and VII), reduce child mortality (MDG IV) and promote gender equality (MDG III), as well as reduce extreme poverty (MDG I). It is the view of the researcher that implemented correctly, development of sustainable settlements can potentially contribute to the attainment of all the MDGs.

The number of urban dwellers will continue to increase from 3.2 billion people today to nearly 5 billion by 2030, mostly in Africa and Asia (United Nations, The Millennium Development Goals Report, 2007). This is attributed to the urban migration and rapid population growth. One out of three urban dwellers was by 2005

living in slum conditions– that is, lacking at least one of the basic conditions of decent housing: adequate sanitation, improved water supply, durable housing or adequate living space (United Nations, The Millennium Development Goals Report, 2007). The MDGs target is to improve the lives of at least 100 million slum dwellers by 2020. Even if the growth rate of slum dwellers decreases, the rapid expansion of urban areas will make it challenging to improve living conditions quickly enough to meet the target. Sub-Saharan Africa and Southern Asia are still the regions where lack of adequate shelter among urban populations is most acute. Looking beyond the regional averages, the situation is even more discouraging. In countries including Chad, the Central African Republic and Ethiopia, four out of five urban dwellers live in slums. In most of Asia and in Latin America, where the majority of urban dwellers have access to improved water and sanitation, slum conditions are characterized mainly by overcrowding and makeshift shelters (United Nations, The Millennium Development Goals Report, 2007). The non-durability of housing, in fact, is a problem for an estimated 117 million people living in cities of the developing world. Over half of these people live in Asia; Northern Africa has the fewest people living in non-durable housing (United Nations, The Millennium Development Goals Report, 2007). In 2005, about one fifth of the urban population in the developing world lived in overcrowded houses (with more than three persons sharing a bedroom); two thirds of them were in Asia, with half in Southern Asia (United Nations, The Millennium Development Goals Report, 2007).

Another international framework for sustainable development which incorporates housing and has influenced the South African Housing policy is Chapter 7 of Agenda 21 which focuses on Promoting Sustainable Human Settlement Development (United Nations, Agenda 21, 1992; United Nations, The Habitat Agenda Goals and Principles, Commitments and the Global Plan of Action, 1996; United Nations, Human Settlements Report of the Secretary-General, 2004). It aims, in addition to the above mentioned MDGs to target, slum dwellers to (i) Improve access to adequate shelter and services, including water and sanitation, as well as land and property; (ii) Promote an integrated approach to transport services and systems; (iii) Develop waste management systems, with the highest priority placed on reduction, reuse and recycling; (iv) Reduce respiratory diseases and other impacts on health resulting from air pollution; (v) Increase decent employment, credit and income for the urban poor;

(vi) Strengthen implementation through mobilization and effective use of financial resources and human capacities and (vii) Strengthen institutional arrangements and governance.

This section reviewed the trends in housing policy on the global scale, while the next section will focus on the trends of the policy within South Africa.

2.1.2: South African Context

2.1.2.1: The changing policy arena

Chapter 2 of the South African constitution (Act 108 of 1996) gives South African citizens fundamental socio-economic rights which the state must protect. These include the right of access to housing, healthcare, food, water and social security and the right to a clean and healthy environment. These are referred to as minimum core obligations of the state by the United Nations committee on Economic, Social and Cultural Rights as they are intended to ensure that everyone at least has access to basic levels of social and economic rights necessary to sustain human life, health and dignity.

The initial white paper on housing of 1994 was structured in line with the overall development framework of the Reconstruction and Development Programme (RDP) which was an integrated socio-economic policy framework (DOH, 1994). The RDP aimed to empower people so that they could become self reliant, initiate development programmes and projects on a participatory basis and address the injustices of the past caused by both colonialism and apartheid. It was the means of operationalization of the African National Congress (ANC) manifesto (Davids et al 2005). The white paper states that the government's approach to housing is aimed at "harnessing and mobilizing the combined resources, efforts and initiatives of communities, the private sector, commercial sector and the state" while underlining the importance of the long term partnership among these sectors (Republic of South Africa, DOH, 1994) Emphasis of this paper was placed on three main issues namely:

(i) A national housing subsidy scheme which provided housing to eligible low income households;

(ii) A specific strategy to stabilize the housing environment and thereby encourage greater lending down-market by existing banks and;

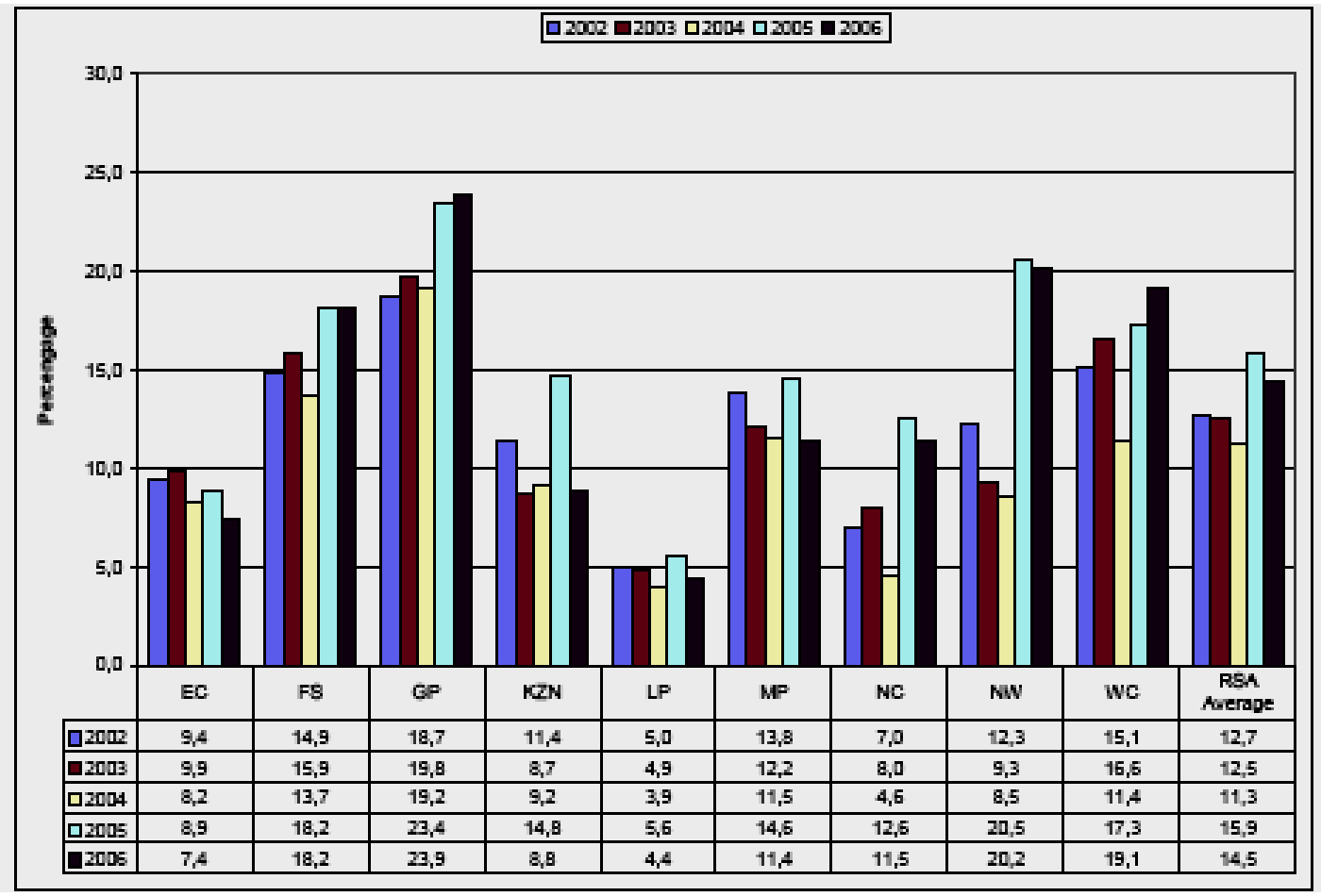
(iii) To mobilize housing finance through the establishment of non banking lenders to offer housing loans to low income earners.

The result of this was that all subsidized housing delivery conformed to the national minimum norms and standards (essentially a $30m^2$ unit -usually a room with a toilet- on a $250m^2$ piece of land) because the credit linked subsidy option never really worked. In addition to subsidised housing, rental housing which has been far less than the demand has been developed. The result has been an escalation of informal settlements. The official 2007 release of statistics by Statistics South Africa is 14.1 % as illustrated in figure 2.1 below. The figure shows the number of households living in informal dwellings between 2002 and 2006 in all provinces of South Africa. Gauteng has the largest number of informal dwellings as well as immigration (see Table 2.1 for migration patterns)

In 1995 the RDP was replaced by a macro economic strategy called Growth, Employment and Redistribution (Gear) whose main objective is stated as increasing economic growth and creating significant new job opportunities although its primary aim remains as that of the RDP which is to bring about better life for all. Government proposed cutting of the budget deficit by reducing consumption spending and increasing government investment to reduce government debt (Davids, *et al,* 2005). However, the neo-liberal macro-economic policies of the ANC government, especially since the introduction of the GEAR program have been blamed as the root of the failures in addressing sustainable habitats in urban areas. Neo-liberal economic policy has deepened the marginalization and poverty of the already poor, causing, for example, very high rates of unemployment (Beall, *et al*, 2002; Bond, 2003). The poor cannot pay for the services essential to healthy urban living. In its quest to uplift the historically disadvantaged, there is tension between commitment to fiscal responsibility and government's social commitments. Built on cheap land on urban peripheries, the low-cost housing program is under funded because the neo-liberal policies limit funds available for the public (Huchzermeyer, 2003).

Accelerated and Shared Growth Initiative- South Africa (ASGISA) is a government initiated economic intervention launched in 2005, aimed at reducing unemployment to below 15% and halving poverty rates to less than one-sixth of households (The

Presidency, Republic of South Africa, undated). This is to be achieved by sustained and strategic economic leadership from government and effective partnership between government and stakeholders such as labour and business. Its primary goal is the same as that of RDP and GEAR except that it intends to increase the rate at which wealth is equitably distributed. The targeted annual economic growth rate is 4.4%



	EC	FS	GP	KZN	LP	MP	NC	NW	WC	RSA Average
2002	9,4	14,9	18,7	11,4	5,0	13,8	7,0	12,3	15,1	12,7
2003	9,9	15,9	19,8	8,7	4,9	12,2	8,0	9,3	16,6	12,5
2004	8,2	13,7	19,2	9,2	3,9	11,5	4,6	8,5	11,4	11,3
2005	8,9	18,2	23,4	14,8	5,6	14,6	12,6	20,5	17,3	15,9
2006	7,4	18,2	23,9	8,8	4,4	11,4	11,5	20,2	19,1	14,5

Figure 2.1: Percentages of households living in informal dwellings. (Source: Statistics South Africa, 2007, Figure 14, p. 25)

KEY:

EC= Eastern Cape, FS= Free State, GP= Gauteng, KZN= KwaZulu-Natal, LP= Limpopo, MP= Mpumalanga, NC= Northern Cape, NW= North West, WC= Western Cape.

gross domestic product (GDP) between 2005 and 2009 (ibid). Between 2010 and 2014 the targeted growth rate is 6% (ibid). Bringing about a third of South African households not yet able to benefit directly from the economic advances into the main

stream economy is a major objective of ASGISA. Among the intervention efforts is the need to ensure that the Financial Services Charter commitment on housing finance is effectively implemented. The second economy is also targeted. This is the result of uneven development. The first economy is described as the modern industrial, mining, agricultural, financial and services sector of the economy that is continuously being integrated into the global economy. It is the sector of the economy that produces the wealth (May and Meth, 2007). The second 'constitutes the structural manifestation of poverty, underdevelopment and marginalization in the country' (May and Meth, pp 271-272, 2007).

In his 2004 State of the Nation Address, the President committed government to the task of building a People's Contract for the eradication of poverty and underdevelopment and the improvement of the quality of life of people, taking care to enhance the process of social cohesion and recognizing the critical importance of local government. The President indicated that a comprehensive programme dealing with human settlement and social infrastructure should be prepared. The Comprehensive Plan for Sustainable Human Settlements also known as Breaking New Ground (BNG) was subsequently prepared and approved by Cabinet in September 2004 (DOH, 2004). This document focuses policy attention on the development of sustainable human settlements, rather than just on the delivery of subsidized housing units (ibid). BNG defines four primary ends and these are:

(i) Sustainable human settlements;
(ii) Integration;
(iii) Housing assets and;
(iv) Upgraded informal settlements.

Notwithstanding the delivery of just under two million subsidised housing units, public sector delivery of subsidised housing has decreased substantially (Rust, 2006). Having peaked in the 1997/98 financial year with the delivery of 295 811 houses, delivery has been on a steady decline, with the 2006/2007 financial year threatening to be the lowest on record (Rust, 2006) . This trend is illustrated in figure 2.2 below. In September 2005, at a Housing Indaba in Cape Town, the government and the private sector, including banks and property developers, agreed to accelerate housing delivery in order to address the housing backlog. This newly formed collaboration

between the public and private sectors has resulted in the developers agreeing, in principle, to set aside a percentage of the total value of the commercially driven housing developments, in a certain price range, for investment in the low-cost housing sector.

More specifically the Minister of Housing and key role players in the housing industry have signed a Social contract for Rapid Housing Delivery. The contract basically

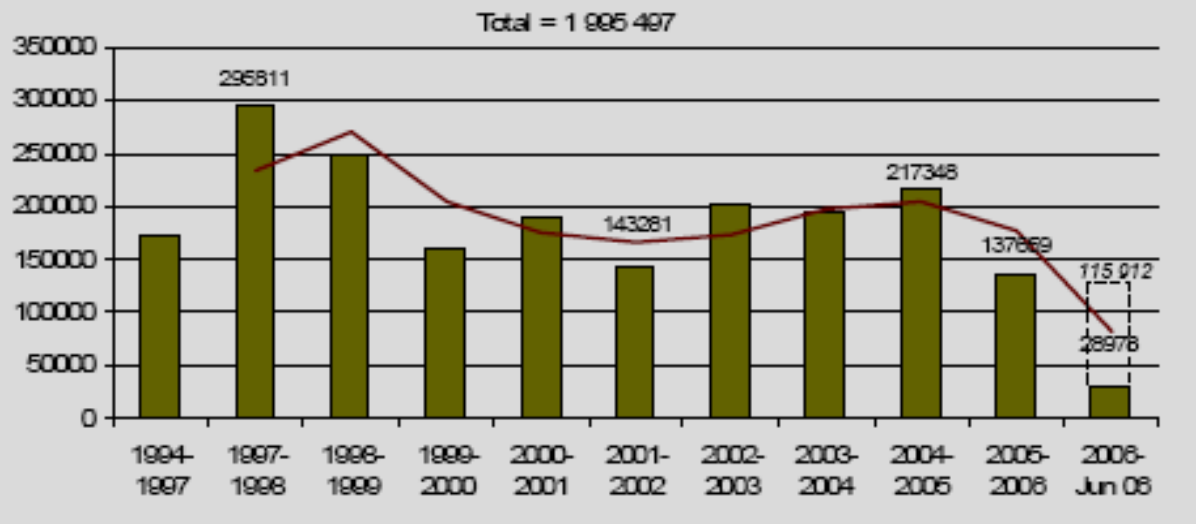


Figure 2.2: Subsidised houses completed or under construction (1994-June 2006). Number of Houses (Y) Vs Time (Years) (X). (Source: Rust, 2006, figure 12, p.23).

states that every commercial development including housing developments that are not directed at those earning R1500 or less per month, spend a minimum of 20 % on the construction of homes within human settlements for those who qualify for government subsidies (DOH, 2006). This type of initiative described above is often referred to in the literature as mixed income housing, affordable housing, inclusionary housing or inclusionary zoning (DOH, 2006).

Mixed-income housing refers to developments that combine market-rate and publicly assisted units, for people with income levels ranging from above-moderate income to very low. Inclusionary housing ordinances require that a certain percentage of new residential development be set aside for the occupancy by families of very low-, low- and moderate income levels. Inclusionary zoning is when mandatory inclusionary requirements are incorporated in the zoning code or housing element of a local

authority and obtaining building plans is made contingent on the developer's agreement to provide affordable housing (DOH, 2006).

Notwithstanding massive state intervention, the challenges of governing the deeply divided cities of South Africa remain and in key respects the old apartheid land regulatory frameworks which resulted in planning as illustrated in Figure 2.3 below and the even more intractable social and economic structures remain intact. What has changed, is the manner in which the obstacles are being tackled; with issues of urban economic development, problems of social exclusion and environmental sustainability and the overarching pattern of urban

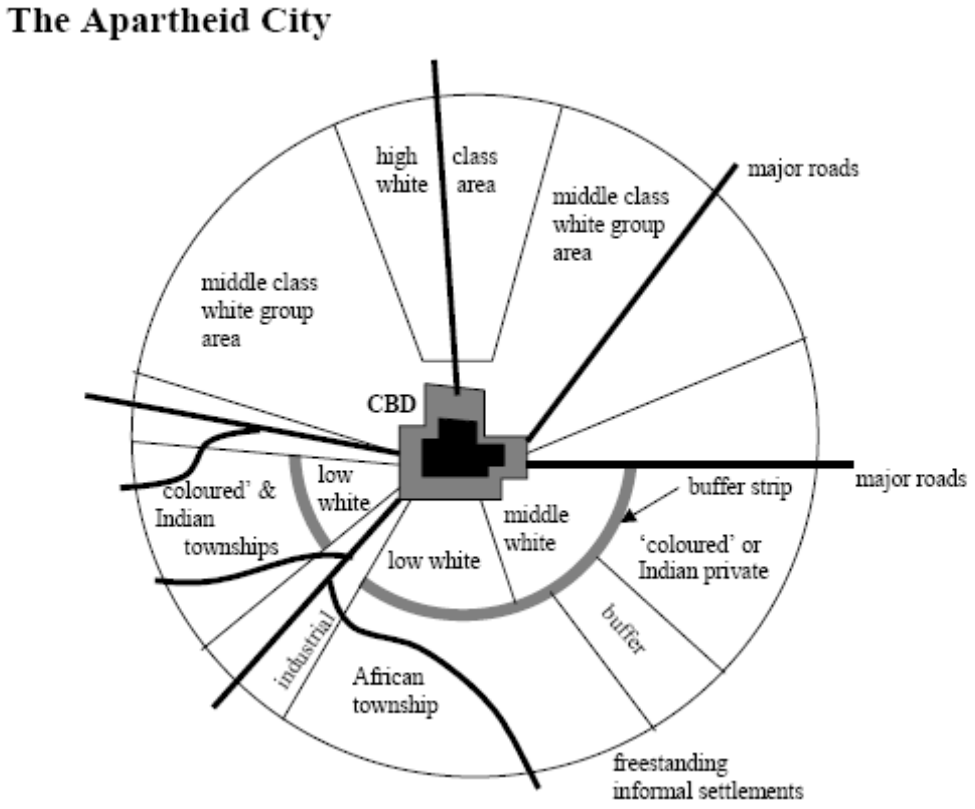


Figure 2.3: The spatial formation of the South African City. (Source*:* Davies, 1981)

growth now assuming much greater prominence than the simplified focus on the apartheid legacy. The on-going problems of racism, inequality and fragmentation are gradually being recast in a paradigm of global urban exclusion and unsustainability. This means that all people regardless of race and economic class have to be part of, and planned for in the developing cities for them to be sustainable.

2.1.2.2: Migration patterns

Global trends in migration patterns are also replicated in South Africa as illustrated in the statistics in Table 2.1 below where the most urbanised provinces of Gauteng and Western Cape have the highest immigrations for the period 2001 to 2006. This could be attributed to among other things the change in legislation in 1985 by abolition of influx control which now allows free movement and the collapse of sources of livelihood in the rural areas resulting in increase in poverty. Another factor contributing to the high urban population is the natural increase in the population within the urban areas. The people want to live near industries and organisations where they can get jobs and have access to other services.

Table 2.1: Estimated Provincial Migration Streams (2001-2006). (Adapted from Statistics South Africa, 2007, figure 5, p. 6)

Province	**Emigration**	**Immigration**	**Migration**	**Net**	**Percentage increase**
Eastern Cape (EC)	454442	132945	587387	-321497	-54.7
Free State (FS)	162510	101475	263985	-61035	-23.1
Gauteng (GP)	350905	862365	1213270	511459	42.1
kwaZulu-Natal(KZN)	212032	203291	415323	-8741	-2.1
Limpopo (LP)	351267	117592	468859	-233675	-49.8
Mpumalanga (MP)	192732	132050	324782	-60682	-18.6
Nothern Cape (NC)	85156	56733	141889	-28423	-20.0
North West (NW)	213534	171713	385247	-41821	-10.8
Western Cape (WC)	117060	361476	478536	244416	51.1

As South Africa is a member of the international community including African union (AU) and the Southern African Development Community its developmental policies are influenced by programmes like the, New Partnership for Africa's Development (NEPAD) as well.

Having discussed the national context of the housing policy trends in this section, the next section discusses policy issues at the municipality level.

2.1.3: Municipal Context

2.1.3.1: The Integrated Development Plan (IDP)

The IDP is a guiding tool for sustainable service delivery in a harmonious and cost effective way based on tangible scientific data that can be accommodated by the financial resources within a given period of time. It provides the parameters within which a municipal establishment can execute its constitutional mandate in line with the outcomes of the deliberations and consultations with the constituency elements (Msunduzi Municipality IDP, 2006/2007).

Despite the need for all spheres of Government to provide inputs into the IDP process, this did not always happen. In order to ensure comprehensive input into the IDPs the Department of Housing has developed a Comprehensive Plan (Republic of South Africa, DOH, 2007). This programme aims to provide a clear framework for incorporating housing planning in municipal integrated development planning processes and aligning housing planning between Provincial Housing Departments and Municipalities. The first step for the implementation of the programme involves the identification of the Housing Voice. The Housing Voice represents a person/persons who will champion housing issues in the IDP and ensure that the Housing Chapter of the IDP addresses the Housing Planning Needs of the Municipality and Province.

2.1.3.2: Msunduzi municipality indigent policy

Msunduzi municipality introduced an indigent policy in 2006 in order to ensure sustained maintenance of minimum health standards in the municipality. It targets indigent citizens of the municipality.

The objective of the indigent support policy is to ensure (i) the provision of basic services to the community in a sustainable manner, within the financial and administrative capacity of the council and (ii) to provide the procedures and guidelines for the subsidization of basic service charges to its indigent households, using the council's budgetary provisions received from central Government, according to prescribed policy guidelines (Msunduzi Municipality, 2006).

The council also endeavours to ensure affordability through setting tariffs in terms of the Councils Tariff Policy which will balance the viability of the continued service delivery and determine appropriate service levels (Msunduzi Municipality, 2006).

This and the previous sections illustrated the way the housing policy is integrated into municipality programmes and how the municipality is subsidising basic services to sustain minimum health standards.

The opening statement of the chapter indicates that to have a sustainable housing policy and practice the four principles of futurity, environment, equity and participation are fundamental. The subsequent sections of this chapter review the concepts of sustainability, integrated assessment, participatory development, and sustainable human settlements within which the principles are defined.

2.2: Sustainability

In this section the concept of sustainability is reviewed and is related to housing. Legislation and strategies that integrate sustainability in development programmes of South Africa are also discussed.

The first principle of sustainability relates to the notion of intergenerational equity. As the Bruntland report suggests sustainable development is, "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43).

The second principle is that of intra-generational equity. Whilst the first principle emphasises inter-generational equity, it is also important to consider the question of access to resources within the current generation. The housing system plays a major part in perpetuating and generating poverty. The central aim of any green housing policy must be to redistribute environmental resources across the population.

The third principle is that of environment; this recognises the effect of human activity on the planet and seeks to work within natural limits. Thus we may question the extent to which cities can go on expanding, or highlight the wider effects of new housing production. The National Environmental Management Act (NEMA), (1998)

of South Africa refers to environment as the surroundings within which humans live including the physical, chemical, aesthetic and cultural properties and conditions of these surroundings that influence human well being. In terms of human settlements issues like sanitation, drainage and solid waste disposal are important indicators of the state of the environment.

Finally, the principle of participation is crucial. Many of the unsustainable polices and practices arise out of a failure to actually involve people in decision making. Thus historically solutions have been imposed from above so that users remain outside the housing process (UNDP/UNCDF, 1994).

Sustainability is a contested concept so a framework (Figure 2.4 below) is perhaps more useful rather than precise definition. Sustainability then becomes the conceptual framework for the study of housing in an environmental context. Approaching the many facets of housing from a sustainable perspective requires a radical shift in thought. Alex Wilson, editor of Environmental Building News, highlights this when he emphasizes that the historical purpose of a building was to separate humans from the environment, not to be in harmony with the environment. Housing scholars have long used Maslow's theory of the hierarchy of human needs to study the needs and purposes fulfilled by housing. By using Maslow as a framework, housing is
first shelter and protection and serves to give people control over the environment
Therefore, to be in balance with the natural environment, to be responsible for the impact of your shelter on the environment, changes the paradigm.

Kathleen and Joann (2001) provide the following checklist for a sustainable building:

- Makes appropriate use of the land;
- Uses water, energy, lumber, and other resources efficiently;
- Enhances human health;
- Strengthens local economies and communities;
- Conserves plants, animals, endangered species, and natural habitats;
- Protects agricultural, cultural, and archeological resources;
- Is nice to live in; and
- Is economical to build and operate.

The diagram represents a systems approach to sustainability because the economic system, socio-political system and ecosystem are seen as embedded within each other, and then integrated via the governance system that holds all the other systems together within a legitimate regulatory framework. Sustainability implies the continuous and mutually compatible integration of these systems over time; sustainable development means making sure that these systems remain mutually compatible as the key development challenges are met via specific actions and interventions to eradicate poverty and severe inequalities. This is preferable to the more commonly used image of the three separate intersecting circles which depict sustainable development as limited to a fragile space where all three circles intersect.

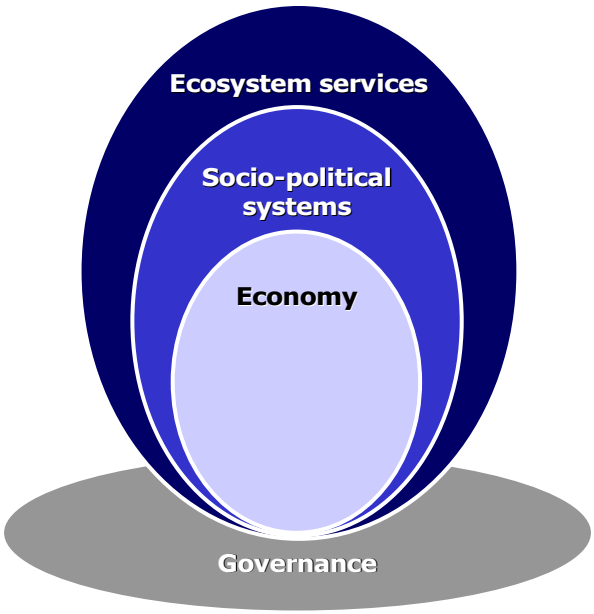


Figure 2.4: A Systems approach to sustainability. (Source: DEAT, 2006, Page 19)

A "green" or sustainable building conserves resources, prevents pollution, and is a healthy living environment. However, housing, as a field of study, encompasses more than the building, or even the neighborhood or community that is the setting of the actual building. “The broad definition of housing includes the people that live in the building and their psychosocial needs and interactions that contribute to the concept of home. Therefore, sustainable housing is more than just the design, development, and construction of a sustainable building. It is a sustainable home to be managed, maintained, adapted, and inhabited in balance with the environment” (Kathleen and Joann, 2001, p 6).

To integrate sustainability in development in South Africa, the National Environmental Management Act (Act 107 of 1998) (NEMA) was enacted. This Act provides the framework for co-operative environmental governance in South Africa and promotes the application of environmental assessment and management tools to

ensure integrated environmental management (IEM) of activities (chapter 5, section 23(1)).

Section 23 of this Act provides the general objectives of integrated environmental management; thereafter Section 24 outlines what procedures must be implemented in order to achieve these objectives. The South African national Department of Environmental Affairs and Tourism (DEAT) is actively promoting integrated environmental management. This is being achieved through the development and implementation of environmental policy and legislation; as well as training, communications and awareness programmes. During the 1990s the philosophy of IEM became well rooted in South African thinking. However, the implementation of IEM was largely focused on one tool, i.e. environmental impact assessment, which focused on new project proposals. Looking ahead, a key challenge is to support sustainable development through the use of a wider range of environmental assessment and management tools across the full activity life cycle and by all sectors of society (Republic of South Africa, DEAT, 2004).

2.3: Integrated Assessment

Integrated assessment is described as an interdisciplinary and participatory process of combining, interpreting and communicating knowledge to allow better understanding of complex phenomena (UNEP, 2002). This requires the involvement of scientific experts, stakeholders and decision makers in informing policy and to support decision making (Figure 2.5 below illustrates this diagrammatically). Communication of the different actors is at the core of integrated assessment. 'Participatory methods' is an umbrella term describing approaches for assessment in which non-scientists, such as policy people, stakeholders or even lay people play an active role. Policies for managing sustainability will be effective only if they have the moral support of people and it is therefore argued that assessments should comprise the opinions and attitudes of stakeholders and citizens. Ensuring that science is more relevant to society is particularly important to those working toward environmental sustainability and to people whose livelihoods are directly related to resource availability and environmental quality. Developing the relationships and information flows necessary for the full integration of scientific knowledge into the decision-making process is a

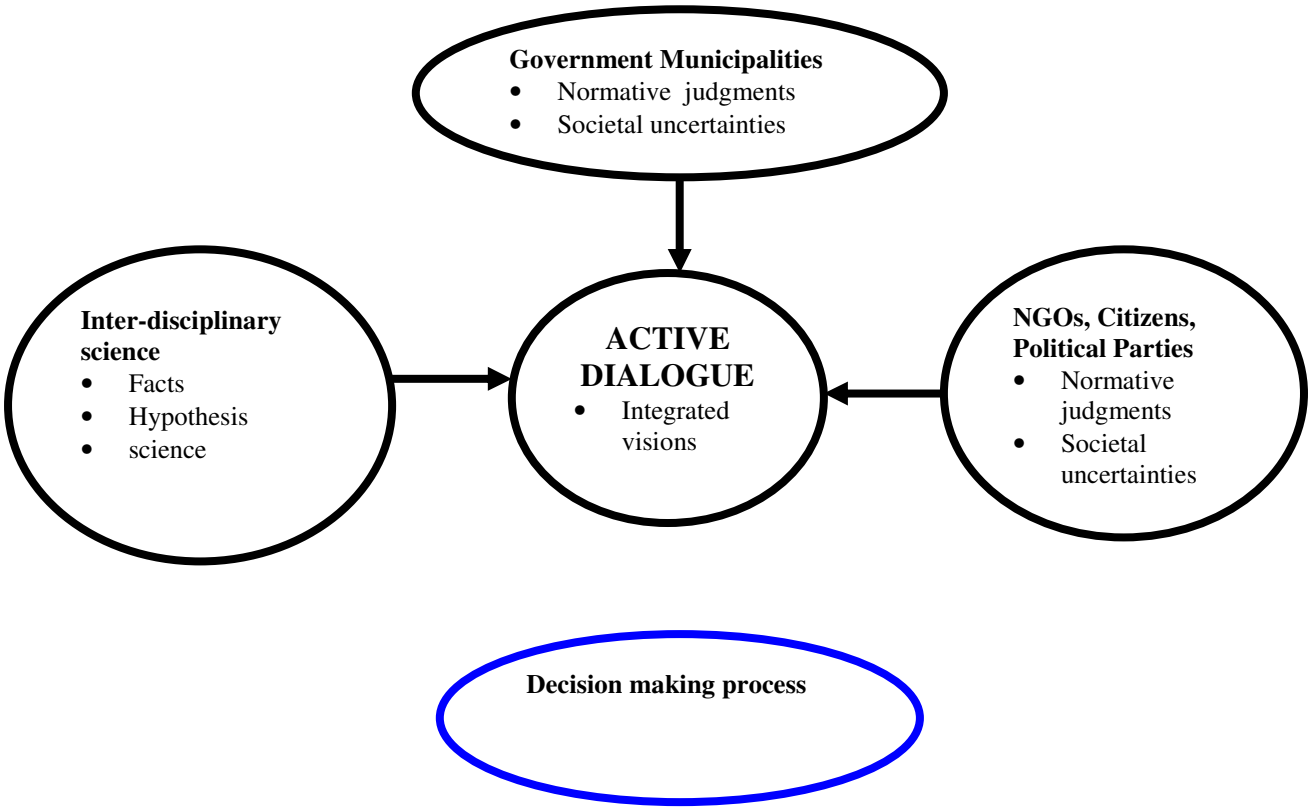


Figure 2.5: Framework of Integrated Assessment (Source: UNEP, 2002)

daunting task, but it is an increasingly important part of producing science that supports sustainability-focused management.

Changing management practices as knowledge improves over time is data-intensive and expensive, requiring managers to use professional judgment and take more risks as they continually interpret new information. More than most scientific research ventures, efforts to define and attain sustainability require the input, interaction, and acceptance of diverse sectors of society. The social-science component of sustainability efforts is especially challenging for traditionally trained natural science experts, who are frequently frustrated by issues such as public perception and the role of politics in science.

The recognition that many issues facing society are too complex to be answered by researchers in one discipline also has promoted integration among various branches of the natural and social sciences. Whether integrative efforts involve researchers from disparate disciplines or members of academia working with managers and decision

makers, such endeavors must surmount various challenges based on differences in worldviews and communication styles (Katharine et al, 2005: Obasi, 2002).Whether integrative efforts involve researchers from disparate disciplines or members of acadamia working with managers and decision makers, such endeavors must summount various challenges based on differences in worldviews and communication styles (Katharine et al, 2005).

2.4: Participatory Development

Participation of local populations in development is one of the motive forces of sustainable development (UNDP/UNCDF, 1994). Participation is a process through which stakeholders influence and share control over development initiatives and the decisions and resources which affect them (World Bank, 1996). Burkey (1993:48) as quoted by Davids et al, 2005 says "Development involves changes in the awareness, motivation and behaviour of individuals and in the relations between individuals as well as between groups within society. These changes must come from within the individuals and the groups, and cannot be imposed from the outside."

The Batho Pele Principles (meaning People First) say "You should be consulted about the level and quality of public services you receive and, wherever possible, should be given a choice about the services that are offered" (Davids et al, 2005). Participatory development demands that communities move from being objects of development to its subjects. To the extent that participatory development entails a humanising process, it becomes an essential ingredient in empowering communities. This means starting with the principle of giving the public a voice and choice in development to ensure equity and democratic rights. Public participation has become an interdisciplinary and holistic approach to creating sustainable communities. This entails the democratization of the development processes. Through public participation the mentality of dependence can be neutralised and the public has an opportunity through IDP to claim their stake in government (Davids et al, 2005).

The 1989 Manila Declaration on people's Participation and Sustainable Development stipulates three principles to be basic to a people centred development among which is the principle that those that would assist the people with their development must recognise that it is they who are participating in support of the people's agenda, not

the reverse. The value of the outsider's contribution will be measured in terms of the enhanced capacity of the people to determine their own future.

In South Africa there are strategies to increase the participation of the public particularly at the local government level. This is reflected in the White paper on Reconstruction and Development (1994), the constitution (1996), the white paper on Local Government (1998) and the Municipal systems Act (2000). These are built and practised as IDPs

Some of the challenges of public participation at the IDP level include:

- Identifying the role of the IDP office and officer as change agents in relation to public participation, pinpointing who is in charge of public participation ;
- Compiling at local government level, an interdisciplinary public participation team of local government change agents and stakeholders in the community who possess indigenous knowledge and people skills, partners ;
- Reorienting the public after more than 40 years of functioning within a top-down, system-maintaining, rigid culture of non-participation, to the opportunity to engineer their own destiny by making decisions which will affect their lives and empower them;
- Retraining and reorienting local government officials to become change agents at grassroots who engage with their stakeholders as planning and implementing partners i.e. assisting them to shift from a top-down to a bottom-up approach ; and
- Public input and participation in IDPs are constrained by the absence of functional Ward Committees, which are not succeeding in providing the connection between councillors and their constituents (Davids et al, 2005),

.

2.5: Sustainable Human Settlements

Human settlements mean the totality of the human community- whether city, town or village-with all the social material, organisational, spiritual and cultural elements that sustain it (Vancouver Declaration on Human Settlements, 1976). Sustainable human settlements are those cities, towns, villages and their communities which:

- enable societies to live in a manner that supports the state of sustainability and the principles of sustainable development, and
- have institutional, social and economic systems that will ensure the continued existence of those settlements.

A study of cities that have existed for a long time will show that they owe their long existence to continuous reinvention that allowed these cities to accommodate changes in the environment, society and economy, as well as new technological developments, all of which threatened the ability of those settlements to continue supporting an acceptable quality of human life. A degree of flexibility that allows for constant change is therefore necessary at all levels of planning, if sustainability is to be the outcome. The ability to meet most of our basic human needs relates in one way or another to the creation and performance of human settlements which are integral to the achievement of sustainable development. To address the role of human settlements in sustainable development, a second international action plan, the Habitat Agenda, was prepared. The Habitat Agenda outlines a global approach to providing adequate shelter for all and developing sustainable human settlements and is the international consensus document describing the qualities and needs of sustainable human settlement development. The Habitat Agenda offers, within a framework of goals, principles and commitments, a positive vision of sustainable human settlements where all have adequate shelter, a healthy and safe environment, basic services, and productive and freely chosen employment.(United Nations Conference on Human Settlements (Habitat II) ,1996)

Table 2.2 below sets out the statistics of the General Household Survey which show indicators of trends in the status of settlements in South Africa in the period 2002 to 2006. These trends may be summarised as follows:

- The percentage of households that live in informal structures, commonly referred to as shacks, was 12.7% in 2002, rose to 15.9% in 2005 and declined slightly to 14.5% in 2006.
- The percentage of households that receive Government housing subsidies was 5.5% in 2002 and 9.6% in 2006.

- The percentage of households that use electricity for lighting rose from 75.6% in 2002 to 81.3% in 2006.
- The percentage of households that use either paraffin or wood for cooking declined from 37.9% in 2002 to 31.6% in 2006.
- Use of municipal services for refuse removal, increased steadily - from 55.0% of all households in 2002 to 60.6% in 2006.
- The percentage of households that have access to piped water in their dwelling or on site, rose from 66.1% in 2002 to 71.3% in 2006.
- The percentage of households that used bucket toilets or had no toilet facility declined from 13.2% in 2002 to 8.6% in 2006.
- Over the period 2002 to 2006, the percentage of households in which an adult went hungry declined from 6.9% in 2002 to 2.5% in 2006.
- The percentage of female-headed households in which an adult went hungry was higher than in male headed household from 2002 to 2006.
- In 2006, the percentage of households in which at least one child went hungry (2.4%) was lower than in earlier years (6.7% in 2002 and 7.0% in 2003, 5.1% in 2004 and 4.7% in 2005) (.Statistics South Africa, 2007)

In terms of sustainability however, it is how long the electricity is supplied without interruption and steady voltage, the frequency of refuse removal, if there is water

Table 2.2: Selected household indicators based on the General Household Survey over the period 2002 to 2006. (Source: Statistics South Africa, 2007)

Indicator	2002	2003	2004	2005	2006
Number of households (Thousand)	**11 479**	**12 041**	**12 194**	**12 726**	**12 972**
		Percentage of households			
Housing					
Type: Informal	12,7	12,5	11,3	15,9*	14,5
Government housing subsidy received (all housing types)	5,5	6,3	6,5	8,4	9,6
Sanitation					
Bucket toilet or none	13,2	11,8	10,8	10,2	8,6
Electricity supply					
Connected to the mains	76,1	77,6	80,4	80,2	80,2
Energy sources					
Cooking: Paraffin/Wood	37,9	36,8	35,0	33,5	31,6
Lighting: Electricity	75,6	77,9	80,3	80,2	81,3
Refuse removal					
By municipality	55,0	56,8	57,1	60,1	60,6
Water					
Piped in the dwelling or on site	66,1	67,3	67,8	68,4	71,3
Hunger					
Adult hungry	6,9	6,2	5,5	4,3	2,5
Male-headed households	5,4	5,3	4,6	3,6	2,1
Female-headed households	9,7	7,9	6,9	5,3	3,3
Child hungry	6,7	7,0	5,1	4,7	2,4

* The figure was published as 11,7% in the 2005 publication. This did not include informal dwellings/shacks in backyards.

flowing in the connected pipes and repair of leakages, how well the sanitation systems operate and the sustainability of the sources of livelihood among other factors which matter most. These, as well as the durability of the built houses, will prevent the people from going back to the shacks or actually turn the formal settlements into slums.

From the reviewed literature it is clear that South Africa's policies, legislation and programmes on housing and sustainable development are in line with international conventions and objectives. With international and national institutional solidarity in abundance for poverty alleviation and development of institutional capacities to deliver, what is critical is development of contextualized strategies and capacities at the municipality level with community input through the IDP process. Community

input is limited by literacy levels and ability to articulate issues which are of priority concern for community sustainability. It is the operationalization of these policies and programmes especially at the municipality level which determines the extent of sustainability of the housing projects and subsequent human settlements. Critical is the lack of sufficient skills to translate these objectives into tangible goods at the municipality and community levels compared to the high demand for housing.

2.6: Conceptual Framework

A housing policy which integrates environmental, economic and social concerns with decision making involving all stakeholders (including the target community) at the planning, implementation and maintenance stages will result in a sustainable human settlement as illustrated in Figure 2.6. A sustainable settlement is sensitive to environmental, economic and social issues of all stakeholders linked to the settlement. It is illustrative of participatory development. Its sustainability is guaranteed by its inclusiveness of professional and community knowledge and participation by all. The community and other stakeholders benefit from the built environment and the natural environment. They are involved in utilization and conservation of the environment sustainability. These interactions are maintained throughout the life cycle of the settlement even as it evolves over time being passed on to other stakeholders or the next generation. These concepts are incorporated in the South African housing policy. They are further integrated in the Urban Development Framework of 1997.

The perceptions and roles played by key stakeholders in a settlement will show the extent of their participation in decision making and implementation. These perceptions and roles will also be indicators of the direction of the sustainability of the low cost housing settlements.

2.7: Summary

In this chapter policy trends in housing at the global scale which shows changes in governments' prioritization of provision of low income housing from low to high have been reviewed. At the national level there has been a trend towards a housing policy of inclusion of all citizens across race and economic class to accessing housing. The national policy is implemented at the municipality level through the IDP which allows for the participation of the citizens of each municipality. The indigent policy at the municipality level is also reviewed as an important strategy towards sustainability. The EMP recommendations for the study area are also listed and the concepts of sustainability, integrated assessment, participatory development, and sustainable human settlements are reviewed as they are critical for a sustainable housing policy and practice. Finally a conceptual framework for the study is presented.

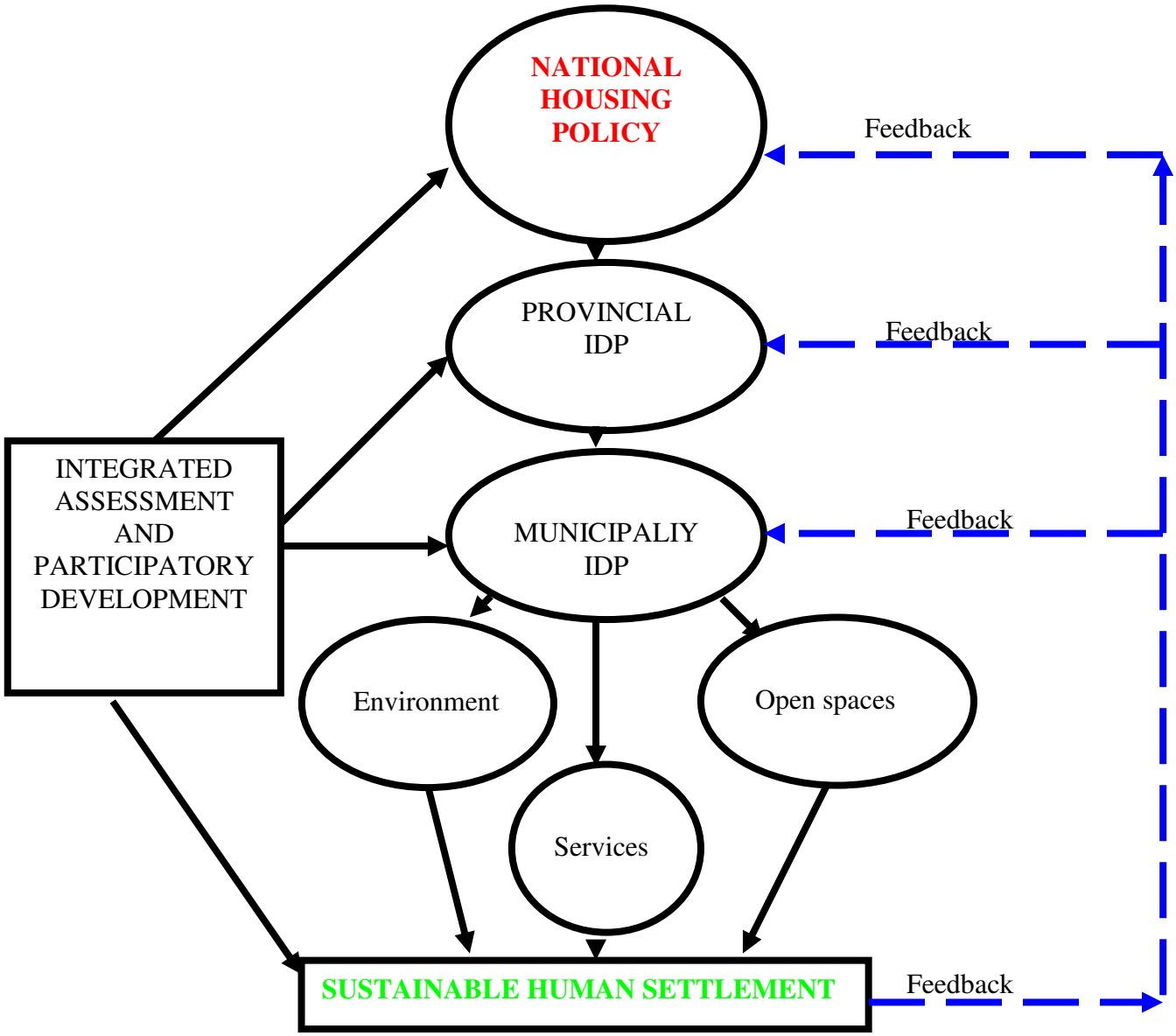


Figure 2.6: Conceptual Framework of the Study

CHAPTER THREE: CONTEXT AND METHODOLOGY

This chapter provides the context of the study by highlighting the geographical location of the study area and giving a description of the Ambleton settlement. It also gives a description of houses and environment of Ambleton settlement. Maps and photographs are used to aid the description. The methodology to collect and analyse data is also included. A structured questionnaire for the homeowners and semi-structured questionnaires for the other key stakeholders were the main instruments used for data collection.

3.1: Context

The case study area of Ambleton is located in the Msunduzi Municipality of the uMgungundlovu District in KwaZulu-Natal Province (see Figure 3.1). Ambleton, a low cost housing project, was chosen as a case study as it has different types of housing development, including in-situ upgrading, the standard Reconstruction and Development programme (RDP) housing types, owner improved houses and a yet to be completed phase that will be developed with the latest policy changes in mind.

The Msunduzi Municipality (Pietermaritzburg) is located along the N3 between Durban and Escourt. Its location has tourism, agricultural, business, as well as administrative significance. It is the second largest city within KwaZulu-Natal and the fifth largest city in South Africa. It is the Capital City of KwaZulu-Natal, and the main economic centre within uMgungundlovu District Municipality. It has very high potential for development. (Msunduzi IDP, 2006/2007).

The Msunduzi Municipality was formed after the 2000 elections and is made up of Pietermaritzburg, Ashburton, Claridge, Vulindlela and Bishopstowe. It covers an area of 649 km^2 and has a population of 523 470 according to the 2001 Census. The population has been growing at a steady rate of 1.2% per annum. It is made up of 53% females and 47% males (Msunduzi IDP, 2006/2007). The municipality has 130 405 households. Extension of free basic services to the farming areas has remained a challenge. The City has a number of unaccounted for water losses amounting to approximately 35% per annum. The unaccounted electricity supply is

approximately 8 %. There is a significant backlog in the delivery of all services (Msunduzi IDP, 2006/2007).

Ambleton is a low cost housing settlement built after 1994. It comprises Farm Ambleton, Erf 720, in the Magisterial District of Pietermaritzburg (Msunduzi Municipality, 2006). Access to the site is via the R56 (P5-4) 10 kilometers to the south of the centre of Pietermaritzburg (Figure 3.1). The area is bounded by small holdings to the south, an existing township to the west, and the main access road to the area, the R56, to the east (Msunduzi Municipality, 2006).

Farm Ambleton, Erf 720 consists of land owned by the Province of KZN, Title Deed T4775/1997, and it is 327Ha in extent. The property concerned forms part of the land that was acquired by the Provincial Administration in the early 1990s. The Department of Housing approved the development of Ambleton in November 2001. Approximately half the site is still vacant, while Phase 1 and Phase 2A and 2B have been constructed. There are about 2400 houses in the settlement (Councillor Shelembe, September 2007). Some subsistence agriculture and the grazing of livestock occurs in the two developed phases, and the area is characterised by large tracts of riverine vegetation associated with the drainage and valley lines of the tributaries to the Slangspruit river running in the western portion of the study area from south to north.

Houses in Phase 1 (Northern end of the settlement) are mostly of two kinds. There are the RDP houses which are $23m^2$ and $30m^2$ in size and are mostly unpainted and unplastered as shown in Plate 3.2 below. These houses have small water tanks on the rooftops although a good number of these tanks were found to be unused at the time of the fieldwork. Some of the houses have been upgraded and are well maintained as shown in Plate 3.3 while others remain in their original state of construction (Plates 3.1 and 3.2).

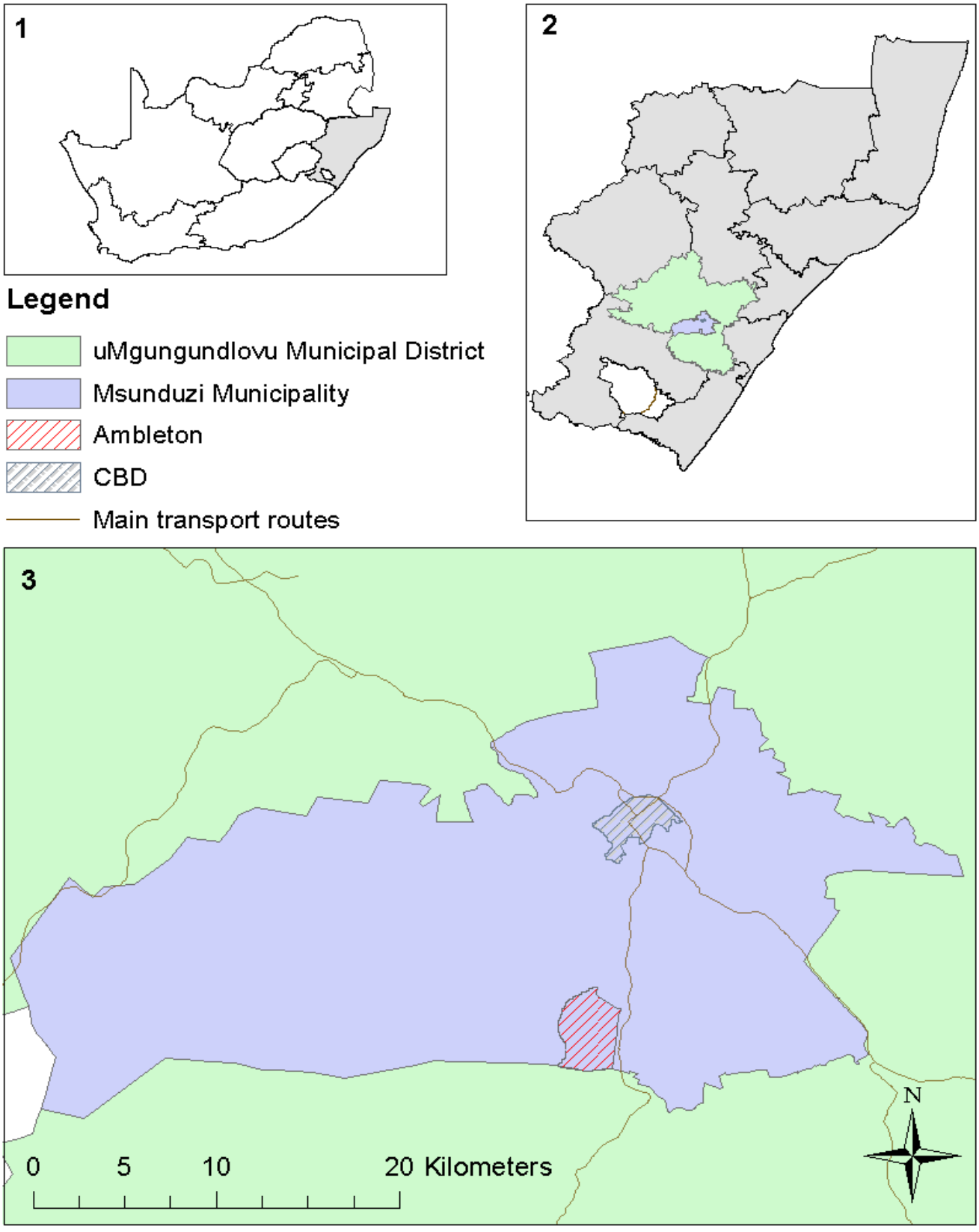


Figure 3.1: The location of the study area. KZN in South Africa (1), uMgungundlovu district in KZN and Msunduzi municipality within the district (2), and Ambleton within Msunduzi municipality (3).

Some of the houses have toilets inside while others are outside. Generally Phase 1 has better tarred roads as shown in Plate 3.1.

Phase two of Ambleton has most of its houses painted and plastered and all are 30m^2. They have toilets inside the houses although some have build some outside because of the faulty design of the inside ones. It has fewer tarred roads and the drainage system is not as elaborate as that in Phase 1. It has less open spaces within the settlement but has a lot of open space on the periphery of the housing development. A small part of phase two is an in situ upgrade. The old Farm house is located within Phase two. This phase also has some upgraded houses although fewer than those in Phase 1.

Plate 3.1: A good road in Phase 1 of Ambleton. Beyond the road are houses of Phase 2.

Plate 3.2 Unplastered RDP houses which are 23m^2 and 30m^2 in size mixed with those which are plastered and painted in Phase 1 of Ambelton.

Plate 3.3 An upgraded house within Ambleton.

3.2: Ambleton Environmental Management Plan

To ensure sustainability of the environment within Ambleton, which is the study area, an Environmental Management Plan (EMP) was developed in 2006 in line with the legislative requirement. The environment being a critical component of the sustainability of human settlements, it has to be managed in an efficient and scientific way. A review of the Ambleton EMP highlighted the key environmental issues. The following were key recommendations which are yet to be implemented:

1. Design of storm water outfalls to reduce flow velocity.
2. Diversion of storm water to detention ponds for irrigation.
3. Removal of alien invasive plant species.
4. Control of cattle access to wetland area.
5. Confinement of livestock in fenced off areas.
6. Planting of palatable grasses and trees.
7. Sealing of leaking pipes and taps while awaiting repair.
8. Placing of rubbish receptacles in strategic places.
9. Forbidding use of rubbish pits and burning of waste.
10. Putting road names in the area.
11. Cleaning up of drainages and road clearing.

This plan was developed after the houses were developed and occupied which is not good practice and the municipality has not been able to implement it.

Having looked at the context of the study area, the next section is on the methodology used to conduct the study.

3.3: Methodology

A primary literature review was done to understand issues of housing sustainability in the global, national municipality and Ambleton contexts, issues of environmental policy and to aid the selection of the methods used for data collection. The primary review included books, peer reviewed journal articles, web-site references as well as Dissertation documents. A secondary review included institutional documents including the IDP for Msunduzi and the Environmental Management Plan (EMP) drawn up for Ambleton.

The research approach beyond the review of literature was both qualitative and quantitative in nature. Data collection was undertaken done by the researcher and one assistant. The assistant is experienced in data collection as he was involved in previous data collection for environmental management research and is currently doing his Honours degree in Geography at UKZN. Observations in the settlement on the houses and their surroundings were also done and noted by the researcher. Photos of significance were also taken and some are included in section 3.1 above.

3.3.1: Household and Key Informant Surveys

Key informant interviews were conducted with officials at the DOH, municipality, an NGO, and a CBO. The intended target included environmental practitioners, construction companies and DAEA. These are critical stakeholders in housing and services delivery and maintenance. However no response was received from these institutions after requests and phone calls were made. Instead the Environmental Management Officer of Umngeni Municipality was consulted by correspondence as he is doing a study on the implementation of the water and sanitation policy in the study area. The selection of the above mentioned key stakeholders was based on snowball sampling (Welman, C., et al, 2005). This is an approach where a few members of a relevant population are approached for information on the study as well as identifying other key informants from that population for inclusion in the sample. The included informants further identify other relevant individuals for inclusion in the sample. This goes on like a rolling snowball until the required sample size is attained.

The initial interview was on 13th August, 2007 with the Housing Delivery Unit of Msunduzi municipality which was recommended by the research supervisor. The subsequent interviews were based on recommendations from the interviewed stakeholders. The last one was with the Ambleton councillor on 3rd October, 2007.

The homeowner sample was selected randomly based on five clusters created by the topography of the study area. Phase one has a cluster on rugged land at low altitude, another cluster on relatively flat and higher land and a third cluster which is on high rugged land. Phase two has a cluster near the stream while another cluster is uphill.

The clusters and houses were identified using an aerial photograph of the study area collected from the GIS Unit of Msunduzi Municipality. Ten houses were selected from each cluster. The spread of the randomly selected houses whose owners were interviewed is indicated in Figure 3.6 below as GPS points were taken during the interviews. Note that some of the picked points are seen as close to each other due to the accuracy levels of the GPS. The actual households are in reality further apart than the apparent distances or lack of distances depicted on the map.

3.3.2: Questionnaires

A structured survey questionnaire was designed to elicit information from the home owners. It was also translated into IsiZulu which is the main language spoken by the people living in Ambleton (Appendix 1). Semi-structured lists of questions and issues for discussion were developed for the institutions and these are included in Appendix 2. Some of the questions and issues are exactly the same for the home owners and the key informants in order to compare responses on key issues. Covering letters were also written to introduce and explain the nature of the study and these are also included in the Appendix 3.

3.3.3: Pilot study

A pilot study of the structured questionnaire was done in an area near the study area and with similar living conditions. Six questionnaires were delivered to home owners and collected a week later. The drop and collect approach was to be used for the main survey. Only three were filled and it was then decided that the researcher and the assistant would have to conduct the interviews and fill in the questionnaires to be able to get the targeted sample size within the limited time available and to improve accuracy of

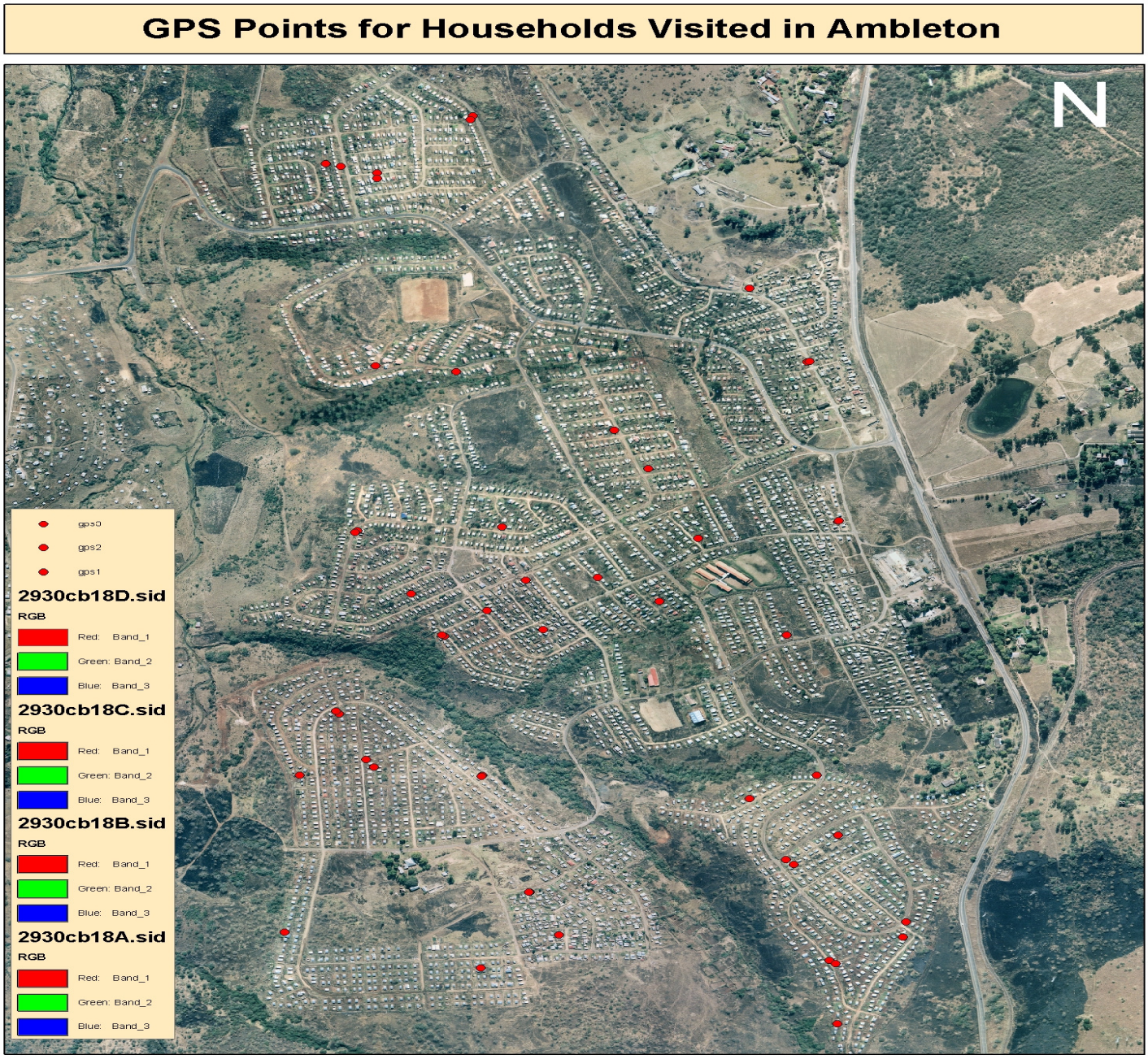


Plate 3.4: The aerial photograph of Ambleton showing the spread of the houses (marked in red) selected for questionnaire interviews.

responses to questions: the respondents simply did not respond appropriately to some of the questions.

3.3.4: Access to Homeowners

An imbizo (a community meeting) was attended in the study area on the 9th of September 2007 by the researcher and assistant before the data collection was started. The researcher and assistant were introduced to the community. The councillor also introduced the study to the community as he was earlier briefed on the intended study.

The community was interested in when the results of the study would be presented to them but it was explained that the study intends to inform policy which would benefit them in the long term. Subsequently data was collected on the 16th and 23rd of September 2007. A commitment to report back to the community via the councillor was agreed to.

For key informant interviews, e-mails were sent (see sample in Appendix 3) to various institutions introducing the study and requesting interviews with appropriate representatives. These were sometimes followed up by phone calls depending on the subsequent arrangements after the initial contact.

3.3.5: Data Analysis

The analytic process has been defined as "breaking down the data into smaller pieces by identifying meaningful units, grouping together in categories and developing relationships among the categories in such a way that patterns in the data are made clear (Bradly 1993:445). Since all the questions in the structured home owners' questionnaire were coded, the data was entered in a statistical package called MoonStats. It is a stand-alone software program that operates in Windows 95 or higher. It provides statistical tools for data exploration and description (Welman C., et al, 2005).

The subsequent pie charts, table and graphs generated were used in the interpretation of the data. Open ended responses were analysed for content, trends noted and reported. Where the responses were written in IsiZulu they were translated in to English by the assistant for whom IsiZulu is a first Language.

Semi structured questionnaire response transcripts were also analysed for content trends. These were also noted and reported.

3.4: Limitations of the Study

Language was a limiting factor for the researcher to probe further and interact with the home owners, as most spoke only IsiZulu. Another limitation was the inability to get interviews from the other key stakeholders who were targeted. These included the developers and DAEA

3.5: Summary

An illustration of the context of the study area and the methodology used in the study has been given in this chapter by description, maps and photographs. The geographical location of the study area within the municipality has been described. The municipality location within the district and the province are also presented. The methods including questionnaires, photographs as well as observations are also described. Snowball sampling was used to get a sample of key stakeholders apart from the homeowners who were sampled randomly in ten clusters of houses. Analysis of the data was by computer and interview transcript reviews. The approach to the analysis of the data was outlined and the limitations of the study indicated.

CHAPTER FOUR: PRESENTATION OF FINDINGS

This chapter presents the findings of the study. Information collected from the homeowners, DOH, the municipality, BESG, a CBO, Ambleton area councillor, an Environmental Management Officer and observations by the researcher are presented. Perceptions on the sustainability of Ambleton are focused on housing delivery, service provision, use of open spaces and the design of the houses. Also presented are the changing roles of stakeholders as policy changes.

4.1: Demographic Data of homeowners interviewed

This section focuses on the demographic data collected from the 50 homeowner respondents from the Ambleton low-cost housing settlement.

4.1.1: Gender and Age profiles

Thirty-three (66%) of the respondents were female and seventeen (34%) were male. These were either the heads of the households or their spouses. From the frequency table (Table 4.1) nine (18%) were aged between 18 and 25 years, fifteen (30%) between 26 and 35, twelve (24%) between 36 and 45, ten (20%) between 46 and 55 and four (8%) were 56 years and above.

Table 4.1: Age distribution of respondents

Value	N	%	Cum. %
18-25	9	18.00	18.00
26-35	15	30.00	48.00
36-45	12	24.00	72.00
46-55	10	20.00	92.00
56+	4	8.00	100.00
TOTAL	50	100.00	

4.1.2: Education Levels

The bar chart in Figure 4.1 below shows that five (10%) of the homeowners interviewed had never been to school, nine (18%) had been to primary school, 32 (64%) had some level of secondary schooling (including those who achieved metric as well as dropouts) and four (8%) had attained tertiary education.

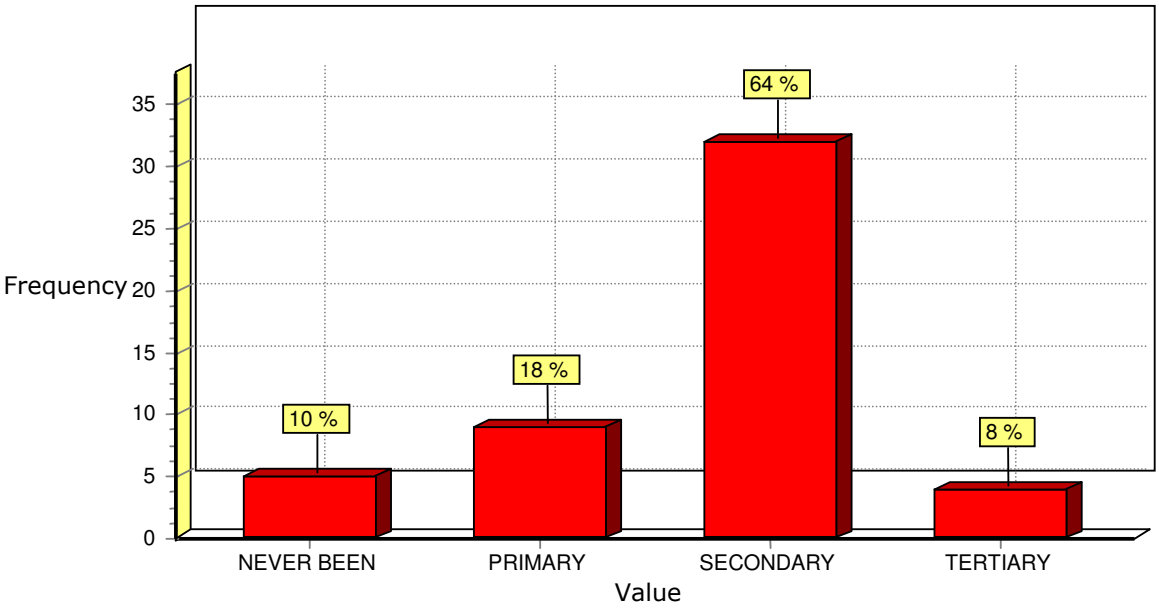


Figure 4.1 Levels of education

4.1.3: Source of Livelihood

The pie chart in Figure 4.2 below shows that twenty-two (44%) respondents were in employment, three (6%) in business and twenty five (50%) had other sources of livelihood among them pensions and grants.

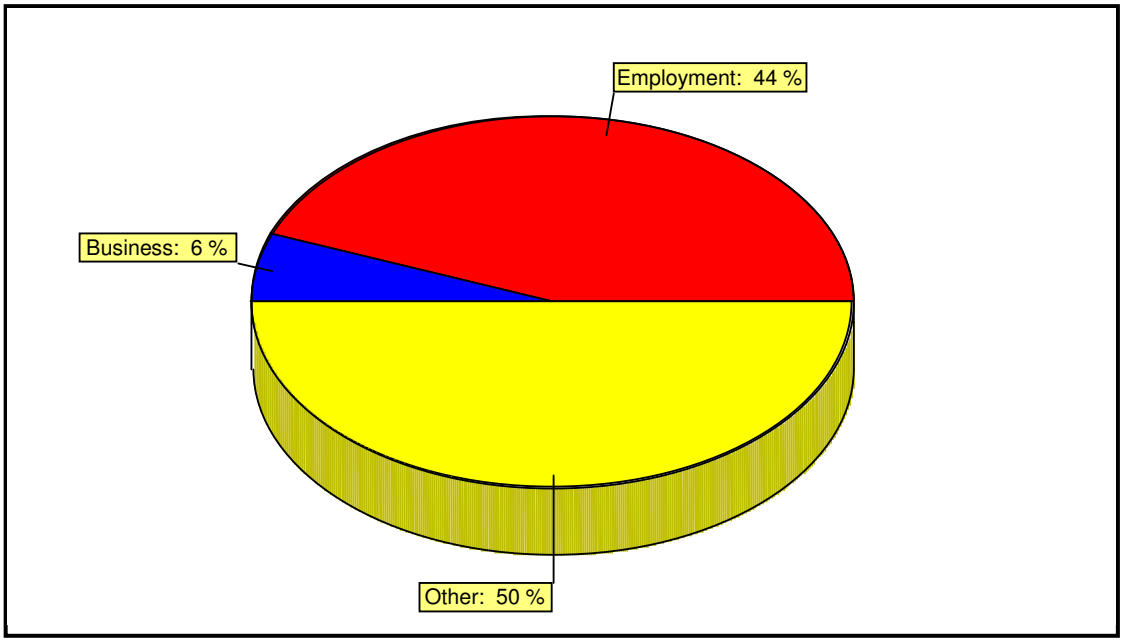


Figure 4.2: Sources of livelihood

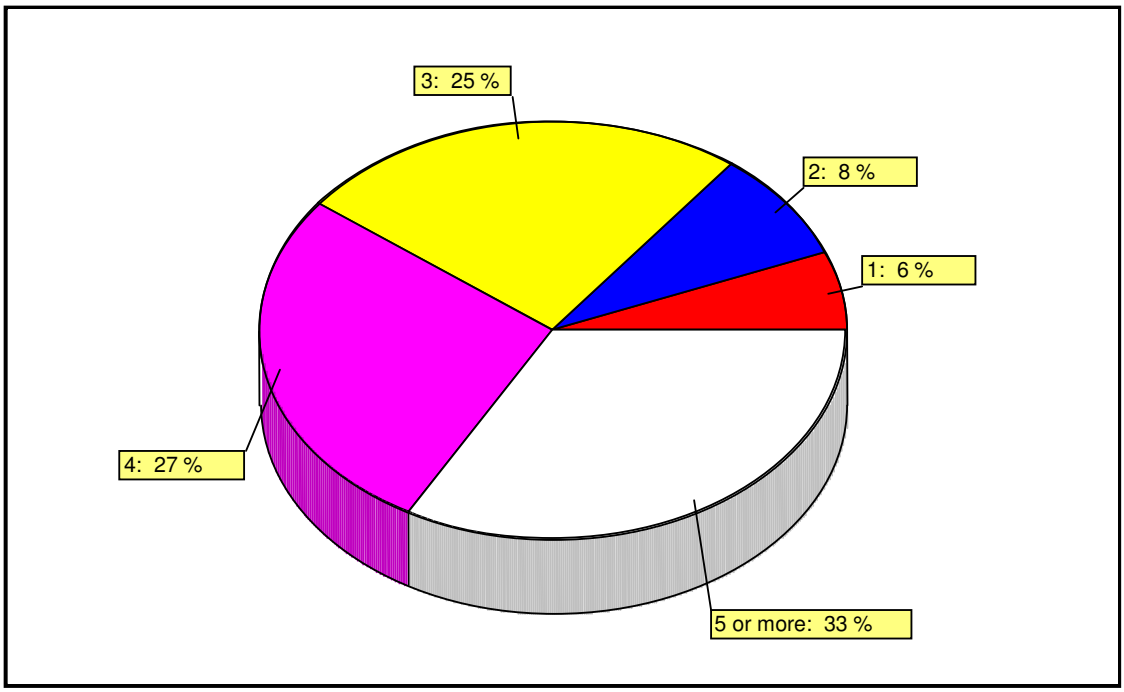


Figure 4.3: Residents per house

4.1.4: Residents per house

The Figure 4.3 above shows that 17(34%) houses had five or more residents, 13(27%) had four, 12(25%) had three, 4(8%) had three and 3(6%) had one resident.

4.1.5: Income Levels

The bar chart in Figure 4.4 below shows that nineteen (38%) respondents earned between R0 and R 800, twenty- three (46%) between R801 and R1300, three (6%)) between R1301 and R1999, three (6%) between R2000 and R3500 and two (4%) earned R3501 and above per month.

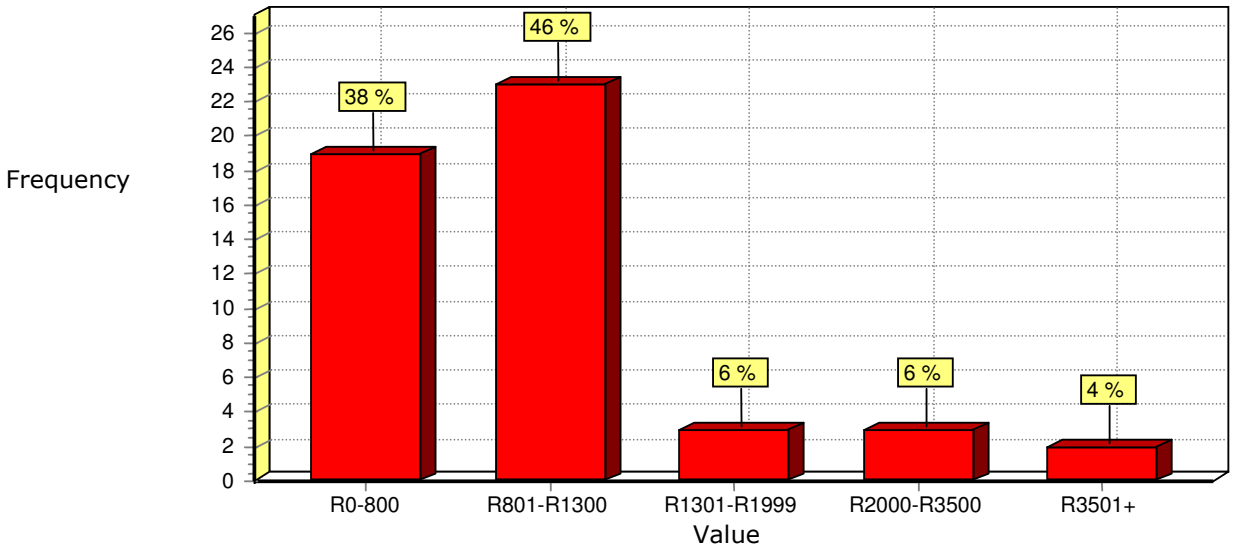


Figure 4.4: Income levels per month of home owners

4.1.6: Summary of Demographic Data

The demographic data above shows that the majority of the respondents (64%) have only been up to secondary school. This includes those who attained metric as well as dropouts. This has a bearing on the kind of skills available in the community and the types of jobs and therefore the amount of money being earned. The roles which the homeowners play in sustaining their communities are influenced by how well informed they are, their ability to interpret the information and the means they have to play those roles.

Thirty eight percent of the respondents earn between R0 and R800 per month, implying they have less than one dollar (<R7) to spend a day per person since the average number of residents per household is four. These are living below the poverty datum line. Forty six percent earn between R801 and R1300 per month meaning

maximally they spend one dollar and fifty cents (~R11) a day, per person. So these are living slightly above the poverty datum line. Poverty can be viewed in absolute and relative terms. Absolute poverty refers to subsistence below minimum, socially acceptable living conditions, usually established based on nutritional requirements and other essential goods. Relative poverty compares the lowest segments of a population with upper segments, usually measured in income quintiles or deciles (Lok-Dessallien, 2002).

4.2: Changing Roles and Perceptions of key stakeholders on housing delivery and service provision

This section documents the trends in the roles and perceptions of three interviewed officials from two units of the municipality, one from DOH, three from BESG, one from a CBO and the Ambleton's area Councillor as captured during the semi structured interviews. It also records perceptions by correspondence of an environmental management officer studying the implementation of the water and sanitation policy in Ambleton.

4.2.1: Municipality

Primarily the municipality is involved in delivery of houses which are meant to be starter homes and it has not been involved in maintenance and incremental improvement because the demand is higher than delivery at the moment. The municipality being the developer appoints an implementing agent from the private sector. Since 2006 the municipality has in addition to housing delivery started providing free basic services to its indigent citizens in order to maintain minimum health standards in the settlements.

The officials at the municipality view Ambleton settlement as unsustainable mainly because of a lack of education of homeowners on maintenance and problems associated with the illegal sale of the houses without change of ownership in the records , the failure of the toilet system to function properly and a lack of economic activities within the study area. Another factor is the inability

of the municipality to implement the environmental management plan of the study area.

Other factors highlighted in the interview process were:

- The municipality minimum building standards for the top structure are higher than those of the DOH. The municipality has been therefore forced to lower its standards because the DOH funds the projects based on its minimum standards and expects the municipality to top up to raise the standards.
- For any project to be funded by DOH the municipality has to make a contribution and this has been problematic in that funds were not budgeted for this purpose.
- Municipality meets with the provincial department of housing but policy is always one way (up-down) and this affected they way in which Ambleton was concieved. There should be a channel of influencing policy from down upwards.

4.2.2: DOH

The DOH is mainly involved in funding the low cost housing projects. Since 1994 focus has been on the number of houses constructed and before 1999 building norms and standards were not being followed. These norms and standards are based on the National Building Regulations and Building Standard Act, 1977 (Act 103 of 1977). The Act is translated into a code pf practice (SANS 10400) which is the application of the national building regulations (NHBRC, 2005). Since 2006 the housing department has focussed on sustainable human settlements through the Breaking New Ground (BNG) policy. They intend to implement inclusionary housing which brings high, medium and low income earners together. The implication is that they are moving away from the box settlement housing type that is present Ambleton. They are still implementing slum clearing which mostly involves in-situ upgrading of these areas. BNG intends to allow for social mobility in low cost housing projects.

The interviewed official at the department sees the challenge in delivery of housing to be a lack of technical expertise. The official also expects that subsidy of housing will be maintained for the foreseeable future. The subsidy increase is inflation linked as well as for product improvement. The perception of the official at DOH is that Ambleton is unsustainable mainly because:

- The sanitation system is not compatible with community needs;
- There is lack of participation in planning at least up to the ward level;
- There is need for education about issues of maintenance; and
- There is a high level of crime.

It was also the view of the official that the choice of building materials should be those which do not require much maintenance. On basic needs subsidy, the official felt that subsidisation encouraged dependency. Nevertheless, water and sanitation subsidies are critical to maintain minimum health standards.

4.2.3: BESG

Before 1994 BESG was mostly involved in policy development. From 1994 to 2002 it was mostly involved in RDP housing by providing technical support to homeowners in housing development. NGOs have contributed 5% in the delivery of housing in South Africa. Since 2002 as a result of the Municipal Systems Act and the Public Finance Management Act, NGOs and private companies are expected to follow the same procurement procedures for projects from the municipality. The municipality became both the regulator and the developer. This resulted in a change in the role of into community service implementers from technical support. BESG creates CBOs and works with them.

BESG is of the view that preconstruction activities like bulldozing whole areas allocated for housing without consideration of issues such as like biodiversity conservation impacts negatively on environmental sustainability of the low cost housing projects. Another factor making the low cost housing projects unsustainable is a lack of cooperation in planning, development and maintenance of the projects by different government departments and other stakeholders. There is also need for

energy efficiency in the buildings by providing things like ceiling boards. Other factors are a lack of education in issues of health and maintenance. BESG is also of the view that good land in the city should be freed as against allocating projects at the periphery of the city where settlements are far away from jobs and other public facilities. Some of the plantations and open spaces centrally located in the city could be freed for housing development.

4.2.4: CBO

Since Ambleton does not have a CBO involved in housing and environmental issues, on the recommendation of BESG, views were taken of a CBO from another low cost housing settlement called Ntutukoville. This is a low cost housing settlement within Msunduzi municipality which received government subsidy before Ambleton. The CBO called Ntutukoville Development Trust is currently non functional because the contract and payment for the services of the CBO by the municipality has not been renewed. There was a partnership among the community, municipality and BESG. The Trust has been involved in the building of houses in Ntutukoville. It has also been involved in the education of the community about the government subsidy. It has a support centre which encourages people in the community to save money for building or extending their houses by helping them to form saving clubs. It also negotiates for the community to obtain materials from suppliers before enough money is accumulated. The Trust has also been involved in community based maintenance and environmental management. It is involved in grass and tree planting as well as cutting depending on the season. It also helps the community to clean drains. It also buys bins for waste disposal and employs people from the community to collect the waste. In addition, the Trust also buys toilet paper and educates community members on its use.

It was the view of the Trust official interviewed that ward committees which have never existed should be set up to facilitate communication between the community and the municipality. Another view was that the partnership among the community, municipality and NGOs worked very well and contributed towards the sustainability socially, economically and environmentally of the community.

4.2.5: Councillor

The councillor represents the community at the ward level and is responsible for reporting back to the municipality. He/she is supposed to work with a ward committee. These have not yet been set up in the wards although Ambleton operates with an ad hoc committee.

The councillor was of the view that Ambleton settlement is unsustainable because mainly the quality of labour used in the construction of the houses was poor, thus contributing to the poor status of the housing structures. During construction, monthly site meetings with contractors were not well conducted by the municipality. He further said skips which were put in place in the community did not work mostly because it is children who dispose of waste and they could not reach the inlet of the skips since they were too high for the children. He also mentioned that some leakages are due to illegal water connections and the poor quality of materials used initially.

Other issues he raised were that:

- A mobile clinic goes into the area to provide health services.
- The people receive some free basic services.
- Water is not metered yet so it is free.
- A new toilet system for the worst cases is being put in place-it is septic tank type of toilet.
- The police are unable to put up a station in the area due to financial constraints.
- Small, Medium and Micro Enterprises (SMMEs) can be regarded as different from the CBOs operated by BESG. The latter were operated as pilot runs in community environmental management. SMMEs rather than CBOs have been picked, however, by the municipality to be the preferred future option because they are cheaper and the money remains in the target community. The BESG-CBO link has been, therefore, not regarded as a feasible way forward.
- Some houses remain unoccupied and vandalized due to administration problems in allocation by the municipality.

4.2.6: Environmental Management Officer

The Environmental Management Officer who was consulted by correspondence on the problem with the toilets in Ambleton wrote that the problem can be attributed to incompatibility of the infrastructure, the sanitation system in particular (especially the soak-away/septic tanks) with the soil condition in the area. The soak-away system generally comprises of three elements, e.g. the retention capacity of the septic tank to allow separation & bacteriological breakdown, the storage and infiltration area of the soak-away to facilitate effluent infiltration and the designation of an open area, preferably a vegetated area for evapotranspiration. Another reason given was the improper use, i.e. use of foreign objects such as newspaper other than tissue paper. Improper designs as well as incompatibility of the system with local conditions were key reasons for the improper functioning of this system.

4.2.7: Home Owners' perceptions of Service Delivery to the houses and the community.

4.2.7.1: Electricity

The Pie chart in Figure 4.5 shows that twenty (40%) of the respondents thought electricity supply was poor, twenty-eight (56%) thought it was good, one (2%) excellent and one (2%) had no electricity supply. Comments indicate that the supply is frequently interrupted and amperage is low.

4.2.7.2: Water

The pie chart in Figure 4.6 shows that ten (20%) of the respondents thought that water supply was poor, thirty-three (66%) thought it was good, five (10%) thought it was excellent and two (4%) respondents had no water supply.

4.2.7.3: Roads

The pie chart in Figure 4.7 shows that twenty-seven (54%) of the respondents thought that the quality of the roads was poor, nineteen (38%) thought that it was good, two (4%) thought it was excellent and two (4%) had no roads.

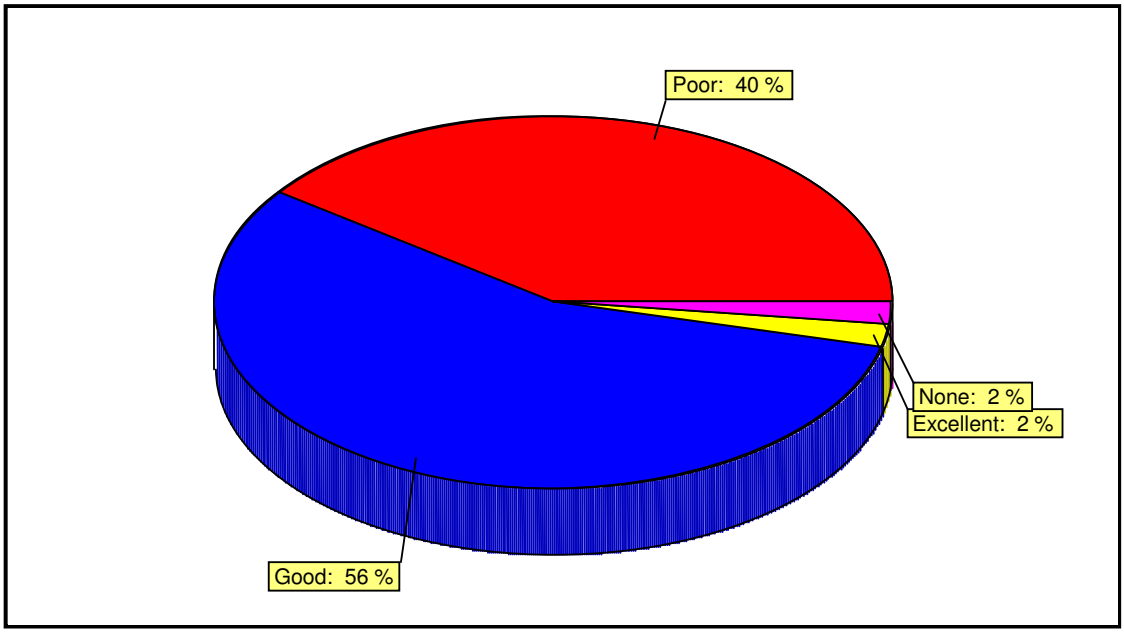


Figure 4.5: Homeowners perceptions of electricity supply.

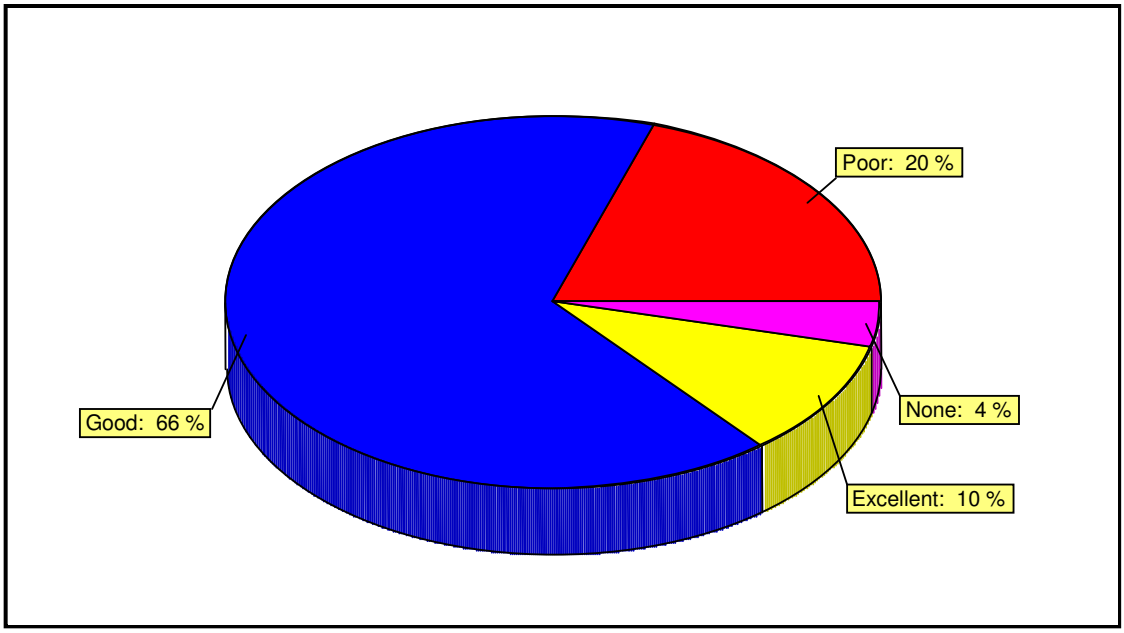


Figure 4.6: Homeowners perceptions of water supply.

4.2.7.4: Drainage

The pie chart in Figure 4.8 shows that thirty two (64%) of the respondents thought that quality of drainage was poor, twelve (24%) thought the quality was good, one (2%) thought the quality was excellent and five (10%) had no drainage. The respondents whose homes were located near the drainage canals thought they were excellent

4.2.7.5: Personal Safety

The pie chart in Figure 4.9 shows that seven (14%) of the respondents felt safe, fourteen (28%) felt somewhat safe and twenty-eight (57%) felt unsafe.

4.2.7.6: Property Safety

The pie chart in Figure 4.10 shows that one (2%) of the respondents thought that their property was very safe, seven (14%) thought that it was safe, eleven (22%) thought that it was somewhat safe and thirty-one (62%) thought that it was unsafe.

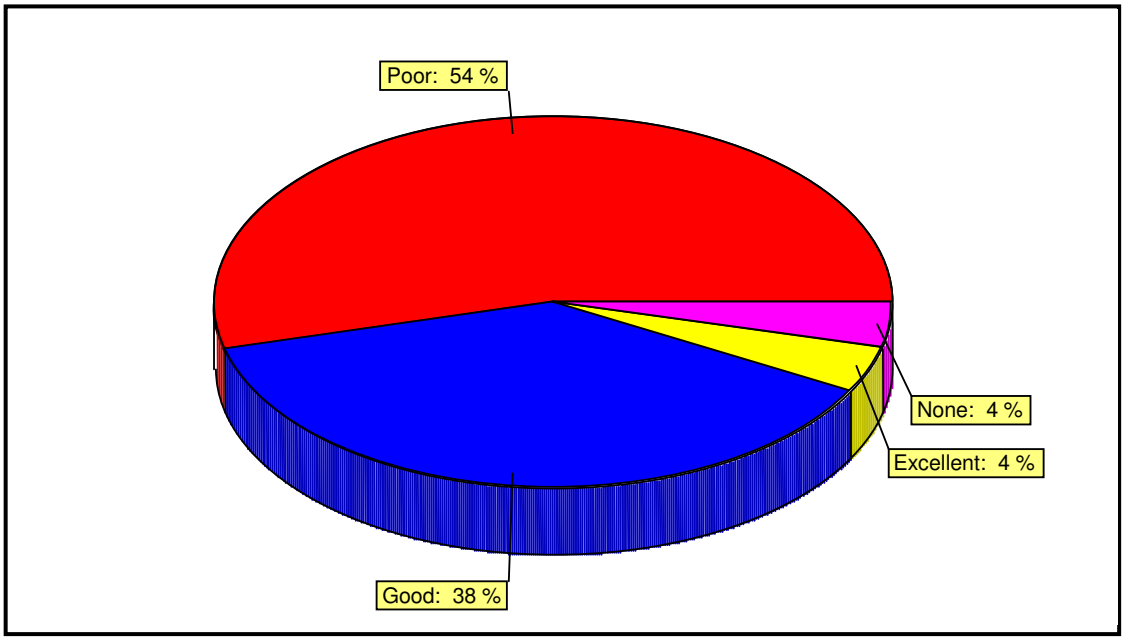


Figure 4.7: Homeowners perceptions of roads quality.

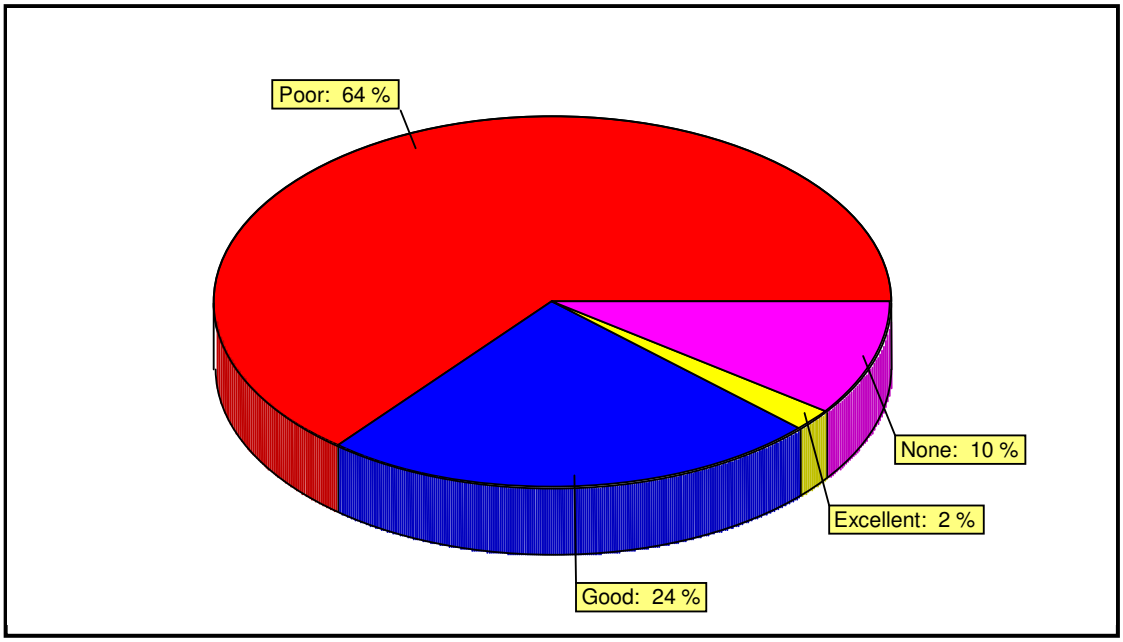


Figure 4.8: Homeowners perceptions of drainage quality.

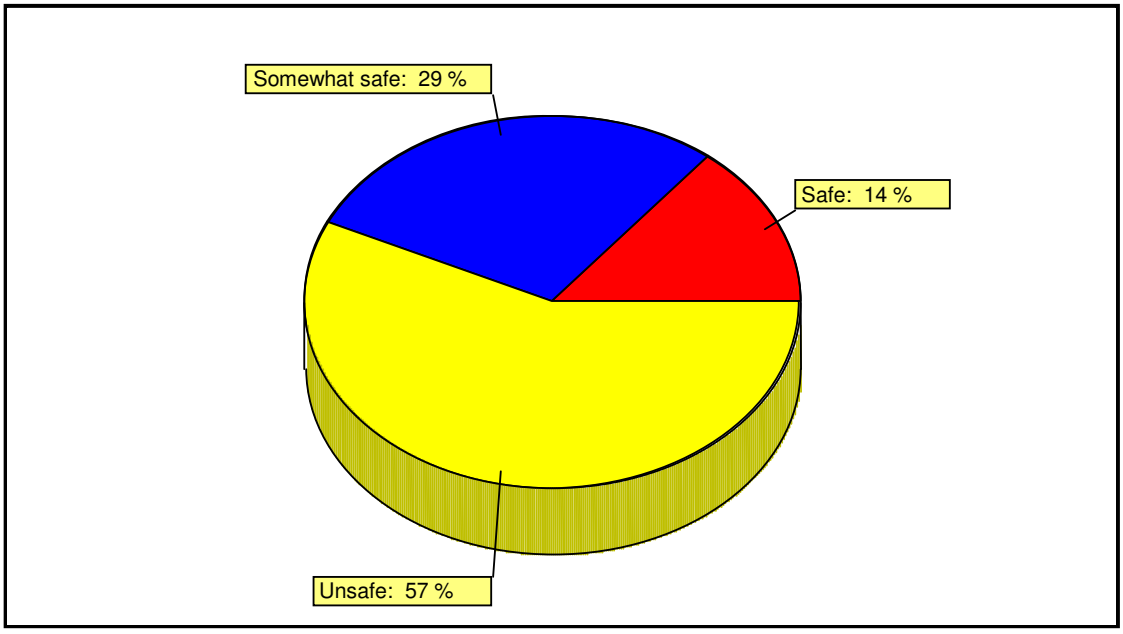


Figure 4.9: Homeowners perceptions of personal safety.

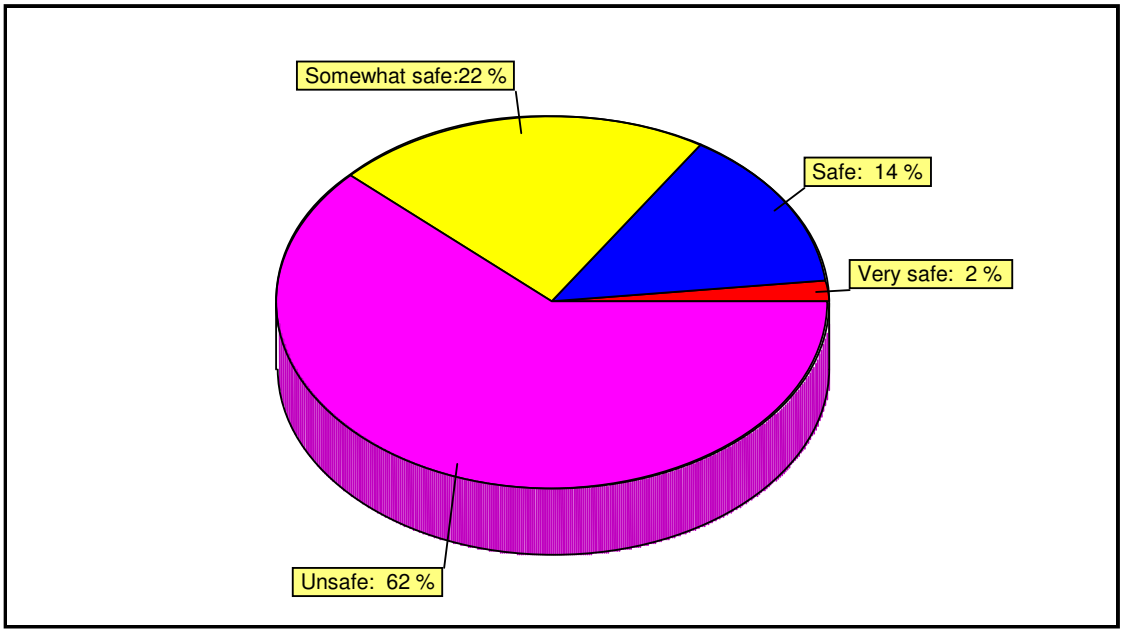


Figure 4.10: Homeowners perceptions of property safety.

4.3: Homeowners perceptions of on use of open spaces

4.3.1: Around the house

The pie chart in Figure 4.11 shows that twenty-seven (55%) of the respondents use the open spaces around their houses for leisure, twenty (41%) use it for gardening and three (4%) for car parking.

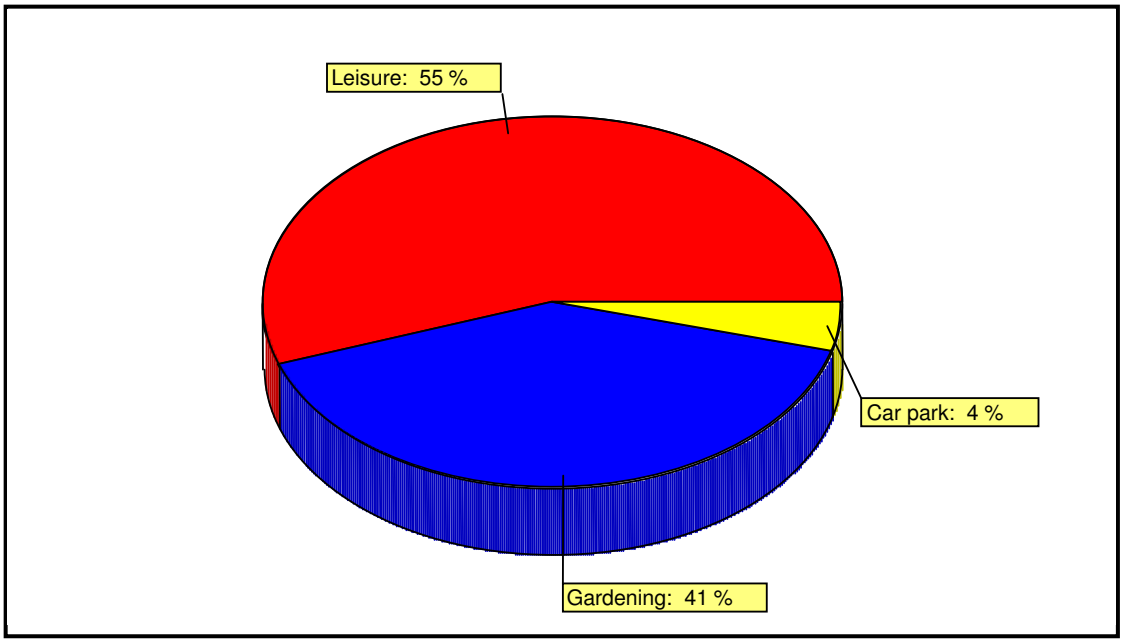


Figure 4.11: Homeowners use of open spaces around the houses.

4.3.2: Within the Community

The pie chart in Figure 4.12 shows that five (8%) of the respondents would prefer the community open space to be used for play parks, twenty-three (47%) thought it should be used for agriculture, one (2%) for a nature reserve, fifteen (29%) for business and seven (14%) saw no specific use for the open space area.

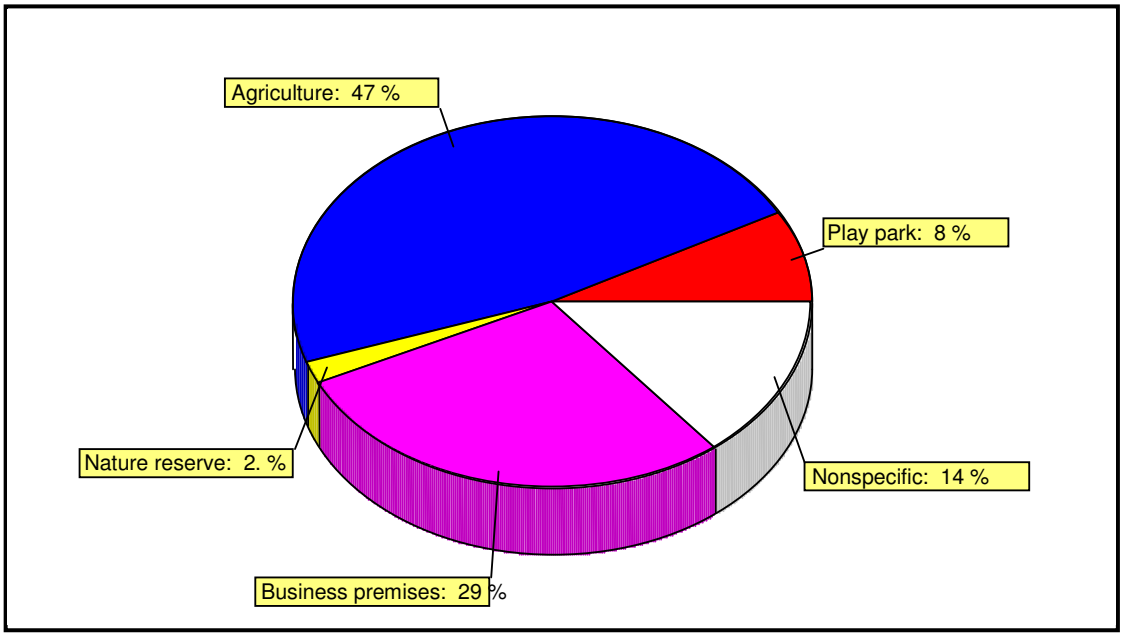


Figure 4.12: Homeowners perceptions of use of community open spaces

4.4: Researcher's Observations

This section sets out the observations made by the researcher during the data collection sessions. The observations gave the researcher an impression of a lack of environmental maintenance and organisation of the community around housing and environmental issues.

- Running water was seen in a number places along the road with green vegetation indicating this has been going on for long. Suspected leaking or broken pipes (see Plate 4.1 below).
- Unoccupied houses were being vandalized.
- Since collection of waste is only done once a week and there are no bins to contain the waste, illegal dumping was observed in many locations as shown in Plate 4.2 below.

- Cattle and goats were observed grazing within the settlement as shown in Plate 4.3 below.
- Some gravel roads are not maintained.
- Containers placed in various places are being used as cell phone communication shops due to a lack of built shops.
- Phase two houses have been plastered and painted with the same design and size while phase one houses where not and this seemed to provide for a better kept housing estate in the former.
- Differences in size of the structures based on the number of dependents of the applicant.
- Premises where bricks were made during the construction phase as well as offices have respectively not been cleared away or maintained.
- Some of the houses have been upgraded with well maintained surroundings.
- Water tanks have been removed from some of the houses.
- Roads and drainage in Phase one are better than those in Phase two.
- Some streets in phase two have lighting.
- It was observed that the homeowners' response, when asked about what they thought could improve their homes and/or communities in the questionnaire (after question 48), was that they would be more comfortable if their toilets were better designed.

4.5: Summary

The demographic data shows that Ambleton community is largely made of people living in poverty.

Key perceptions among the stakeholders include the fact that there is need for educating the homeowners on issues of maintenance and selling procedures. There is a problem with the type of toilets in Ambleton due to the settlement's location and in the way the toilets are used. Illegal damping and running water as well as livestock grazing within the settlement were also noted. Also illustrated are the perceptions of homeowners on electricity, water, drainage, roads, personal and property safety. The home owners also indicated that the open spaces within the settlement would best be used for agriculture and business premises mostly. It was the view of BESG that a

lack of cooperation among government departments and other stakeholders in planning, development and maintenance make the communities unsustainable.

Generally all stake holders had the view that the low cost housing projects and in particular Ambleton was unsustainable due to various reasons mentioned in this chapter.

Plate 4.1: Water running in a drainage canal due to leakages and broken pipes.

Plate 4.2: Solid waste illegally dumped

Plate 4.3: Cattle grazing on open space near the houses and a tarred road.

Plate 4.4: Gardening being done on artificially levelled space.

Plate 4.5 An upgraded house next to a 30m^2 low cost house which is being upgraded.

CHAPTER FIVE: DISCUSSION AND CONCLUSION

5.1: Introduction

The purpose of this study was to understand the changing roles and perceptions of key stakeholders on the sustainability of low cost housing in Msunduzi municipality since 1994. The key stakeholders interviewed during the study were the municipality, DOH, BESG, a CBO called Ntutukoville Development Trust, Ambleton area Councillor and its residents. An Environmental Management officer doing a study in the area was also consulted by correspondence. The sustainability issues focused on by the study were on housing and service delivery as well as environmental management including the use of open spaces. This chapter is a discussion and conclusion of the findings presented in Chapter four, based on the objectives of the study as stated in chapter one. It consists of five sections and these are a discussion of trends in the roles played by key stakeholders and their perceptions, a discussion of the engagement of the community in decision making on the use of open spaces around their homes and in their communities, creation and Discussion of an integrated picture of trends in roles and perceptions and conclusions.

5.2: Discussion of trends in the roles played by key stakeholders and their perceptions

In terms of service delivery, the majority view by the residents on electricity and water is that it is good. It is the researcher's view that the water supply perception can be improved upon by repairing the leaking pipes and connecting those who are not yet connected. The researcher is also of the view that the electricity supply perception could be improved as the national capacity to supply improves as one of the complaints was on the frequency of cutouts and low amperage supply. The water pipes used in the repair should be checked for quality. As for roads and drainage the majority perception was that they are poor mostly because of a lack of maintenance. Waste collection was perceived to be either poor or not available by the majority. This resulted in illegal damping as collection was only once in a week. Skips which were previously in place could be reintroduced and placed in a way that children can reach the inlets as they are the ones who mostly dispose of the waste. These aspects of

environmental management could be implemented by the community itself if organized into a CBO or SMME dealing with environmental and housing issues.

Personal and property safety were perceived to be very low by the majority of the residents, a reflection of the national perception. This is further hampered by the absence of a police station within the area. Neighborhood watch committees could be introduced to help minimize crime. Other services lacking in the area are a clinic, a market and shops. There is a mobile clinic which goes to the area but is not available all the time. All these lacking services entail that residents have to spend money on transport to access them. With the present focus on sustainable settlements (BNG) by DOH, these are some of the services which should be planned for and provided in existing settlements before new ones are built.

As for the toilets, all the residents complained about them not properly functioning and this could have been avoided if the geotechnical report was followed in determining the type of system to fit. Although plans are under way to replace them this will be more costly and should be a lesson for future projects not to ignore technical reports.

The municipality indigent policy will contribute to the sustainability of the settlement especially if those who cannot genuinely afford to pay for the basic services are informed and apply for it. Capacity at the municipality should be enhanced by recruiting and/or training existing staff in the lacking skills including project initiation, interpretation of EMPs as well as their implementation. This can also be supplemented by partnerships with NGOs and CBOs. Since the municipality lacks certain capacity which the NGOs have, they could partner with them to acquire those skills or impart them to SMMEs. Only when the municipality has enhanced capacity or is able to subcontract an NGO with capacity will it be able to carry out effective consumer education and implement EMPs. So instead of considering either NGOs or SMMEs as a solution, the municipality should consider both as each will have something significant to offer. The municipality is also critical in facilitating the introduction of business activities in the settlement as well as in ensuring feedback to

policy on housing is channeled upwards in the hierarchy of policy formulation. It also has a duty to ensure that ward committees are in place as they are important in facilitating community participation in all aspects of project cycles.

The DOH officials' perceptions on crime were confirmed by the respondents to the study. The need for education for the home owners was also mentioned by the municipality officials and BESG. The official's view on the choice of building materials to be those which require minimum maintenance is affirmed by the area councilor and BESG. They also mention the importance of the indigent policy just as the DOH official does. BESGs view of freeing some of the centrally located open space and plantations in the city for low cost housing development could be an alternative after consultation with all stakeholders and planning.

The researcher also observed that even though Ambleton is a low cost housing area there are a number of higher cost houses as a result of upgrading. This seems to be housing development in terms of those coming into the area with higher income levels, a trend which the DOH is keen to support.

5.3: Discussion of the engagement of the community in decision making on the use of open spaces around their homes and in their communities.

If a well designed programme is put in place to support the residents technically in Ambleton in their gardening, their use of the space around their homes for this activity would increase from the present forty percent and the benefit of food security and green environment would add to the sustainability of the settlement. Some could need a way of flattening their space and importation of soil with more organic matter. There is also a need of information of looking after the livestock in an urban setup like Ambleton. These activities could also be carried out by a CBO dealing in environmental issues.

Forty-seven percent of the resident respondents think the community open space should be used for agricultural purposes. Considering the level of unemployment in the community this could enhance food security. The agriculture in this area can only

be on a small scale as most of the open space especially on the periphery of the settlement is set for housing development. The view of twenty nine percent of the respondents that the space should be used for business is also viable as there is a need for shops and a market as indicated in Section 5.2 above. This would create employment opportunities as well.

The engagement of the community in the use of the open space in their area ensures the municipality makes a decision which is supported by the community and thus is likely to be sustainable.
Currently the municipality officials seem not be conversant with the real situation in the study area as they do not physically visit the place. This deprives them of opportunities to engage with the community and make critical observations.

5.4: Creation and Discussion of an integrated picture of trends in roles and perceptions by key stakeholders

A diagram giving an integrated view of Ambleton in terms of perceptions by key stakeholders on its sustainability and their roles in it, as illustrated in Figure 5.1 below, was developed. It is illustrating that Ambleton is unsustainable because among other things the residents are not well informed, are unorganized around the issues of housing and environment and fifty percent are unemployed, while those employed have very low incomes.

The municipality does not have the capacity to implement the EMP which is supposed to ensure environmental sustainability. It has not been able to repair leaking pipes and taps which have been in that state for a long time as indicated in the EMP report. Waste collection frequencies are not sufficient to prevent damping. The use of open spaces has not been planned for, resulting in residents using them as they wish, which may sometimes cause deterioration of a healthy environment and conflicts.
The absence of a clinic, police station, market and shops within the settlement makes it costly for the residents to access these services.

Since the ward committees are not in place and due to a lack of CBOs focusing on housing and environment the channeling of perceptions on these issues to inform policy is curtailed. This results in a policy which is not informed by the residents. Even when feedback is given to the municipality officials there feel they have no forum to channel it upwards in the policy making hierarchy.

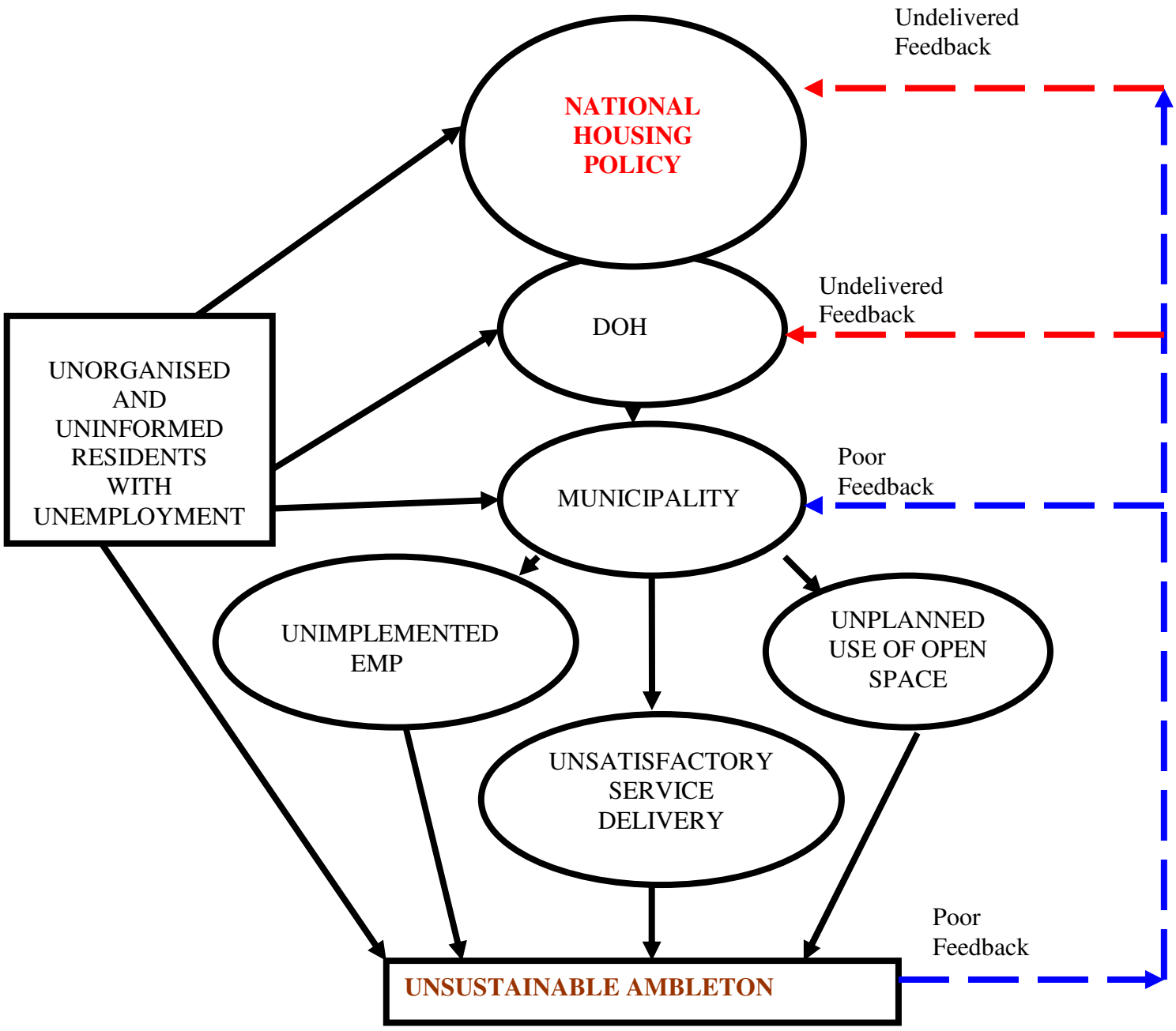


Figure 5.1: An integrated picture of the trends in roles and perceptions by key stakeholders of Ambleton.

5.5: Conclusions

The changing roles of key stakeholders like the municipality's introduction of the indigent policy will enhance the sustainability of the low cost housing settlements. The capacity of the municipality should be enhanced by attracting relevant skills to implement its programmes. The municipality officials should be in physical contact with communities which they serve in order to make practical decisions. The municipality can also enhance sustainability by including among its roles assessing for and providing missing services and infrastructure in already existing low income settlements.

The NGOs and CBOs are critical vehicles for implementing sustainable service delivery and engaging community participation in municipality programmes like EMP implementation. The fifty percent who are unemployed are potential which could be harnessed to make the community sustainable by engaging them in agriculture, business and community maintenance work.

Being mostly low income earners and with limited education, Ambleton residents are limited in the roles they can play in sustaining their community. Their accessing and interpretation of information is limited by the level of education while the interventions they implement are limited by the skills and incomes they earn. As shown in the results of the study (section 4.1), eighty four percent of the respondents are living around the poverty datum line meaning they spend slightly above a dollar (R7) a day per person or less. Establishing of money generating and food securing activities as well as education of the residents would make them better able to carry out their roles in sustaining the community.

Perceptions by the residents on service delivery were varied although generally electricity and water were viewed to be good. Roads, drainage and waste collection were generally perceived to be poor. The roads and drainage mainly lacked maintenance while the frequency of waste collection was too low. Skips should be reintroduced and placed in a way that facilitates easy reach of the inlets by children. Personal and property safety were viewed to be very low. Introduction of a police

station and neighborhood watch committees in the area could help reduce crime. Building a clinic, market and shops within will enhance the sustainability of Ambleton as a settlement. The toilets which are problematic will have to be replaced to maintain minimum health standards.

The residents' view that open spaces within the community could mostly be used for agriculture and business purposes is a good way of helping decision makers to plan and implement programmes which are supported by the community and are likely to be sustainable. This would also increase food security, keep the environment green, and create jobs.

The upgrading that is going on within the study area is a positive thing contributing to the sustainability of the settlement. It should be encouraged and favorable conditions created for more upgrading.

From the results and discussions it is clear that there are social, environmental and economic issues which need to be addressed in order to make Ambleton tend towards sustainability. Socially there is dislocation and poverty as well as low levels of formal education, although there is informal knowledge which can be harnessed towards sustaining the settlement. Environmentally, well planned for open spaces, with the involvement of the community, fitting the appropriate toilet types and repairing of the water pipes among the other things recommended in the EMP will contribute to make Ambleton towards sustainability. Economically, with half the population being unemployed and the majority living in poverty, it is difficult for the community to focuss on environmental issues when there have to struggle to obtain their basic needs on a daily basis.

The four principles which make housing policy and practice sustainable will only be integrated into low cost housing settlements if:

- The EMP is developed and implemented with involvement of the community (environment and participation principles). Currently there is no input from

the Ambleton community including its representatives in the EMP report. The EMP was therefore not done in line with the principles of sustainability.

- In order to make the houses durable, the norms and standards based on the National Building Regulations and Building Standard Act must be followed (futurity principle). Therefore the municipality must endeavor to budget for the required money to maintain these standards in low income housing developments.
- Skills development, education and creation of jobs will enable resident of the low income settlements have a share of the national wealth (equity and participation principles).

As the national legislation and municipality regulations are in line with the four principles of sustainability this assessment can contribute to their implementation.

Finally the integrated picture is showing that Ambleton in its current state is unsustainable unless the various issues raise which hinder the correct role playing by the key stakeholders are addressed. These are mainly the organization and education of the residents on housing and environmental issues, enhancing of capacity at the municipality to carry out its programmes and to have an unbroken channel of communicating feedback from residents and all other stakeholders to the national policy making organs. Some of these issues are generic and could be applicable to other low income settlements within Msunduzi municipality.

References

Addo, P.K., 1997. A review of the application of integrated environmental management by National Government Departments in South Africa. Master of Science Dissertation. School of Applied Environmental Sciences, Facultyof Science. University of KwaZulu-Natal. Pietermaritzburg

Aldrich B. C, Sandu S., 1995. *Housing the Urban Poor*. Oxford University Press. New York.

Barnard, D., 1999. *Environmental Law for All*. Impact Books, Pretoria

Built Environment Support Group (BESG), 1999. Towards the right to adequate housing**.** BESG and European Union Foundation for Human Rights in South Africa. Durban.

Beall, J., Crankshaw O. and Parnell, S., 2002. *Uniting a divided city. Governance and social exclusion in Johannesburg*, Earthscan, London.

Bond, P., 2003. *The degeneration of urban policy after apartheid*, in: Harrison, P., Huchzermeyer, M., and Mayekiso, M., (Eds)Confronting Fragmentation: Housing and Urban Development in a Democratising
Society, pp. 40–56. Cape Town: University of Cape Town Press.

Bradley, J., 1993. *Methodological issues and practices in qualitative research*. Library quarterly 63 (4): 431-449.

Dansoh, A., W., 2003. An Investigation into the Provision of Information on Low-Cost Housing: A Case Study of BESG'S Tamboville Low-Cost Housing Project in Pietermaritzburg-Msunduzi. Master of Information Studies Dissertation. Faculty of Human and Management Sciences, University of KwaZulu-Natal. Pietermaritzburg.

Davids, I., Theron, F., Maphunye, J. k., 2005. *Participatory Development in South Africa: A Development Management Perspective*. Van Schaik, Pretoria.

Davies, R.J., 1981. The spatial formation of the South African city. *GeoJournal* Supplementary Issue 2.

Fredrick, J.L., Mathew, B. A., 1995. *The Power of Environmental Partnerships.* The Dryden Press. Florida

Graham, B., 2000. *Developing a questionnaire*. T.J International, Padstow, Cornwall

Hifab International Ab. (1998) Assessment of the South African Housing Programme. Draft report. Urban Planning and Environmental Projects, Kimberley and Port Elizabeth

Hlela, S. P., 2005. An evaluation of the use of environmental plans in KwaZulu-Natal. Master of Environment and Development Dissertation. Centre For Environment and Development, School of Applied Environmental Sciences, University of KwaZulu-Natal .Pietermaritzburg

May, J., Meth, C., 2007. Dualism or Underdevelopment in South Africa: what does a quantitative assessment of poverty, inequality and employment reveal? *Development Southern Africa*, Volume 24, Number 2, June, pg 271 16pgs.

Mangin, W.P., 1963, Urbanization case history in Peru. *Architectural Design* 33 pp. 366–370.

Mattson, M. and Dalzell C., 2002. Establishment of a Cultural Resource Garden. Statement of Intent and Request for Support for a New Project at the Request of the Durban Botanic Gardens, Parks Department, Durban Metro Council, Durban

Mathiane, T., 2001. Urban greening in South Africa: a government perspective. In: 19th IFPRA World Congress and IERM National Conference, 17–21 September,

2001, Institute of Environment and Recreation Management (Africa), Cape Town, 1–13.

Msunduzi Municipality, 2006. *Environmental Management Plan for Ambleton Phase 2 Housing Development.* Terratest (PTY) LTD, Durban.

Republic of South Africa. DEAT, 2006. *People-Planet-Prosperity: A Strategic Framework for Sustainable Development in South Africa*. Draft Discussion Document for Public Comment. Pretoria

Republic of South Africa. DEAT, 2004. *Overview of Integrated Environmental Management*, Integrated Environmental Management, Information Series, DEAT, Pretoria

Republic of South Africa. DOH, 2000. South African Country Report to the Special Session of the United Nations General Assembly for the review of the implementation of the Habitat Agenda. Pretoria

South Africa. National Environmental Management Act No. 107, 1998.

Turner, J., 1967. Barriers and Channels for Housing Development in Modernising Countries. *Journal of the American Institute of Planners*. 33 (3), pp.167-80.

UNDP/UNCDF, 1994. *People, Power and Ecology: Towards Participatory Eco-Development*. Macmillan Press Ltd. London

United Nations Environment Programme (UNEP), 2002. *Implementing sustainable development: integrated assessment and participatory decision making processes.* Edward Elgar Publishing Limited. Cheltenham

Welman C., Kruger F., Mitchell B., 2005, 3rd edition. *Research Methodology*. Oxford, University Press. Cape Town

World Bank, 2000. *Greening Industry: New Roles for Communities, Markets and Governments*. Oxford University Press. New York.

Internet Sources

Bhatti, M., 2001. Greening Housing: a challenge for public policy. *Hume Papers on Public Policy*, Vol. 8, Issue 4, p.63-71.
http://www.brighton.ac.uk/cupp/pdf%20files/rept_hsprc.pdf (Accessed on 30-04-07)

Choguill, C., 2007.The search for policies to support sustainable housing. *Habitat International* **,**Volume 31, Issue 1, Pages 143-149
http://www.sciencedirect.com/science? (Accessed on 14-10-07)

Donaldson-Selby G., Hill T. and Korrubel J., 2007. Photorealistic visualization of urban greening in a low-cost high-density housing settlement, Durban, South Africa. *Urban Forestry & Urban Greening,* Volume 6, Issue 1, Pages 3-14
http://www.sciencedirect.com/science?_ (Accessed on 14-10-07)

Department of Environment and Sustainability (DSE), 2006. Choosing the right tool-snowball sampling.
http://www.dse.vic.gov.au/DSE/ (Accessed on 30-04-07)

Goebel, A., 2007. Sustainable urban development? Low-cost housing challenges in South Africa. *Habitat International* Article in Press**,** Corrected Proof.
http://www.sciencedirect.com/science?_ (Accessed on 14-10-07)

Huchzermeyer, M., 2003. Housing rights in South Africa: Invasions, evictions, the media, and the courts in cases of Grootboom, Alexandra, and Bredell, *Urban Forum* 14 (1), pp. 80–107.
http://www.ihrn.gov.za/Seminars/March%202004/23%20Huchzermeyer.pdf- (Accessed on 14-10-07)

Katharine, J., Gregg G., Melanie, L., November 2005. More than Just Talk: Connecting Science and Decision-making. *Environment.* Washington Vol.47, Issue. 9; pg. 6, 17 pgs
http://proquest.umi.com/pqdweb? Accessed on (Accessed on 30-04-07)

Kathleen, P., Joann, M., E., 2001. Sustainability in housing: A curriculum case study**.** *Journal of Family and Consumer Sciences.* Alexandria: Vol.93, Issue 5; pg. 31, 4 pgs
http://proquest.umi.com/pqdweb? (Accessed on 30-04-07)

Lok-Dessallien, R., 2002. *Review of Poverty Concepts and Indicators.* United Nations Development Programme publications,
http://www.undp.org/publications/poverty.html. (Accessed on 20-05-07)

Miraftab, F., 2001.The Perils of Participatory Discourse: Housing Policy in Post apartheid South Africa. *Journal of Planning Education and Research* , 22:226-239
http://jpe.sagepub.com/cgi/content/refs/22/3/226 (Accessed on 30-04-07)

Msunduzi Municipality, 2006. *Indigent Policy.*
http://www.**msunduzi**.gov.za/documentation/**2006**2007/**Indigent**%20**Policy**.pdf (Accessed on 30-09-07)

Msunduzi Municipality, IDP, 2006/2007.
http://www.msunduzi.gov.za/documentation/Msunduzi%20IDP%20Document.pdf
(Accessed on 10-10-07)

Napier, M., Mulenga, A.L., Undated. *Environmental technologies in South Africa: pathways towards sustainable innovation in human settlements?* http://www.gdnet.org/pdf/napier.pdf. (Accessed on 30-04-07)

Ness et al, 2007. Categorizing tools for sustainability assessment. *Ecological Economics*,Volume 60, Issue 3, 15 January 2007, Pages 498-508

http://www.sciencedirect.com/science?_ (Accessed on 30-04-07)

NHBRC, 2005. Assessment of Housing Products. http://www.nhbrc.org.za (Accessed on 30-04-07)

Obasi, *G., O., P*., May 2002. Embracing sustainability science: The challenges for Africa. *Environment*. Washington Vol.44, Issue 4; pg. 8, 13 pgs http://proquest.umi.com/pqdweb? (Accessed on 30-04-07)

Ometto, A. R., Filho, G. A., Souza, M.P., 2006. Implementation of life cycle thinking in Brazil's Environmental Policy. *Environmental Science and Policy*, Volume 9, Issue6, October 2006, Pages 587-592. http://www.sciencedirect.com/science?_ (Accessed on 30-04-07)

Republic of South Africa. DOH, 1994. *Department of Housing White Paper: A New Housing Policy and Strategy for South Africa* http://www.**housing**.gov.za/Content/planned/Docs/**Housing**%20**White**%20**Paper**.pdf (Accessed on 30-09-07)

Republic of South Africa, DOH, 1997.*The Urban Development Framework (UDF)* http://www.housing.gov.za/content/legislation_policies/leg_pol/UrbanDevelopmentFramework.pdf (Accessed on 30-04-07)

Republic of South Africa, DOH 2004a. *Breaking new ground* (BNG) http://www.sciencedirect.com/science?_ (Accessed on 30-04-07)

Republic of South Africa, DOH, 2004b. *United Nations commission for sustainable development twelfth session*. South Africa's Progress Report: Human settlements. Compiled by The Department of Housing.
http://www.sciencedirect.com/science?_ (Accessed on 18-04-07)

Republic of South Africa. DOH, 2006. *A Review of the International Experience with Inclusionary Housing Programmes: Implications for South Africa*
http://www.housing.gov.za (Accessed on 30-09-07)

Republic of South Africa. DOH, 2006. *National Housing Programme for Housing Sections of Integrated Development Plans.*
http://www.housing.gov.za (Accessed on 30-09-07)

Rust, K., 2006. *Analysis of South Africa's Housing Sector Performance*
http://www.finmar**ktrust**.org.za/documents/2007/October/HSector**Performance**.pdf - (Accessed on 31-10-2007)

Statistics South Africa. 2007. *Mid-year Population Estimates*.
Http://www.statssa.gov.za Accessed on 30-09-07

Statistics South Africa, 2007. *General Household Survey. Pretoria*
Http://www.statssa.gov.za Accessed on 30-09-07

The Presidency, Republic of South Africa, undated. *Accelerated and Shared Growth Initiative –South Africa (ASGISA)-Summary.*
http://www.info.gov.za/asgisa (Accessed on 4-10-2007)

United Nations Conference on Human Settlements (Habitat II) in Istanbul, Turkey, June 1996. *The Habitat Agenda Goals and Principles, Commitments and the Global Plan of Action.*
http://www.unhabitat.org/declarations/habitat_agenda.htm (Accessed on 30-09-2007)

United Nations, 1992. *Agenda 21*
http://www.un.org/esa/sustdev/**agenda21**.htm (Accessed on 30-09-2007)

United Nations, 2004. *Human Settlements Report of the Secretary-General*. Economic and Social Council
http://www.un.org/esa/policy/devplan/cdpdocs/**2004**_299.pdf (Accessed on 30-09-2007)

United Nations, 2007. *The Millennium Development goals Report*. June 2007, United Nations Department of Economic and Social Affairs, New York.
http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2007/UNSD_MDG_Report_2007e.pdf (Accessed on 30-09-2007)

Vermuelin, S., 2006. Informal settlement policies in the Polycentric City: The case of Durban. *South African Review of Sociology* (previously *Society in Transition)*, 37(1), Pages. 65-79
http://web.ebscohost.com (Accessed on 30-04-07)

Yung-Jaan L., Ching-Ming H., 2007. Sustainability index for Taipei. *Environmental Impact Assessment Review* Volume 27, Issue 6, Pages 505-521
http://www.sciencedirect.com/science?_ (Accessed on 15-09-2007)

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APPENDIX 1: QUESTIONNAIRE FOR HOMEOWNERS-ENGLISH (a) AND ISIZULU (b)

(a)

Questionnaire no.:

CENTRE FOR ENVIRONMENT, AGRICULTURE AND DEVELOPMENT
UNIVERSITY OF KWAZULU-NATAL

LOW COST HOUSING SUSTAINABILITY RESEARCH QUESTIONNAIRE FOR RESIDENTS

INTRODUCTION: The **purpose** of this research is to understand the factors which can aid the sustainability of low cost housing so as to inform decision making of stakeholders.

Any information collected in this study will be treated as confidential and respondents will remain anonymous and will not be identified in any part of the research report.

INSTRUCTIONS:

a. Please tick in the box to the right/below your chosen answer.
b. Answer all questions in the order in which they appear.
c. Write on the lined space provided.

1. _House number and or Name (optional): _____

2. Gender M (1) ☐ F (2) ☐

3. Age range

Years Less than18 (1) 18-25 (2) 26-35 (3) 36-45 (4) 46-55 (5) 56+ (6)

4. Education Level

Never been to school (1) Primary (2) Secondary (3) Tertiary (4)

5. Source of livelihood

Employment (1)
Business (2)
Employment
And business (3)
Other (4)

6. Income per month

Less than R800 (1) R800-R1300 (2) R1400-R1900 (3) R2000-3500 (4) R3600+ (5)

7. Number of rooms of house 1 (1) 2 (2) 3 (3) 4 (4) 5 or more (5)

8. Preferred number of rooms 1 (1) 2 (2) 3 (3) 4 (4) 5 or more (5)

9. Number of residents 1 (1) 2 (2) 3 (3) 4 (4) 5 or more (5)

10. How long have you lived in this house?

Less than a year(1) 1-5years (2) 6-10years (3) 11-15years (4)

11. Do you own or rent this house? Own (1)
Rent (2)

12. If you rent how much do you pay per month? [ ]

13. Do you make mortgage payments on this house? Yes(1)
No (2)

Which of the following services are provided to your house and how do you rate them?

Poor (1) Good (2) Excellent (3) None (4)

14. Electricity
15. Water
16. waste collection
17. Roads
18. Drainage

Provide comments on the above if any:

_____
_____
_____
_____
_____
_____

19. Are you able to pay for the above mentioned services?

Some (1) All (2) Non (3)

What do you think about the following issues of your house?

Poor (1) Good (2) Excellent (3)

20. location
21. design
22. Size

Provide comments on the above if any:

_____
_____
_____
_____
_____

23. Where is your toilet located?

Separate from main building (1) Part of main Building (2)

24. How do you dispose of your waste?

Recycle (1) Composting (2) Waste pit (3) Collected from bin (4) Storm drain (5)

25. What is the source of lighting in your home?

Electric bulbs (1) Candles (2) Kerosene lamps (3) Gas lamps (4)

26. What energy source do you use for cooking?

Electricity (1) Gas (2) Charcoal (3) Wood (4) Paraffin/Kerosene (5)

27. What energy source do you use for warming the house?

Electricity (1) Gas (2) Charcoal (3) Wood (4) Paraffin/Kerosene (5)

28. Have you extended the house from its original size?

Yes(1)
No (2)

29. Do you plan to extend your house?

Yes(1)
No (2)

30. In which of the following types of settlements was your previous home?

Township (1) Shanty (2) Hostel (3) Village (4) Other-Specify (5)

31. How do you compare your present house to your previous home in terms of quality and services?

Better (1) Worse (2) Same (3)

32. How would you rate personal safety in this community?

Very safe (1) Safe (2) Somewhat safe(3) Unsafe(4)

33. How would you rate property safety in this community?

Very safe (1) Safe (2) Somewhat safe(3) Unsafe(4)

34. Do you have any boundary disputes with your neighbours?

Yes (1) No (2)

35. Who does maintenance work for this house?

Owner (1) Privately Hired (2) Municipality (3)

36. What do you think about the amount of space around the house?

Too small (1) Just right (2) Too much (3)

37. What do you use the space around the house for?

Leisure (1) Gardening (2) Business (3) Car Park (4)

38. What in your opinion would be the best use of open spaces in your community?

Play parks (1)	Agriculture (2)	Natural reserves (3)	Business premises (4)	Other-specify (5)

39. Do you participate in any community activities within this settlement?

Yes (1) No (2)

40. If yes to number thirty seven indicate which ones.

Political (1)
Religious (2)
Cultural (3)
Charitable (4)
Educational (5)

Which of the following services are offered in your settlement and how do you rate them?

	Non (1)	Poor (2)	Good (3)	Excellent (4)
41. School				
42. Hospital/ Clinic				
43. Market				
44. Shops				
45. Bus stop				
46. Community hall				
47. Play ground/park				
48. Police station				

Write down any other thing you think can improve your home and/or community.

_____

_____

_____
_____
_____
_____

Thank you for taking part in this interview. The time spent answering these questions is appreciated very much.

Questionnaire no.:

(b)

CENTRE FOR ENVIRONMENT, AGRICULTURE AND DEVELOPMENT
UNIVERSITY OF KWAZULU-NATAL

IMIBUZO YOPHENYO LWENQUBEKELAPHAMBILI KUBAHLALI BASEZINDLINI ZENANI ELIPHANSI

ISINGENISO: Inhloso yaloluphenyo ukuthola kabanzi izinto ezingasiza inqubekela phambili yemindeni ehlala ezindlini zenani eliphansi ngenhloso yokwazisa abathatha izinqumo

Lonke ulwazi oluqokelelwe kuloluphenyo luzothathwa njengoluyimfihlo futhi amagama abantu abaphendule imibuzo ngeke adalulwe emibhalweni ezobhalwa ngaloluphenyo

INDLELA YOKUPHENDULA:

d. Faka uphawu X ebhokisini eliqondene nempendulo yakho.
e. Phendula yonke imibuzo ngokulandelana kwayo.
f. Bhala emingqeni oyinikeziwe

1. Inamba yendlu noma igama lakho (uma uthanda):

2. Ubulili M (1) ☐ F (2) ☐

3. Iminyaka
   Engaphansi kuka18 (1) 18-25 (2) 26-35 (3) 36-45 (4) 46-55 (5) 56+ (6)

4. Izinga lezemfundo

Angifundile (1) Primary (2) Secondary (3) Tertiary (4)

5. Indlela yokuziphilisa

Ngiyasebenza (1)
Ngine Bhizinisi (2)
Ngiyasebenza futhi Ngine Bhizinisi (3)
Okunye (4)

6. Imali engenayo ngenyanga

Engaphansi kuka R800 (1)	R800-R1300 (2)	R1400-R1900 (3)	R2000-3500 (4)	R3600+ (5)

7. Inani Lamakamelo endlu

1 (1) 2 (2) 3 (3) 4 (4) 5 or more (5)

8. Inani Lamakamelo endlu olifisayo

1 (1) 2 (2) 3 (3) 4 (4) 5 or more (5)

9. Inani labantu abahlala endlini

1 (1) 2 (2) 3 (3) 4 (4) 5 or more (5)

10. Usuhlale isikhathi esingakanani kulendlu?

Ngaphansi konyaka (1) 1-5years (2) 6-10years (3) 11-15years (4)

11. Ngabe indlu eyakho noma uqashile?

Eyami (1)
Ngiqashile (2)

12. Uma uqashile ukhokha malini ngenyanga? [ ]

13. Uma indlu kungeyakho, ngabe ikhona yini imali mboleko yendlu oyikhokhayo ngenyanga?

Yebo(1)
Cha (2)

Yikuphi kulezizidingo ezingenzansi okulethelwayo futhi kusezingeni elinjani?

	Kubi (1)	Kuhle (2)	Kuhle kakhulu (3)	Akukho (4)
14. Ugesi				
15. Amanzi				
16. Ukuqoqwa kwezibi				
17. Imigwaqo				
18. Izitamkoko zamanzi				

Unganika neminye imibono kulokhu okungenhla uma unayo:

_____
_____
_____
_____
_____

19. Ngabe uyakwazi yini uku khokhela lezi zidingo ezingenhle?

Ezinye (1) Zonke (2) Nanesisodwa (3)

Ucabangani ngalezinto ezilandelayo ngendlu yakho?

	Kubi (1)	Kuhle (2)	Kuhle kakhulu (3)
20. Indawo			
21. Isakhiwo sendlu			
22. Ubukhulu bendlu			

Unganika neminye imibono kulokhu okungenhla uma unayo:

_____
_____
_____

23. Ikuphi indlu yangasese?

Ingaphandle kwendlu enkulu (1)
Iyingxenye yendlu enkulu (2)

24. Izibi uzilahla kuphi?

Ngiyazisebenzisa futhi (1)	Ngizenza umquba engadini (2)	Ngizilahla emgodini (3)	Ziyaqoqwa imoto yezibi (4)	Ngizilahla esitamkokweni (5)

25. Ngabe ukhanyisa ngani endlini yakho?

Ngogesi (1) Amakhandlela (2) Ilambu lapalafini (3) Ilambu Le Gesi (4)

26. Usebenzisani uma upheka?

Ugesi (1) iGas (2) Amalahle (3) Izinkuni (4) Palafini (5)

27. Usebenzisani uma uzifudumeza?

Ugesi (1) iGas (2) Amalahle (3) Izinkuni (4) Palafini (5)

28. Ngabe uyandisile yini indlu yakho kulukhu eyayiyikho ekuqaleni?

Yebo(1)
Cha (2)

29. Ngabe usezinhlelweni zokuyandisa yini indlu yakho?

Yebo(1)
Cha (2)

30. Ngabe iyiphi indawo obukade uhlala kuyo ngaphambili?

Elokishini (1)	Emkhukhwini (2)	Ehositela (3)	Emakhaya (4)	Okunye (5)

31. Uyiqhathanisa kanjani indlu yakho yakudala nele osuhlalakuyo manje?

Incono (1) Izingalayo liphansi(2) Iyafana (3)

32. Isimo sokuphepha singakanani emphakathini?

Kuphephe kakhulu (1) kuphephile (2) Kuphephile kancane(3) Akuphephile(4)

33. How would you rate property safety in this community Iziza kanye neZindlu zipephe kangakanani?

Ziphephe kakhulu (1) Ziphephile (2) Ziphephile kancane(3) Azikuphephile(4)

34. N
g
abe zikhona yini izingxabano ngeziza no makhelwane?

Yebo(1)
Cha (2)

35. Ubani olungisa izinto ezonakele endlini?

Umnikazi wendlu (1) Kuqashwa umuntu (2) uMasipala (3)

36. Ucabangani ngendawo ezungeze indlu yakho?

Incane kakhulu (1) Yanele (2) Inkulu Kakhulu (3)

37. Uyisebenzisela ukwenzani indawo ezungeze indlu yakho?

Ukuphumula (1) Ingadi (2) iBhizinisi (3) Ukupaka imoto (4)

38. Ngokombono wakho indawo le eseduzane engezi lutho yomphakathi kufanele isetshenziswe kokuphi?

Indawo yokungcebeleka (1)	Indawo yokulima (2)	Indawo yokugcina ezemvelo (3)	Kuvulwe amabhizinisi (4)	Okunye (5)

39. Ngabe uyazibandakanya ezinhlanganisweni zomphakathi?

Yebo(1)
Cha (2)

40. Uma impendulu ka 37 kunguyebo, iyiphi inhlangano kulezi.

iPolitiki (1)
eZenkolo (2)
aMasiko (3)
eYokusiya abahluphekayo (4)
eyezeMfundo (5)

Iziphi kulezinto ezitholakalayo endaweni yakho futhi zikuliphi izinga?

	Akukho (1)	Kubi (2)	Kuhle (3)	Kuhle kakhulu (4)

41. Isikole

42. Isibhedlela/ uMtholampilo
43. iMakethe
44. iZitolo
45. Isitobhi sebhasi/ amatekisi
46. Ihholo lomphakathi
47. Inkundla yezemidlalo/ ipaki
48. Isiteshi samaphoyisa

Ungabha noma yini enye ocabanga ukuthi ingasiza noma ithuthukise ikhayalakho no umphakathi wakho.

_____
_____
_____
_____
_____
_____

Siyabonga ukuthatha ingxenye kuloluphenyo. sSibonga nesikhathi osithathile ukuphendula lemibuzo.

APPENDIX 2: INSTITUTIONAL DISCUSSION ISSUES

Basic Environment Support Group Question issues

- Roles played in the low cost housing projects by your institution
- Possible credit act effect on effective housing demand
- Social mobility prospects in the low cost housing projects
- View on subsidies and alternative strategies to provide housing for the urban poor
- Will the increase in the subsidy add value to the structure or is an adjustment for inflation?
- Some houses in these projects are owned by more than one person-any comments
- Perceptions of the sustainability of the housing projects socially, environmentally and economically.
- Suggest other stakeholders to be interviewed

Department of housing (DOH) interview question issues

- Policy changes in low cost housing provision
- Roles of DOH and their changes with policy changes

- Public involvement in planning, construction and maintenance
- Perception of sustainability of low cost housing in terms of

a. social
b. environment
c. economic

- Ambleton's project records including their contractors and consultants.
- Ownership of individual houses by more than person or household
- Annual targeted numbers for construction and trends since 1994
- Major financiers of present and future projects
- Subsidies are they staying or going out.
- Will the promised 5% of national budget be attained as allocation to housing
- Social mobility prospects in the low cost housing projects.
- Verify if increase of subsidy to R40,000 is just inflation adjustment
- What is the number of houses built between 2001-2006
- View on the number of people moving out of the RDP houses
- Suggest any other stakeholders to interview

<u>Counsellor's interview question issues</u>

- Review of the meeting of 10-09-07 in Ambleton
- Problem of the toilets-what is the cause?
- Will the new toilet design for Ambleton work?
- Street lighting only in some areas
- Clinic, police stations and shops
- Waste collection –frequency and illegal damping
- Road and drainage maintenance
- Leakages and running water
- Unoccupied vandalized houses
- Agriculture
- Livestock
- Unrehabilitated brick making site

- Plot boundary disputes
- Number of houses in Ambleton
- When is the next phase of construction in Ambleton due and what lessons learned from phases 1and 2 will be incorporated?
- Perception of sustainability of low cost housing in terms of

a. social
b. environment
c. economic

- BESG and CBO relations with the municipality

Municipality second interview question issues

- Policy changes in low cost (LCH) housing provision
- Roles of municipality and their changes with policy changes in LCH
- Public involvement in planning, construction and maintenance
- Ambleton's project records including their contractors and consultants.
- Social mobility prospects in the low cost housing projects.
- View on the number of people moving out of the RDP houses
- Comment on basic needs subsidy
- Comment on Municipal systems act and the Public finance management act and changes in relations with NGOs and the private sector
- Will the new toilet design for Ambleton work?
- Waste collection
- Road maintenance
- Unoccupied vandalized houses
- Livestock
- Unrehabilitated brick making site
- Plot boundary disputes
- Number of houses in Ambleton

- When is the next phase of construction in Ambleton due and what lessons learned from phases 1and 2 will be incorporated?
- Perception of sustainability of low cost housing in terms of

a. Social
b. Environment
c. economic

- Relationship with DOH
- Suggest any other stakeholders to interview

<u>Municipality environmental management unit question issues</u>

- Will the new toilet design for Ambleton work?
- Waste collection –frequency and illegal damping
- Road maintenance
- Unoccupied vandalized houses
- Livestock
- Unrehabilitated brick making site
- Plot boundary disputes
- Number of houses in Ambleton
- When is the next phase of construction in Ambleton due and what lessons learned from phases 1and 2 will be incorporated?
- Perception of sustainability of low cost housing in terms of

a. social
b. environment
c. economic

- BESG and CBO relations with the municipality

<u>Municipality interview question issues</u>

- Changing roles of the municipality in low cost housing with changing policy
- Role in incremental improvement and maintenance
- Maintenance of standards of water, sanitation, drainage
- Financing

- Land
- Perception of sustainability in terms if

a. land use
b. efficient use of resources like water and energy
c. human health
d. conservation of plants , animals and habitats
e. protection of agriculture, culture and archaeological resources
f. economic capacity of occupants

- Suggest early (1994) projects and late (2007) projects and records on their contractors and consultants.
- Possible contacts at DAEA, DOH and others within municipality, NGOs, CBOs, etc.

APPENDIX 3 COVERING LETTERS: INTERVIEW REQUEST AND QUESTIONNAIRE

Centre for Environment, Agriculture and Development (CEAD),
University of KwaZulu-Natal (UKZN),
Private Bag X01,
Scottsville,
3209.
13th August, 2007.

Dear Milne Marty,

Reference: Request for interview-Study on Low Cost Housing Sustainability

I am a Masters Degree student at CEAD, UKZN under the supervision of Professor Robert Fincham.

I am doing a dissertation research entitled: Evolving Stakeholders' Roles And Perceptions Of Sustainability Of Low Cost Housing Developments In Msunduzi Municipality.

The research **objectives** are concerned with the changing roles and perceptions of stakeholders in the sustainability of low cost housing developments as policies change since 1994. I intend to develop an integrated picture of the overall trends in roles, perceptions and sustainability indicators which will guide, correct and evaluate the decisions and actions of the various stakeholders.

The Department of Housing municipality being a major stakeholder and on the recommendation of Val Spearman of the Msunduzi Municipality housing unit, I am requesting to have an audience with you and get your views on the above subject. The interview should last not more than one hour. I am prepared to be available any day of the next two weeks to suite your convenience.

Thank you in anticipation of a positive response.

Sincerely yours,

Mwansa Mwanamwenge.
CEAD Masters Degree Student.
Cell phone Number: 0796340974

Centre for Environment, Agriculture and Development (CEAD),
University of KwaZulu-Natal (UKZN),
Private Bag X01,
Scottsville,
3209.

August, 2007.

Dear Respondent,

REFERENCE: **LOW COST HOUSING SUSTAINABILITY RESEARCH QUESTIONNAIRE FOR RESIDENTS**

I am a Masters Degree student at CEAD, UKZN under the supervision of Professor Robert Fincham.

I am doing a dissertation research looking at the sustainability of low cost housing in Pietermaritzburg.

The research **objectives** are concerned with the changing roles and perceptions of stakeholders in the sustainability of low cost housing developments as policies change since 1994. I intend to develop an integrated picture of the overall trends in roles, perceptions and sustainability indicators which will guide, correct and evaluate the decisions and actions of the various stakeholders.

You residents being major stakeholders, I am requesting you to provide me with your perceptions and other information which will help me to assess the sustainability of your housing facilities by filling in the attached questionnaire.

The information collected will be used only for the dissertation and will be treated as confidential.

Thank you in anticipation of a positive response.

Sincerely yours,

Mwansa Mwanamwenge.

CEAD Masters Degree Student.

Cell phone Number: 0796340974