

**EVALUATION OF THE IMPLEMENTATION
OF WATER SUPPLY AND SANITATION SERVICES
TO AN *IN-SITU* UPGRADE HOUSING PROJECT:
A CASE STUDY OF
NEWTOWN, PIETERMARITZBURG**

by

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ABSTRACT

The provision of a basic water supply and sanitation service to the 12 million South Africans without an adequate water supply and the 21 million without basic sanitation is a mammoth task that is currently being undertaken by the Department of Water Affairs and Forestry. Billions of rands have been spent on, and committed to, water and sanitation projects that involve national, provincial and local spheres of government, as well as parastatals, non-government organisations and private developers.

It is acknowledged that important successes have been achieved in the water and sanitation sector. However, despite the provisions provided in national and local legislation, internationally lauded policy directives, the numerous studies undertaken and recommendations made by institutions such as the Water Research Commission, problems have continued to emerge in the sustainable delivery of water and sanitation projects, particularly in the peri-urban and rural areas. It is clear that the installation of physical structures such as pipes, taps and ventilated improved pit latrines in these areas have created a sense of 'delivery' however, little thought seems to have gone into how these projects are to be sustained.

International experience has shown that the concept of 'community ownership' is very important in providing sustainable water and sanitation services. The most important principles in achieving sustainability are community participation and community decision-making throughout both the development of the project as well as the further operation and maintenance of the system. International experience has also shown that financial contributions towards the scheme from the community (in cash, labour or materials), also assists in obtaining community ownership.

Over the past decade emphasis in South Africa has shifted towards community participation and the empowerment of previously disadvantaged communities where communities play an active role in determining the level of service provided and the manner in which these services are delivered. However, current government policy advocates that water must be treated as an economic resource to achieve sustainability and this does not always lie comfortably with the policy of delivering free basic water. As a

result of these two often-juxtaposed concepts, the delivery of sustainable water and sanitation services, a function performed by local government, is thus made more difficult.

This study assesses the importance of delivering a potable water supply and adequate sanitation service to enhance the quality of lives of people. It also considers the key issues that contribute towards sustainable water and sanitation service delivery, with particular reference to the concept of ‘community ownership’. The complex nature of the policy, legislative and institutional framework for water supply and sanitation is considered along with an analysis of the Msunduzi Municipality’s water supply and sanitation policy and objectives. The study then focuses on the delivery of water and sanitation services to one such project, Edendale Unit RR (commonly known as Newtown), as an *in-situ* upgrade case study. A Provincial Housing Board funded project has, over the last five years, provided housing units, roads, stormwater drains, and water and sanitation infrastructure to this community.

This initial research is undertaken with the intention of providing an evaluation of the installation of the water supply and sanitation service to the *in-situ* upgrade of Newtown.

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LIST OF ABBREVIATIONS

BPD	Business Partners for Development
CSIR	Central Statistical Institute for Research
DDA	Department of Development Aid
DoH	Department of Housing
DWAF	Department of Water Affairs and Forestry
GDP	Growth Domestic Product
GEAR	Growth, Employment and Redistribution strategy
IDP	Integrated Development Plan
NGO	Non Government Organisation
PHB	Provincial Housing Board
TBVC	Transkei, Bophuthutswana, Venda, Ciskei (all former homelands')
TLC	Transitional Local Council
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNWWAP	United Nations World Water Assessment Programme
VIP	Ventilated Improved Pit latrine
WSSCC	Water Supply and Sanitation Collaborative Council

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CHAPTER 1: OVERVIEW

1.1 INTRODUCTION

It is clear that the development needs of South Africa must receive greater attention. One of the most important of these needs is water supply and sanitation services which, like housing, are one of the basic needs for any community (DWAF 1994). As will be highlighted in Chapter 2, there are 12 million South Africans that do not have access to an adequate supply of potable water and nearly 21 million without basic sanitation. Providing these people with a sustainable water supply and sanitation service is a major challenge.

Despite the development of internationally lauded laws and policies over the last ten years, the water and sanitation sector has experienced many problems in the implementation of policies and the delivery of sustainable services. Water supply and sanitation sustainability refers to the continuous availability of sufficient quantities of water of sufficient quality, while at the same time ensuring that there are adequate institutional frameworks; that sound management practices are applied, facilities and equipment are effectively maintained and full cost accounting is being undertaken (Palmer & Eberhard 1994).

In many water supply and sanitation service projects, delivery agents have been unable to achieve the objective of sustainability. For example, Mvula Trust assessed fifty six of its projects and twenty one Department of Water Affairs and Forestry (DWAF) projects and found that few were functioning adequately (Hagg and Emmett 2003:76). The reasons identified as causing, or at least contributing towards the failure of such projects are varied. They range from accusations of poor on-site maintenance; operation and management of projects, to allegations that users are not involved in decision making during the planning and design stages. Other issues such as inadequate tariff and collection systems and negative political interference have also been identified as likely contributing factors. As Louw (2003) suggests, the government's insistence (through DWAF) on physical output as a measurement of success, rather than concentrating efforts on the institutional and social framework for sustainable service provision, have not only compromised DWAF's water service delivery programme, but also failed in providing people with basic access to a sustainable supply of potable water.

After the adoption of the Growth, Employment and Redistribution strategy (GEAR), the issue of cost recovery in water supply schemes became an important element of DWAF water supply policy. However, it became evident to government that there were communities, especially in the rural and peri-urban areas, which could not afford even low-cost water supply. A shift in government thinking then led to a change in cost-recovery policies and the announcement by President Mbeki and Minister Kasrils that a stepped tariff system would be implemented which would allow water services providers to provide a free basic water supply (i.e. 25 litres of potable water per person per day within 200 metres from each dwelling) (Hagg *et al.* 2003).

The Msunduzi Municipality, like many other municipalities in South Africa, faces the unenviable task of providing a sustainable water supply and sanitation service to its many residents without such services. One such project is the peri-urban settlement of Newtown. This settlement has undergone numerous development initiatives over the years, but efforts to formalise its housing and associated services (including water and sanitation) were only undertaken over the last four years. As this was the first settlement within the Municipality where the low pressure trickle feed system was implemented (each property is serviced with a water connection to a 200 litre low pressure water supply tank), and bearing in mind that from a technical perspective the system is ideal for delivering free basic water in line with the governments free basic water policy, Newtown provides a great opportunity to undertake an evaluation of a project which involves the *in-situ* upgrade of water supply and sanitation services (each housing unit within the settlement is also serviced with a ventilated improved pit latrine).

1.2 PROBLEM STATEMENT

Autocratic approaches to the delivery of services to communities, as has been the case in previous years, are not appropriate and can no longer be accepted (Louw 2003). Delivery must be carried out in an approach that places greatest emphasis on the community's role and full involvement in the development process. This, as Palmer and Eberhard (1994) contend, does not merely mean participation in decision-making. This means empowering communities to gain real control over important issues that affect them such as gaining skills in the field of water, sanitation, health and the environment; understanding the social, technical and financial considerations in choosing and maintaining water and sanitation

services; and, very importantly, utilizing community socio/political structures to assist organisational development efforts.

The Pietermaritzburg Municipality (now the Msunduzi Municipality) had, until recently, a relatively small population that it was responsible to supply water and sanitation services to. Since 2000, and the introduction of the new municipal structures and boundaries, its area of jurisdiction has increased 430% and its population 300% (Msunduzi Municipality 2002:9). The burden of responsibility to supply water and sanitation services has thus dramatically increased.

The area of Newtown, one of the poorest settlements in the Msunduzi Municipality, recently underwent a PHB funded *in-situ* upgrade of its houses, roads, sanitation facilities and water supply. The project took place during a period of rapid change where national government was in the process of implementing new water strategies; roles and responsibilities of local and provincial governments as well as bodies such as Umgeni Water were changing and the boundaries of municipalities were increasing. It also occurred during a time when delivery of services was the primary goal of government and often took place without due recognition of important developmental issues such as full community acceptance (buy-in) and participation in the construction and management of services and upgrading initiatives; a properly established relationship between the service provider and the community; the implementation of education programmes on the use of services such as water supply systems and sanitation services; and, the general unwillingness to pay for services.

This study therefore takes cognisance of these potential problems and evaluates the *in-situ* upgrade of the water supply and sanitation service to the Newtown community. Such an evaluation must consider the following key questions:

- (i) What are the critical issues that contribute towards sustainable water and sanitation service delivery?
- (ii) What is the history and what are the dynamics behind the *in-situ* upgrade of the water supply and sanitation project in the Newtown settlement?

- (iii) Were the critical issues identified in (i) adequately undertaken in the installation of services in the Newtown project?
- (iv) What are the lessons that can be learnt from this case study?

1.3 AIMS AND OBJECTIVES

The primary aim of this project is to examine and evaluate an *in-situ* upgrade of water supply and sanitation services by using the peri-urban settlement of Newtown, a settlement situated on the outskirts of the city of Pietermaritzburg, as a case study. It is envisaged that by using a case study, valuable lessons may be learnt.

The objectives of this study are thus:

- (i) To conduct a literature review in order to establish criteria for evaluating an *in-situ* upgrade of a water supply and sanitation services project.
- (ii) To determine the Msunduzi Municipality's policies, objectives and strategies with regard to water supply and sanitation services within its municipality.
- (iii) To document the history behind the Newtown settlement, and assess the *in-situ* upgrade of the water supply and sanitation project in the Newtown settlement.
- (iv) To evaluate the implementation of the Newtown *in-situ* upgrade according to the criteria identified in (i) and (ii).
- (v) To provide recommendations to guide the future implementation of such projects.

1.4 STRUCTURE

This component is set out into four chapters. Following the introduction is a detailed literature review, which addresses various aspects of water supply and sanitation. It considers the international water and sanitation crisis and the battle to meet the enormous water supply and sanitation targets, particularly in rapidly expanding urban areas. The literature review considers international experience in water supply and sanitation services and some of the lessons that can be learnt. This is followed by an introduction to water supply and sanitation services in South Africa, the impacts of a poor water supply and sanitation service and an assessment of such service projects in South Africa, including key issues that contribute towards sustainable water and sanitation service delivery. A detailed assessment of the policy, legislative and institutional framework for water supply and sanitation services follows. This chapter then covers a review of the Msunduzi

Municipality, some of the problems the Municipality faces and what its water supply and sanitation policy and objectives are. As the chosen case study is an *in-situ* upgrade project¹, addressing certain important dynamics of an in-situ project concludes the chapter. These dynamics are especially relevant to South Africa as a result of its past history. The final section of Chapter 2 presents the conceptual framework for the study, together with the criteria that will be used in the evaluation of the case study. Chapter 3 sets out the physical and social background of Newtown. It details previous development initiatives and promises made, and considers the most recent development initiative and agreements reached. Chapter 4 describes and justifies the qualitative and quantitative methodologies used during the course of this research.

¹ *In-situ* upgrading refers to the provision of secure tenure, infrastructure and services to an existing informal settlement. This means that even while people are living in an informal settlement the land is surveyed (so that each house has its own site), and services such as electricity, roads and water pipes are provided (Burton, Makhathini, Mkhize & Proctor 1998)

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

The intention of this chapter is to provide the context within which the current study falls. Discussion begins with a description of the serious water and sanitation crisis that the world is faced with. The review will suggest that the crisis will continue to worsen unless corrective action is urgently taken, essentially around the way in which water, and specifically the supply of water, is governed. There is a clear link to be made between the supply of water (or lack thereof) and the sanitation crisis facing particularly the poor. The review will thus also consider how important a safe water supply is in addressing water and sanitation diseases. The United Nations Educational, Scientific and Cultural Organisation (UNESCO) estimates that 80% of all sickness and disease is caused by polluted water, unavailability of water and inadequate sanitation, which threatens to worsen the lot of the poor in the foreseeable future (UNWWAP 2003a). This crisis, in today's world, is humiliating and oppressive. South Africa is faced with these very challenges, and the review thus assesses the crisis from a South African perspective and highlights the importance of developing a safe water supply and sanitation system in order to minimise the spread of water and sanitation related diseases in South Africa.

It is recognised that the upgrading of informal settlements (*in-situ* upgrade) differs markedly from the development of vacant land for housing. The social, political and physical dynamics are very different with social integration a primary goal of an *in-situ* upgrade. This review thus considers these differences, it considers the implementation of services in an existing community, the importance of community participation and consultation in service provision, as well as the importance of a partnership between the community and the local authority and a sense of 'ownership of services' on the part of the residents.

South Africa, over the past ten years, has moved into a new political dispensation that created the opportunity to re-assess policies and principles, draft new laws, review and amend existing laws and restructure the roles and responsibilities of the three spheres of government. An important element of this transformation is the constitutional obligation of both national and provincial government to create viable and effective local governments.

The provision of water and sanitation services, essentially a local government responsibility, is a complex process with numerous guiding principles, laws and organisations playing an important part in the delivery of the service. It is thus essential to understand these requirements, roles and responsibilities if services are to be effectively provided. Consequently, this review provides a detailed account of the policy, legislative and institutional environment in which the delivery of water and sanitation services operates.

The case study is a peri-urban settlement on the outskirts of the city of Pietermaritzburg, which forms the main urban centre of the Msunduzi Municipality. The review accordingly considers some of the key municipal policies (such as the IDP), aims and objectives in the provision of water and sanitation services to its constituency.

2.2 INTERNATIONAL WATER AND SANITATION CRISIS

It is generally accepted that humans can survive without water for about three days. After air, water is the most essential commodity for survival. The body needs a constant supply of clean, potable water to live a healthy life. As reported by Time Magazine (2000), 71% of the earth is covered in water, of which 97,5% is salt water. That leaves a mere 2,53% as fresh water. However, of this 2,53%, some 70% is locked up in glaciers and permanent snow cover. With approximately 30% of the remaining fresh water present as soil moisture or in underground aquifers, a mere 0,53% of all water remains accessible for direct human use. These figures become more alarming when it is considered that large quantities of available freshwater resources are polluted. UNESCO (UNWWAPb 2003) estimates that approximately 2 million tons of waste (including industrial waste, chemicals, human and agricultural waste) is disposed into receiving waters every day. Such an essential and finite resource must thus be used sparingly and wisely, but at the same time made accessible to all.

Centuries of learning ways to move and use water has left humans with the ability to settle in areas far from naturally available water, grow food supplies in places never thought to be possible, generate electricity from falling water to develop unprecedented wealth and technological advances, develop sophisticated sewer systems and thus reduce outbreaks of cholera and typhoid, and protect clean water supplies (UNWWAPb 2003). But, as Gleick

(1998:29) has so succinctly noted, *“there is a dark side to human development: despite our progress, half of the worlds population still suffers with water services inferior to those available to the ancient Greeks and Romans.”*

At the start of the 21st century, six billion humans inhabited this planet (UNWWAPa 2003). With such a rapidly increasing population, the world clearly faces a serious water crisis (UNWWAPb 2003). According to the Water Supply and Sanitation Collaborative Council (WSSCC) 1.1 billion people worldwide lack access to clean drinking water (Kalbermatten, Middleton & Schertenleib 1999) and nearly 2.5 billion people (almost half the world’s population) do not have access to adequate sanitation services (van Damme 2001). Dowdeswell (1998) states that nearly 250 million cases of preventable water-related diseases are reported every year and as van Damme (2001) reports, in excess of 3 million deaths occur annually from water related diseases (about 10 000 each day)².

In light of the numbers of people in today’s world who still do not have access to an adequate water supply and sanitation service (almost always the poor), and seen in conjunction with the increase in world population, it is clear that progress made in improving water supply and sanitation services throughout the 1980s and 1990s, although commendable, still falls well short of acceptable (see Table 1 below). In fact, the United Nations (UNWWAPb 2003) advocates that the water crisis is getting worse and will continue to do so, unless corrective action is taken against the way in which water is mismanaged. Van Damme (2001) reports that the United Nations Population Council predicts that the world’s population will stand at approximately 7.8 billion by the year 2025. He reports further that of this population, it is predicted that 4.5 billion will be urbanised (nearly double the present figure). *“Universal water supply and sanitation coverage by 2025 - a now widely acknowledged goal - will mean that in urban areas an additional 1.9 billion people will need water supply and 2.1 billion will need sanitation services. In rural areas, an additional 1 billion people will need water supply and 2.1 billion will need sanitation”* (van Damme 2001:2).

² Of the 3 million deaths annually, Hans Van Damme (2001) reports that approximately 2 million are young children from the developing world. Many more children are left physically and mentally impeded, underweight, vulnerable to diseases, and generally in a very poor state of health.

The optimistic view on meeting these enormous water supply and sanitation targets is that with more private sector involvement, better governance of the water sector and the development of new technologies, the water crisis can be eased. However, the reality is that *“on the basis of the evidence put forth by this first WWDR (World Water Development Report), the prospects for many hundreds of millions of people in the lower-income countries, as well as for the natural environment, do not look good.”* (UNWWAPb 2003).

Table 1: Population without water supply and sanitation in 1980, 1994 and 2000 (after Dowdeswell 1998; van Damme 2001; UNWWAPa 2003).

Region	Millions Without Safe Water Supply			Millions Without Adequate Sanitation		
	1980	1994	2000	1980	1994	2000
Africa	243	381	297	315	464	312
Latin America & Caribbean	109	97	66	150	176	120
Asia & Pacific	1 461	627	715	1 250	2 206	1 920
Europe	12*	10*	22	20*	26*	48
Total	1 827	1 115	1 100	1 740	2 873	2 400

* European figures for 1980 and 1994 are only for Western Europe.

2.3 SUCCESSFUL INTERNATIONAL EXPERIENCES IN WATER SUPPLY AND SANITATION SERVICES

There are many valuable international experiences and lessons learned that South Africa can benefit from. The UN General Assembly proclaimed the decade of the 1980s as the International Drinking Water and Sanitation Decade. As Louw (2003) observes, the broader developmental focus during this period was on satisfying the ‘basic needs’ of the very poor, where the state provided water services directly and independent of market forces and community structures. This decade experienced some dramatic failures of state-sponsored water programmes in the developing world as well as a realisation that massive state expenditure on water supply programmes did not have the desired effect on water service delivery (Hagg *et al.* 2003). Kalbermatten *et al.* (1999) argue further that these

projects were implemented in a top-down manner, which disempowered community structures and led to many projects being rejected, discarded or becoming unsustainable. Examples of such failed initiatives can be seen in many of the former communist states in Central Asia, parts of India, Latin America as well as numerous African countries. In many of these cases, the state was unable to continue to subsidise such unsustainable projects.

During the 1990s, and as a result of some of the lessons learnt through the previous decade and in an attempt to promote sustainability, the international water sector shifted away from the 'basic needs' top-down approach and moved towards the idea of community participation in the construction and management of services and upgrading initiatives (Mvula Trust 1998 and May, May, Newton, Persad & Stavrou 1994). Breslin (1999 in Louw 2003) concurs with this and argues that communities should no longer merely 'take delivery' of services but should rather play an active part in projects right from their inception. This must include not only determining the services type to be provided, but also the monitoring and evaluation of the performance of the developer and service provider. Without this "*communities are unlikely to develop a sense of ownership of water projects and there is little to motivate them to take responsibility for such programmes.*" (Louw 2003:102).

In addition to the idea of community participation, is the principle of payment. In 1991 India began implementing its first rural water supply project where the capital cost was recovered and included full community responsibility for operation and maintenance (van Schalkwyk 2001). The community makes all-important decisions, which creates a sense of ownership. Van Schalkwyk (2001) reports that although the project is still in its implementation stage, the NGO for the project is confident of its success.

Payment towards water supply and sanitation services is considered important in developing a sense of ownership of a project. However, the UNWWAP (2003b) states that studies have shown that these services do not come cheap to the urban poor who spend a high percentage of their income on water. Wall (2000) provides an example of this where some of the poorest households in Port-au-Prince, Haiti, spend up to 20% of their income on water during the dry season, whereas the more affluent households spend a mere 2 – 3%. Wall (2000) sites an example in Karachi, Pakistan, where some households purchase

their water from vendors and pay 25 – 50 times more per unit of water than those households connected to the municipal system. This same problem occurs in Jakarta, Indonesia; Dacca, Bangladesh; Tegucigalpa, Honduras.

Water and sanitation services improvement projects were established in Ghana in 1994. These projects were based on the idea that the community chooses the type of services, depending on what they could afford, and then accepts responsibility for all maintenance costs, operation costs and contributes 5% towards capital costs (van Schalkwyk 2001). The communities are responsible for the financial management of the projects and as van Schalkwyk (2001) reports, the projects have been a success.

Wall (2000) cites an example of why it is so important that water projects are demand driven. A development initiative to supply water to the Klepu Kelis, a peri-urban community in Lombok, Indonesia was stopped because it was learnt during the latter part of the planning stage that the community refused to self-finance the water scheme. Although they had to walk up to five kilometres to get water, the community did not consider it their primary problem. As the work they perform was largely seasonal, the inconvenience caused in having to spend time collecting water was not considered important. Time saved had little economic value. The creation of employment opportunities was seen as being far more important.

Both Bolivia and Indonesia have implemented schemes where communities are responsible for part payment. In Bolivia, municipalities get certain funding from government but are themselves responsible for 10% of the cash contribution towards the costs of construction, with the community contributing 5%. The community is then required to contribute a further 15% of the costs by way of providing labour and materials (van Schalkwyk 2001). Indonesia has a similar scheme with communities expected to contribute 4% in cash and a further 16% in kind, of the capital cost. Van Schalkwk (2001) reports an interesting additional feature of the Indonesian scheme, and that is that village labourers are paid below the minimum wage to ensure that only the really poor and unemployed are recruited. The community participates in all the planning decisions in both the Bolivian and Indonesian cases. Important additional aspects of both these case studies are community training on environmental health and a high level of participation by woman. Van

Schalkwyk (2001) notes that although the implementation of the scheme in Bolivia did experience problems in relation to the institutional structure, project targets were generally met, especially where there was a high level of community participation. The Indonesian schemes have been particularly successful. Thirty-one of the schemes that were implemented in 1995/6 were still fully operational in 1998 (van Schalkwyk 2001).

International experience provided by Dreyer (1998) suggests that it is common for communities to be unwilling to pay for any kind of communal service. However, communities become more willing depending on the quality of service. She also identified that many households are willing to pay large sums of money for high levels of service such as an individually metered household water supply, but that community consultation on the level of service to be provided remains of utmost importance (Dreyer 1998). An interesting finding in Dreyer's (1998) studies is that not all communities, particularly rural communities, are willing to take on the responsibility of managing water and sanitation projects, as they are best managed by government agencies rather than local political bodies. She attributes this to "*the complexity of community dynamics*", and that "*Governments are seen to be neutral in service provision*" (Dreyer 1998:13).

It is clear from international experience that taking ownership of a project is very important for its successful implementation. This is achieved through community participation and community decision-making throughout both the development of the project as well as the further operation and maintenance of the system. A further very important common denominator throughout the international cases cited is the concept that the community contributes financially (in cash, labour and materials) towards the scheme. However, it is noted that it is important to ensure that poor communities are not required to spend a large portion of their income on water and sanitation services.

Assessing international examples also suggests that although water and sanitation projects should be community driven rather than a top-down approach, the state still plays a crucial role in creating the right conditions for development to occur as well as build capacity within community structures and local governments so that projects can be properly managed.

2.4 WATER SUPPLY AND SANITATION SERVICES IN SOUTH AFRICA

South Africa, perhaps more than any other country in the world, has a huge imbalance in its level of water and sanitation services provided from those who receive full water-borne sewerage and tapped water of an extremely high quality, to others who have no sanitation service and who obtain contaminated water from one source or another.

2.4.1 Brief history of water and sanitation supply

According to Alcock (1999a) more than 12 million people do not have access to an adequate supply of potable water and there are nearly 21 million people (in 3 million households) living in South Africa without basic sanitation (Alcock 1999a and Pearson, Bhagwan, Kariuki and Banda 2002). Those without adequate sanitation are using the bucket system, unimproved pit latrines or the veld, all of which are potential health and environmental hazards.

Historically, the divide between those with adequate access to water and those without, has been on the basis of race. Such inequity has not only been with regard to the allocation of water resources, but also an inequity in water supply development. During the second half of the 20th century, vast water schemes were developed to ensure distribution of water to industry, agriculture and other competing users (DWAF 1994). However, during this period, very little was achieved in developing water schemes that served communities in the homeland territories or black communities housed in townships around urban centres (DWAF 1994).

The development of sanitation services in these poor communities very much mirrors the history of water service development in South Africa. The development of water supplies for wealthy, white communities generally ensured that water-borne sewerage was the preferred sanitation option whereas poorer, black communities have had to endure other sanitation systems such as the VIP, the unhygienic bucket system and, in rural areas, no level of service provision (DWAF 1994).

Prior to 1994 and South Africa's first democratically elected government, service provision was managed in a very fragmented manner, with no institutional framework that

established clear responsibilities. This is not surprising as there were eleven different homeland administrative and political areas, four independent TBVC states, six self-governing territories and the dominant Republic of South Africa territory, governed by the tri-cameral parliament (DWAF 2002a). In addition, ten of the homelands also had rural areas that were managed by tribal authorities. Former 'black' areas were affected the most as little or no services were provided to these areas, and this contributed significantly to the disparity in access to basic services. There were other problems as well which related to the proliferation of 'governments'. These problems included the fact that there were many institutional boundaries that overlapped, there was a lack of political legitimacy, and nationwide boycotts against paying for services provided. Water and sanitation efforts were, at the time, generally focused on the provision of standpipes and toilet facilities, with little or no effort given to community needs or health and hygiene education (DWAF 2002a).

Overcoming such huge inequalities was one of the greatest challenges that faced the new government in 1994. With South Africa moving to a non-racial democratic government in 1994, *"political transition provided a window of opportunity for the radical transformation of the country's water law"* (Muller undated:9). It was apparent that the Water Act of 1956, used as a tool by the government of the day to secure water as a private resource for the minority, and particularly the white agricultural community, was inappropriate for a country trying to redress the imbalances of the past. To achieve the objectives of the new South Africa and meet the fundamental rights enshrined in the Constitution (Act 108 of 1996), it was clear that South Africa's water law demanded revision. An identified central issue in the water sector that required addressing was that of equity. For many years there had been no equitable distribution of water. Gleick (1998), considered to be one of the world's leading experts on water related problems, including sustainable use of water, maintains that many water institutes fail in their responsibilities because they do not adequately address issues of equity. A goal of government thus became to ensure that all South Africans have access to essential basic water supply and sanitation services at a cost, which is affordable both to the household and to the country as a whole, while continuing to promote environmental values (DWAF 1994). Creating a new water law was not only politically motivated. It was also apparent that the country had reached a point where no

more water could be made available, and yet the number of users continued to grow (Muller, undated).

Such fundamental change to redress the imbalances of the past meant that if the concept of sustainable water service delivery was to become a reality, Government needed to restructure its institutional framework as well as its social environment. This, as it has proven, has been extremely difficult because government has had to develop a balance between political promises on the one hand and sustainable service provision on the other hand, while at the same time transform the entire water sector.

2.4.2 Water and sanitation related diseases

Pearson *et al.* (2002) states that more than 1,5 million cases of diarrhoea occur annually amongst South African children under the age of five. Furthermore, mortality rates are estimated to be greater than 20 per thousand populations in the nought to one year age group, of which at least 25% are due directly to water and sanitation related diseases (Pearson *et al.* 2002). There are together over 10 000 deaths annually from water and sanitation related diseases in South Africa. These figures are likely to be considerably higher as not all cases are reported (Pearson *et al.* 2002).

The human cost associated with mortality and morbidity³ resulting from water and sanitation related diseases is of great concern, and will obviously have an impact on the economic development of the affected communities and the GDP. However, there are also other related concerns. Firstly, medical costs of water and sanitation related diseases is extremely high and, although the state does provide medical support at minimal cost to poor communities (but high cost to itself), these small costs must still be borne by people who can ill afford to. Secondly, there are a high number of lost labour hours as well as child learning time. Thirdly, the personal grief and sorrow cannot even begin to be quantified.

³ Mortality refers to the number of deaths in a given period whereas morbidity refers to the number of people who are taken ill.

2.4.3 Impacts of a poor water supply and sanitation service

It is apparent that projects aimed at improving water supplies and sanitation facilities play an important role in reducing incidents of illness and disease, which is especially prevalent in informal settlements. Ward, Hall and Clacherty (2001) maintain that improved domestic water supply and sanitation within informal settlements will reduce the number of diarrhea cases caused from contaminated water or food, as well as those cases which are as a result of an inability to maintain domestic cleanliness.

Kalbermatten *et al.* (1999) contend that it is not so much the quality of water that is important in reducing the number of diarrhea cases but rather the quantity. The argument is that there must be enough water to be able to perform good household and personal hygienic functions, but that the quality of the water does not necessarily have to meet acceptable human consumption standards, especially in reducing water-washed diseases (Kalbermatten *et al.* 1999). Archer (1999), in her research on identifying the prevalence and pathways to diarrhoeal disease in two rural villages in KwaZulu-Natal, found no association between the prevalence of diarrhea and the source of water. Her findings did show that diarrhoeal disease is most prevalent in children under five years old, females and those who perform the cooking function in the household.

In order to understand the importance of developing a safe and proper water supply and sanitation system within an informal community that is undergoing an *in-situ* upgrade, it is useful to consider transmission routes of water and sanitation related diseases, to grasp the ease with which these diseases can be spread. An understanding of the prevention measures will further emphasise the importance of a safe water supply and sanitation system.

The CSIR (2000) report that most water and sanitation related diseases are spread from an infected or sick person through a particular transmission route to a healthy person. Understandably then, the denser a settlement is, the easier such diseases are spread. Also, these densely settled communities are some of the poorest people in the country and it is unlikely that a sick person will be in a position to purchase medication prior to the disease spreading further. The scenario painted here is that there is a vicious cycle and unless a

safe water supply and sanitation system is made available to poor communities, this cycle of spreading disease will not be broken.

There are many types of organisms and transmission routes that spread water and sanitation related diseases from infected or sick persons to healthy persons. Table 2 illustrates the range of water and sanitation related diseases that are commonly found within poor communities:

Table 2: Transmission routes for water and sanitation related diseases (after CSIR 2000: Chap 9:6, Wall 2000:107 and Ward *et al.* 2001:85)

Transmission Route	Description	Examples
Water-borne through microbiologically contaminated water	transmission through consumption of contaminated water	Poliomyelitis Hepatitis A Rotavirus diarrhoea Amoebic dysentery Giardiasis Cholera E.coli Typhoid
Water-washed sanitation related	transmission through inadequate use of water for domestic and personal hygiene and personal use	same as above + trachoma Scabies
Soil and animal transmitted	transmission through contact with faeces disposed in shallow soil, or consumption of meat of infected animals	ascariasis hook worms tape worms ring worms Trichuriasis
Water-based through contact	transmission via an intermediate host that lives in the water	schistosomiasis (bilharzia)
Water-site related insect vector	transmission by insects which breed in or near water	malaria filariasis Onchocerciasis

There are numerous measures that can be taken to break the cycle of re-infection. However, these measures all rely on improvements to water supply and sanitation, health and hygiene education as well as awareness programmes. Table 3 demonstrates the

importance of an improved and accessible water supply and sanitation system and good hygiene practices in order to lower the incidence of water-borne and water-washed diseases, and thus break the cycle of re-infection. It is clear from Table 3 that a good water supply (quantity as opposed to quality), which is central to all five sanitation components, will assist poor communities in breaking the cycle of water and sanitation related diseases.

Table 3: Prevention of transmission of sanitation related diseases (after Pearson *et al.* 2002:7)

Sanitation Related Disease	Sanitation Component				
	safe drinking water	safe excreta disposal	personal & domestic hygiene	food hygiene	grey-water disposal - drainage
diarrheas (bacterial & non-bacterial)	• •	• • •	• • •	• • •	
Poliomyelitis, Hepatitis A	•	• •	• • •	• •	
worm infections: ascariasis, trichurus hookworm pinworm, dwarf tapeworm other tapeworms guinea worm	• • • •	• • • • • • • • • • •	• • • • • • • •	• • • • • •	•
skin infections eye infections		•	• • • • • •		•
schistosomiasis (bilharzias)		• • •	• • •		•
insect vector: malaria yellow fever Filarisis		• • •	•		• • • • • •

Importance of preventing disease transmission: • • • high • • medium • low

However, as established by Ward *et al.* (2001), a good water and sanitation system alone will not break the cycle of infection. Prevention relies equally on an understanding of the disease cycle and adopting appropriate hygiene practices to reduce the chance of re-

infection. The findings of Archer (1999) show that there are many factors such as settlement density, number of occupants in a home, water collection containers, failure to disinfect water, the type of toilet used, the presence of soap and/or water near toilets for hand-washing purposes and the presence of decomposing organic matter in close proximity to the house, all play a role in the prevalence of diarrhea. Kalbermatten *et al.* (1999) reports that the simple act of washing hands after going to the toilet can cut diseases by one third. As the Palmer Development Group (1995) commented, advising people by means of a health education programme of the sources of their particular disease problems and how to avoid them, is a more effective means of combating water related diseases than merely improving a communities water supply and sanitation facilities. It is therefore, essential that an intensive education programme should form an integral part of any sanitation or water supply project.

Many people in developing countries would consider an inadequate water supply and sanitation service as the most pressing problem they face. The negative economic impact of a poor water and sanitation system can be substantial. Poor health (from water related diseases) leads to a loss of income and a continuation of the poverty cycle. Furthermore, as Ward *et al.* (2001) argue, time and effort is spent every day (especially by women) in securing water, where this time could be better spent in some form of economic or social activity.

Wall (2000) maintains that there is little doubt that effective water and sanitation projects assist in the fight to alleviate poverty, improve the living standards of women and reduce the loss of working hours caused by water and sanitation related sickness.

2.4.4 Water supply and sanitation service projects

Minister Kasrils (Minister of Water Affairs and Forestry), in his address to Parliament on 06 June 2003 (Vote No. 34) made various statements reporting on the great progress his department has made in reducing the national backlog in community water supply (Kasrils 2003a). As stated by Kasrils, 8.5 million people had received access to potable water at a cost of R4.4 billion by October 2001. This wiped out 50% of the backlog, which, in terms of the internationally agreed Millennium Target, was supposed to be achieved by 2015. According to DWAF, 82% of the schemes are working adequately (Kasrils 2003b).

However, as much as these figures may sound impressive, the allegation is that delivery figures have been inflated (Greenberg 2001 cited in Hagg *et al.* 2003:73). It is suggested that Governments attention has been aimed at publicizing inflated delivery figures while ignoring the lack of sustainability of many of the community water supply schemes. Hagg *et al.* (2003) maintain that there have been numerous accusations aimed at DWAF that many of the community water projects deliver erratic supplies of water with many having ceased operation. Wellman (1999 cited in Hagg *et al.* 2003:73) argues, “(o)ver 50% of schemes were functioning inadequately.” Hemson (2001 cited in Hagg *et al.* 2003:73) advocates that only 33% of water supply projects have been a success.

Although over-inflation arguments seem to carry some validity, at this stage there is no proof of this. What cannot be denied is that many of the projects are not sustainable. An argument put forward by some is that several projects have not been sustained because of a lack of affordability (van Schalkwyk 2001). Kasrils does not deny this and claims that in many cases, not even the basic tariffs are affordable by the very poor (Hagg *et al.* 2003).

It is always difficult to determine whether or not a project is sustainable, especially when the term “sustainable” is defined differently in various cases. Also, information on water supply schemes is not always readily available to enable an assessment on the sustainability of a project. Van Schalkwyk (2001) has documented a number of water supply schemes, which DWAF had identified as successful cost recovery schemes. Ten of these projects are documented in Table 4 below. All ten projects documented have a high level of cost recovery. In the case of the Durban Metro (now eThekwin municipality), the cost recovery is as high as 99%. Douglas and Klerksdorp both have a cost recovery rate in excess of 90%. It cannot be claimed that the size of the population determines the level of success of cost recovery because the Durban Metro supplies water to 1.4 million people whereas in Douglas water is supplied to only 15 000 people. What is common throughout all these “successful cost recovery projects” is that some form of action is taken against non-payers. Action ranges from a late payment fee to the installation of flow restrictors to cutoffs and even various forms of social ostracism. However, what is also clear from these schemes, and perhaps most important, is that the water tariffs are by no means steep. Communities are often not unwilling to pay, but rather unable to pay, and successful cost

recovery schemes must ensure must take cognisance of this in setting water tariffs that are payable.

A further assessment of the table reveals that women play an important role in a number of the water committees established to manage the various water schemes. Also, in six of the cases it is not left to the municipality to manage the scheme but rather the community itself through water committees and development forums. This highlights the importance that such committees and forums play in successful cost recovery schemes.

Table 4: Successful cost recovery schemes in South Africa (van Schalkwyk 2001:9 – 10)

Scheme	Cost Recovery	Population	Authority responsible for managing scheme	Payments required	Action against non-payers
Vhuthalu (NP)	Excellent	500	Water Committee	R10/household/month	Late payment - R30/household/month
Gundani (NP)	85%	1 195	Water Committee	R1.40/household/month	It is expected of everybody to pay- headman decides on action to be taken
Pietersburg / Seshego (NP)	82%	80 000	Pietersburg / Polokwane TLC	Step tariff 1 to 10kl - R0.98/kl 10 to 15kl - R2.72/kl 15 to 30kl - R3.04/kl 30 to 50kl - R3.30/kl 50 to 100kl - R3.68/kl > 100kl - R4.43/kl	Flow restrictors are installed & if payment is still not made water is cut off
Ngqele (EC)	Good 65-75%	4 000	Village Development Forum (43% female)	R5/household/month	Disciplinary Committee Social sanctions. Community peer pressure
Durban (KZN)	99%	1 400 000	Durban Metro	Full pressure system: < 6kl - R1.33kl 6 to 30kl - R2.43/kl > 30kl - R3.64/kl Semi-pressure system: < 6kl - R1.33kl 6 to 30kl - R1.74/kl > 30kl - R3.64/kl Water tank- R9.30/household/month	A lower level of service is provided – still no payment – cut off

Scheme	Cost Recovery	Population	Authority responsible for managing scheme	Payments required	Action against non-payers
Crossroads (EC)	Good > 80%	1 584	Water Committee (40% female)	R5/household/month	Social ostracism, social events boycotted
Douglas	95%	15 000	Douglas Municipality (Interim Council)	House & yard connections: 1 to 10 kl - R27.13 > 10kl - R0.91/kl Standpipe – R4.94/household/month	Flow restrictors are installed – R20 to have removed. Electricity is cutoff.
Motlhabe/Ntswana-Le-Metsing villages (NW)	Excellent	4 600	Project steering committee (70% female)	R15/household/month	Visit & talk to non-payers. Illegal connections are fined R300 by Tribal Authority
Klerksdorp (NW)	94%	194 000	Klerksdorp City Council	Step tariff 1 to 10kl - R1.30/kl 10 to 20kl - R3.51/kl 20 to 30kl - R3.61/kl 30 to 50kl - R3.66/kl 50 to 100kl - R3.70/kl 100 to 500kl - R4.43/kl > 500kl - R5.31/kl Min levy - R13 Standpipe - R4.56/household/month	Flow restricted to 3kl/month - still no payment – cut off illegal connections – Fine of R300 1 st offence & R2 000 2 nd offence
Tsita (EC)	Good	13 000	Water Committee (50% female)	R2/adult/month Adult: over 18 yrs excl scholars	Names are read out at community meetings. Headman decides on action to be taken

2.5 THE POLICY, LEGISLATIVE AND INSTITUTIONAL FRAMEWORK

It is important at this point to consider the policy, legislative and institutional frameworks that are in place and which impact on the delivery of water supply and sanitation services, with special reference to the supply of these services to poorer communities.

2.5.1 Policy Framework

There are five key policy documents that apply to water supply and sanitation in South Africa:

- The 1994 White Paper on Water Supply and Sanitation
- The 1996 White Paper on Sanitation
- The 1997 White Paper on Water Policy
- The 2002 Proposed National Water Resource Strategy

2.5.1.1 White Paper on Water Supply and Sanitation (1994)

The White Paper on Water Supply and Sanitation recognises that the lack of basic services in South Africa such as water supply and sanitation, is a key symptom of poverty and underdevelopment. Water is in fact, central to development.

Basic water principles

The White Paper identifies the following eight basic water principles:

- (i) Development should be demand driven and community based. Decision-making and control should be devolved as far as possible, to accountable local structures and communities should accept responsibility for their own development, with the assistance of the state.
- (ii) Basic services are a human right. Every person has a right, in terms of the Constitution, to a level of services adequate to provide a healthy environment.
- (iii) “Some for All”, rather than “All for Some”. Priority will be given to those who are presently inadequately served.
- (iv) Equitable regional allocation of development resources
- (v) Water has economic value. Recognition is given to the scarcity of good quality water in the country.

- (vi) The user pays. This is a central principle to ensure sustainable and equitable development, as well as efficient and effective management.
- (vii) Integrated development. Water and sanitation development are not isolated from development in other sectors.
- (viii) Environmental integrity.

Basic service provision policy

Guidelines for the provision of water and sanitation services, with special reference to the less developed areas of South Africa, were outlined in the White Paper on Water Supply and Sanitation, which was released in 1994. The policy statement (DWAF 1994) set as an objective that all South Africans must have access to a basic water supply and sanitation service by 2002 or earlier. Basic water supply is defined in the White Paper (DWAF 1994:15) as being:

- (i) A minimum of 25 litres per person per day. This is considered the minimum requirement for consumption, preparation of food and personal hygiene. The White Paper does recognise that 25 litres is not considered to be adequate for a full, healthy and productive life, which is why it is considered as a minimum. (Gleick (1998) proposes a minimum of 50 litres per person per day to sustain life).
- (ii) Available water within a maximum of 200 metres from all dwellings. The distance should be reduced in areas of steep terrain to take into account the extra effort required to carry water up steep slopes.
- (iii) A flow rate from the outlet of at least 10 litres per minute.
- (iv) A regular, daily available supply.
- (v) An effective and assured supply (i.e. “raw” water 98% of the time, even in times of drought and, no more than 1 weeks interruption in supply per year).
- (vi) A quality of water that is in accordance with currently accepted minimum standards with respect to health related chemical and microbial contaminants. The potability of the supply (taste, odour and appearance) must also be acceptable to the consumer.
- (vii) An upgradeable supply to allow for future household connections.

Government's free basic services policy

As part of the South African Government's strategy to alleviate poverty in South Africa, a policy for the provision of a free basic level of services has, in the past couple of years, been promoted. In the words of President Mbeki, "*the provision of free basic amounts of electricity and water to our people will alleviate the plight of the poorest among us.*" (Mbeki 2001:1). However, although national and provincial government are obliged to provide support to local government, it is the latter that is constitutionally mandated to deliver water services. Much of the ultimate responsibility for delivering free basic water therefore rests on local government.

Implementing this policy successfully is a complex task that requires a wide range of issues to be addressed both nationally and locally. The process of implementation also differs across municipalities. Given the very different income and service level profiles of municipalities, some will find it relatively easy to implement the policy while others will face severe constraints.

2.5.1.2 White Paper on Sanitation (1996)

The White Paper places major emphasis on health and hygiene education and promotion. Very importantly, it makes health education and promotion an integral part of all community sanitation projects and community water supply improvement projects.

Policy principles

The National Sanitation Policy includes the same eight principles as stated in the White Paper on Water Supply and Sanitation, with the addition of two further principles namely:

- (i) Sanitation is about health. Sanitation is not just about the construction of toilets but includes all forms of sanitation improvement and is accompanied by promotional activities as well as health and hygiene education.
- (ii) Sanitation is a community responsibility. This must be emphasised through sanitation awareness programmes.

2.5.1.3 White Paper on Water Policy (1997)

An important feature of the White Paper is that the objective is no longer just to promote equity in access to and benefiting from the country's water resource, but to make sure the needs and challenges of South Africa in the 21st century can be addressed.

The White Paper provides an extensive list of key proposals. Some of these proposals are listed:

- (i) The status of the nation's water resources as an indivisible national asset will be confirmed and formalised
- (ii) Only water required to meet basic human needs and maintain environmental sustainability will be guaranteed as a right (known as the Reserve).
- (iii) Other water uses will be subject to a system of allocation based on uses that promote the optimal achievement of equitable and sustainable economic and social development.
- (iv) In an effort to promote the efficient use of water, users will be charged for all the financial costs of providing the service.
- (v) To promote equitable access to water for basic human needs, provision will be made for some or all of the charges to be waived.
- (vi) All major water user sectors must develop a water use, conservation and protection policy.

2.5.1.4 Proposed National Water Resource Strategy

This strategy sets out ways in which to achieve integrated water resources management. It is the implementation strategy for the National Water Act (Act No 36 of 1998) and provides the legally binding framework within which water resources will be managed in this country in the future. The strategy outlines a number of goals and objectives of water resource management for the country and provides plans, guidelines and strategies to achieve these goals. The strategy identifies opportunities for social and economic development where water is available, and the developments required to achieve them (DWAF 2002b).

2.5.2 Legislative framework

The Water Services Act (Act 108 of 1997) and the National Water Act (Act 36 of 1998) provide the legislative framework for water supply and the use thereof. Legislation on sanitation is less developed with the 1996 draft National Sanitation White Paper still under review.

2.5.2.1 The Constitution (1996)

The Constitution of the Republic of South Africa (Act 108 of 1996) assigned to local government the responsibility of providing water and sanitation to communities. In terms of section 152 of the Constitution, local governments are “*to ensure the provision of services to communities in a sustainable manner.*” The Constitution also, under Part B read with section 155(7) & 156(1), places the responsibility with municipalities to provide a potable water supply and domestic wastewater and sewage disposal system.

2.5.2.2 Water Services Act (1997)

The main purpose of the Water Services Act (Act 108 of 1997) is to provide the legislative mandate to municipalities to provide a water supply and sanitation service to the consumers within that municipality, as a water services authority. This Act also establishes other water services institutions which may be responsible for water services provision such as a bulk water services provider (for example Umgeni Water), a water board (established by the Minister of Water Affairs and Forestry to provide water services to other water services institutions), and a water services committee (a committee that the Minister may establish should a water services authority fail to perform its functions).

2.5.2.3 The National Water Act (1998)

This Act regulates the use of water to ensure equitable and sustainable use of available resources. With reference to water service delivery, the act addresses the use of water, the protection of water resources, water use charges and reporting.

2.5.3 Institutional framework - roles and responsibilities of national, provincial and local spheres of government

South Africa’s entire framework of government has undergone massive transformation at national, provincial and local level over the last ten years. The Constitution has established

‘spheres of government’ rather than the previous ‘levels of government’, with each sphere of government having its own concurrent and exclusive functional areas. The supply of water services and sanitation is a function that involves all three spheres of government, although provincial government to a lesser degree.

2.5.3.1 National government

The overall task of water resource management lies with the national government (Department of Water Affairs and Forestry, as the lead department in the water and sanitation sector). National government has an obligation, in terms of the Constitution, to provide a sufficient supply of water and sanitation service to all its citizens, as well as to ensure the protection of the resource for future generations. Furthermore, the Bill of Rights requires the national government to ensure an environment that is not harmful to the health of all its citizens, through “*reasonable legislative and other measures*”.

National government is also responsible for developing water supply and sanitation standards, supporting provinces and municipalities in developing water and sanitation services, building capacity within local governments and assisting municipalities in developing their Water Services Development Plans, which form an important part of a municipality’s IDP. (DWAf 2001).

National government (Department of Housing) is responsible for developing standards for housing as well as the minimum service levels for such housing projects (presently the minimum standard for sanitation is a VIP, unless soil conditions require other options and at least a standpipe within 200 metres of each household.)

2.5.3.2 Provincial government

The direct responsibility for water supply and sanitation services falls outside the jurisdiction of Provincial government. Nevertheless, in terms of Schedule 5 of the Constitution, Provincial government has the exclusive competence for provincial planning, and more importantly, the siting of settlements. Therefore, indirectly, the Provincial government plays an extremely important role in the drive towards improving basic service standards, even though both the KwaZulu-Natal Planning and Development Act (Act 5 of 1998) and the national Land Use Management Bill (both of which deal with the

consideration of development applications, including housing projects) aim to transfer the function and responsibility of municipal planning from the provincial level to the municipal level.

In terms of section 155(6) of the Constitution (and both the Municipal Structures Act of 1998 and the Municipal Systems Act of 2000, Provincial Governments clearly have a shared responsibility with municipalities, through the promotion of effective local government, to ensure that services, including water and sanitation, are delivered. Very closely aligned to this is the responsibility that Provincial governments have (the Department of Traditional and Local Government Affairs in KwaZulu-Natal) for promoting the IDPs of municipalities and ensuring that municipalities have the capacity to develop their IDPs. It is thus extremely important that close co-operation is maintained between the spheres of government.

Provincial government, and more specifically the Department of Health, has the responsibility of leading the health and hygiene promotion and education programmes in the province. It must co-ordinate information on public health and prepare health norms for sanitation, while at the same build the capacity of municipalities and support municipalities in delivering their constitutional obligation of municipal health services. (DWAF 2001).

2.5.3.3 Local government (municipalities)

While protection of the water resource remains a national responsibility, the Constitution states that local government has legislative and executive authority over, amongst others, water and sanitation services, domestic wastewater and sewage disposal (Part B of Schedule 4 of the Constitution). The White Paper on Water Supply and Sanitation recognises that “*the key to sustainable water and sanitation development is the existence of functional and competent local government*” (DWAF 1994:11). Local government thus has the key responsibility for ensuring that services are improved at a local level. The local or district municipality (depending on which is the Water Services Authority) is responsible for preparing a Water Services Development Plan. Within this plan, the municipality must ensure (amongst others) that (DWAF 2001 and DWAF 2002a):

- it identifies and prioritises the needs of the people of the municipality in terms of water

supply and sanitation services, and ultimately ensures that it provides its people with an adequate access to water and sanitation.

- it budgets and sources funding for improved water supply and sanitation services through revenue collection and from provincial and national government. Linked to this, it must consider costs of basic services such as housing, water, sanitation, electricity, and what it can afford in respect of supplying such services and what the consumer can afford.
- each water and sanitation project has a business plan, which must be developed in consultation with a water and/or sanitation steering committee elected from and by the community. This plan must set out what methods will be used for the project and what the community contribution to the project will be.
- it continues to reinforce health and hygiene messages and monitor health in this respect

The provision of water supply and sanitation services must be done within an IDP process. The IDP, together with the Water Services Development Plan, forms an essential management tool for municipalities (DWA 2001 and DWA 2002a).

2.5.3.4 Water services authority

A water services authority (district or local municipality), as provided for in the Water Services Act (No 108 of 1997), is responsible for ensuring that infrastructure for water reticulation is developed, operated and maintained and that it has an efficient, affordable, economical and sustainable access to water services for all its consumers. It is also responsible for developing bylaws that address conditions for the provision of water services. Within this requirement, and amongst many other conditions, is the need for a services authority to regulate against the unlawful or wasteful use of water and the prevention of unlawful connections to water services works, both of which have been identified within the Msunduzi Municipality IDP (2002) as major problems that must be addressed. Water services authorities must also therefore develop local water services policies to address issues around service provision, such as the free basic water policy. It is also responsible for collecting and treating sewage, wastewater and effluent

In terms of the Municipal Structures Amendment Act (Act 33 of 2000), the function of providing a potable water system and domestic sewage and wastewater has been assigned

to district municipalities. However, a local municipality may be authorized to perform the water services authority function by the Minister of Provincial and Local Government Affairs (section 84(3) of the Municipal Structures Amendment Act). The Minister has authorised the Msunduzi Local Municipality (w.e.f 01 July 2003) to perform the function of a water services authority.

2.5.3.5 Water services provider

A water services authority may provide its own bulk potable water if it has the capacity to do so, or contract a water services provider to perform this function. A contracted water services provider is responsible for developing, operating and maintaining abstraction works and bulk potable infrastructure and for distributing bulk potable water to municipal reservoirs. It is also responsible for setting conditions for the provision of water services. These conditions must be in accordance with the bylaws made by the water services authority of a municipality. The conditions must provide for, amongst others, the following:

- the conditions for payment
- circumstances under which water services may be limited or discontinued
- procedures for limiting or discontinuing water services, which must:
 - give a reasonable notice of intention to limit or discontinue water services
 - not deny a person/s access to basic water services as a result of non-payment, where that person is able to prove that he or she is unable to pay for basic services

It is clear from these provisions of the Water Services Act that all efforts must be made to ensure that every individual has access to a water supply, regardless of his or her ability to pay for that service.

Some municipalities do not have the capacity to collect and treat sewage, wastewater and effluent and may thus contract a water services provider to perform this function on its behalf. The Msunduzi Municipality manages the collection of sewerage in its municipality but utilises the services of Umgeni Water, with whom it has a contract, for the treatment of its sewerage.

ALITY

Water supply and sanitation is, like housing, one of the basic needs. Such needs are more basic than transport, than telephones, than health service proves to be almost meaningless without a proper sanitation system. However, like most parts of South Africa, the Municipality is characterised by tremendous imbalances in terms of the services. Historically, this was owing mainly to the South African policy of segregated development, but was exacerbated by the bureaucracy and the plethora of planning and implementing agencies responsible for the various aspects of community development (A'Bear 1991).

6.2 The changing city

The city of Pietermaritzburg, up until 1994, had a relatively small population of 176 590 covering an area of 150 square kilometres. During the period 1995 – 2000, the municipality, which was by then known as the Pietermaritzburg-Msunduzi Transitional Local Council (TLC), had more than doubled its population to 373 910 and its area to 251 square kilometres. Since 2000, and the introduction of the new municipal structures, the area of jurisdiction has increased to 649 square kilometres and the population within this area to a staggering 523 470 (an increase of 430% and 300% respectively over the last eight years). The Municipality is now known as the Msunduzi Municipality. What is also important is that although the population has increased by 300%, its rates income has only increased by 24% (Msunduzi Municipality 2002:9).

From these increases in both area and population, with very little increase in revenue, it is clear that the task of providing services to the entire population of the Municipality has greatly increased. Not only has the size of responsibility significantly increased, but so too have the complexities in relations. Although the Municipality is responsible for all service provision (see section 152 of the Constitution), the actual service providers of key services such as Eskom, Provincial Roads Department and Umgeni Water, still obviously play a major role. This creates complexities in relationships, the provision of resources and the planning and controlling of service provision projects and initiatives, and thus emphasizing the need for good interaction, co-ordination and co-operation with other service providers.

It is important that partnerships are established between the service providers, the three spheres of government, business, NGOs and the affected communities.

What is also important and not to be forgotten is that prior to 1994, local governments were mainly concerned with the provision of services and the implementation of various regulations ... but only in their relatively small area of jurisdiction. The provision of a water supply and sanitation service was mostly, if not all, in the form of a full pressure water system⁴ and full water borne reticulated sewerage system⁵. Local governments were thus not familiar with the development, installation and maintenance of alternative water supply and sanitation systems, let alone the consultation process required between affected communities and other role players. Provincial and national government, as well as homeland governments were responsible for the provision of services in the former “Black” areas. Pietermaritzburg was no different where none of the areas of Edendale, Imbali, Sobantu, Greater Edendale and Vulindlela were the responsibility of the Pietermaritzburg Municipality. They were all serviced under the responsibility of other levels and forms of government (National and Provincial government, as well as the KwaZulu government).

2.6.3 Water supply

Umgeni Water supplies bulk potable water to the Municipality, who then reticulates water to individual users. The old Pietermaritzburg Municipality areas have up to 48 hours of water stored, whereas some parts of Greater Edendale have only 24 hours storage time available (Bruce McCormack & Associates, Maseko Hlongwa & Associates 1999a).

⁴ “This is the highest service level that can be provided. Typically, the installations use conventional 50mm or more pipework and fittings, such as fibre cement and “plastic” piping, cast iron valves, flange adapters, couplings etc, and the water mains are generally laid at a depth of 1 metre. Experienced main layer contractors are generally required to install. Skilled municipal maintenance teams maintain these systems. Water meters need to be read regularly and accounts sent out regularly. The house plumbing must be able to handle water pressure up to 1 200kpa. A full-pressure system has a connection fee of approximately R5 000 and the tariffing is the highest of all water supply systems, simply because there is no limit on the amount of water used. This is an expensive system and not suitable for low cost housing projects where communities cannot afford the maintenance and tariffs of such a system” (Burton, Makhathini, Mkhize & Proctor 1998:177).

⁵ “This is an expensive sanitation system to build and maintain. This system requires a constant supply of water and involves a pipe system from each house that feeds into a main sewer line that leads to a sewerage treatment works. Connection fees are expensive (approx R3 000) and up to R100 per month to maintain. This system is not suitable for communities where there is no constant & reliable supply of water or communities that cannot afford the high maintenance costs” (Burton *et al* 1998:186).

Presently, although 95% of the population of the Msunduzi Municipality has access to some form of water supply, only 60% of the population has a safe, continuous and reliable supply of water (Msunduzi Municipality 2002).

The Municipality services parts of its area with piped, potable water. Most of the “old city” (Pietermaritzburg Municipality – pre 1994) has a full pressure system. The Municipality has also attempted to provide informal settlements within the “old city”, with standpipes. Some parts of the former “Black” areas are now also serviced with piped, potable water.

The Municipality is faced with a crisis in that approximately 40% of water supplied is unaccounted for and reflects a loss of revenue of 26 million rand (Msunduzi Municipality 2002). A lack of funding for capital renewal and maintenance of existing infrastructure leads to breakdowns and consequent water loss. Furthermore, water supply systems are being abused and vandalized (numerous unmetered communal standpipes and illegal water connections) leading to supply interruptions and costly maintenance and replacements (Figures 1 and 2). However, what is surprising is that although the Municipality has identified in its IDP that illegal standpipes are a serious problem, there seems to be no strategy or policy on how to combat the erection of illegal standpipes, which is a particularly severe problem in the Newtown settlement.



Figure 1 and 2: Illegal standpipe connections

A further problem facing the Municipality is that there are many parts of Greater Edendale that do not have an alternative bulk supply of water, therefore reducing the reliability of a continuous supply of water (Msunduzi Municipality 2002).

2.6.4 Water supply policy and objectives

A key objective of the Municipality is to provide a free basic water supply to all residents, in accordance with the government's free basic services strategy. It is the long-term goal of the Municipality to supply a full pressure water supply system to all its citizens, including those in the remote areas such as Vulindlela and Newtown. However, due to infrastructure, affordability and sustainability constraints, other levels of supply will be adopted over the short to medium term (Msunduzi Municipality 2002). It has been accepted that the low-pressure water supply system be adopted in the short to medium term for PHB projects. It is only in exceptional circumstances, with fully motivated development proposals, that full pressure systems will be considered for low cost housing projects (Bruce McCormack & Assoc *et al.* 1999a).

According to the Msunduzi Municipality IDP (2002) the Municipality has set itself an objective to provide an uninterrupted, affordable water supply to all its citizens within the next five years. It also aims to replace all standpipes with individual connections as well as eliminate the use of water tankers as a means of delivering water. The water tanker presently delivers water to thousands of residents within the municipality

Water loss and unaccounted water is a problem that plagues many urban areas throughout the world and the Msunduzi Municipality is no exception. As a result, the Municipality aims to reduce its water loss to 15%. At present, 40% of water used is unaccounted for and the Municipality aims to reduce this to 20% within the next five years. (Msunduzi Municipality 2002:120).

2.6.5 Impact of Government's free basic services policy

As a result of the government's policy, there are certain key issues that the Msunduzi Municipality needs to address such as:

- financial; how to finance and target the supply of free basic services in a sustainable and efficient manner;
- socio-political; how to establish successful communication and co-operation between consumers, councillors, local government officials and different spheres of government;
- institutional; how to develop the required organisational capacity and working relationships between different institutions; and
- technical; how to choose the appropriate technical and service level options to facilitate free basic water.

2.6.6 Msunduzi Municipality's interim basic free water policy

The Municipality's Interim Basic Free Water Policy was implemented in January of 2002. Free water was initially only implemented within the old TLC boundary but in May of 2002 was extended to include areas outside the previous TLC boundary. These new areas include Vulindlela, Payiphini, Sweetwaters, Whispers and Bishopstowe, all areas particularly affected by poverty.

The Interim Basic Free Water Policy allows consumers who restrict their water consumption to 6 kilolitres or less per month, to qualify for free water. A recent report presented to the Municipality's Technical and Engineering Services Committee on the first year of the implementation of the policy, indicated that by December 2002, thousands of domestic consumers had restricted their water consumption to 6 kilolitres or less, with many thousands more automatically restricted to this amount by way of systems such as the "low pressure ground tank water supply system", which only allows a limited amount of water to each household per day. The cost of this free basic water to the Municipality was just short of R2 million rand (Bharath 2003 *personal communication*).

2.6.7 Sanitation services

According to the Msunduzi Municipality IDP (2002), more than half the population living in the municipal area does not have access to appropriate sanitation. Also, as a result of financial, administrative, political and technical reasons, the existing sanitation system has not been properly maintained. Many parts of the Municipality are serviced by an ageing sewer system that needs replacing, hence the need for the Municipality to budget large

sums of money (10 million rand annually) for infrastructural replacement (Msunduzi Municipality 2002). Not only is the system old, but it is also being abused through a lack of knowledge. Newspaper and other household items and waste are flushed into the sewer system causing blockages. These blockages cause sewers to discharge raw sewerage into the nearest waterway or stream.

The old Borough, Sobantu, Imbali, Ashdown and Slangspruit are all serviced by a waterborne system linked to the Darvill sewage works (Bruce McCormack & Associates *et al.* 1999a). The remainder of the municipal area has on-site disposal systems. Unventilated pit latrines service approximately half of the Greater Edendale area. The remaining sites serviced by waterborne sewerage (20%), conservancy tanks (15%) and VIPs (15%) (Bruce McCormack & Assoc *et al.* 1999a:19).

The provision of adequate sanitation to communities throughout South Africa is a priority at both national and local government level. As a result of the extensive need for improved sanitation systems and the requirement for local municipalities to provide such services against severe financial constraints (which effectively excludes water-borne systems), alternative methods such as the ventilated improved pit latrine (VIP) are being installed in large numbers. It is noted in the Msunduzi Municipality IDP (2002), that there are no short or even medium term plans to extend water-borne sewer lines to many of the peri-urban and rural areas of Edendale and Vulindlela. Not only would it prove particularly expensive to extend the sewer lines to these areas, but also the communities themselves are poor and could not afford the high maintenance costs associated with such a system. The Msunduzi Municipality has recognised this and intends spending 81 million rand on the construction and replacement of VIPs over the next number of years and in addition and 1.5 million annually on sanitation education and awareness (Msunduzi Municipality 2002).

2.6.8 Msunduzi Municipality water and sanitation policy for PHB funded projects

The Msunduzi Municipality has adopted the following policy for housing projects that are funded by the Provincial Housing Board (PHB), and where 80% or more of the beneficiaries have gross household incomes of less than R1 500 per month (Bruce McCormack & Associates, Maseko Hlongwa & Associates 1999b):

- A VIP latrine, especially in areas where there is limited water supply. The water would be contained in a ground or roof tank. This method of delivery would only be provided where geotechnical conditions on-site provide adequate percolation.
- A lined VIP latrine. Water supply to the site would be limited. The water would be contained in a ground or roof tank. This method of delivery would only be provided where geotechnical conditions on-site **do not** provide adequate percolation.
- Communal standpipes or tanker water supply should not be provided unless in emergency situations and then only on a temporary basis. The standpipe or tanker provision should be terminated as soon as is realistically feasible.

Although VIPs provide effective sanitation for community members, this system requires regular maintenance and committed community involvement with the local municipality to ensure efficient and healthy functioning.

2.7 THE *IN-SITU* UPGRADE OF A COMMUNITY

2.7.1 Community leadership

Development initiatives in many settlements throughout South Africa almost ground to a halt during the late 1980s and early 1990s, because of the unstable political climate, the emergence of new community leadership structures and the erosion of formal administrative structures seen as being part of an illegitimate government (Hindson & McCarthy 1994). New leadership structures were used to place obstacles in the way of development and service delivery in an attempt to gain political control of a community. (Taylor 1994). Since the mid 1990s and the establishment of legitimate local government structures, democratically elected local councillors are now more accountable to residents within communities. The reconstitution of local government has allowed for a shift in power in many communities from local power elites towards individual residents, who are the beneficiaries of development.

2.7.2 Importance of community participation and consultation

International evidence suggests that community participation in the construction and management of services is crucial to the success of a project. Pillay (1994) maintains that community participation facilitates the project by ensuring the legitimacy of project interventions and builds local capacity for ongoing management of the development. She

also argues that community participation has the potential to transform communities by allowing access to decision making, facilitating organisation around issues of local concern, and promoting political awareness (Pillay 1994).

There is little doubt that the lack of consultation and interaction between the supply authority and consumers has, in many development initiatives, resulted in some form of resistance towards the delivery of the service. Appropriate technological solutions implemented by the service supplier have not always met the needs of the community as well as the development challenge of that community, essentially because the service was inappropriately implemented due to a lack of consultation and interaction with the community. In the 2003 United Nations World Development report, the point is made that a fundamental requirement in implementing water services, is that it is sustainable, and sustainability can only be created through an interactive process between the supplier, the community and development of the natural environment (UNWWAP 2003b).

During the past ten years, a period characterised by extensive international efforts to improve water supply and sanitation services in poor communities, developers, regulatory bodies and service providers began to acknowledge and embrace the notion that the sustainability of any service provision project depended greatly on ensuring that the users understood the need for the proposed improvements and the purpose of the improvements. Kalbermatten *et al.* (1999:8), argue that *“investments should be based on ‘effective demand’; that is, that facilities should be provided only if the prospective users stated that they were willing and able to cover some or all of the investment costs (directly in cash, or by in-kind contributions of labour and materials) and at least all of the costs for operation and maintenance.”* ‘Ownership’ of such an investment by a community is far more likely to be sustainable than if it is merely given to a community. This is a very important concept, and one that seems to be gaining international acceptance and momentum. Certainly, in the South African context, this could be applied, although each household is still entitled, in terms of government policy, to 6 000 litres of free water per month (or 25 litres per person per day).

2.7.3 Partnership between the community and the local authority

It is very evident that the relationship between the local authority and the community is extremely important in any *in-situ* upgrade project. Too often the first point of contact between these two parties is one of contrast and confrontation. This is due to the fact that although the local authority may be responsible for encouraging and supporting development that results in an improvement of the quality of life of its residents, it also has a regulatory responsibility to enforce regulations which, informal communities by their very nature, often transgress.

The long-term success and sustainability of such a project hinges on a good working relationship between these two parties. As Abbott and Douglas (2001) argue, similar partnerships that are currently being forged between the public and private sector need to be initiated between the local authority and the community. Unconditional support and resources to the community is certainly not the answer. No private/public partnership is successful under these circumstances. Abbott and Douglas (2001) explain further that the partnership must include a critical assessment of what the objectives of the “upgrade” are to be and more importantly, a willingness to give and take on both sides. This leads to a very important concept, and that is the idea of “community enablement”. This concept, as Helmsing and de Bos (1998:74) explain in Abbott and Douglas (2001:71), “*seeks to strengthen communities and their organisations and to make communities, via collective actions, either wholly or partially, responsible for particular services*”. Counter arguments to the public-private partnership concept as a model for water service providers, are documented in Hagg *et al.* (2003). For example, some critics have accused DWAF that it is government’s responsibility to ensure that all citizens have an equitable access to services. Requiring financial assurance of a project first, and then making the community responsible, sacrifices the rights of the poor in favour of the fiscal needs of local government and the profits of the private sector.

2.7.4 Implementation of services in an existing community

A characteristic of nearly all informal settlements is the lack of an adequate access to bulk infrastructure. There is invariably a lack of bulk water provision and bulk sewage disposal, coupled with difficult terrain, and these factors often constrain the levels of service

provision to communal water points and pit latrines, both of which have potential associated environmental problems.

An accepted policy in the installation of services to informal settlements is that they must be upgradeable. However, Taylor (1994) argues that given the nature of settlements, this is not always possible and if it is possible, often comes at much higher cost than would be for a greenfields development.

Land occupied by informal settlements tends, in many cases, to be on land that is either environmentally degraded or land that is prone to natural disasters such as flooding, landslides or collapses (Schoeman, MacKay & Stephenson 2001). Financial constraints are always an issue. Not only are the communities that are being upgraded invariably extremely poor, but also because of the often-difficult terrain in and around informal settlements, especially in KwaZulu-Natal, larger sums of money are usually required for infrastructure than are required for greenfield projects. Also, because of the poverty of the community, there is difficulty in accessing finances for development through the conventional financial markets.

These factors must be recognised in the early stages of planning an informal settlement upgrade. But, perhaps more importantly, and as Sowman and Urquhart (1998) recognise, the planning process must go further by placing all these factors at the core of the development process. Without satisfactorily addressing all the factors the project is likely to fail at some point in the future.

2.7.5 Impacts of relocating a community

Any *in-situ* housing development upgrade project involves a certain amount of disruption to individuals, families and communities. The relocation of an established community can be very disruptive. Studies undertaken by Abbott and Douglas (2001) and Taylor (1994) suggest that residents of informal communities are socially very closely knit and reliant upon one another. This is supported by Sowman and Urquhart (1998) who maintain that informal communities rely on social unity and community interaction as an important source of support. This study also determined that it is very important not to disrupt existing social groups, especially in poorer communities, because cultural activities and

habits help communities to maintain bonds during difficult times.

2.7.6 Basis for upgrading (development objectives)

Abbott and Douglas (2001) contend that the objective of development initiatives is no longer to reduce income poverty and increase employment but rather to diminish deprivation, enhance well-being and develop a sustainable livelihood. Thus, the basis of projects aimed at upgrading communities should be economic development and social integration. The success of such initiatives is heavily dependant on the establishment of a strong partnership between local government and local communities.

2.8 CONCEPTUAL FRAMEWORK

For the purposes of this research, the particular concern being studied is that many of South Africa's water supply and sanitation projects are not sustainable. Poor maintenance, operation and management of existing and new schemes are often blamed. This is despite the numerous successful international experiences (and some local experiences) from which valuable lessons have been documented. Furthermore, projects have failed notwithstanding (or perhaps because of?) the development of internationally lauded laws, policies and best practices. The overriding message is that delivery must be carried out in an approach that places greatest emphasis on the community's role and full involvement in the development process. This means empowering communities to gain real control over important issues that affect them such as gaining skills in the field of water, sanitation, health and the environment; understanding the social, technical and financial considerations in choosing and maintaining water and sanitation services; and, very importantly, utilizing community socio/political structures to assist organisational development efforts.

2.9 CRITERIA TO BE USED TO EVALUATE THE CASE STUDY

It is evident from the literature review that an adequate and sustainable water service delivery depends on numerous factors. Many of these factors can be addressed by sound project planning and by introducing preventative measures, before and during the project, (van Schalkwyk 2001). Table 5 sets out the criteria that will be used to evaluate the case study. The criteria were obtained from the lessons learnt and successful international and national experiences in water supply and sanitation services that were extracted from the

literature review. The criteria were derived essentially from four sources namely van Schalkwyk (2001), Duncker (1999), Ward *et al.* (2001) and Wall (2000). However, it is acknowledged that other sources such as Dreyer (1998), Archer (1999), Louw (2003) and Hagg *et al.* (2003) had an influence in the derivation of the twelve evaluation criteria.

Table 5: Evaluation criteria (after van Schalkwyk 2001, Duncker 1999, Ward *et al.* 2001, Wall 2000).

<i>Ensure that the project is demand driven</i>	Was the project driven by demand?
<i>Establish community needs and service level</i>	Were the community's needs and the level of service that is affordable, and for which the community is willing to pay, established during the planning and design stage of the project?
<i>Involve community in decision making</i>	Was the community involved with the decision making during the planning and design stages?
<i>Establish a community elected committee</i>	Was support provided in establishing a community elected committee that represented the community through the different stages of the project? Does such a committee still exist as it could have been used as the body responsible for the scheme after implementation?
<i>Involve woman in the project</i>	Were woman involved in the project? Were woman included in the committee? Other experiences have shown that involving woman greatly increases the sustainability of a project (van Schalkwyk 2001, Ward <i>et al.</i> 2000, Wall 2000).
<i>Ensure that the community invests in the project</i>	Was the community's willingness to invest in the project established during the planning stages? Were they willing to contribute financially or by providing labour or resources? Such investment will encourage a sense of ownership.
<i>Identify community members who will manage the scheme after implementation</i>	Were member(s) of the community identified during the project implementation stage, who will operate and maintain the scheme? Are these member(s) still responsible? If not, who is responsible?
<i>Resolve political issues during the planning stage</i>	Were political issues that could affect the proper functioning of the project resolved during the planning stage? Issues of this nature, if not resolved at an early stage, could lead to the failure of the project.
<i>Provide education and awareness of scheme</i>	Were the residents trained on how to maintain the water system and on how to best utilise the sanitation service provided?
<i>Provide upgradeable services</i>	Are the services that have been installed, upgradeable?
<i>Determine punitive measures for non-compliance</i>	Were punitive measures for non-compliance negotiated and accepted by all and are they being strictly enforced?
<i>Provide post project support</i>	Is there any form of post project support, as support after project 'close out' must be made available? Does such support include a complaint and query "help desk"?

CHAPTER 3: NEWTOWN (EDENDALE UNIT RR)

3.1 INTRODUCTION

Edendale Unit RR (commonly known as Newtown) is a peri-urban settlement (previous informal settlement)⁶, which is situated on the sides of the Sinathing valley in the remote southwestern corner of Edendale, approximately 12 kilometres from the city. The settlement borders Edendale Unit M in the north, Unit L in the west and Unit R in the east.

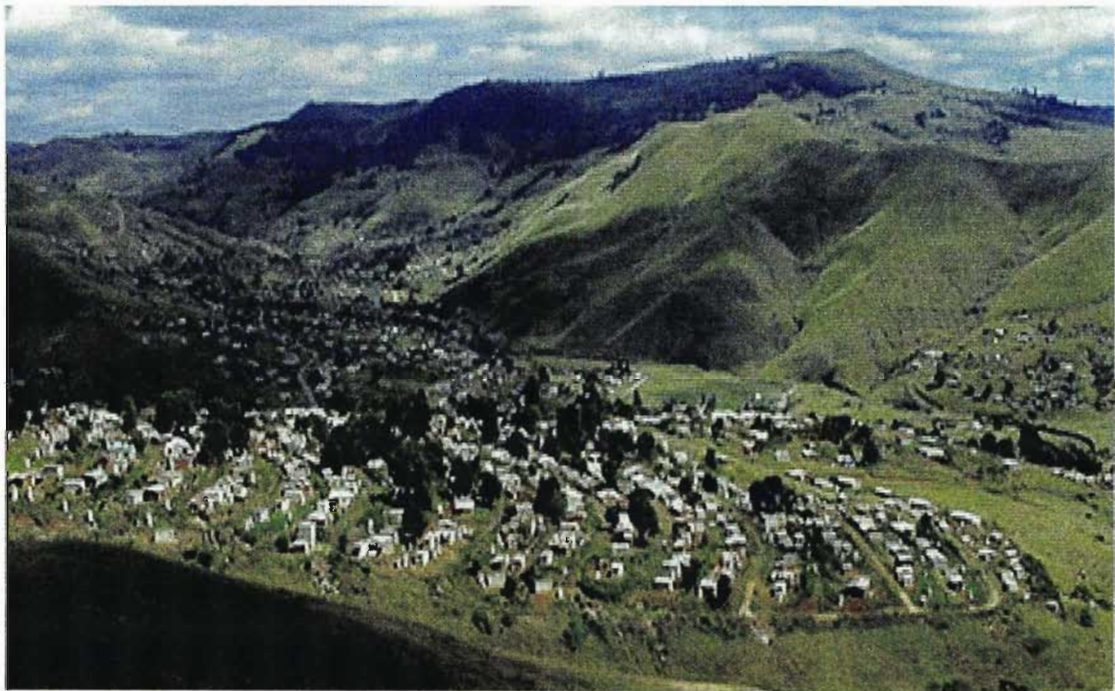


Figure 3: View of Newtown looking westwards. Note the steep slopes.

⁶ Hindson and McCarthy (1994:1) define an informal settlement as a dense settlement comprising communities housed in self constructed shelters under conditions of informal or traditional land tenure).

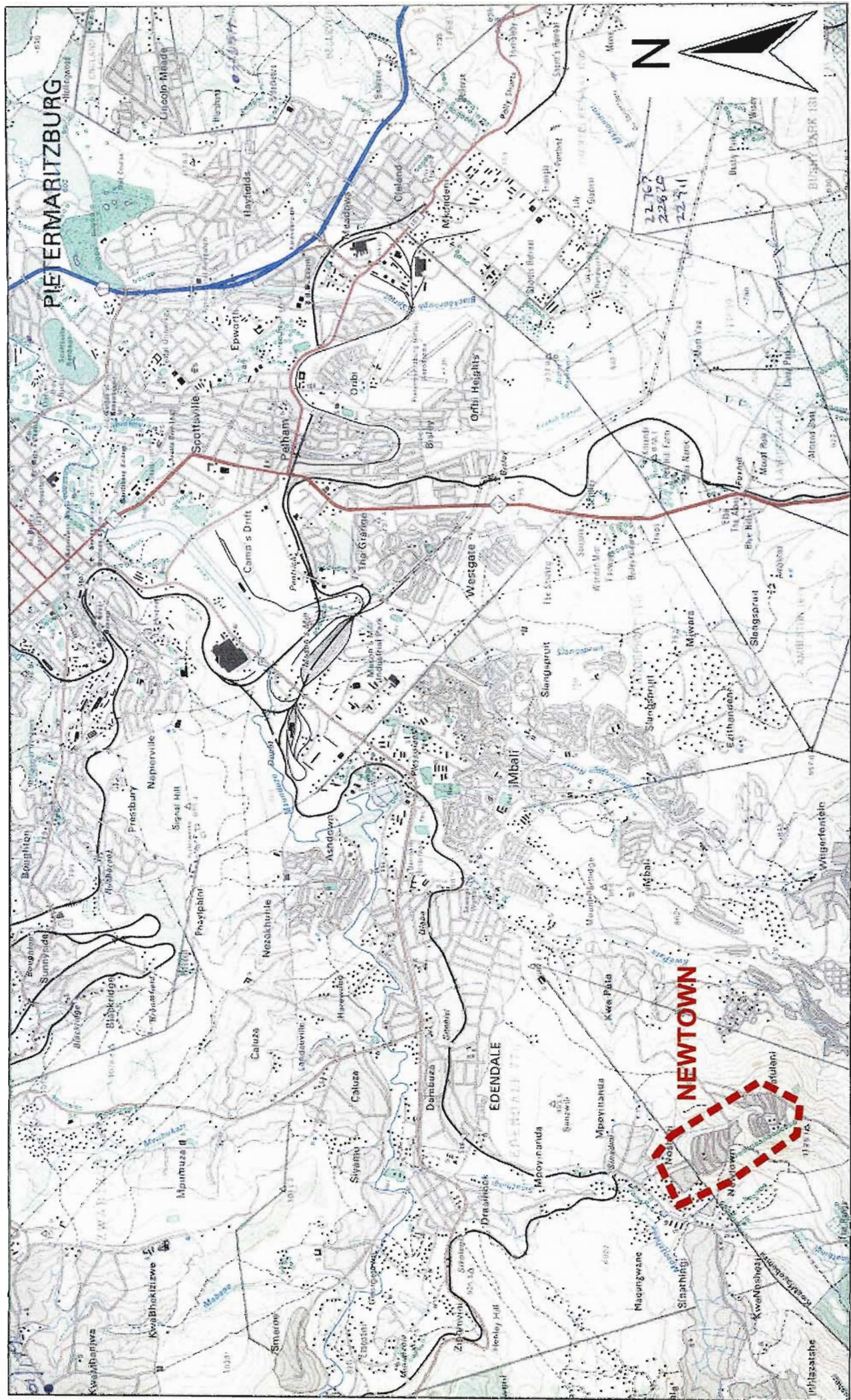


Figure 4: 1:50 000 locality map showing Newtown

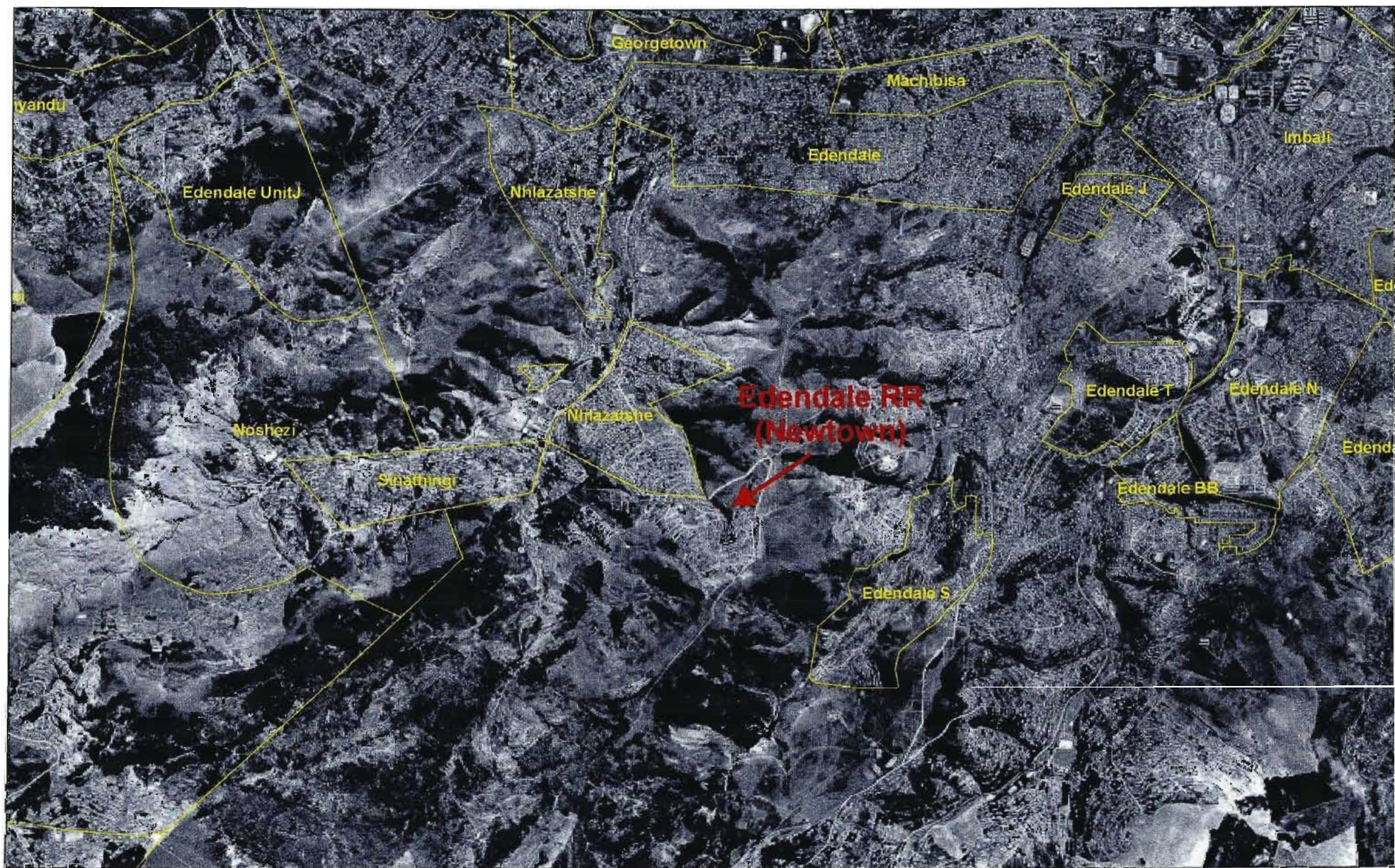


Figure 5: Aerial photograph showing Edendale and the peri-urban settlement of Newtown

3.2 NATURAL ENVIRONMENT

3.2.1 Topography

The topography is generally very steep with a westerly aspect. The slopes at the bottom of the settlement have a gradient of 1:10 and steeper. In the middle portion of the settlement the slope increases to a very steep 1:2 gradient, and levels out again towards the crest of the hill.



Figure 6: Houses constructed on steep cut-and-fill slopes. VIPs have been placed far from the road making sullage removal difficult and costly. Also, the placement of VIPs on cut-and-fill slopes is a potential health hazard due to seepage (Rivett-Carnac 1984).

3.2.2 Geology and soils

The site is underlain partly by shales of the Pietermaritzburg formation and partly by sandstone and grits of the Vryheid formation and intruded by dolerite sills and dykes. Outcrops of dolerite and sandy shale are common with sandstone outcrops in the higher lying parts. The slopes are covered with hillwash deposits. These transported soils are clay-rich and in places exhibit potential expansiveness. The soils are badly drained in most parts of the development and there are numerous areas with a shallow water table (Msunduzi Municipality 2003a).

The construction of VIPs in areas where soils don't allow for good drainage can become a serious health problem. This is exacerbated when large amounts of water are provided to each property (Alcock 1999b). Also, VIPs are not ideally suitable in areas with a high water table. This can be overcome by raising the VIP above the ground (Alcock 1999b).

3.3 SOCIO- ECONOMIC STATUS

Newtown is a very poor community that has very little service infrastructure. It is resident to a population of approximately 700 low-income families (5 000 inhabitants) (BPD 2001a:10). Over 80% of households earn an income below the poverty line.⁷ At least 50% of households earn less than R238,15 per capita, putting these households in the ultra-poor category (BPD 2001b:155). Households are generally large with an average of six members per household (BPD 2001b).

The BPD (2001b:154) report shows that only ten percent of adults had obtained a matric certificate and approximately 50% of residents over the age of 40 having received some formal education. Only a very few residents had received post secondary school qualifications (BPD 2001b:154).

Houses in the community are generally relatively informal and constructed using traditional materials such as mud brick. In addition, formal PHB funded houses have been

⁷ The poverty line is a measure used to classify the economic status of households. It can be defined as "the minimum income level needed to secure the necessities of life." The poverty line threshold established for South Africa is R476,30 per capita. All households earning between this figure and R238, 19 per capita are considered poor and all households earning less than R238, 19 are considered ultra-poor (BPD 2001b).

constructed alongside the informal houses. The upper portion of the settlement is predominantly new formal houses with few informal houses.

Most households have access to electricity, which forms the main source of energy, although almost 50% of households continue to use cheaper sources of energy such as paraffin (BPD 2001b:154). Almost all households have access to piped water, many of whom access yard standpipes for drinking, washing and irrigation purposes. Approximately 80% of households benefit from municipal refuse collection (BPD 2001b:154).

3.4 HISTORY

3.4.1 Relocation to present site

Residents of Newtown are a community who, in the early 1950s, were forcibly removed from their place of residence in Empushini and relocated to the farm Politique, which is situated approximately 10 kilometres to the southwest. The area to which the community was moved (now known as Newtown) had plots laid out in terms of a formal township layout, although settlement on these plots did not take place in accordance with the layout plan, nor was any formal tenure issued. Initial development of this area included the installation of a reservoir, which fed a few standpipes, and the construction of sub-standard pit latrines. Water tankers also made regular stops to the community to supply water (Msunduzi Municipality 2003a). Administrative control and responsibility of the area has changed hands over the years. For many years the Department of Development Aid (DDA) administered Newtown before it was handed over to the Natal Provincial Administration to administer. After the elections in 1994, and the establishment of TLCs, the administration of Edendale was handed over to the Pietermaritzburg TLC. In more recent years, the entire Greater Edendale area became the responsibility of the Msunduzi Municipality. The land on which Newtown is situated is state owned land (Minister of Land Affairs) (Msunduzi Municipality 2003b).

3.4.2 Available services prior to development initiative

Prior to the recent development initiative access to Newtown was by means of a gravel road (constructed years earlier), which continued to the uppermost point of the

settlement. Where informal development took place, narrow unsurfaced tracks provided access to each of the housing units. Very little provision had previously been made for stormwater control. Many of the existing access tracks had flat grades, so ponding of stormwater occurred at regular intervals in the tracks. Nearly all of the informal housing units had rudimentary pit latrines that did not conform to any standards. Bulk water was supplied to the settlement by means of a 75 mm diameter gravity line from a nearby storage dam to a 90m³ reservoir in Newtown. For a considerable time prior up until the formal development initiative (in 1997), the water level in the storage dam was below the inlet of the gravity line to the reservoir, so no water was supplied to the reservoir, therefore no water supplied to the settlement. Also, previous water supply initiatives had also not been particularly successful. The pipeline serving the various standpipes had developed numerous breaks (Msunduzi Municipality 2003c).

As a result of these water supply problems, water was supplied to the local community by means of water tankers that transported water to temporary water distribution points throughout the settlement. During the latter part of the 1990s a new 100m³ steel reservoir was constructed in the lower part of Newtown which gravity fed portions of the community (Msunduzi Municipality 2003c).

3.5 DEVELOPMENT INITIATIVES

The Newtown community has been involved in development negotiations for many years. The Natal Provincial Administration had approved a previous development initiative for 700 sites, before the community stopped the project. In May 1997, a second development proposal was lodged with the Pietermaritzburg-Msunduzi TLC (Newtown had by this stage fallen within the boundary of the TLC) to formalise Newtown (*in-situ* upgrade) and thus enable residents to obtain secure tenure to their sites and access to the (at the time) R15 000 PHB grants⁸. These grants were to be utilised to upgrade the services within the community as well as services to the community. Remaining funds were to be made available to the residents to purchase building materials to erect new, or improve on existing structures (Msunduzi Municipality 2003d).

⁸ People who earn less than R3 500 a month qualify for a subsidy based on a sliding scale. With effect from 01 April 2002 the maximum housing subsidy was increased from R16 000 to R20 300 (figures for those earning in the R0 – R1 500 income category). The maximum subsidy at the time of the project was R15 000.

The project proposal was for the layout and development of 1 377 sites⁹, of which 565 were already occupied (*in-situ* upgrade) and 790 vacant (new stands on previously unoccupied land) (Msunduzi Municipality 2003b). In addition, the project included a number of community facilities such as a community hall, clinic, church sites, crèche sites, commercial sites, sports fields, educational sites, public open space and two further water reservoir sites. The community appointed a development committee, which formed part of the technical development committee established for the duration of the project. Records suggest that because of the income profile of the community and its limited ability to pay for services, and the small size of the properties, limited services would be installed (Msunduzi Municipality 2003d).

The level of service provided under the PHB funded project to Newtown is a limited water supply, with each property serviced with a water connection to a 200 litre low-pressure water supply tank (trickle-feed system) installed outside each house on a concrete block plinth (BPD 2000a:34). This system allows a daily consumption of approximately 200 litres per household per day. With an average of five people per family, (Newtown has an average of 6 people), it represents 40 litres per day per capita, which is above the World Health Organisation's standard of 25 litres per day per capita. Due to the small amount of money available for service installation, no soak away pits have been provided and thus no means to dispose of grey-water, albeit that each site only has access to 200 litres of water per day.

There are no sewer mains in close proximity to the settlement, nor are there any plans to extend sewer mains to the area in the short term. For these reasons waterborne sanitation was excluded. VIPs are the preferred sanitation system as they are cheaper to install and maintain. Each site has been provided with a VIP.

3.6 Business Partners for Development (BPD)

BPD is a World Bank initiative that addresses the growing need for partnerships and alliances among business, civil society and government to support development efforts that

⁹ The development now has 1 365 sites and not 1 377.

are aimed at improving the standard of living of communities throughout the world. The idea of this programme, which was initiated in 1998, is to bring together the diverse resources, expertise and perspectives of three distinct sectors namely, the business sector, the public sector and civil society, in particular Non-Governmental Organisations (NGOs). The general objective of the programme is to search for new ways or methods of providing services and sustainable development, in particular, to deprived urban and peri-urban communities (BPD 2001b).

The programme consists of four clusters areas namely:

- Education and youth development
- Natural resources
- Road safety
- Water and sanitation

A number of projects, spread throughout the world, have been developed for each cluster area, with the aim of demonstrating the partnership approach and sharing the lessons learnt from one project, to another.

3.6.1 Water and sanitation cluster

This was an obvious choice by the World Bank because water supply and sanitation play such an important role in the health of a population and thus the ability of the people to become upwardly mobile. Also, the World Bank felt that *“the complexities and the sensitivities of this sector make it appropriate for the type of association proposed in the BPD Programme”* (BPD 2000a:2). The Water and Sanitation cluster presently has eight projects running in places such as Colombia, Haiti, Indonesia, Argentina, Bolivia, Senegal and South Africa (BPD 2001b). These projects range from major developments to experimental pilot programmes such as the KwaZulu-Natal BPD project.

3.6.2 The KwaZulu-Natal pilot project

As previously described, one of the many challenges facing South Africa is the extension of services previously supplied by municipalities to predominantly white areas, to former townships, semi-urban and rural areas, all of which are now incorporated into municipalities, thus placing a huge financial and human resource strain on these local authorities. The high level of technical and engineering skills available in this country,

make this an accomplishable task. As a result, Vivendi Water (an experienced waste and water service provider in France and world-wide), Mvula Trust (a leading NGO whose mission is to improve water and services for the poor) and Umgeni Water (the regional bulk water supplier) together proposed that a tri-sector water and sanitation pilot project be developed in Edendale.

The Pietermaritzburg Executive Committee agreed to the project in May 1998 and, after further discussions, it was agreed to extend the project to include a similar project in Durban (Inanda-Ntuzuma). Together these two projects are known as the KwaZulu-Natal BPD Project (BPD 2001b). The tri-sector partnership is built on co-operation between the Ethekweni municipality, the Msunduzi municipality, Umgeni Water, Mvula Trust, Vivendi Water and the Water Research Commission.

Two areas in Inanda (Amatikwe and Bhambayi), one in Ntuzuma (Ntuzuma Extension G), and three areas in Edendale (Ashdown, Imbali and Newtown) were identified as being suitable for the BPD Programme.

3.6.3 The Newtown project

The primary aim of the BPD project in Newtown was to investigate and improve health and hygiene conditions and practices in the community (BPD 2000a). The problem in the settlement was that grey-water tended to stagnate in areas adjacent to the tank and the house itself. As documented by the BPD in their February 2000 Report (2000a), the problems included:

- Rising damp into block walls.
- Nutrient rich water open to air and light.
- Pollution of natural waterways.
- Salinisation of topsoil due to soaps.
- Associated human and environmental health risks.

3.6.4 Failure of the low pressure ground tank water supply system

However, the most concerning issue was that the trickle feed water tank system¹⁰, which included the installation of a 200-litre water tank on a concrete plinth outside each house in the settlement, was not successful. The positioning of the tank resulted in a number of perceived and actual water supply problems. The outcome of this unhappiness was that there was resistance from the community to the system and ultimately a rejection of the system. An investigation undertaken for BPD identified the following problems:

- The inlet pipe to the tanks had been poorly installed resulting in broken or leaking pipes.
- Ball and valve mechanisms in the tank were damaged or completely destroyed.
- Tank taps had been broken off from the tank.
- The trickle feed box apertures were tampered with to increase water flow.
- Many of the tanks had been stolen, were missing or were merely being used for other purposes (see Figure 7 below).
- Water was being lost due to damages to the system and illegal standpipes. Many house owners had disconnected and bypassed the trickle feed system and had installed garden taps with full pressure, compromising the pressure elsewhere in the settlement.
- There was evidence of poor grey-water drainage, which would very easily lead to health problems.
- There was evidence of rising damp and moisture around the tanks and the adjoining house walls.
- Tanks were poorly positioned. The tanks were exposed to the sun (no shelter), which not only damaged the tanks (tanks became brittle), but also heated the water (unpalatable).
- There was a concern amongst community members that the tanks, because of their poor positioning, posed a security risk as poison could easily be added to the water.

¹⁰ With this system, water is gravity fed to specially manufactured yard tanks. The tank inlet has a flow regulator (trickle feed), which is sized to give a predetermined volume (approximately 200 litres per day) to each household.



Figure 7: Water tank used for other purposes. An observation made during site visits undertaken in April 2003 was that few, if any, water tanks were being properly used.

3.7 PRESENT SITUATION

The construction of housing units seem to be complete. Settlement roads, together with stormwater drains, have been constructed. Some roads on steeper gradients, have been concreted. The remaining roads are gravel.

A VIP has been constructed on each property, albeit that some VIPs have been constructed on potentially hazardous cut-and-fill slopes. Very few of the houses still have an operational trickle feed system. During the author's initial site visit it was noted that most houses were using either illegal yard taps or merely bending the water pipe when not requiring water, and simply releasing the 'bend' when requiring water (Figure 8). As a result still-lying surface grey-water is an obvious problem (Figure 9).

Clearly, the implementation of a water supply and sanitation services to the Newtown community has created numerous problems, and its sustainability is questionable.

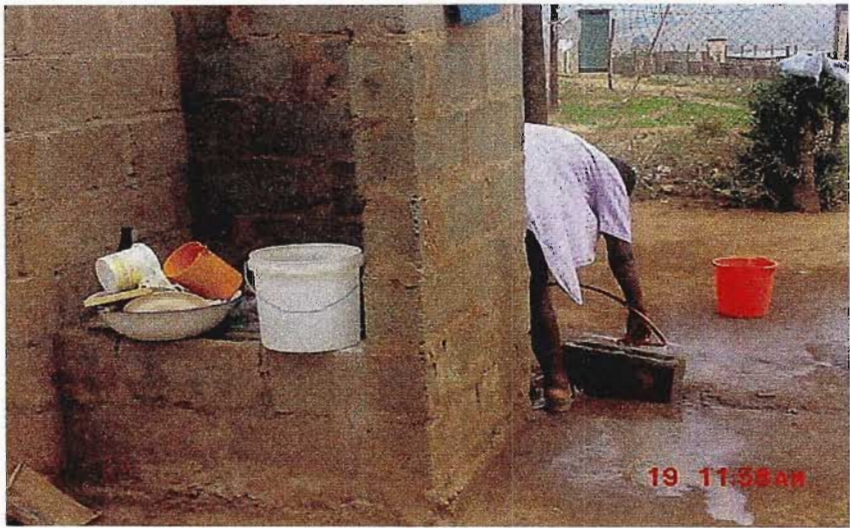


Figure 8: Bent pipe being ‘released’ to obtain water.



Figure 9: Stagnant surface grey-water.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 INTRODUCTION

The research task of evaluating the implementation of water supply and sanitation services to an *in-situ* upgrade housing project is to be explored by evaluating the peri-urban settlement of Newtown as a case study. The aim of this section is to describe the data gathering methods and methods of analysis that will be used as well as the limitations and problems that may be experienced during data collection. A range of data sources and research methods will be employed to undertake this project.

4.2 METHODOLOGY

4.2.1 Case study

The main aim of a case study is to try and understand a person, an institution or an event by studying a single case for a period of time. In other words, as explained by Bouma (1996:89), a case study is aimed at answering the question of ‘what is going on?’ The important factor in a case study is that it focuses on one group without making comparisons with any other group (Pratt & Loizos 1992). Results of a case study may then be tested against a hypothesis or even the results of other case studies. This research project will use evaluation criteria obtained from the literature review, to assess the sustainability of the water and sanitation project established in the chosen case study.

4.2.2 Research method

Data will be collected from the case study area using qualitative research techniques. Quantitative data will be utilised where such data is available should it be found to enhance the research project. Mouton & Marais (1994) describe the qualitative research approach as an approach in which the procedures are not strictly formalised, while the scope is more likely to be undefined and a more philosophical/intuitive mode of operation is adopted and tends to the subjective. Whereas quantitative data collection tends to be rather restrictive, the danger with qualitative data collection is that it tends to produce vast amounts of information, which requires the researcher to summarize (Bouma 1996). Qualitative research, as maintained by Mouton *et al.* (1994), allows the researcher to continually reflect on the research in progress, alter the research if needed and allows for more

interaction with participants. Quantitative research on the other hand, is explained by Bouma (1996) as essentially designed to give numerical results, which are usually reported in tables, graphs and charts telling the number of something, the proportion of something, or what the trends are.

4.2.3 Data collection

Secondary data sources will be used extensively in this project to collect data on the development of the Newtown settlement and the implementation of the water supply and sanitation system. Far too often new research is carried out without first checking on what information is already available. As described by Stewart and Kamins (1993), it is not important whether information is obtained from a primary or secondary source, so long as the information is reliable and answers the question at hand. Data will be collected from sources such as government records, both provincial and local, unpublished consultants reports, archived data sets, journals and published research, both national and international. Such data will be reviewed in order to properly understand the dynamics of the case study.

Primary data, which Stewart *et al.* (1993) describe as data collected by the researcher for the purpose of the investigation at hand, will be collected by way of semi structured key informant interviews. These interviews will involve using a checklist of questions and issues, rather than questionnaire. Open-ended questions will be asked to allow for expansion on ideas and debate. Interviews will be carried out in a flexible and informal manner.

4.3 FIELD TRIPS

In carrying out the research, a number of visits will be made to the study area. These visits will entail site observations of the installation and use of the low-pressure ground tank water supply system and sanitation service. The first of these field trips has already been undertaken under the guidance of the two housing project monitors from the Department of Housing. As the project was a PHB funded project, Departmental “project monitors” were assigned to the project from the outset. The second field trip will be under the guidance of the town planner from the former DDA who was involved in the initial planning and development of the settlement, and who later, as an official of the Natal Provincial Administration, also became involved in the provincial development project. The third

field trip will be undertaken with officials from the Msunduzi Municipality's Water and Sanitation component, and accompanied by the councilor for the area.

4.4 LIMITATIONS

Given the time and resource constraints (the research must be conducted within a two-month period), it will not be possible for this study to include detailed surveys and investigations into the success of the implementation of water supply and sanitation services to the Newtown settlement. Formal interviews, in the form of questionnaires may elicit additional information on the success of the implementation of the low-pressure ground tank water supply system and ventilated improved pit latrines (VIP's), however, secondary data sources, semi structured key informant interviews and site observations will be sufficient in meeting the objectives of the study.

Certain key informant interviews will not be able to be conducted. No representative from the previous Newtown Development Committee can be located. However, minutes of the initial meetings held between the old Committee and the Developer, as well as other related correspondence, have already been obtained, which will negate the need to pursue such an interview.

It is envisaged that some key informant interviewee's may not be willing to divulge all information at their disposal, lest it implicates individuals or groups of individuals. Obtaining certain sensitive data from consultants and the municipality may not readily be made available.

This broad aim of the research project will be pursued with the realization that the research period is very limited. For this reason this study can only be regarded as exploratory and results emanating from the study should be viewed with this in mind.

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COMPONENT B

EVALUATION OF THE IMPLEMENTATION OF WATER SUPPLY AND SANITATION SERVICES TO AN *IN-SITU* UPGRADE HOUSING PROJECT: A CASE STUDY OF NEWTOWN, PIETERMARITZBURG

ABSTRACT

International experience has shown that the concepts of 'community participation' and 'community ownership' are very important in providing sustainable water and sanitation services. Over the past decade emphasis in South Africa has shifted towards community participation and the empowerment of previously disadvantaged communities where communities play an active role in determining the level of service provided and the manner in which these services are delivered. However, current government policy advocates that water must be treated as an economic resource to achieve sustainability and this does not always lie comfortably with the policy of delivering free basic water. As a result of these two often-juxtaposed concepts, the delivery of sustainable water and sanitation services, a function performed by local government, is thus made more difficult.

The primary aim of this case study is to examine and evaluate the *in-situ* upgrade of water supply and sanitation services to the Newtown community, a peri-urban settlement on the outskirts of Pietermaritzburg. This *in-situ* upgrade housing project has yet to be completed although the trickle-feed ground tank water supply system, which was the preferred method of water supply, has already collapsed. The case study considers key issues that contribute towards sustainable water and sanitation service delivery and evaluates the project against twelve identified criteria. The case study also provides recommendations to guide the future implementation of such projects.

At least nine of the evaluation criteria incorporate various forms and levels of community participation and although there was clearly a community participation process where the community were directly at times and indirectly at other times, part of the decision-making process, there was a breakdown of trust and communication between the developer, the local authority and the service users which was identified as the major contributor towards the abuse of the services. However, as international experience has shown, getting the community to invest, either by part funding (money or material) or in sweat equity is considered an extremely important factor in developing a sense of ownership and pride in a project.

1.1 Introduction

Newtown is a peri-urban settlement situated on the outskirts of the urban centre of Pietermaritzburg. It is home to a very poor community of approximately 700 families (BPD 2001a: 10). The topography is generally very steep with the slope ranging from a gradient of 1:10 to a 1:2 gradient. The settlement is situated on soils that are badly drained (Msunduzi Municipality 2003a).

In 1988 there were approximately 500 habitable structures in the settlement. By 1993 this had grown to approximately 550. In December 1993 the erstwhile Natal Provincial Administration

(NPA) appointed a consultant to carry out the planning and upgrade of Newtown and obtained National Housing Commission (NHC) funding for the project. During the following 15 months, comprehensive community consultation, planning and design work was undertaken. The establishment of a Development Committee enabled such work. Construction was aimed to commence in the middle of 1995. However, during March 1995 talks between the NPA and the Msunduzi Transitional Local Council (TLC) were initiated to discuss the administrative takeover of Edendale (which included Newtown) by the TLC (Msunduzi Municipality 2003b).

During 1995, the NPA withdrew its resources from the area while the TLC continued to decline to take over the administration of Edendale. After months of discussion the TLC finally agreed to administer the Edendale area (Msunduzi Municipality 2003b). The Newtown development project was resurrected in May 1997 with the appointment of new consultants. This second development initiative¹, funded by the Provincial Housing Board (PHB), aimed to formalise the settlement, upgrade services (provide gravel roads, stormwater drains as well as water and sanitation infrastructure) and construct new houses on each of the existing and new sites (Msunduzi Municipality 2003c).

Based on the income profile and the size of the plots the level of water and sanitation service provided to Newtown residents was a limited water supply and a VIP latrine, in accordance with the water and sanitation policy of the Municipality. After consultation between the developer and the Development Committee it was decided that the 200-litre trickle-feed ground tank water supply system was the preferred method of water supply. This method of water supply and sanitation system had been recently adopted by the Msunduzi Municipality (Pietermaritzburg-Msunduzi TLC at the time) as a means of providing services to the poorer sections of the community whilst at the same time bringing these communities into the housing market. It was also the most feasible technical solution as it best addressed the issue of excess sullage water. This method of service provision also meets with the Government's policy for the provision of a free basic level of service. Flow restrictors were put in the house connections to restrict the daily quantity of water that could be supplied to each site. The restriction was set at 200 litres per day. Each site was then supplied with a 200-litre water tank that could be filled during the day (Msunduzi Municipality 2003d).

¹ The 2nd development initiative was for the layout of 1 365 stands.

Towards the end of the development project, a number of complaints from various community bodies and residents began to filter through to the Municipality concerning the water supply. It became obvious that the community was not satisfied with the water supply system that had been installed. The community was generally unhappy with the slow progress of the housing project and also felt that they had been 'forced' to sign the social compact, which included the level of services to be provided (BPD 2001b).

The result of the unhappiness in the water supply was that the community resisted and then rejected the system. Serious misuse, vandalism of and interference with the water tank system took place. A large percentage of house owners disconnected and bypassed the trickle feed system and replaced it with illegal standpipes. The effect of this was that the water supply to consumers living in the upper section of the development was compromised. Furthermore, excess greywater became a potential health hazard (BPD 2001b).

1.2 History Of Newtown

In 1948 the residents of Newtown were relocated from Empushini, an informally settled area near Emkhondeni when this area was marked for white development, to the present site on the farm Politique. Sites were pegged and allocations made but residents were informed that their sites were temporary and therefore advised not to build substantial structures (Msunduzi Municipality 2003a).

The community built wattle and daub structures, as it was the most affordable means of housing (Sithole 2003 Appendix A *pers.comm.*). House sizes ranged between 30m² to 70m² with sites as big as 600m² and upwards. Corrugated iron was used for roofing. At the start of the 1990s almost all houses were still the original houses that were built over 40 years previously. For most of the years since being relocated to Newtown the community has used candles for lighting and wood for cooking purposes. Prior to the recent development initiative, simple pit latrines were used throughout the area. Most of the pits were constructed on corrugated iron and timber bases with corrugated iron used to build the structure (Msunduzi Municipality 2003a).

Historically, land ownership and administrative control rested with the Department of Development Aid (DDA). Prior to the elections in 1994, Newtown fell under the control (informal structure) of the Newtown Residents Committee, which exercised limited control over

the affairs of the community. These included matters such as the use of water and the erection of dwellings for lodgers or outsiders (Msunduzi Municipality 2003a).

Tafuleni, the upper portion of Newtown, fell outside the pressure zone of existing water reservoirs. This has always resulted in the high cost of providing water to these residents, as water has always had to be brought in by truck. Further expansion of this area was thus discouraged and therefore did not form part of the NPA development initiative in 1993 and 1994.

According to Hoole and Roos (2003 Appendix A *pers.comm*), (the two development planners from the Natal Provincial Administration who were closely involved in the development project when the Natal Provincial Administration were administering Edendale), Newtown has never received the same sort of attention and proper administration that other areas of Edendale have received. Unlike other areas of Edendale, Newtown did not experience any rapid population growth and hence the pressures on the land have not been as great as other areas (Msunduzi Municipality 2003a). Due to the natural growth of the Newtown population over the years, many of the people were residing on existing stands in extended family groups. Fourie (2003 Appendix A *pers.comm*), project engineer for the Newtown Housing Project, states that as there was a clear desire by the community to live in the same area as their families, additional sites were required for sons who had grown up and now required sites of their own to build a house. Although there was a need for some additional sites for expansion of the extended family, it was essentially the lack of services within the settlement that required to be upgraded.

1.3 Present status

The housing project is almost complete.² According to Crabtree (2003 Appendix A *pers.comm*), the project manager for the Newtown Housing Project, the developer has withdrawn until such time as additional funding is sourced to complete the project. Services have been installed, including VIPs and the trickle feed system. The trickle feed system has totally collapsed with

² Although all services have been provided, not all the houses have been constructed. One of the main reasons for this is that not all residents qualify for a housing subsidy in terms of the PHDB policy. The developer is unable to access this funding, and yet many of the residents who do not qualify, have lived on the site for many years (Crabtree 2003)

very few households still obtaining water through this system of water supply³. Most households have erected illegal standpipes with some households receiving water via a municipal water tanker that brings in water daily.

1.4 Aims and objectives

The primary aim of this project is to examine and evaluate an *in-situ* upgrade of water supply and sanitation services by using the peri-urban settlement of Newtown as a case study. It is evident from the literature review undertaken that an adequate and sustainable water service and sanitation delivery depends on numerous factors. It is clear that the development initiative, which included the supply of water and sanitation services to the Newtown community, experienced a range of problems.

The objectives of this study are thus:

- (i) To assess the *in-situ* upgrade of the water supply and sanitation project in the Newtown settlement.
- (ii) To identify criteria for evaluating an *in-situ* upgrade of a water supply and sanitation services project.
- (iii) To evaluate the implementation of the Newtown *in-situ* upgrade according to the identified criteria.
- (iv) To provide recommendations to guide the future implementation of such projects.

1.5 Methodology

Data were collected from the case study area using qualitative research techniques. Quantitative data were utilised where such data were found to enhance the research project. Secondary data sources were used extensively in this project to collect data on the development of the Newtown

³ Through personal observation (few tanks in the yards) it is clear that less than 10% of households still obtain water through the trickle feed system.

settlement and the implementation of the water supply and sanitation system. Data was collected from sources such as government records, both provincial and local, unpublished consultants reports, archived data sets, journals and published research, both national and international. This data was reviewed in order to properly understand the dynamics of the case study.

Primary data were collected by way of semi-structured key informant interviews. These interviews involved the use of a checklist of questions and issues. Open-ended questions were asked to allow for expansion on ideas and debate.

2. Results and Discussion

This section examines the results obtained from the semi-structured interviews as well as the secondary data sources. The semi-structured interviews were based on twelve evaluation criteria that were identified in the literature review. The case study was then evaluated using these twelve evaluation criteria (Table 1).

It must be noted that a number of the evaluation criteria incorporate various forms and levels of community participation. However, for the purposes of this evaluation, community participation was not evaluated as a criterion on its own. This should not in any way be seen to detract from the importance of community participation. In fact, community participation forms the basis of at least nine of the twelve criteria.

It is acknowledged that there is an absence of natural environmental parameters within the twelve criteria. However, the Newtown project was an *in-situ* upgrade project⁴ and with most *in-situ* upgrade projects damage to the environment has already occurred. The scope of this study thus does not include an environmental assessment of the case study.

⁴ *In-situ* upgrading refers to the provision of secure tenure, infrastructure and services to an existing informal settlement. This means that even while people are living in an informal settlement the land is surveyed (so that each house has its own site), and services such as electricity, roads and water pipes are provided (Burton, Makhathini, Mkhize & Proctor 1998)

Table 1: Evaluation criteria (after Duncker 1999, Wall , van Schalkwyk 2001 and Ward, Hall & Clacherty 2001).

<i>Ensure that the project is demand driven</i>	Was the project driven by demand?
<i>Establish community needs and service level</i>	Were the community's needs and the level of service that is affordable, and for which the community is willing to pay, established during the planning and design stage of the project?
<i>Involve community in decision making</i>	Was the community involved with the decision making during the planning and design stages?
<i>Establish a community elected committee</i>	Was support provided in establishing a community elected committee that represented the community through the different stages of the project? Does such a committee still exist as it could have been used as the body responsible for the scheme after implementation?
<i>Involve woman in the project</i>	Were woman involved in the project? Were woman included in the committee? Other experiences have shown that involving woman greatly increases the sustainability of a project (Wall 2000, Ward et al. 2000, van Schalkwyk 2001).
<i>Ensure that the community invests in the project</i>	Was the community's willingness to invest in the project established during the planning stages? Were they willing to contribute financially or by providing labour or resources? Such investment will encourage a sense of ownership.
<i>Identify community members who will manage the scheme after implementation</i>	Were member(s) of the community identified during the project implementation stage, who will operate and maintain the scheme? Are these member(s) still responsible? If not, who is responsible?
<i>Resolve political issues during the planning stage</i>	Were political issues that could affect the proper functioning of the project resolved during the planning stage? Issues of this nature, if not resolved at an early stage, could lead to the failure of the project.
<i>Provide education and awareness of scheme</i>	Were the residents trained on how to maintain the water system and on how to best utilise the sanitation service provided?
<i>Provide upgradeable services</i>	Are the services that have been installed, upgradeable?
<i>Complaints and queries facility</i>	Is a facility provided where complaints and queries can be forwarded and addressed?
<i>Determine punitive measures for non-compliance</i>	Were punitive measures for non-compliance negotiated and accepted by all and are they being strictly enforced?
<i>Provide post project support</i>	Is there any form of post project support, as support after project 'close out' must be made available? Does such support include a complaint and query "help desk"?

2.1 Ensure that the project is demand driven

In terms of the basic water principles in the White Paper on Water Supply and Sanitation (1994) development should be demand driven. There is very little point embarking on a development initiative if there is no real, expressed demand for such development. A project driven by demand, linked to a range of other requirements, is part of the key to sustainability and as such should play an increasing role in development initiatives.

Too often during South Africa's recent past, development initiatives have taken place merely because a developer has seized on an opportunity to make some money. The development or service provided, although perhaps much needed by a community, may not be a priority for that community. It may be perceived by an outsider that a community requires an improved road network or better housing, when in actual fact the highest priority may be better access to a safe supply of water or the creation of jobs in the area. Yes, legislation such as the Development Facilitation Act (No 67 of 1997) and the Less Formal Township Establishment Act (No 113 of 1991) may require a developer to first prove that a proposed development is needed, or the Department of Housing may require a social compact, but this is not difficult to obtain when communities are happy to accept any form of development whilst national and provincial departments want to spend their budget to meet their targets. This perspective has changed now that local municipalities are required to be the developer rather than a private developer.

It is evident that there has always been a strong demand within the Newtown settlement for some form of development initiative aimed at improving the water supply to, and within the settlement as well as the improvement of the road network within the settlement (Hoole & Roos 2003 Appendix A *pers.comm.*). The settlement had not previously had the benefit of any formal development initiative. Community members themselves had tried for at least the past fifteen years to get the various authorities (first the DDA, then the NPA, then the Pmb/Msunduzi TLC) to provide better services to the area, particularly with respect to the upgrade of roads and improvement of the water supply (Msunduzi Municipality 2003e). This is supported by Hoole & Roos (2003 Appendix A *pers.comm.*) and Sithole (2003 Appendix A *pers.comm.*).

It was clear that the community's basic need for water was not being met and that the demand for upgrade was increasing. However, the question remains as to whether or not there was a demand at that time to expand the settlement from the 550 habitable structures in 1993 to the 1300 unit settlement proposed by the developer to the NPA in 1994, or a demand for an improved water supply. The socio-economic survey completed at the end of 1994 stated that there was not a great demand for housing (Msunduzi Municipality 2003f: 14). Furthermore, residents claimed in the survey that there were many higher priorities than housing, such as a reliable water supply and an improved road system.

At the time the funding source was the RKDP and the Midlands Joint Services Board. Very little money had been earmarked for Newtown (Msunduzi Municipality 2003f). This money was not enough to make a worthwhile contribution to resolve either the water delivery problem or the road network problem. However, by identifying this as an *in-situ* upgrade project, the NPA was able to secure funding from the National Housing Commission⁵. The problem with such funding was that it had to be linked to housing delivery and secure tenure, even though the demand was for the upgrade of identified services. Very little money was thus left for the implementation of acceptable services. What was agreed to was that standpipes would be erected at 150m intervals, with the ability to deliver individual connections in the future (Msunduzi Municipality 2003a).

By the time the project was resurrected in 1997 through the then Pietermaritzburg/Msunduzi TLC, the focus of the project changed even though there was no reason to believe that the demand had changed. Officials of the Pmb/Msunduzi TLC informed the developer to maximize the portion of the subsidy available for top structures and that the portion utilized for services should not exceed 50% of the subsidy (i.e. R7 500) (Msunduzi Municipality 2003c). This is despite the fact that it was services such as water and sanitation, roads and stormwater that the community was really in desperate need of. It must be borne in mind that in 1997 the drive to move from Permission to Occupy as a form of tenure to full ownership had gained political momentum. The demand was to deliver formal housing and secure tenure to residents, regardless of where real needs lay.

⁵ At that time the National Housing Commission provided funding. This commission later became known as the Provincial Housing Board.

Yes, the project was demand driven. However, the demand was essentially for improved services and yet officials and developers from both the NPA and particularly the Msunduzi Municipality chose to focus on delivering formalised housing units with secure tenure. The fact that most of the properties are still without formal tenure (Crabtree 2003 Appendix A *pers.comm.*) and that the formal housing units are not built to a high standard, may go some way in explaining the community's frustrations in that their needs have not been properly met. This will be considered under the next point.

2.2 Establish community needs and required service level

Once it has been established whether or not there is a demand for development, it is important to determine the community development needs that must be established. Autocratic approaches to the delivery of services can no longer be accepted (Louw 2003). International and local experience indicate that projects aimed at improving services to low income communities must focus on what the community want and are willing to pay for (Wall 2000). Although the government authority is a very important stakeholder it can no longer dictate to a community what it perceives to be the community's needs. In addition, research findings provided by Dreyer (1998) reveals that the successful water delivery projects are those situated in areas where there is a dire need for water. Those projects that are aimed at improving communities who felt that their basic need for water had already been satisfied, and were demanding a higher service level than was feasible (interpreted as a tap in their own yard), withdrew their support for the project the moment they knew their expectations were not going to be met (Dreyer 1998). Dreyer's findings also reveal that the collapse of water projects did not necessarily happen overnight and for any particular reason, but rather as a result of other problems which manifested themselves during the development and implementation stage and which the water committee were unable or unwilling to resolve, mainly due to a lack of enthusiasm.

Although it has been established that the project was demand driven, it is important to assess whether or not the community's needs and the level of service that the community could maintain, were established during the planning and design stage of the project. The community made post-project accusations that their needs were not adequately met (Msunduzi Municipality 2003g). Ideally, an *in-situ* upgrade should aim to deliver services in order of need on the part of residents, from those most needed to those least needed.

In 1992 the NPA identified the need to upgrade certain services in Newtown. The project included the subdivision and layout of over 500 sites, the township establishment process, bulk services arrangements, the installation of services, including a water supply, sanitation system, electricity, township roads, the top structure and tenure registration. However, during the planning and design stage of the project extensive consultation took place between the developer, the provincial authority and the community to identify the community's needs and to consider the level of services that could be sustained.

According to a survey carried out in 1994, “virtually no household claimed to be on a waiting list for a site nor were members of any household seeking alternative accommodation due to overcrowding. There is virtually no evidence of more than one family living on a site in all three of the communities” (Msunduzi Municipality 2003f: 14). The application to the KwaZulu-Natal Regional Housing Board (made in June 1994 by the NPA) refers to the development initiative as servicing existing and undeveloped areas within Newtown for the provision of sites “desperately needed to relieve the grossly overcramped and overpopulated existing situation”⁶ (Msunduzi Municipality 2003h). The socio-economic survey carried out in November 1994 found the following infrastructural needs:

Table 2: Infrastructural needs of residents in Newtown (Msunduzi Municipality 2003f: 25).

Response	%	Response	%
Water/install more taps	73	Clinic	8
Improve/tar roads	73	Community hall	8
Schools	24	Recreational facilities	8
Improve transport services	21	Improved services	4
Creches	20	Churches	4
Electricity	19	Shops	1
Jobs	13	Telephones	-
Formal houses	12	Other	8
Sewerage system	11		

Percentages add up to more than 100%. This is due to the fact that each respondent was requested to list his or her three most important needs.

⁶ This application was submitted by the NPA to the KwaZulu-Natal Regional Housing Board. The project formed part of the RKDP initiative. The NPA Community Services Branch was to act as developer. The KwaZulu-Natal Regional Housing Board approved this project on 14 September 1994. This approval was only for Phase I which was approximately 400 sites.

This survey identified the two key needs as being ‘a better water supply’ and ‘improvements to the roads’, which were both totally inadequate. These two services were clearly the highest priority, by some margin. In fact, 73% of respondents claimed this to be one of their three most important needs, whereas only 12% listed formal housing. However, the only way that NHC funding could be sourced was if there was a housing project that formed the basis of the *in-situ* upgrade.

The developers were faced with three significant obstacles. The first was that Newtown is a particularly poor community (Fourie 2003 Appendix A *pers.comm.*). The 1994 survey showed that nearly half the population was seeking employment with only 39% of males and 22% of females employed full-time. Sixty seven percent of residents in the 18 – 30 year cohort were seeking employment (Msunduzi Municipality 2003f). The per capita income, which was calculated by dividing the total household income by the number of resident household members, was R170. If it is considered that the average per capita subsistence level in the Durban area at the time was R160, it is evident that most people only had an income to maintain their health and provide the basic necessities of life. These figures suggest that there was clearly not enough additional income to pay for any services that required a monthly fee. The low per capita income, coupled with the high levels of unemployment imply low levels of affordability with respect to housing and particularly with regard to the level of service that can be sustainably maintained. A household survey carried out by Mvula Trust in April 2000 did reveal however, that all respondents were willing to pay for a better service. The majority of respondents were willing to pay between R6 and R20 per month, with 74% of respondents saying that they would like to pay for such a service at a local pay point rather than the TLC office (UWP 2000). Unfortunately, this survey was carried out after the implementation of low-pressure system had begun. Although an improved system may not have been possible, the developer (and Msunduzi TLC) missed the opportunity to explore this option further and possibly avoid the later rejection of the water system.

The second obstacle was that the Newtown community is situated some distance from the city with the result that there are no sewer mains anywhere near by and would be far too costly to bring to Newtown (Crabtree 2003 Appendix A *pers.comm.*). Furthermore, there is no short-term plan for sewer mains to be constructed in the area (Msunduzi Municipality IDP 2002). Without

a sewer mains to discharge excess greywater, there was no real chance of each stand getting its own standpipe/s. Furthermore, the soils, which are clay-rich and badly drained in most parts of the development, are not conducive to soakaways, especially not large quantities of greywater (Msunduzi Municipality 2003a). Added to this is the fact that with VIPs being the preferred sanitation option, excess greywater would create serious problems by raising the already shallow water table, shortening the lifespan of VIPs and increasing the potential for pollution.

The third problem was funding. The only source of funding during the planning and design stages for both the first and second initiatives was PHDB⁷ funding (Hoole & Roos 2003 Appendix A *pers.comm.* and Fourie 2003 Appendix A *pers.comm.*). Once the Msunduzi Municipality took over the development project from the NPA, it insisted that at least 50% of the PHDB subsidy be used for top structures, even though improved housing had not been identified as a priority (Msunduzi Municipality 2003c).

From a sustainability point of view it made little planning sense to deliver a costly waterborne system and full water pressure to Newtown when fully serviced land had been made available by the NPA close to the city. However, as poorly located as the Newtown community is in terms of factors such as distance from employment opportunities, poor soils, particularly steep slopes, no services etc. forced removal or even attempts to encourage people to move were not options. This is especially so when consideration is given to the fact that both development initiatives took place during a period in South Africa's history where political sensitivity was at a peak.

Although it is recognised that there was an urgent need to provide a more secure and reliable source of water and sanitation service to Newtown, by the time the second development initiative got underway the community's basic water needs had already been met in the form of temporary standpipes as well as the daily delivery of water by truck to those areas which were unable to receive water. Once the community's basic water and sanitation need had been met, the next 'want' was for a higher level of service and not a similar level of service, but merely delivered in a different way. Bharath (engineer from the Water Division of the Msunduzi Municipality), Sithole (Newtown resident and member of the Development Committee) and

⁷ The PHDP is a statutory body and approves various types of housing development throughout the country

Crabtree 2003 (Appendix A *pers.comm.*) all agree that the trickle-feed system did not meet that ‘want’ for a higher level of service.

2.3 Involve the community in decision making

The principles in the White Paper on Water Supply and Sanitation (1994) advocate that decision-making and control should be devolved as far as possible, to accountable local structures and communities should accept responsibility for their own development, with the assistance of the state. The essence of involving the community in decision-making is to endeavour to build consensus within a community group to assist in arriving at a legitimate product that can then be implemented. Atkins and Milne (1995) argue that involving the community in decision-making is recognised as one of the most important criteria in providing the right platform for sustainable development. Research undertaken by van Schalkwyk (2001) indicates that project targets are most often met when there has been a high level of participation in the process. Community decision-making is important throughout the planning and design phase, the construction phase as well as the further operation and maintenance of the system. It empowers communities to initiate actions on their own which ultimately influence the outcomes of the project (Nel 2001). This enhances the probability of a community taking ‘ownership’ of a development project.

Wall (2000) recognises that a crucial element in the success of a project is the participatory and interactive processes between the service provider/developer and the beneficiaries of the service. This becomes even more important for projects that are driven by the local authority as the local authority must “*ensure that the beneficiary community is actively involved in each phase of the development process*” (Atkins *et al.*: 25 1995).

Community participation in decision-making formed the basis of the first development initiative. Correspondence as well as interviews confirm that a number of open, on site community meetings were held between the community, the developer, the various engineers as well as officials from the NPA to discuss the development options available to the community (Msunduzi Municipality 2003b and Hoole & Roos 2003 Appendix A *pers.comm.*). On-site, open community meetings were the preferred *modus operandi*. Community meetings, which included an interpreter, were always aimed at gaining the confidence of the community towards the development initiative and the development team. These on-site meetings also served to

encourage the community to feel part of the development experience and generally, to allow the community to become involved in decision-making (Hoole & Roos 2003 Appendix A *pers.comm.*). Important decisions were always taken at community meetings. “Decisions were never made just by a representative committee. The ultimate decisions were always made on-site by the whole community.” (Hoole and Roos 2003 Appendix A: 13 *pers.comm.*). According to Hoole and Roos (2003), the community preferred that decisions must be made by the community and not by a committee.

Many of the initial designs, proposed lot sizes and service levels were amended to take into account the needs of the community. However, as already mentioned, available finances were a determining factor in how flexible the developers could be. The agreed sanitation option was VIPs. The many limiting factors left no option to the community but to agree to VIPs and reports on file indicate that the community did not object to VIPs (Msunduzi Municipality 2003b). The community, through the Development Committee, accepted that water would be supplied from standpipes situated 200 metres apart. Other services such as roads and electricity were also accepted.

The second development initiative carried forward some of the work and decisions of the first initiative. However, a critical difference, as later emerged, was the method of water supply. Whereas the NPA initiative had proposed standpipes every 200 metres, the Msunduzi TLC adopted the low-pressure ground tank (or trickle-feed system). This was after extensive consultation with the Development Committee who had wanted a full pressure system to each household. When it was explained that it was not possible as greywater could not be carried away, nor were there sufficient funds to address the problem in other ways, the project manager decided to take the committee and councillor to Durban to look at other successful low-pressure water tank installations (Crabtree 2003 Appendix A *pers.comm.*). After further consultation, the Development Committee elected to accept the ground tank system (Msunduzi Municipality 2003b). What did create a problem though, was the lack of communication between the water committee and the community (Crabtree 2003 Appendix A *pers.comm.*).

Crabtree (2003 Appendix A *pers.comm.*) maintains that there is little doubt that the community was involved in the decision making process. This is supported by Bharath (2003 Appendix A *pers.comm.*), who stated that the Development Committee was party to all decisions. Crabtree

further maintains that although the community was involved and agreed to the levels of service, they still wanted a full-pressure system with individual house connections (2003 Appendix A *pers.comm.*). The community stated that although there was a social compact signed by themselves wherein the community accepted the level of services, the perception of the community was that they were never properly informed of how the trickle-feed system works, and its advantages and disadvantages, with the result that they were then “coerced” into accepting the system as it was too late to change (UWP 2000 and Crabtree 2003 Appendix A *pers.comm.*).

A survey carried out in October 1999 by the Mvula Trust revealed that 84% of residents said they were consulted regarding the level of service to be provided by the project (UWP 2000). The method of consultation was chiefly carried out through the Development Committee (93% of respondents) (UWP 2000).

The managers of both projects seemed content that so long as the community (through the Development Committee in the case of the latter project) was given the opportunity to comment on the development options during the planning and design phase, this met the obligations of ‘community decision-making’. Little or no attempt was made to extend community decision-making to the implementation phase and the evaluation phase. Extending decision-making into these phases is an effective way to respond to local needs and concerns and it conveys a sense of co-responsibility for the outcome and a sense of long term satisfaction.

2.4 Establish a community elected committee

Closely linked to the previous principle is the need to establish an elected committee that represents the community throughout the different stages of the project and which has the full support and confidence of the residents for whom they represent (Swanepoel 1989 and van Schalkwyk 2001). A weak or uncommitted committee/representative/s is a recipe for project failure. Establishing a community elected representative Development Committee can be a time-consuming and thus costly task. This once-off capacity building exercise then becomes a community asset that can be used throughout the duration of the project as well as for future projects (Atkins *et al.* 1995).

Painstaking effort was taken prior to and during the planning stages of the initial project, to ensure that a proper community structure and committee was set up (Hoole and Roos 2003 Appendix A *pers.comm.*). An advantage was that the residents of Newtown “seemed to have a certain amount of cohesion” (Hoole and Roos 2003 Appendix A: 12 *pers.comm.*), and thus setting up a development committee proved uncomplicated. This is especially remarkable when it is considered that it was accomplished in 1993 when South Africa was in the grips of political nervousness ahead of the 1994 general elections.

By 1997 few of the original community structures remained (Sithole 2003 Appendix A *pers.comm.*). A community elected development committee was elected for Phase I of the project. However, by the time Phase II got underway, representation on the Development Committee had changed with the community electing a more representative committee (Crabtree 2003 Appendix A *pers.comm.*). It is understandable that such a committee must represent the community but a change in membership did create problems later on in that decisions made by the first Committee were considered not binding on the second Committee (Msunduzi Municipality 2003c and Bharath 2003 Appendix A *pers.comm.*). This was a consequence of both the developer and the Municipality failing to establish a strong Development Committee from the outset. It is clearly in the best interest of both the developer and the local authority to play active roles in ensuring that successful and representative community elected committees are established. This is particularly important for the local authority as the local authority is responsible to provide services to the community in the long term. Also, the local authority will be required to “repair” any post project damages such as is the case in Newtown with the rejection of the trickle-feed water supply system. Such “repairs” come at economic, social and political cost. It seems that neither the developer nor the Municipality placed enough emphasis on ensuring that a strong, well-prepared and informed committee was established. In fact, no attempt was made by the Municipality to continue to maintain such a committee after project ‘close-out’, even though there are many benefits to doing so. As reported by Bharath (2003 Appendix A: 33 *pers.comm.*),

“We don’t go around trying to tell the community what to do. Local issues are their problem once we have provided them with water. The town planning team sometimes tries to assist in forming a ward committee. But from our side we don’t do that. Whether the same Development Committee is in existence today is very unlikely. We deal mostly with the councillor and he takes it to the committee but whether they are an approved committee, I’m not sure.”

The Development Committee no longer exists (Bharath 2003 Appendix A *pers.comm.*), although it did continue to function until recently (Crabtree 2003 Appendix A *pers.comm.*). Mbatha (2003 Appendix A *pers.comm.*), Development Facilitation Officer from the Msunduzi Municipality, argues that there is a Development Committee, but Bharath (2003 Appendix A *pers.comm.*) is certain that its functions are very different and no longer serve the purpose for which it was intended.

2.5 Involve women in the project

Development projects have for many years been technical projects which focused essentially on construction and maintenance of supply systems. However, it is now clear that women have an important role to play in matters of development. According to studies undertaken by Barot (1995) and Duncker (1999), the sustainability of water projects can be directly linked to the level of participation of women in the project. The more women that are involved in the management of water projects, the higher the success rate is. Since African women are traditionally the lead managers within the home environment for providing food, nutrition, water, health, education and family planning and as mothers carry the responsibility of ‘doctor’, ‘teacher’ and ‘care giver’ within the family, their role and participation in projects of this nature is fundamentally important (World Bank 1989). Women need to play a major role not only as a ‘voice’ but also actively involved in the management of water and sanitary services at the domestic level (Fernando 1995). Duncker (1999) maintains that such involvement must start at the project initiation stage and be carried through to the post-project community service management structures. The participation of women in water and sanitation projects thus often enhances the efficiency and effectiveness of the installation and operation of water and sanitation services (Aziz & Halvorson 1999).

The developer from the initial development project made particular efforts to involve women in the programme and motivate women to achieve targeted objectives (Msunduzi Municipality 2003a). The first step undertaken was to recognise and acknowledge the important role women play in projects of this nature. The development team then identified and communicated with a core group of women from within the community, to try and reach a base understanding of some of the water and sanitation needs and problems within the community (Hoole & Roos 2003 Appendix A *pers.comm.*). The next step was to create awareness amongst the rest of the women

within the community that the success of the project depended to a great extent on their participation. Explanation was given of the benefits of sustainable service provision and use to encourage their active involvement (Msunduzi Municipality 2003a).

Women were involved in the second development initiative and were included on the Development Committee (Crabtree 2003 Appendix A *pers.comm.*). However, there is little to indicate that women played a leading role on the Development Committee or in information sharing sessions and awareness programmes within the community. There was no conscious effort or specific provision made to involve women in decision making, training or in the operation and maintenance of the new water and sanitation services. In fact, very few of the development team even knew whether or not women had played a role in the development of the project. An opportunity was lost to utilise women's influence and motivation regarding the promotion of health and hygiene matters within the family unit (Barot 1995).

2.6 Ensure that the community invests in the project

As international experience has shown, getting the community to invest, either by part funding (money or material) or in 'sweat equity' helps develop a sense of ownership and pride in a project (van Schalkwyk 2001). According to van Gijn and Ellis (1995) the principle of cost sharing is fundamental in a development project. Cost sharing helps vest ownership of a project in a community (Nel 2001). Successful projects are often those where households (or future households in a greenfields project) are responsible to finance their share of the costs, participate in construction, and contribute long-term towards services. Such contributions by beneficiaries, no matter how small, gives some form of assurance that the infrastructural investment will be maintained. The World Bank (1989) suggests that the concept of 'entitlement' is an important factor in the sustainability of water services. Projects where people believe that the state alone is responsible to provide water without the need for a contribution from the people are less likely to be sustainable than projects where the people have accepted their responsibility in the project. Wall (2000) recognises this by stating that the "free rider" problem must be minimised by implementing some form of cost recovery either during or post construction. Thus, there is clearly need for governments to institute a form of cost sharing where the community contributes towards the success of the project.

Although there is a need to provide all people with basic water and sanitation, “recent emphasis in the international agencies has been on closer consideration of cost and price issues, and of affordability and willingness to pay, as a means to ensure that services are efficient and are financially sustainable” (Wall 2000: 145). Sustainability thus relies ‘in part’ on the value and importance a community places on the service being provided.

It was evident from the survey carried out in November 1994 that a large percentage of the community was unemployed. It is quite conceivable that each household could have contributed towards labour costs by nominating a family member to assist with construction. Although only approximately 15% of the male population had some form of building skills, it could have served as a great opportunity to not only cut development costs, and therefore allow more money to go towards the installation of a higher level of service, but given that construction is a significant employment sector, it could have increased the proportion of the population with building skills (Msunduzi Municipality 2003f : 13).

According to Crabtree (2003 Appendix A *pers.comm.*), the community was unwilling to invest by means of sweat equity. Members of the community were willing to assist during the construction of the services, but only if they were to be paid for their services. Mbatha (2003 Appendix A *pers.comm.*) disputes this and says that the community was willing to invest in the project by providing free labour as the project would assist and empower the community. This is another example of the lack of communication between the developer, the Municipality and the community.

According to Crabtree (2003 Appendix A *pers.comm.*) and Hoole and Roos (2003 Appendix A *pers.comm.*) labour was sourced from the community. However, these residents were paid for the work completed and although this did improve household income, it did not address the concept of sweat equity.

Both Bharath (2003 Appendix A *pers.comm.*) and Crabtree (2003 Appendix A *pers.comm.*) agree that there is little doubt that a major reason for the failure of the water supply system is because the community was not required to part-fund the initiative. In response to the question of whether or not the community should have contributed financially, Crabtree (2003 Appendix A: 26 *pers.comm.*) states

“Oh definitely because I think they would have taken more interest in the project and maybe had more pride in maintaining it. You also probably wouldn’t have so much vandalism happening.”

The way in which government funding is provided is far from being structured in such a way as to address a community’s willingness to contribute towards a project so that the community benefits. Presently, whether a community contributes either financially or in sweat equity it makes little difference to what is provided.

2.7 Identify community members who will manage the scheme after implementation

Many community upliftment programmes, both nationally and particularly internationally, rely on nominated members of the community to be trained to oversee the smooth running of the development once the contractor has withdrawn. The nature of the services provided to the Newtown settlement did not require technically skilled community members to manage pumps, or main line problems, or run water kiosks, or read water meters or anything of this nature. People who use VIPs and a low-pressure water supply system require a level of training on the use and management of such systems. However, there is no need for a team of trained personnel to ‘manage’ the system. The Msunduzi Municipality, as water service provider, oversees all forms of technical assistance. It is important to note however that it remains essential for the developer and service provider to offer as much attention to maintaining the project as is given to the construction phase.

Bharath (2003 Appendix A: 35 *pers.comm.*) is not convinced that it is in the interests of the Municipality to skill community members to perform any of the functions that the Municipality is well equipped to deal with.

“No, I for one wouldn’t encourage it because he’s the guy that may well start tampering with things and putting up illegal connections for a fee. I’m not saying that this is what happened in Newtown, but it does encourage that sort of thing to happen”.

However, Cobbett (1987) argues that service providers and government authorities must find ways to be less directive and paternalistic towards communities in delivering services. He

argues further that the transfer of skills to selected individuals will ensure that in time, the community can manage their own project.

Both Crabtree (2003 Appendix A *pers.comm.*) and Fourie (2003 Appendix A *pers.comm.*) agree that it is not the developer's responsibility, but rather the service provider and the local government's responsibility to skill community members so that there is technical support after the contract is complete. There were a number of community members who were identified and trained during the construction phase as they formed part of the community labour force. As alluded to earlier, these people were paid for their labour.

A report by the Department of the City Planner for the Urbanisation and Housing Indaba dated 12 August 1999 (Msunduzi Municipality 2003g) reveals that there were disputes between the employees and the developer around the payment of wages and the hiring/dismissal of certain labourers. The same report reveals that certain of the contractors alleged that members of the Development Committee were interfering with the construction process, including the day-to-day management of a range of tasks. Clearly, a lack of trust between the developer, the Municipality and the community built up over the duration of the project, and this may have led to the Municipality being strongly opposed to any further "technical assistance" coming from members of the community.

2.8 Resolve political issues during the planning stage

Studies undertaken by Dreyer (1998) have shown that in projects where there is a lack of community cohesion and solidarity, projects have been abandoned rather than have internal conflict over water supply matters. Political issues, either internal or external, have been known to lead to the failure of a project, if not resolved at an early stage.

The socio-economic survey carried out in November of 1994 indicates that the Newtown community has always been free of the political violence which negatively affected other areas in the Greater Edendale area over the past 15 years, and which had hampered many development initiatives elsewhere. Fifty-six percent of residents stated that one of the three main reasons why they liked staying in Newtown was because there was no violence and it was a quiet area (Msunduzi Municipality 2003f). Hoole and Roos (2003 Appendix A *pers.comm.*)

agree that the Newtown community was politically stable throughout the period of the involvement of the NPA during the early 1990s.

However, there were some internal political issues that did lead to problems during project development. File records (Msunduzi Municipality 2003e & Msunduzi Municipality 2003g) and interview results (Crabtree 2003 Appendix A, Mbatha 2003 Appendix A *pers.comm.*) show that the composition of the Development Committee constantly changed throughout the years of existence of the committee. These records suggest that this was essentially due to a lack of trust between the community and the representatives who were supposed to represent the community. Not only did the composition of the Development Committee change from the NPA driven initiative to the municipal driven initiative, but also between Phase I and II of the recent initiative. This led to a lack of continuity in that there were claims by members of the Development Committee that they should not be bound by decisions taken by the previous committee such as the agreement reached that the trickle-feed system was accepted (Msunduzi Municipality 2003c and Bharath 2003 Appendix A *pers.comm.*).

The community raised concern that there was a lack of communication between the Development Committee and the Ward Councillor. This is supported by Bharath (2003 Appendix A *pers.comm.*) who suggests that the councillor was not involved as much as he should have been involved and that he must take some of the blame for the failure of the project.

Mbatha (2003 Appendix A *pers.comm.*) raises another issue that created a problem and that was that certain labour unions became involved in a labour dispute. The unions believed that BPD⁸ was trying to introduce the concept of privatization into the community, although that clearly was not its intention. This accusation quickly disappeared but it did create further unnecessary tension.

Although one of the main reasons why the community resisted and then rejected the water tank system was because they feared that someone could easily poison the water tanks, there is no

⁸ BPD is a World Bank initiative that addresses the growing need for partnerships and alliances among business, civil society and government to support development efforts that are aimed at improving the standard of living of communities throughout the world. The primary aim of the BPD project in Newtown was to investigate and improve health and hygiene conditions and practices in the community.

evidence to suggest that this was a real problem, or that there was any real threat of something of this nature happening.

2.9 Provide education, training and awareness programmes

Water use and hygiene awareness education has become an important part of water and sanitation programmes, especially in developing countries. It is through education, training and awareness programmes that the technical and social objectives of a project are transferred to individuals. According to Nel (2001), such training enables people to make a project self-sustaining and viable over time. Atkins and Milne (1995) state that education, training and awareness programmes must be not only be directed at community leaders and community representatives within committees, but more importantly the community themselves. Ward, Hall and Clacherty (2000) add further that education programmes of this nature must include participatory strategies if they are to contribute to sustainability.

Service provision in most former black areas has been poor and administered by under-resourced and inadequately managed municipalities. Infrastructure has been inadequately maintained both by the authorities and the users. According to Louw (2003) some of the main causes of poor water and sanitation services are:

- Poorly maintained systems by the responsible service provider
- Incorrect usage of VIPs, such as the use of newspaper instead of toilet paper, the use of the pit as a solid waste disposal system and the incorrect use of chemicals in the pit such as jeyes fluid
- The misuse and abuse of water supply systems such as the trickle-feed system
- Lack of knowledge on how to repair household water and sanitation problems
- Lack of knowledge on where to report problems
- Lack of understanding of the cost implications in supplying water and sanitation services

Training forms the basis for adequate maintenance. Atkins *et al.* (1995: 26) argue that “*damage that can be prevented is more cost effective than what has to be redone to remedy a situation deteriorated beyond normal repair*”. Education, training and awareness programmes are thus vitally important to:

- Raise awareness on water and sanitation systems and the correct use of these systems
- Raise hygiene awareness
- Raise conservation awareness
- Reduce vandalism of water supply systems

Crabtree (2003 Appendix A *pers.comm.*) states that all training on how to use the water system and how best to use VIPs was provided by the developer and the Municipality to the members of the Development Committee at the monthly committee meetings. Both the developer and the Municipality are of the opinion that it was the Development Committee's responsibility to make sure that the information provided to them filtered through to the rest of the community. He states further that there was a period during the development phase where the Development Committee wanted to be shown the low-pressure system in operation. He arranged a trip to Cato Manor in Durban for the committee members and the councilor to see such a system in operation. The committee was shown the ground tank system as well as the roof tank system. After observing and receiving training on the operation of the two systems, the committee decided to elect the ground tank system.

Bharath (2003 Appendix A: 36 *pers.comm.*) maintains that:

"When I saw that the system was going down I went on the site and I told them how the system works. Andrew Pascoe, Emerald Mbatha and myself went there on the 12/10/2000 and met with the Development Committee, 9 of them, and we spoke to them on the low-pressure water system, VIPs, storm-water servitudes etc etc and we gave these people a full explanation of how everything works."

When questioned further on whether or not he thought this information was filtered down to the community, he responded that it was unlikely that it happened. A BPD report (2000: 24) to the BPD Steering Committee reveals, *"Newtown residents complained about a lack of consultation and explanation prior to the implementation of the tank system. In particular, people felt that they had not been informed as to how the trickle-feed tanks worked and how this system would benefit the community."* Findings from the household survey carried out by UWP (2000) show that the overwhelming majority of residents (84%) were consulted, with 93% of these people consulted by the Development Committee. It is clearly naïve to think that the consultation process carried out by the Development Committee could in any way be considered as a training

and awareness campaign to the level required for the installation of VIPs and a trickle-feed water supply system.

There are conflicting views between Bharath (2003 Appendix A *pers.comm.*) and Crabtree (2003 Appendix A *pers.comm.*) as to who is responsible to ensure that the community is trained on the use of the services provided. Neither the developer nor the Municipality was willing to accept the responsibility for training the community. Since the Municipality is the service provider and has a long-term interest in ensuring the successful use of the services by the community, it seems logical that it should have ensured that capacity building and empowerment programmes were implemented. Had the Municipality (with the assistance of the developer) been more proactive in putting in place such programmes at the planning and design stage, the chances of a sustainable trickle-feed and VIP system would have been far greater, thus saving on social and economic costs, which the Municipality now faces.

It is disappointing to note that, unlike the NPA development initiative of the early 1990s, there was reluctance on the part of the developer and the Municipality to interact directly with the community. The weakness of the Development Committee to filter information to the residents (including training, which is an unfair expectation placed on the Committee), should have led to the developer and Municipality taking on that responsibility. It is also disappointing to learn that there is a lack of integration within the various departments of the Municipality. For example, the attendance of the municipal official required to attend development/progress meetings was dependent on which aspect of the project was to be discussed. This created a lack of cohesion and continuity insofar as the Municipality's role and responsibility was concerned. Bharath (2003 Appendix A *pers.comm.*) tends to agree that the Municipality failed to ensure that its departments communicated properly with one another, especially when it came to making decisions that may have affected one or more of the other municipal departments. It is considered essential that the delivery of sustainable services can only be achieved with a well-integrated and coordinated multi-disciplinary team. The Municipality failed on this count.

According to Mbatha (2003 Appendix A *pers.comm.*) a recent education and awareness initiative was undertaken where community members were identified and who then took part in a series of train-the-trainer workshops. These people received training on a range of water supply and sanitation service matters. They have been carrying out house-to-house training,

explaining to residents how to utilize the services. The effectiveness of this is questionable because the author, on numerous visits to Newtown, has posed informally to residents the question of the implementation of an education and awareness programme. Without fail the residents questioned have denied any knowledge of such a programme. Regardless of whether or not there is an education and awareness programme running at the moment, it has clearly come too late. A programme of this nature should have been implemented at the beginning of the project for it to have any desired effect.

2.10 Provide upgradeable services

The Msunduzi Municipality has set in its IDP a five-year objective to replace all standpipes with individual connections. It has also set a long-term objective to supply a full pressure water supply system and full waterborne sanitation system to all its citizens, including those in the remote areas such as Vulindlela and Newtown. However, due to infrastructure, affordability and sustainability constraints, other levels of supply will be adopted over the short to medium term (Msunduzi Municipality 2002). The low-pressure water supply system and VIP sanitation system have been adopted in the short to medium term for the Newtown settlement. With this as the Municipality's long-term vision, it makes sense that service upgrade projects should, as far as possible, ensure that the services provided are upgradeable.

According to Fourie (2003 Appendix A *pers.comm.*) the water supply system within Newtown is upgradeable. The network was designed as a full network able to supply each individual stand with the quantity required in terms of the accepted norm for each stand. Fourie (2003 Appendix A *pers.comm.*) states that the only major cost to upgrade to a full pressure system is to upgrade the pumps that pump water to the reservoir at the top of the hill. However, without the implementation of a full waterborne sanitation system to dispose of additional greywater, it is unlikely that a full pressure system will be implemented. Already, with the large number of illegal standpipes that have been erected in the settlement, excess greywater is lying stagnant. This is exacerbated by the fact that the clay-rich soils in the area drain poorly and are not conducive to disposing of excess greywater.

It may be more cost effective for a municipality such as Msunduzi, to bear the additional costs of upgrading services to a full pressure water supply system and full water-borne sanitation system now, rather than look at this as a long-term objective. Already, the water supply system

to Newtown requires re-visiting, at great cost⁹. The large numbers of VIPs across the city are filling up far quicker than anticipated due mainly to a lack of understanding of how to properly maintain VIPs (Bharath 2003 Appendix A *pers.comm.*). VIPs in Newtown are not only filling up quicker than anticipated, but are also particularly difficult to empty due to the positioning of the VIPs in relation to the roads. Trucks are unable to gain access to many VIPs to remove the sillage resulting in manual removal being the only method available. Although it is not clear on whether or not a costing exercise has been undertaken, it may prove cost effective to bear the costs of installing a full water-borne sanitation system and full water pressure system now rather than bear the present high maintenance costs and upgrade at a later stage.

2.11 Determine punitive measures for non-compliance

Studies undertaken by van Vuuren (2003) in four study areas around South Africa reveal that most residents underestimate the amount of water consumed within a household. Residents estimations usually varied between three and seven times less than their actual water consumption. The findings also revealed that poverty, a negative attitude to paying for water, excessive water usage and a general lack of interest in implementing water saving measures were major causes behind the non-payment of water (van Vuuren 2003). A study undertaken by the University of the Free State concludes that, “unlike five to ten years ago, non-payment for municipal services is a function of an inability to pay rather than an unwillingness to do so” (S.A. Local Government Research Centre 2001:1).

It can be argued then that putting punitive measures in place for non-compliance (i.e., in most cases, the non-payment of services) serves no purpose, especially when it is considered that the main reason for non-compliance is the lack of ability to pay rather than an unwillingness to pay. However, as pointed out by Wall (2000) and van Scalkwyk (2001) in their assessment of international and national experiences, non-compliance does not only refer to the non payment of services but also to the abuse and vandalism of water supply systems. Wall (2000) and van Scalkwyk (2001) thus both conclude that punitive measures for non-compliance must be negotiated with users at the outset of a project in order to sustain such a system.

⁹ Calculations provided by the Msunduzi Municipality put the cost of replacing tanks, providing internal tank stands and labour and related costs at R2 768 per unit (BPD 2000). Considering that Newtown has 1 365 stands the cost of re-installing the trickle-feed system is approximately R3 811 536, money the municipality can ill afford to spend.

Although Newtown residents are not required to pay for water, non-compliance is a serious problem. The trickle-feed system, although perhaps not endorsed by all residents, is nevertheless an acceptable method of supplying minimum amounts of free basic water, as prescribed by the national government. This system has been vandalized to such an extent that there are few households that still obtain water via the trickle-feed system. Many of the water tanks that were supplied to each household are 'missing'. The ball and valve mechanisms in several of the tanks have been damaged or completely destroyed. Inlet pipes to the tanks as well as tank taps have been damaged and trickle feed box apertures have been tampered with to increase flow (Pietermaritzburg-Msunduzi TLC 2001). Although there is clearly a need for an education and awareness programme during the planning and design phase, there is little doubt that this must be backed up by punitive measures for non-compliance. While not denying the importance of community buy-in to a project and the need to provide all people with free basic water and sanitation, in accordance with government policy, consideration must be given to ways of penalizing transgressors and putting in place incentives for efficiency by users. Creating the right incentives may prove to be an extremely complex task, and one that requires a partnership between service users, service providers, NGOs and professionals (Wall 2000). van Vuuren (2003: 3), in his research findings, refers to a "*climate of non-payment*" as opposed to a culture of non-payment. This is where "a precedent is set by majority default, which includes even those people who accept the principle of non-payment to default, because everybody does it" (van Vuuren 2003: 3).

It is clear that no punitive measures for non-compliance were negotiated with the community. Bharath (2003 Appendix A *pers.comm.*) states that there is no municipal strategy or policy to address the number of illegal standpipes in the city, even though it has been identified in the Msunduzi Municipality IDP as a serious problem. This is particularly bewildering when it is considered that approximately 40% of water supplied is unaccounted for and reflects a loss of revenue of 26 million Rand (Msunduzi Municipality 2002). There seems little that can be done to ensure that residents demonstrate a greater sense of responsibility towards service provision.

According to Bharath (2003 Appendix A *pers.comm.*) the illegal standpipes in Newtown will have to remain, at least until a new water supply system is implemented. However, without a proper strategy to address the problem, more standpipes are being erected all the time.

2.12 Provide post-project support

It is considered important that both the developer and the service provider provide post-project support. New services, especially when a community has not utilised such level of services previously, require a period of support after installation. Post project support becomes even more important in instances where no education and awareness campaign has been undertaken, for example Newtown.

According to Crabtree (2003 Appendix A *pers.comm.*), although the development is not yet complete, he will provide support to the community in that he is willing to continue for a while to give support to the Development Committee and resolve any outstanding issues or problems. Fourie (2003 Appendix A *pers.comm.*), on the other hand, suggests that he, as engineer, cannot be responsible for any post project support but that the Municipality is required to provide such support as part of their normal municipal support function. Mbatha (2003 Appendix A *pers.comm.*) provides an open door policy to the community should there be a need for assistance. Bharath (2003 Appendix A *pers.comm.*) maintains that his department does provide support but the problem he has encountered is that residents do not use the offer. He claims that if residents had addressed their unhappiness with the trickle-feed system at an early stage rather than at the end of the project by disregarding the system, alternatives could have been discussed and possibly implemented. The offer of post project support is only useful if residents take up the offer. The Municipality provides a toll free service whereby residents are able to log a fault. This facility is extremely effective however Bharath (2003 Appendix A *pers.comm.*) finds that most residents still prefer to log their problems/faults with the councillor. As a result, problems may only reach his office days after the problem occurs.

Bharath (2003 Appendix A *pers.comm.*) has recognised the need for a toll free helpdesk whereby residents may enquire about information on any of the services provided to each household. A toll free helpdesk may act as a temporary alternative method of community education and awareness.

All parties interviewed were unanimous in their approval of an education and awareness programme being adopted at an early stage of the project. It was felt that many of the problems experienced would probably not have happened had such an initiative got off the ground.

3. RECOMMENDATIONS AND CONCLUSION

- The local authority and developer must play an active role at the beginning of the project in establishing good communication and a strong working relationship with the community and the Development Committee. Close consultation must take place between the local authority, developer and the community. This period would be marked by an increase in sense of 'ownership' of the project by the community and a move from an active role towards a more supportive role by the local authority and developer. Decision-making should then be the responsibility of the community with the local authority and developer continuing to withdraw from an active role to a supportive and advisory role. The last phase should see the community take 'ownership' of the development.
- It is important that the relationship between the Development Committee and the community remains strong throughout the duration of the project.
- It is recognised that building trust and fostering a good working relationship between the development partners is very important to the successful delivery of a project. (This was not initially considered as one of the twelve evaluation criteria but should be added).
- Capacity building and empowerment initiatives must be adopted as key components throughout each phase of the development.
- Community education, training and awareness programmes are the responsibility of both the developer and the Municipality and should be introduced into a community during the planning and design stage of a project and continued through to the completion of the project. During the construction phase, an accompanying hygiene education programme should be implemented through the pre-school, school and other social programmes initiated within the community. This must be followed up with community training that addresses technical and social issues such as 'how to use a VIP effectively', how the water supply system works (in this case the trickle feed system), 'how to repair leaking pipes, taps, tanks etc', how to use water effectively to combat water-borne diseases etc.

- A Municipality must take the responsibility of continuing with training and empowerment initiatives after the developer has left. Although the Development Committee in this case study has not been particularly effective, such initiatives should be done in conjunction with the Development Committee.
- It is important to ensure that the community invests in a project. Cost sharing is fundamental to the success of a development project and helps vest ownership of a project in a community. Getting the community to invest, either by part funding (money or material) or in sweat equity will help develop a sense of ownership and pride in a project. This was clearly lacking in this project. Thus, there is clearly a need for government to institute a form of cost sharing where the community contributes towards the success of the project.
- Until it is understood and accepted that woman must play a fundamental role in development initiatives, there will be limited success in implementing water and sanitation development programmes in communities. Training and empowerment efforts must be concentrated on women because of their role in the family and influence they have in obtaining 'buy-in' from the rest of the family members.
- Water and sanitation projects must substantially improve the level of service provided. The trickle-feed system did not meet that 'want' for a higher level of service as it provided a similar level of service that was merely delivered in a different way.
- The Department of Housing should consider relaxing its policy on who and how it grants subsidies. Development funds are unable to be secured for existing sites that are occupied by people who do not qualify for a housing subsidy, and yet service costs are still incurred.
- Monies should be made more readily available to improve services without having to tie it into a housing initiative.

- Development initiatives that are targeted at low-income communities must include punitive measures for non-compliance, but at the same be structured in such a way that households that fulfill their obligations and commitments are rewarded. At the same time the community must also take responsibility for the manner in which it addressed its lack of support for the supply method.
- Lengthy delays in delivering a project frustrate a community, especially when high expectations have been created. *In-situ* housing projects cannot be allowed to take so long to complete.

This study has shown that a breakdown of trust and communication between service providers and service users can lead to a spiraling effect of deteriorating service provision and the use (and abuse) of those services. Repairing that relationship can be extremely difficult, painful and costly both in terms of the social impacts and the infrastructural and associated health impacts. The history of non-payment coupled with the unequal distribution of services in South Africa may still take many years to play itself out.

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DEFINITIONS

BPD	Business Partners for Development
DDA	Department of Development Aid
IDP	Integrated Development Plan
NHC	National Housing Commission
NPA	Natal Provincial Administration
PHDB	Provincial Housing Development Board
RKDP	RSA/KwaZulu Development Project
TLC	Transitional Local Government

APPENDIX A

Interviewee: Ross Hoole (RH)
Gert Roos (GR)

Both were closely involved in the development project when the Natal Provincial Administration were administering Edendale.

Interviewer: Dave Moffett (DM)

Date: 02 July 2003
Venue: Natalia, Pmb

DM: Thanks Ross and Gert for agreeing to do this interview with me. I know you haven't been involved in the most recent project but the knowledge you have of the original project will be hugely useful to me. I also think that the first project created the basis for the second project with many of the ideas, expectations and initial developments being carried forward to the second project. There is obviously no way one can guarantee the sustainability of a project but if a developer, responsible authority or service provider addresses certain key issues during the planning and construction phase, the sustainability of that project increases hugely. Now, what I am doing here is assessing whether those particular issues were addressed during that development stage, but more specifically the latter part of this last project because that project of 1994 never really got off the ground. Ok, so I'm really talking about the first project but there would be carryovers from the days you yourselves were involved in and I am looking back to that time to find out if these issues were addressed by the developers and the responsible authorities and that's where the focus of this interview will be.

RH: In looking at this document, you've talked about water problems, that already had been highlighted because the reservoir was actually just there but there was not enough capacity in the whole of the valley to ... Ok that was one of the constraining points to actually develop the development. There was a serious shortage of water supply in the Edendale area, in that reservoir in Newtown particularly. That's why standpipes were the only option. Also, with VIPs being the sanitation option, there wasn't such a great need for water to each site. Besides, if water had been made available to each site, what would have been done with the excess greywater? So therefore the RDPs 200 metres distance between each standpipe was what had to basically be accepted by the people.

DM: Gert, I know you've been involved in this community for many years, please give me some background to the project. Who was involved when this project first got off the ground?

GR: During 1993/94, Rob Kirby and Associates now Ndebele Kirby Associates, did the initial work. It was their staff that went out and spoke to everybody in the in-situ upgrade. He used an orthophoto, it was flown for the occasion. He used a photograph and actually did the layout on ... like he usually does on a map you know, with a picture underneath it and then they went and walked the area when the land surveying was done because Tarbotan, Holder, Ross and Partners were actually the land surveyors who were appointed to undertake this job and to my knowledge it actually was surveyed, if I remember correctly that is. By the end of 1994 it was already surveyed. So I'm not sure if the '97 '98 redevelopment actually pulled all the pegs up or actually just went with the same layout. You'd have to show me the same layout and I would recognize it. So there was actually a hang of a lot of work done and even the Provincial

Housing Board funding was actually committed. A date of October rings in my brain, it could even be October '93 or '94. It must be '94. It was one of the first allocations of the Housing Board. That was actually one of the problems because the project took so long to get off the ground while the funding just sat there waiting to be used. Ok, that was more specifically when the project was handed over to the Municipality. The funding for the initial surveys was actually funded by the NPA. We paid the land surveyors and we paid for Rob Kirby and Associates to do all that initial work. So that was like R500 000.00 worth of work that was done.

DM: And this was work done predominantly for Phase I but you were looking at Phase II as well or was the surveying done for both?

GR: No we weren't really looking at Phase II so much, but I realized that there were already new people settling that weren't any part of the original community. One of the things Rob suggested was to say, "Look, if we are going to do the lay-out for this area, people are already going to settle there, like it or not, why don't we just plan for Phase 2 while we are at it. We don't actually have to survey each individual site. What we can do is survey the corners of the street blocks then as the need arises we'll survey the inside of it", because I think that is a foregone conclusion that people will settle there whether you say to them they can or cannot. The fact is ... they will. The people had been living under those circumstances for the past 30-40 years, so they are used to it but it doesn't mean that is right that they are used to it. It wasn't something they were forced into as such. They knew what the circumstances were and it wasn't such that if you weren't providing water they were going to live elsewhere, they were still going to live there in Newtown.

DM: What was the layout like prior to the formal layout? Obviously nothing had been pegged off in terms of a survey, but was there some sort of informal layout that this community had settled in terms of?

RH: They had set up road structures. Yes they had road structures and everything so it was a matter of actually working around all that situation.

DM: So it wasn't as informal as you would find other informal settlements?

RH: No

DM: It was informal in a structured way?

GR: No, I don't know how it worked. I know the guys arrived in government graders and stuff and I'd imagine they just had to grade the roads and just put a couple of extra roads for them. That's why if you look at the layout you don't really get houses that need to be demolished. It's actually accurate enough in terms of the layout, I don't think there's really a problem, but the problem really comes in I think, with the services, especially with the water and sanitation.

DM: So why did that project stop then when you handed it over to the Municipality or were you not aware that it had stopped and had to be resurrected?

GR: No, I was aware that ... what happened was that ... I don't know if you can recall that in 1995 there were talks between the NPA and the Maritzburg municipality to take over the Edendale area. There was a bit of a debate around the point of what happens to existing projects if the administration of land is going across, and one of the things that the Municipality wanted was

for Province (NPA) to complete all its projects before handing over Edendale. The Municipality said it would not take over the administration of the land and face all the associated liabilities. The Municipality had said that it would be quite happy to take the land once services had been installed ... almost like a developer who has to do certain things before the municipality will take over roads supporting a township. Of course, Province (the NPA) didn't want any of that. Province said "you shall take it because new legislation says so". So the Municipality put up resistance by saying "we will not go in to Edendale" So Province then just decided to withdraw all its resources. Ross, remember Jay was reallocated, I don't know if you were reallocated as well.

RH: I had already been reallocated.

GR: I was reallocated. Les Howard reallocated his whole team away from Edendale saying "we are not going to leave any resources there, we'll reallocate the whole staff complement. Municipality, it's your baby now. You are responsible for the whole Edendale area."

RH: Alfred Welsing was with you as well?

GR: Ya. In the meantime, while Province and the Municipality were arguing over responsibilities, Rob felt that he could not let the people down and he actually continued to work there knowing he wouldn't ever get paid for it. He just said that's it, I'm not going to let the people down because Government can't make up its mind.

DM: Ok, some of my questions you've already answered in one way or another so if we can just try and restructure a little bit. The first question ... one of the most important things in any project must be that it is demand driven. A project must be driven by demand. Now, in terms of demand, can you give me some idea, and I'm sure it's pretty obvious, what was the demand for this project to get off the ground? What sort of a demand was it, or were the people just happy to carry on as they were and perhaps down the line that's why they haven't necessarily bought fully into the development project?. Was there an actual demand, or was it a demand identified by officials rather than the people on the ground?

RH: The way that I remember it is that the community needed water.

DM: So it revolved around that service only?

RH: Yes

DM: In terms of sanitation, were they happy to just use the bush, or did they have rudimentary pit latrines?

RH: Ja I think they used a mix of the bush and pit latrines, but you see the problem was, there was a tanker which was providing water and ...

DM: Tanker provided by whom?

RH: The NPA. You see, there were problems with the reservoir. And the NPA was actually filling that reservoir to get water to the people or bringing water directly to the people. Basically, what had happened was that the reservoir was fed by an extremely long pipeline and what was happening was that the pipeline kept on getting vandalized. They were destroying the pump

stations or substations or whatever, every time there was a culvert, they were damaging it, the community.

DM: So the reservoir was never full?

RH: Ja, and the reservoir had major problems anyway, so they couldn't keep it full, even if they delivered water to the reservoir by truck. So they were actually tanking in water directly to the community. The community didn't have that much water, only water that the NPA could provide by truck.

GR: Also, could I just interrupt, when it rained, if I remember correctly, it's a very steep road up there and the trucks couldn't get there. So if it rained for a few days, the community would run out of water because the trucks couldn't get in there to deliver water, even for a few days after the rain. Obviously in summer it was a huge problem.

RH: So that was a major problem. Look, I'm sure there were political things. As I said to you before one of the big community meetings at the start of the project, which was a few days before the 1994 General Elections, the last 15 minutes turned into an ANC rally. So it was quite a politically sensitive community, but even while we ... and Rob Kirby, were doing our work, you know, doing the layout, more people were still moving in. The community was actually still growing, more houses were being built.

DM: Where were they filling up? Were they building further up the slope or were they densifying?

RH: Ok, when you come up the hill and you see the reservoir on the right hand side, they were actually building there. Then you come over the crest, they were building on the vacant land that was near the road towards the reservoir as well. They were actually building on that side not down into the dip again which is where Phase II is, so they were actually expanding alongside Phase I. I'm sure there were other houses but that's where it was very noticeable.

GR: Edendale L and M, which are below Newtown on the city side of the hill, I can remember going in there and receiving a phone call saying that overnight 20 people sort of moved in there, put up 20 little houses. People were selling sites there illegally. So people were definitely settling in that area, whether we liked it or not. There was definitely an influx of people into the area. But I must say, most of the influx was onto land closer to town. I know that there were some new informal houses going up in Newtown at the time, but nothing like that which was happening in some of the other areas in Edendale. I guess that Newtown was too far out of town to be attractive to those looking for jobs in the city. But there was a demand for development, even if it was mainly for the services rather than houses.

DM: So there was a demand, but essentially the demand around Newtown was based on a water problem? That was the essential demand? Am I right? They didn't really care about the fact that there was PHB funding that could have given them another roof or another additional...

RH: No because the houses were quite substantial already. I remember, in Phase I, the in-situ upgrade, there were a couple of houses that were going to get quite large pieces of land because you actually had to work around their rather large structures, so this wasn't an excessively poor community in terms of housing shortage. This community had actually spent money on their blockhouses and things like that. It wasn't a tin shanty. It wasn't a typical informal settlement.

- DM: All right, you've kind of just given me reasons for the demand. What about other services like for example, were there problems with roads and storm water? I know there were already roads there in a way ...
- GR: No they were mainly on the bus route. The major collector road. That was a huge problem because getting the rain you can't actually go up there.
- DM: And what about things like run-off? Were there problems particularly with excessive amounts of run-off, perhaps erosion? I know that some of the storm water drains from the latest project have already started to erode away and are undercutting the concrete roads that were built.
- GR: I've never been in there that I could never get in. I've always managed to get in there pretty easily, even with a normal vehicle. I think the only road that was a major concern in terms of the storm water was the main collector road that went up because it's very steep. The other ones were fairly sort of mellow angles across the hills.
- RH: The way I remember it, a large portion of where the existing houses were was quite flat, relatively, so it wasn't an issue or major issue in these peoples lives. Maybe one or two houses on the lower side of that road which comes, should we say, when you turn left on the bus route, on the flat part, there might have been some of those lower houses having water problems but runoff wasn't to my recollection a major issue.
- GR: Except for on top, the area that was not developed at that time. That we knew from the beginning would be problematic because western slopes do tend to slide in that area so we knew about that.
- DM: From a sanitation point of view, was there a particular demand for improved sanitation services? Was there any evidence that suggested that there were health problems within the community? Were there particular health issues that were of concern, which would've raised a question about the sanitation there? If that wasn't the case then that's fine then maybe there was never a reason based on sanitation.
- GR: I don't think raised by the community. No not to my recollection but they did have engineers over there as well. Over and above Leon vd Linde there was another guy there as well Brian somebody or other.
- DM: What was there previously? Just pit latrines.
- RH: Their own sanitation which didn't stand out in my memory.
- DM: Ok that's fine. And then again linked to, yes, demand driven, but would you say that it was the community who came to you themselves and said "Guys we've got a water problem here, we need development", or was it a person or was it a political figure who came to you and made you aware that there was a demand within the community?
- RH: As we heard from Gert right in the beginning, his involvement goes back to DDA days back in 1991. So the NPA had actually picked up on the carting of water onto the site from DDA, so a lot of the issues and therefore interaction with the community, had actually you know, begun a few years prior. Also, because of the problems with that reservoir, I think that heightened the involvement of the NPA and the DDA to try and sort out those problems in the community because every time that pipeline, which if I remember correctly was at least 20 to 40

kilometres long got vandalized, these communities had no water. So then they would be crying out to the authorities to ... which would be the NPA. There was an office there in Edendale, so they would go down there and say "Look we've got a problem" and then the NPA would have to go and sort it out again. So there must have been quite a lot of interaction over this water issue.

GR: Ja, no there would have been. I mean look the RKDP was out there plus the Township Managers office but also I think Grobbie might have been the guy for that area. Um Malcolm. On the RKDP side, Malcolm was the guy that specialized in setting up community structures. That was his main task ... sort of sociology type of person. Grobbie was more assistant to the town manager. They would have got into those areas on a very regular basis.

DM: So over time there was an obvious demand that had built up? There wasn't a particular incident or anything, it sort of gradually became ...

GR: No, no there was definitely constant interaction between them.

DM: Sorry we going to have to move on in terms of time and I know we're only sitting on the first question.

Ok the second question I'm just going to read it for now then we can expand on it.

Were the community's needs and level of service that is affordable to the community, and for which the community is willing to pay, established during the planning and design stage of the project?

GR: Yes it was.

DM: So all the way along both the DDA and NPA, and obviously someone else will have to respond in terms of municipalities, but it's a carry over?

GR: Ja. What we did with a project like this is that we brought in the town planner, the land surveyor and the civil engineer. The civil engineer then worked with 2 other people. One would have been from the RKDP. One would have specialized in water, one of them would have specialized in roads and that gives you all the options that you can have. Rob Kirby helped with that and they explained in Zulu to them what the package was and what their options were, For example, these are the sanitation options we've got, these are the water options we've got. Obviously you've got your limitations. The community meetings that we used to have were always aimed at gaining the confidence of the community towards the development initiative and us as the development team. We also wanted to encourage the community to feel part of the development experience and generally, just to allow the community to become involved in decision-making. We always knew how important it was to get the community to make its own decisions where possible. That was the only way we could guarantee the support of the community throughout the project.

RH: Ok, you asked about options and how the people were given options. The options were very constrained because you remember we've got a water pressure problem and you've got no link to the sewer. The sewer was already at full capacity. Besides, it was far too far away. It wasn't an option. So with those two options there wasn't an option to bring full pressure into the settlement because you couldn't get rid of the grey-water, and even if you could've you didn't have enough water in that reservoir and you'd have to get enough money to actually upgrade that reservoir.

- GR: The policy was to give people as wide a range of options as possible.
- DM: I am aware that the Msunduzi Director of Water and Sanitation has done some calculations on what it's costing them to empty VIP's and what it's costing them to..to redevelop the water supply that they originally put in which has been vandalized and now have to repair again. Costs are already at the stage where if they'd just gone ahead and put in full pressure, full water borne back then it might have paid dividends now. But ja...
- GR: There's a lot of things that comes into it. What was possible back then compared to what is possible now, how the funding worked back then. The thing with the Newtown project, you have to remember, and that's the biggest issue there and that's the socio-economic factors. We couldn't relocate people back then. If we could have we probably would have. The argument would have been that there is plenty of land twenty kilometres closer to town. We could have offered people all the services they needed ... and free. All right, now remember, we just came out of that forced removal stage and we couldn't do that but we would have had to go to that extent because there was no way they would have been willing to go twenty kilometres closer to town. They still opted to stay there so that played quite a major role in this development. So it just wasn't possible to bring all the "wanted services" to the Newtown area. You try to encourage people to settle in areas where you can develop but you recognize the ones that have developed elsewhere but they wont develop any further there.
- DM: I know that Ross had mentioned that they weren't really a poor community but research showed that although they may have been able to build relatively nice houses, they were poor in terms of income. You guys as NPA, appointed a consultant, I can't remember the name of that consultant, I think it was Delcan, to go and do a study of the Newtown community. They did a survey, a socio-economic survey and out of that socio-economic survey it came about that that is a very poor community, although it might not have looked like it in terms of their structures.
- RH: Maybe they were poor, but they were very resourceful.
- DM: Ok where I was going with that obviously there would have been a resistance within that community to move to another area just from an economic point of view because they couldn't afford to maintain whatever water borne sewage costs would have
- RH: Remember in those days it was a flat rate so it wasn't an issue.
- DM: So they could have moved back there?
- RH: Easily. It had nothing to do with finance. The constraints were that we were using Provincial Housing Board funding. Ok, so at that time it was R15 000 plus 15% extra for the terrain. So there was a constraint on the funding that we had available. But it was all those other factors and the fact that the community wanted to stay there and the community was growing you know, so it wasn't as if the people were being scared away from living there. You've also got to remember the period of time in South Africa's history. I mean, as I said earlier, this whole thing turned into an ANC rally and when I got out of there around 7pm and I mean it was really pitch dark by then ... what I am saying is that there was no ways we could ever be seen or think about forcing people out of the area against their will. The whole political temperature would have just exploded in our faces if we tried to do anything like that. They knew there were other sites available and they could have moved there, but the fact is that they didn't want to. They were happy to settle in Newtown, even though it was far out of town.

- GR: They knew where the government was making land available. If a person wanted land closer to town with services, it wasn't difficult to find in those days. There was a lot of money pumped into housing. Communities in these other areas were paying next to nothing for services, if anything at all.
- DM: So many people in the Edendale area got water borne sewerage and full pressure water and didn't pay for it? No payments back then?
- GR: If anything, very little. I don't think there was anything.
- RH: Look, that's why I said you've got to think. Imbali is a totally different type of setup and then your Ashdown and Plessislar with DSB - well there were payments there. I know people have been moaning lately about that so there definitely was a difference and that's why there was a lot of pressure from those areas like DSB areas not to pay because nobody else is paying so why should we pay and they were having to pay rates and services.
- DM: But what about the possible option of other water and sanitation services? In other words, was there even an option?
- RH: The engineers were Bradford Conning. They were the ones that came up with the concrete road idea. They were very innovative, they tried all sorts of things and put lots of proposals on the table. They were going to use the road as the stormwater drain as well.
- DM: Ok I'm thinking, what happens if a community said "Look we will partly fund whatever services."? What I'm trying to ascertain is "were there clearly no other options?" I know funds were a problem, but were all the possible options put to the community? The community can't come back now and say "Ja but if you'd only asked us back then we would have been able to contribute bits and pieces and maybe we could have come to some other arrangement." So did that level of consultation take place, to the point where it can be said that there is no doubt that the community was consulted?
- RH: Look, they were clearly consulted. We had lots of meetings and we'd had meetings with van Wyk and Louw in their engineering offices. There was a lot of consultation. The community would attend those meetings. The community would attend the meetings on site as well. Rob Kirby went around, I mean when he was doing the layout, he went around and spoke with them, you know verifying peoples fences and if anything was moved would talk to the community to see if they were happy to move their fences. And he would go around with ... a community person was allocated to go around with his staff when they were on site, so there was a lot of consultation with that community and....
- DM: Did consultation take place as a community or as a representative body?
- RH: I think a bit of both really. It was clearly a representative body but as I said like that meeting I had late in the afternoon and early evening, it was a community meeting actually on site.
- GR: We had quite a lot of those at critical stages, where you arrange to meet either on a Saturday or Sunday, but it was always on the weekends or evenings and were open meetings so people can actually be there. The Saturday ones were say 2pm under the trees and we would just say that is when we will be there, and send word out and you find people just come, it's like a big church meeting almost. There were always interpreters.

- DM: Ok then one last question around this issue is; an important part to a sustainable development is to get some sort of commitment. It doesn't have to be financial, it can be by way of gathering resources, it can be by way of offering their own labour but you have to get some sort of buy in from that perspective from the community. In other words you need to get the community to contribute financially, resources or manpower, sweat equity. That seems to be a key aspect of sustainable development.
- RH: One of the ideas was that when the project went ahead a community member would be employed you know to...
- DM: But they would get paid for it?
- RH: Oh yes.
- DM: But I'm talking about community contributions. I'm referring to the offering of labour free of charge or a financial contribution, maybe by way of a percentage of the cost of the project. In fact, I've done some research on international cases on this type of thing and invariably the projects that work are the projects where the community financially contributes. It doesn't have to be a big amount ... it works out if you calculate a percentage of the overall project, it could be ½ % of overall costs but the community contributes financially or in terms of free labour or in terms of gathering resources.
- RH: To my knowledge nothing like that happened. In all the early housing projects nothing like that happened. The community had already got fairly decent top structures so in some ways they had already contributed by putting in
- DM: I hear that although obviously the reverse there is that the housing structures were going to go up anyway so it was in addition....
- RH: No that would have been that they would have had bigger sites. In other words here they had an existing structure and you were going to build an extra structure so they were actually going to have a large house so the end result was actually going to be quite a substantial investment.
- DM: But do you see merit in the way that international projects have proved ...
- RH: Look I remember hearing about one of the Brazil ones in the, I guess it was in late '80's where they actually got them to build their houses and then they pulled their keys out of a hat at the end. It was a big, successful project. Everybody worked till the end, they didn't work and then say, "well I've finished my house now we don't have to go on". They didn't know which one was going to be theirs so they had to make them all of a good standard and then they pulled the keys out of a hat at the end and then you got your house.
- GR: I think its something that's got merit, but I don't say that the development can only be sustainable if there is no investment; I'm not too sure...
- DM: No I think that the important thing is that the chance of it being sustainable increases if you include that sort of an investment. They're investing something in a project rather than just being given it as a grant.

- RH: The problem is now what you're kind of putting in is that Newtown unit RR is not sustainable. That's actually what...
- DM: From a water and sanitation point of view, no its not. There are some major problems at the moment.
- RH: We in those early '90s had no option but to do it the way it was done. Other communities in the Edendale Valley were getting better services ... for nothing. During this time obviously the Newtown community's aspirations rose. At first they were happy to get anything because they had nothing. To sort out their water problem was a major issue. But now their aspirations have obviously risen because everybody else has got so much more and not paying for it, so there view is "why can't we have more", But, and this is the whole thing, the RDP standards are great, a standpipe every 200 metres, but if you're a household your ultimate aim is to not just have a stand pipe in your garden but actually have one in your house. Its actually to have water on site that is your ultimate goal and this might be questioning the whole RDP water standard of 200 metres. What this is showing is that, once you've given them the minimum their aspirations change and they want more. They say "ok, we've got so far along the ride now we want to go the whole hog."
- GR: That is in fact true. Is there an outcry from the community saying that we were not sustainable, or is there an outsider that is saying...
- DM: No. Basically the water supply system that was implemented in the latter project, which is not standpipes, collapsed and what's happened now is the Municipality is back to one of 2 things, either trucking it in, or repair or replace the existing water system. They are trucking water in at the moment, but that's something they can't continue doing because it's so expensive. There's presently hundreds of illegal standpipes in the settlement and this is creating problems for parts of the settlement, especially the upper section because there's no pressure because of the standpipes. So that's why I say the existing water system has failed. Some of the reasons given for that, there's numerous reasons, but some of the reasons are that they weren't properly consulted, its not what they wanted. The new system is not what they wanted.
- GR: Who actually say's this?
- DM: A company by the name of UWP did a survey of the area for the communities.
- RH: No. Look, in the early '90s they were so happy just to have their water problems sorted out. Now clearly their aspirations have grown. A trickle system irritates people because you can't go and put your bucket underneath the tap and get a full bucket load. You have to leave it under the tap and come back in half an hour and at last the bucket is full. They've tried that in other places, putting a washer in the pipe to actually only allow a certain amount of water through. It doesn't work because the old system was the people used to have to carry, go to a river or stream or even just a pipe, stand and queue for ages then cart it back. The trickle system still takes a lot of time, so if they put in a proper standpipe it might have been less annoying for the community.
- DM: Ok, very closely linked to this is the question of whether or not the community was involved in decision making during the entire planning and design stages?
- RH: Yes.

- DM: Just to clarify, were they involved listening, or were they actively involved in making decisions?
- GR: Making decisions. They had options to make.
- DM: So they were given options?
- RH: Yes, and when the developers were doing the layout they took community members with them in case there was any conflict over a fence, or anything having to be moved. It was all done with a community member who was with Rob Kirby and his staff who would then talk to the household involved to actually sort out the issue. So in other words, we never made decisions on our own.
- DM: So everything was made on the basis of a community decision? Just one other thing, you don't recall any particular potential block where a group of people said no, we not having it that way? Was there generally consensus?
- GR: No, I can't remember anything like that.
- DM: So this was a consenting community?
- GR: A lot of other areas had a dominant leader but this one didn't have that. There were some that were quite vocal.
- RH: Unit P was totally destroyed because they wanted 750m² sites and of course the servicing of those sites was so expensive. But we never had a problem. No, Newtown didn't have that.
- DM: Are you quite adamant that the community agreed with VIP's and standpipes every 200m under the circumstances?
- RH: Under the circumstances, they agreed. It was explained to them, they understood. They knew the difficulties that were already being experienced with a lack of water so they weren't naïve and this was a better option to what they had.
- DM: Ok let's go on. Was support provided in establishing a community committee?
- GR: Yes. Rob went to a great deal of trouble to make sure that proper structures and committees were set up. He had a very strong view that if you didn't have community representatives on a committee who can be trusted by the community to make the right noises and decisions that would benefit the community as a whole, then the project would fail.
- RH: Remember all those structures had gone because the NPA had started being transferred to...
- DM: So there were people there specifically trained to go and set up community committee's and things like that that could run through your discussion stage leading up to a project and thereafter being part of a committee that oversaw that project?
- GR: Even then Rob wanted two people for the duration of the project in his employ who they trusted and who knew the people enough and could go around. They were appointed by the Committee at an open meeting on site ...

DM: And they were accepted committees and weren't dominated by a group who said we are the voice and you listen to us?

GR: No they had that in other places but not in Newtown.

DM: So it was genuinely a community elected committee. I mean, an accepted community committee.

GR: No, it's the sort of thing where the whole community is there on a Saturday at a meeting and Rob would say ok, I need 2 people because we are going to do a survey within the next 3 or 4 months and I need 2 people who know the community, who are available and I am happy to pay them but they will be with my guys.

DM: You see, the moment you say you'll pay then there are ulterior motives why people are doing it and they don't necessarily have the community's best interest at heart.

GR: Yes, but it wasn't a salary. It's more like an allowance. You couldn't live off it. You are just compensating them.

DM: As long as it's an accepted representative of the community that's fine. Now are you aware if that committee existed right until after you left?

RH: It might not have been a strict committee but they used to attend the meetings.

GR: There wasn't actually a representative committee as such. As far as I know it works like this: you say to your people, we are going to meet ...

DM: So there weren't any formally elected committees?

RH: This was a community that seemed to have a certain amount of cohesion. There wasn't any fighting amongst each other and nobody was excluded. There wasn't one important person.

GR: You never had the same people at the meetings every time, maybe one or two, so there was no one person representing them.

DM: That does have a problem with continuity?

GR: Ya I guess it could be a bit of a problem from that point of view.

DM: So who could make decisions on behalf of the community if they weren't properly elected?

RH: It depends on which decisions you are talking about. Look, I remember on that top road there was a big house on the left hand side of the down side and that guy was quite an important person in the community so he always seemed to be around. Then there was the youngster...

DM: Was it Tsotsi Sithole?

GR: You see Tsotsi Sithole was one of the guys who worked for Rob. That's where he comes into the picture but he wasn't part of the Committee. While we were trying to get information together we just spoke to a few members of the community. Then, when we needed to make a decision we would have an open meeting and meet with the whole

community. Decisions can never be made just by a representative committee. The ultimate decision is made on site by the whole community.

DM: Ok that was question 4, now question 5, another aspect, again from international experience, and from national experience, is that especially around in-situ upgrades, is to involve women. It's something of a traditional nature. Also, when it comes to water and sanitation, the women's role in water and sanitation has always been very important and it's been identified that it's very important to get women involved as much as possible throughout the development of a project. The question then is, were women key role players within this process?

RH: Yes, no doubt. In fact, I remember Rob being particular about involving women in the project. He felt that they played a huge role in making sure that development decisions were accepted within a community. It ended up that there were a couple of women on the committee. There were at least 2 quite prominent women who stayed on the Committee as long as I can remember, but they might not have been Women were involved and remember, the water issue was affecting their lives more than the men's lives and that was the biggest problem in this community. They were trying to sort out the water issues.

DM: Even more so. Why, weren't women even more prominent on any thinking of this...

GR: It wasn't like 10 men and only 1 woman, it was fairly even. The ANC Women's League was also quite strong.

DM: So they played some key roles in this project?

RH: There were a couple of prominent women there, but I still think this should have been pursued even further.

DM: I'm surprised because again I don't think that was carried forward to the latter project where they had a steering committee as such ...

GR: The ANC's women's league in Edendale is very strongly organised.

DM: Ok, closely linked now to another question. This is question 6. Was the community willing to invest something in the project?

RH: I think we've already answered that. The community had already got large investments in their existing structure.

DM: Were they willing to investment more though?

GR: I think they were. The land may have been a grant but the structure was a measure of investment although it isn't a financial payment to the government or anything like that.

DM: But it was all an investment prior to a development initiative. Whatever investment they put into that area was invested prior to the development initiative formalizing...

GR: No I don't think ... If we didn't formalize it ... that place has had very little growth for the past 30 years and for the past 10 years it's tripled so ... and I mean that's not the government, that's

people building there. So they themselves have actually invested quite a lot there. More than before.

DM: Where I'm actually going with this is to say, if they had invested time, effort and other resources into that project during the development phase, might the project have been more sustainable?

RH: Look people had been living there and had been doing so for a long time so their commitment to continue living there was already there. The issues that needed to be addressed was far beyond individuals or even communities and the mere fact that it still hasn't been rectified even now shows that it might even be beyond the Municipality's ability to rectify. And that actually is upgrading that reservoir.

DM: That's all been done. There is a new reservoir there.

RH: It's got to be bigger.

DM: I accept that. If you're looking at something like....

RH: That's the pressure point for enormous areas of Edendale that reservoir. It wasn't just for that community. They were pumping water up there and then it would feed the pressure into that area. So the community couldn't invest anything into the reservoir. Fixing up the access road, that was beyond the community but you would probably find the community had tried to maintain it. So those were the two issues that affected their lives in a big way and other than that they were actually maintaining themselves before we moved in.

DM: You see, I just think

GR: I don't think it would make any difference quite honestly. It's not an issue. Not in this development. It already has a history to it. I think the investment of the house is more of an investment. We couldn't have got more of a commitment from the community. This wasn't a fly by night community. This community were moved there against their will and they had made the most of the situation and now they didn't want to be disrupted and their lives destroyed.

DM: Ok so now what about this theory ... the theory is that the community made sure that the trickle feed system did not work because there were ulterior motives around "hell, why must I only have a trickle feed system when over there they have full water pressure and waterborne sewerage, so I'm going to make it not work here so that we can prove our point"?

RH: No, its not that organised, just a bit of selfishness.

DM: But what if you made them pay for a system right up front?

RH: The trickle system is a lousy system. It was a bad decision. A standpipe, where the tap actually works, is far better than having a trickle system. Communities do not like trickle systems, that's why they vandalize them.

DM: Well, they're easy to vandalise because the pipes are all over and these pipes basically lie loose on the ground.

GR: I don't think the communities' investment was insufficient to sustain it.

- DM: This system is working in Cato Manor. Its been working in Cato Manor for the last 3 or 4 years.
- RH: Is that how it works?
- DM: Yes, you've got the option of a roof tank or in this case you have a plinth with a tank put on it next to the door. So it does technically work if its properly managed and maintained.
- RH: We haven't seen it, we don't understand it.
- DM: But surely any development you're going to put in any type of development no matter what stage you come in, you might be coming in when a whole lot has already taken place, if you come in with investment, there must be some sort of commitment from that community? That commitment can be built in by way of money etc?
- RH: The issue in my opinion is not, OK, I don't like the drip system, but maybe it works maybe it doesn't. Standpipes are not very nice but there was limited water pressure so they had to go this option but the aspirations of the community was that they wanted more water and it didn't matter if they built the system themselves in the first place, if they bought into the system, if they agreed to the system. They were wanting more now basically that was the bottom line. In 1993/94, when we were working there, there was a major water problem, so anything was better than nothing so they were happy to take what they could get. Now that the water is actually there in the pipes they are actually still wanting more water.
- RH: When we got there, there were trucks trucking in water. No standpipes there. Ok to my knowledge no standpipes. That reservoir was a major problem. It hadn't been functioning at all.
- DM: Then that's what happened during that development. Ok, so some progress was made during that particular stage.
- RH: Surveying was done as well so the people got their individual sites during that time.
- DM: Ok I'm going to move on. I see time is ticking on. I think we've hit the questions where you are going to be unable to answer but perhaps you can give input into the first couple. The question is:
Were members of the community identified during the project implementation stage to be trained to operate and maintain the scheme. In other words
- RH: Ok. Our funding was R500 000.00 to do the town planning, community facilitation and the land surveying. The money went untouched from the Provincial Housing Board to the Municipality, so all the implementation stage was done by the Municipality.
- DM: The important thing there is that if you're implementing any project and there's some sort of maintenance that needs to take place thereafter, you need to involve community members to be able to assist other member, I mean, VIPs sound simple, but there's a hell of a lot of knowledge that needs to go into knowing how to maintain a VIP. There's also all sorts of little things that people need to know on how to maintain a trickle feed system. So that's important with any project to build those continued maintenance skills into a community but you can't

answer that obviously? You see, the trickle feed system fits nicely into the Governments free basic water policy, basically it drips 200 litres of water into a tank in a 24hr period.

RH: Yes but what I am saying is the peoples water consumption is greater than 200 litres a day for that particular household so therefore they are needing more water.

DM: I'm not so sure about those as a reason ... You see, there are all sorts of other problems creeping in, for example, they put tanks on these plinths and the community complained that other people who don't like them can come in and poison their water. There's a whole list of things; that the tank stands outside and the water gets warm and they don't like drinking warm water; the tank starts to get brittle because it stands in the sun. People started using, and I've seen it as I've been there, they empty the tank, they go and put up an illegal standpipe because now they can get more water and they use their barrels for other purposes like making beer.

RH: Ok you can see that had nothing to do with us.

DM: You see, to me there's just a certain degree of lawlessness, a lack of respect for law that comes through. It's like they say: Hell, he's doing it so why can't I do it. Why must I live off this 200 litre tank when he's put up an illegal standpipe. Let me do the same because the Municipality is not going to do anything about it anyway.

GR: One of the problems already is that you've got a community living, pretty much like you do in Scottsville, that you don't know people living a few houses from you. So there's no longer a sense of community and you'd need a closer-knit community to sustain it.

RH: So in other words, your Phase I Newtown was a community. Everybody else who has come on to those new sites have come with the sense of "We weren't moved on here and dumped, we moved on our own free will.

GR: I mean if you take Willowfontain for example, its much bigger but they have their own strong personality, and they are proud of their identity and community. Sobantu is the same.

RH: You've also got to remember what happened in '94 is that a certain amount of staff went over to the Municipality. VanWyk and Louw dissolved its involvement in that place and many of the NPA employees chose not to go to to the Municipality and were absorbed back into the NPA. So you actually had a lot of the structures that were keeping these things going and the momentum going with involvement with the community disappeared, literally. Now you have a Municipality who don't understand all the issues, their area of jurisdiction had just been doubled and they didn't have the resources or time to deal with the communities on a day-to-day basis. So they wouldn't have dealt with the community with the sensitivity which the NPA, van Wyk & Louw and others did, and that's why the whole thing just came to a standstill.

DM: I think there is just one more question that may apply to you. Another issue of importance before you even get a project going is to try and resolve some of the community, or bigger, political issues, prior to undertaking the project. Sort them out as early as possible rather than let them hijack you later on.

RH: Look it was an ANC community, so there was a division between party politics. To my knowledge the original ... you see this is the problem we are talking about. When we went in

there it was a community that had a history. Other people joined them, they kind of spread out because now they have double house families in one house. So it has cohesion and a history behind it and other people who come in had to basically buy into that community's ethos, you know, the dynamics of the community. So when that was starting, which is when we were involved with Phase I, it didn't need for us to try and join two communities and make them into one big development.

DM: So it wasn't a politically motivated community? I mean, they didn't have political motivation with any of the issues that might have come up and there weren't any community politics? There wasn't anything there that may have scuppered a project?

GR: There may have been one or two who had a problem, but generally there wouldn't have been a reason to make problems later on in the project.

DM: Ok let's go on. There a few questions which I'll skip because you wouldn't be able to answer them. I'll have to put them to the Municipality. Let me ask you this one. Were punitive measures for non-compliance negotiated and accepted by all?

RH: Ok just go back to the complaints question. You see, it was a place where the people could go and talk to Grobbie and they would then be able to speak to the correct people dealing with those problems for that community.

DM: Something like that is now lacking totally.

RH: You see that's why I said Grobbie didn't go to the Municipality, he came back to the NPA. Pete van Aardt went.

DM: Ok so there was that sort of close kind of help desk. It wasn't far, it was more localised than things are right now?

RH: Yes and these guys really did help. These guys were falling over backwards for this community and with van Wyk and Louw, they were looking for projects. They were kind of doing things and really working with the community. That's why they had a community facilitation section you know and ... I remember there was that blond guy ... Malcolm ... he actually was the one involved. It was their job to get out into the communities. It was their job to put out fires and address the problems. They worked hands on all the time. I don't think there is still that same 'hands-on' approach with the Municipality.

DM: As you say, maybe there was more personal contact in those days?

RH: You might even say it was paternalistic but the problem is they got weaned overnight when it was handed over to the Municipality.

DM: The next question is:
Was there any form of post project support? This again you probably cant answer. Were there any false expectations created within the community through the most recent development in terms of water and sanitation services able to be provided. Were there any promises made that were undeliverable.

- GR: I don't think so. No. Some may be unhappy with the change of the standpipe system to the trickle system but I don't know. I don't think they expected that.
- DM: The trickle system is certainly theoretically an advancement on standpipes because with the trickle system now, you actually have water in your house. How they've designed it now is that they don't even have the stand outside. They have a metal stand that is inside their house that has a basin, big tank and you can do your washing right there from the tank. It's now in the corner of a house.
- GR: Ok so its closer but is it more effective?
- DM: Technically yes.
- RH: I guess it's like having a standpipe in your house. The point is, when we were dealing with this community it was clear there was going to be a standpipe every 200 metres because we did not want greywater on the site because we could not handle that.
- DM: There is so little greywater with the trickle feed system. Not even half of the 200 litres is greywater that must be disposed. So for them there was no problem. So there was no need to deal with...
- RH: We were very aware of the issue that because we had VIP's we couldn't have them pouring water down
- DM: Sure and that's exactly the problem they are having right now. The problem is they've got all these illegal standpipes and because of the VIP's and the illegal standpipes all over the place, you have uncontrolled usage of water and there's no way of getting rid of the greywater, water seeping into the ground. Its impacting on the water table, its rising. You have the problem that water is running into VIPs so its filling them up. So illegal standpipes are causing all sorts of problems.
- RH: There were issues that we were aware of at the time and that's why the options were spelt out to the community and they realised the implications. There wasn't an opportunity to go in at higher standards.
- GR: But maybe somebody was rather ambitious to go through with this system.
- DM: Well, the new system feeds exactly into the Government's 200 litres free water.
- GR: Ok but its sort of based on the fact that it will be maintained, which its not, and it will be used in a responsible manner, which its not. So what you've really got to ask yourself is, how much responsibility and how much maintenance should I build into this, then decide if its sustainable or not.
- DM: Yes, or follow up with a full education programme, follow up with a technical team that can maintain it. You get the community to physically buy into it to a certain degree, and then back it up with punitive measures if illegal standpipes are used. Do something about it straight away and make it clear to the community that things like that wont be accepted and that there must be some sort of penalty paid and back it up with ...

- GR: There are ways to actually make it work. I don't dispute that, but what I'm worried about is that they choose an option based on an ideal scenario.
- DM: Maybe that community wasn't ready for such a responsible...
- GR: And in terms of that did Newtown have a reasonable expectation and did the Municipality have a reasonable expectation or realistic one? Lets put it that way.
- DM: Possibly the municipality was naïve. Gert and Ross, thanks for your time this afternoon. I really appreciate you agreeing to see me.

Interviewee: Steve Crabtree, Project Manager for the Newtown Housing Project (SC)

Interviewer: Dave Moffett (DM)

Date: 03 July 2003

Venue: Steve Crabtree's home/office

DM: Basically Steve, this is a semi-structured interview, so I'm happy for you to talk about anything that you think is important. As I explained to you on the telephone the other day, I'm looking specifically at the provision of water and sanitation to in-situ upgrade projects and I'm using the Newtown project as a case study. What I did was to do a comprehensive literature analysis, and out of that review I identified a number of criteria that I will use to assess this project. So although my questions will be broadly based around these criteria, we can probe other key issues, so don't feel restricted to just answering my main questions.

DM: Steve, let me start off with the question of demand. It is quite obvious that 'demand' is an important part of any development project, but in the case of Newtown, was the project driven by demand?

SC: I'm not sure who initiated the project as by the time I got involved, both Phase I and II had already been approved by the PHB and a project agreement was already in place for Phase 1. But I don't doubt for a minute that there was a huge demand for housing in that area.

DM: Ok so what's the present status of the Newtown development? Is it complete? Near completion?

SC: Near completion but not complete. Um ... no ... from a housing perspective not, but all the services are in, but not all the houses are complete. Um ... there are a number of reasons for that. One of the main reasons is that ... the Department of Housing has requirements for who qualifies for a housing subsidy. Now I feel that this is something they must address because in an in-situ upgrade, not everyone can qualify for a subsidy. Guaranteed not everyone is going to qualify.

DM: What are the qualification criteria?

SC: Okay, he has to ... there is a number of them. Basically, first of all you have to earn below R2 500 a month. Then there are different categories and if you want the maximum subsidy, which will then provide you with a house, you have to earn below R850 a month.

DM: Which a lot of them do?

SC: Most of them ... ya, I'd say 99% of them do. That's not the problem. Okay, then you have to be older than 21 ... to be able to enter into contracts. Also, you have to either be married or if you are single you must have a dependant. Okay ... um ... and that's .. Oh and you must never have owned property before. So you must be a first time property owner. They check that at the Deeds Office. You must have never received a subsidy before. They check that as well. That's basically it. But what you find happens there, and they didn't quite understand this ... when the project first started, and I wasn't involved at that stage, there was a layout done for that area, but it was done quite some time ago and ... the layout ... the sites were quite big. Obviously at the time ... I think DDA or someone was going to do it ...

DM: Yes, it was originally an area that the DDA were involved in trying to develop way back over 10 to 15 years ago.

SC: Ya. Okay, and so they (DDA) obviously at that time weren't so stressed about the site sizes and whatever or at the time there was enough money to actually put in sites of that size. But then when it became a housing project then obviously um ... you have restrictions in terms of what you can spend so you've only got, in this case R17 250 per site to do everything, so you are kind of restricted so you want to try and put as many sites in as you can get because then it gives you more money. So the community were then not that happy with the smaller site. Obviously smaller than that which was originally planned in the DDA days. But what they said to them was "Look guys ... we understand, so what we will do for you is ... you are going to have a house for your extended family and we'll try and chop it up (the land) into separate sites, so you will have the same area but now you are going to have three sites instead of one, so that your kids will end up getting one and you'll have one ... and like that", you know what I mean? So it will cover the same area as they have now, but there will be three separate owners. So, they were quite happy with that. Then what actually happens ...

DM: Sorry to interrupt. How long ago are you talking about?

SC: Oh ... it must have been about '95, '96, somewhere around then. Another problem with the Dept of Housing system is that if you have been used as a dependant for someone else, then you can't qualify as an applicant. And this caused problems because the son now was a dependant but then wanted to become an applicant on the property next door. So that was one of the problems why we've never been able to get all the people approved. He's living there; he's been used as a dependant, but now can't be an applicant. So what do I do? I can't get a person approved. So you can't build them a house because there's no subsidy. This is what I'm saying about an in-situ upgrade. All those other criteria as well. You'll never get everyone to qualify. You can't move him away but you must still pay for the cost of putting in the services to get it past his house, although there is no subsidy granted for that house. So at least the infrastructure costs should be paid for by the Dept of Housing, as far as I'm concerned. Otherwise what can I do? I can't make the guy disappear ... he's already there. So that's another reason why the project has never been completed. Because not all the people have been approved yet. These are the problems we are faced with in in-situ upgrade projects. Another problem is that there is no more money from Dept of Housing. The project was approved in 1996 and with inflation, building costs have gone up. So Charles Sarjoo (the developer) said to the Department of Housing that unless he gets more money for the project, the development couldn't carry on. So that's another reason why the project is not complete.

DM: So at this stage, all the services are in, but some of the housing units have not yet been constructed?

SC: Ya. That's correct.

DM: Is it mainly in the upper section that there are houses not yet constructed?

SC: Ya there are some not yet complete higher up, but I think there's more unfinished sites lower down because there is more in-situ lower down and that is where we have run into the subsidy problem. I think there are about 30 that aren't constructed lower down. There are only about 10 higher up.

DM: Here and there, there are sites that are half built, or have been vandalized?

- SC: No, vandalized. See what also happens, and it happens in all of these projects, and its something the Department of Housing should look at, they make you sign the people up so far ahead of the time you build the house. They want you to sign the guy before you even start with the infrastructure. If you don't sign them up ahead, you get a lower level of payment, and it's not enough to cover your costs.
- DM: I see there are very few units that have been transferred into individual's names?
- SC: We have got some transfers through. Um ... what's happened there is that Province initially owned the land and there is a big dispute between Province and the Municipality over rates.
- DM: Yes, I'm aware of that problem. In fact, I'm also aware that the whole township establishment application was done in terms of the Natal Town Planning Ordinance, which legally, is the incorrect piece of legislation. This puts doubt over the status of the individual transfers.
- SC: Well, we've actually done transfers on ... I think on Phase I we've done about 300 out of about 700 sites and Phase II we've done about 500 out of about 700 sites.
- DM: So you've completed just over half the transfers? How did you manage to get those transfers through, but now you can't?
- SC: Yes. What happened was that ... I don't know how we got those transfers through back then. Somehow there was someone in the Municipality who signed the rates clearance certificates for some, so we got those transfers through. Then what we did with the others that we got transferred was that the Department of Housing agreed to put some money in an account to cover the outstanding rates. So as a site was ready to be transferred, money was paid to the Municipality to clear the rates for that site, and transfer took place. Then the money ran out and we needed more money.
- DM: So you need to try and get more money out of the Department of Housing to cover the rates on the properties that have not yet been transferred?
- SC: Yes, but I'm not working on the project any more. But I can say that until the rates clearance issue is sorted out, transfers can't take place.
- DM: Has the Dept of Housing tried to push to close-out the project?
- SC: Yes, at one time they pushed quite hard and they were trying to get the problem resolved and that's why they put the money aside. Then when the money ran out the project basically stopped.
- DM: What was Sarkum Housing's role in the project?
- SC: Developers. They are the people who Dept of Housing is contracted with.
- DM: So they are the developers and ultimately responsible for this project? Then what is your responsibility? Are you the sub-consultant?
- SC: Yes, in a way. I was the project manager throughout the development, but I was contracted by Trevor Griffiths who was the sub-consultant appointed by Charles Sarjoo of Sarkum Housing.

DM: Who was the team of consultants?

SC: Town planning and land surveying was done by Tarbotton Holder Ross and Partners. Owen Greene and Richard Boot were the guys involved. Then engineering was LWF (Lategan, Wagenaar & Fourie). Dirk Fourie was the engineer. Then the project manager was Trevor Griffiths and I sub-contracted to him. Trevor hasn't been involved in the project for a long while now, but you might still want to speak to him some time.

DM: When did you get involved in this project?

SC: I only got involved round about the beginning of 1998. When I got involved Phase I had already been approved by the Dept of Housing and Phase II had been submitted to the Dept of Housing for approval. They hadn't started anything on site at that stage but all the consultants had been appointed. The design and layout had already been done.

DM: What levels of services were in place when you got involved?

SC: No nothing ...

DM: So there was nothing?

SC: Well there was very ... there was sort of roads and you could see that some town planning or layout had previously taken place because the informal houses had been built in some sort of order. There was also some sort of access roads linking some of the areas. There was also one main road ... a gravel road that is still there that went through the whole project right up to the top of the hill. That was there ... but that is a bulk service and we weren't involved in bulks. We assist to try and get the 'bulks' but we aren't responsible for it.

DM: What sanitation service was in place at that stage? Were there any VIPs?

SC: No nothing ... nothing at all. They just used to use the bush for all their toilet needs. There were some pit latrines, but none of them were constructed to specifications. There was water. Bulk water was provided to a reservoir at the top of the hill and fed to stand pipes in the settlement. But there were very few standpipes. Probably about 3 or 4 for that whole area. Electricity was also supplied to the settlement.

DM: Are you aware if a social compact was ever done for that project?

SC: One was done. There has to be ... yes in fact there is. It had to be done for the Dept of Housing.

DM: I have been trying to get hold of a copy of this social compact and haven't found it. I did check through the Dept of Housing's files and found a short document that might be considered to be the social compact, although I hope not because it is very sketchy, and as far as I'm concerned, is not a social compact. Other than that I have seen nothing. What I am aware of is that in those days social compacts were not as detailed as they are now, and therefore didn't address all the issues.

SC: There is a social compact for this project; in fact I think I might have it here.

At this point SC goes to his office to look for a copy of the social compact. He returns without having found a copy. The interview then proceeds.

DM: Steve, were you involved in the social compact?

SC: No, but I've got it because I was fully involved in getting approval for Phase II and putting in the development in the two phases.

DM: So who was responsible for the social compact?

SC: Charles ... Charles Sarjoo.

DM: Who signed the social compact?

SC: I'm pretty sure ... if I remember correctly, it was the Development Committee, which was made up of community representatives.

DM: Did the community give input into the level of services that were to be provided for the development? In other words were the community's needs and the level of service that is affordable to the community, and for which the community is willing to pay, established during the planning and design stage of the project?

SC: Well, the social compact should have addressed all the service level issues, so I'm sure that it is documented that the community agreed to the level of services to be provided but I was not involved in the initial workshops with the community and Committee. They would have been held by Sarkum Housing. I suppose though, that they would have had limited options due to there being no bulk sewer available. As I've mentioned, by the time I got involved the social compact had already been signed. But there was no money anyway. The PHB only gave out limited funds. Besides, the community wanted to maximize the amount of money available for their top structure. So the community probably didn't get what they wanted, but compromises had to be made.

DM: Did this Committee include any of the consultants or municipal ...

SC: No, no, no, this committee was just made up of representatives from the community.

DM: Was the Councillor a member of the committee or was he involved in the signing of the social compact?

SC: I don't think he was involved in the social compact or form part of the Committee who accepted the social compact. In fact, if my memory serves me correctly, he wasn't even the Councillor at the time.

DM: You are obviously familiar with the water supply problem in the community? The whole problem with the failure of the trickle-feed system. Are you aware of any promises that had been made to the community in years gone by regarding the level of services that would be provided? Why I ask is that I'm trying to establish if any higher expectations had been created within the community to explain why the trickle-feed system is such a failure?

SC: When I got involved in the project, the water issue was still in the process of being finalized. The community did know at that stage that it was going to be VIPs. That hadn't changed. It

was always going to be VIPs. There was never any talk about full waterborne sewerage. But as for water supply, as far as I was aware, it was always going to be standpipes. The sites were also too small and there wasn't enough money to try to deal with the greywater on site. In order to still provide the people with water on their site instead of communal standpipes, the engineers suggested that the community um... consider the trickle feed tank system. I think this system was supported by the Pietermaritzburg TLC as well.

DM: How far apart were the standpipes going to be?

SC: There was going to be one sort of ... every 20 houses I think. Um ... that was the original. But remember, when I got involved they were already talking about installing the trickle feed system.

DM: Who is "they"?

SC: The engineers. The Water Department from the Municipality and the developers' engineers.

DM: What say had the community had in determining the water system to be implemented?

SC: Well I'm not exactly sure but the people weren't keen at all to carry on carting water from the standpipes to their homes. They wanted water on their site. But the problem was that there was no ways they could afford a full pressure system and if they wanted water on site, the only option was the on-site water tank system.

DM: So what sort of community consultation took place to get them to accept a trickle-feed system?

SC: At the time ...well, I can remember, and they can say what they like, Mitchie and Tsotsie will back me up on this one, that we went ... I brought the Committee down to Durban, I paid for a taxi and they came down here. We went and had a look at ... um ... at the roof tank system that had been installed in Cato Manor. Durban Water was busy installing water into Cato Manor. They had the ground tank and they had the roof tank. That was the whole debate at the time, which system to install in Newtown.

DM: Did Cato Manor have some with ground tanks and some with roof tanks?

SC: Yes, we looked at some ... there was an area in Cato Manor that had the ground tanks and there was an area in Cato Manor that had the roof tanks. We said to the guys "these are the options, you can have either the ground tank or the roof tank." They all said they wanted the ground tank. The guy from the Water Department came up and a Councillor, but not Councillor Mdlangathi, some other councillor but I can't remember his name. They had the whole ground tank and roof tank system explained to them.

DM: How successful has the Cato Manor water supply system been?

SC: Look, I don't know. At the time it had already been going for a while when we took the guys to see it. When we walked around there they just asked how it would work, but I'm not sure how it is now.

DM: When you were in Cato Manor, were there any signs of vandalism?

- SC: No, no. But I don't know if it's still working. A lot of the houses in Durban were fitted with roof tanks, although I think Durban Metro are doing away with the roof tank system now. The problem is that it is so easy ... a lot of people just tap into the water line and put in their own standpipes... illegal connections. Then there is the problem that there is additional greywater to deal with.
- DM: Ok so then the Committee after having seen Cato Manor, explained to the community what was going to happen, and the water system was agreed on am I right?
- SC: Ja. But they were never really happy because they always wanted the full pressure system but it was explained to them why they couldn't have it.
- DM: Did they (the Committee) get buy-in from the rest of the community on this?
- SC: I'm not sure on that. It wasn't my responsibility to make sure that the Committee properly informed the community.
- DM: So their choices basically were standpipes every so many houses or a low-pressure system?
- SC: That's correct yes.
- DM: So the Municipality was satisfied that everything was properly installed, that the tanks were...
- SC: Ja, but the community were always complaining but we sorted all the problems out before handing them over.
- DM: Do you know if the community's willingness to invest in the project was established in the beginning stages of the project? Were they willing to provide anything or was everything given to them?
- SC: Well, I know they couldn't afford to contribute financially but I also know that they were unwilling to invest by means of sweat equity. Why I know this is that it was raised at a Development Committee meeting once and when the representatives took this to the community, the response was that it was governments responsibility to provide funding for the development and not them as a community. I know all the labour though was sourced through the community.
- DM: Do you see this as a problem though that they contributed nothing?
- SC: Oh definitely because I think they would have taken more interest in the project and maybe had more pride in maintaining it. You also probably wouldn't have so much vandalism happening.
- DM: Ok now I know some decisions were taken way back now I'm talking about perhaps '94 or '95 when initializing a project, um when relocation was not an option back then, whether some decision was taken back then to say "hang on, from this level up we are not going to expand because of the problems with sanitation, erosion, stormwater and others, and somewhere either Planning or the engineers should have said "No there will be no development further up from this point." So what sort of thinking went into the boundaries? I'm just trying to work out where the pressures came from in terms of developing and ... um because there couldn't have been too much there may be a few shacks here and there?

- SC: Ja, no look, its not as dense as down below so even when I got there you could see that there had been some sort of development there for some time.
- DM: So what was the thinking behind extending there rather than along?
- SC: That was the extremity of the land. I don't know if that was owned by Province or whether Charles had got ... U see ... I don't know. That was before my involvement
- DM: From a sanitation point of view, up till now, you haven't seen any problems have you?
- SC: No. I haven't, no.
- DM: I know there are a few problems now with illegal standpipes, greywater running into VIPs, but those are obviously problems that have to be addressed by other responsible authorities, but were members of the community identified and trained to assist the Municipality to operate and maintain the services in the community?
- SC: No, as far as I know no members of the community were identified to be trained to maintain the system. We believe that it is the Municipality's responsibility to operate and manage any service system that is installed so I don't see why anyone should have been appointed to maintain the system. I do know that there are members of the community who are very familiar with the system though, because they were the ones who assisted the contractors to install the services. I wonder if they have anything to do with all the illegal water connections? I can't say they do, but they certainly have the skills to install illegal standpipes.
- DM: Was support provided in establishing a community elected committee that represented the community through the different stages of the project?
- SC: As far as I'm um... Yes, the Committee was elected by the community. I know the Committee changed a couple of times but a couple of members stayed constant. I know Tsotsi was one of them.
- DM: But did you have some of the new members saying, "hang on we didn't agree to that arrangement?"
- SC: Yes, that was a problem we encountered. The new committee did not believe that they were bound to the 'social compact' because they had not signed it. But, because Tsotsi was there, and he'd been around from the outset, we did manage to work through most of the issues. The new Committee did always still try and raise new issues and problems though.
- DM: How much clout though did this committee have? Did you get a sense that this Committee was a strong committee and that the community actually listened to them?
- SC: I think ... you know...Um I wouldn't say they were strong, but they were elected by the people. They didn't always follow. I think their main aim was to try and get some work out of this, thinking that they were on the committee so they were the ones who knew what was going on so they didn't always have the communities best interest at heart.
- DM: Are the services that have been installed, upgradeable?

- SC: Yes they are, but for more details you'd have to speak to the engineers. I feel that they need to decide from the outset on a higher level of service to avoid all the problems later on and ultimately have to spend more money. They should do the same as Durban has done. Bear the costs now and it will save in the long run.
- DM: So how was greywater supposed to be dealt with, disposed of? We're not talking about huge amounts of greywater.
- SC: I don't know. The way I understand it, is that it's going to go straight into the ground. Every one accepted that from the 200 litres of water, only a small amount would be greywater that would have to be disposed of, I guess straight into the ground.
- DM: Steve to your knowledge were women involved in the project at all? Either on the Committee or wherever ... because women play a huge role around water issues in the family unit?
- SC: I know there were women involved but I'm really not sure as to what level they were involved. I can't say that I had many dealings with women. There was a woman from the Municipality that got quite involved in the community though.
- DM: Ok I'm just going to run through a few quick questions if you don't mind because time is running on.
Were political issues that could affect the proper functioning of the project resolved during the planning stage?
- SC: Sarkum Housing dealt with all those issues so you'd have to ask them. I don't recall there being any political problems. Not to my knowledge. There were of course some problems, but I don't think you could call them political problems.
- DM: Steve, obviously education and training forms a very important part in the proper maintenance of any new system. We have already agreed that there are certain things that users must know about in using a VIP. The same can be said for using the trickle feed system. Were the residents ever given any training on how to maintain the water system and on how to best utilize the sanitation service provided?
- SC: They will claim that they were never informed. The whole system was explained to the Committee then they in turn explained it to the community but it was never taken further, no workshops were held. I feel though that they (the community) are ultimately going to have to deal with the problems so they should have more training and the Municipality should get more involved in this because we can only do so much. I know the water people were there quite a bit doing some explaining but no one from sanitation. The roads people were also there. Myself, the Dept. of Housing and the Municipality were always there to offer support and we would have a monthly committee meeting. So ja we tried. The community just went ahead and destroyed the system. I'm not so sure that it is just because they didn't get the necessary training. I think there is another reason and that is that the community want full services free of charge and until they get what they want, they'll continue to make sure that the services are a failure, especially if they know they'll get away with it.
- DM: Well, that leads to my next question. Were punitive measures for non-compliance negotiated and accepted by all and are they being strictly enforced?

- SC: Not to my knowledge, no. That's part of the problem. The Municipality are doing nothing about it. If they had gone in there right from the start, the moment they saw that there was a problem, then maybe the system wouldn't be in the shape it is in now. We had theft problems while construction was taking place. It was terrible. Work would be done during the day, and then the next day it would have to be done again because things like windows had been stolen. Lots of equipment got stolen. It got so bad that the contractors couldn't work properly in there after a while. There seems to be a culture of lawlessness there, but perhaps it is no worse than in other areas.
- DM: Ok one final question: Is there a facility provided where complaints and queries can be forwarded and addressed?
- SC: Yes. The Municipality has a toll free number where complaints and faults can be lodged. I think complaints can also be forwarded through the Councillor to the Municipality. Also, I know that the development is still not complete, but I am willing to provide support to the community if there are still issues or problems which haven't been resolved and for which I may be responsible for. I suspect though that there's not much more I can do. It's all up to the municipality now. They are the ones who face the problem. I just don't know what they are going to do about supplying a new water supply system to that community. I wouldn't like to be in their shoes, having to solve that problem.
- DM: Steve thanks so much for your time.

Interviewee: Nareen Bharath (NB), Engineer: Water Division: Msunduzi Municipality.

Interviewer: Dave Moffett (DM)

Date: 07 July 2003

Venue: Msunduzi Municipality Office

DM: In doing a literature review I identified key issues that need to be addressed before, during and after a development initiative. I believe the sustainability of a project increases greatly if these key issues are met. So the questions I'm going to put to you are based around these identified key issues.

To start off with, a key issue for me must be that a project is demand driven. If you don't have a demand for a project the sustainability is immediately questioned. In this particular project there would have been a need so my question is:

Was it government who determined that there was a demand out there, and therefore decided to upgrade the settlement? Or was it the community saying, "we believe as a community there is a demand so please help us"?

NB: The way I understand it, it was like informal housing and it was wattle and daub type houses, scattered housing and when the government came out with their low cost housing policy there seemed to be a demand to upgrade this community from the wattle and daub type to whatever is there now. So the demand was definitely there. There's no doubt about that. Then you get other communities, like demands coming from the Unit P's etc. So I say yes, it is demand driven.

DM: I had an interview with 2 people a few days ago; one was from old DDA days and the other from Provincial town planning. We were talking about the period 1990 to '94/'95 when Rob Kirby tried to drive a development initiative to get a housing project off the ground. It had gone so far as to get funds approved through the Department of Housing and in those days you were talking about the National Housing Commission rather than the Provincial Housing Board that funded such projects. So funds had been approved, and in fact, the NPA had already spent money on some surveying costs. The hopes of the community had been substantially raised that development was finally going to get off the ground. And it was at that stage that responsibilities started to change with NPA negotiating with the Msunduzi TLC to take over the administration of the whole of Edendale. By all accounts from the two gentlemen that I have spoken to already it got to a point where the provincial government said "local government, take over this project, now you're responsible. There's funding etc etc". The Municipality said "no we are not taking over this project right now" and the project died. The funding fell away because National Housing Commission, which then became Provincial Housing Board, said "we are now going to re-allocate the funding elsewhere. You don't want to spend it; you're still squabbling about whose responsibility it is, so we are going to reallocate it. When you're ready come back to us for funding." So that's where the project died, for about three years until the Municipality resurrected that project in about '96/'97 with the initiative starting to take place in about '98 through '99/2000. Obviously the initial project was definitely demand driven but the question I then have is: Was there such a demand for housing there when they already had fairly structured housing? By all accounts, the housing they had back then was reasonable in terms of quality. So for me the demand wasn't so much for housing but rather for services. Would that be fair?

NB: That's a fair comment but also when you link up with the services then you have to lay a proper road, reasonable water. Then it becomes town planning. If you look at the old structures of wattle and daub, they are not proper houses or should I say stable structures, and with one heavy rain you have a problem. Then if you put in a 30m² blockhouse with a working roof then you get proper structures. So, in terms of demand, the demand was there. The demand led to improved services, roads, water the sanitation was improved. The only unfortunate thing is that in some of the situations we got is they don't let outsiders come into the development.

DM: For me though there was no doubt that this project was demand driven. I don't think anyone would doubt that. There was a need and in particular, issues around water because there were obvious problems around water. There were sanitation problems because there was no sanitation. There were rudimentary pit latrines in fact not even pit latrines. There was the bush but clearly around those issues there was a demand. From my understanding as well, the community had been pushing for quite some time with Province and then obviously with Local Government to resurrect that project so I'm satisfied that there was a demand. So if we can move on.

Question 2 then is: Were the community's needs and the level of service that is affordable to the community, and for which the community is willing to pay, established during the planning and design stage of the project? In other words was it taken that this is what they are going to get whether it was affordable or not into consideration and as it turns out with the water and sanitation that is supplied, there are no costs, to the community. The question then goes further to say is it possible or was it negotiated with the community to say if you're prepared to pay X amount more than nothing we can give you a higher level of service.

NB: You see what happens with the Housing Board and its application method, is that it does a social compact study. The social compact study is normally done by the developer where he should get the Councilor, the community, the ward committee etc or whatever and say, "we are going ahead with this project and in terms of the subsidy or whatever, we're offering you this. If you don't want that we'll take this. We're giving you an option" and then the communities must decide amongst themselves and the ward Councilor which option is acceptable to them. The Councilor signs on behalf of the community. This is the way I understand it. They accept that social study and iron out as to what level of service they will be getting, whether its latrines, waterborne sewerage, trickle feed system, unlimited supply everything. Now, some of these services cannot be negotiated, for example, the water. If the community said "ok we can afford to pay for water so don't give us the trickle feed system or a limited supply, we want unlimited supply", what do we do with the grey-water because there's no sewerage line to take the grey-water away, so that is why the developer says sanitation will be VIPs and the water will be a trickle feed system with a limited supply. The other thing that can be negotiated are roads.

DM: So that particular community, their location, their socio-economic standing, there were no options really in terms of water and sanitation. They were kind of limited simply because....

NB: You see what could have been negotiated with the water is that they chose a ground tank where they could have chosen a roof tank.

DM: So just to clarify something. When it came to sanitation there literally was no option because it was just too far to bring the ... it was just too costly. So the moment you have a VIP

you're limited water wise. The limit was, they could have had standpipes every 200m, that was an option I presume?

NB: No because if we took the water into these houses then we give them all individual house supply, because if you have a standpipe system you're defeating the purpose because unfortunately some poor people would have to walk 200 metres to a standpipe and others a very short distance. Standpipes are usually located along the road reserve and the community around there starts to use that standpipe and wrecks everything. So the aim was to get each person to have his or her own water supply and sanitation.

DM: So are standpipes something the Municipality would be moving away from.

NB: Oh yes definitely. Any new housing projects would have no standpipes. We are even trying to get the ones out there removed. That is one of our highest priorities. Now, in terms of sanitation, you can have a lo-flo system but then you have to put a septic tank in.

DM: OK for record purposes, question 3:
Was the community involved with the decision making during the planning and design stages again key to um any successful project, is that the community on board from start to finish as much as is possible. So the question is who was involved?

NB: You see in most of these projects that take place, guys like Charles Sarjoo and Steve Crabtree are involved in discussions with the Councilors. Now the way I do it is that I cannot talk to the community because then it becomes a problem. So I talk to the Councilor and he takes it to the community, so a lot of responsibility lies with the Councilor. He is the link between the people and officials. So I'm pretty certain that that design went through the Councilor. Also, when we have our project implementation and we go ahead with a project, the Councilor is involved. He comes to the meetings, he is welcome at the meetings whenever he wants to but some of them don't bother to come. You're talking planning issue, you're talking engineering, you're talking technical, the Councilor is a politician and he may not understand so some of them don't come.

DM: So throughout your involvement in this project the community was involved?

NB: Oh yes definitely.

DM: So any decisions that were taken, it was like a joint committee decision rather than just the engineers, or just the community it was a...

NB: No let me tell you what happened. When I joined the Council this project was already underway. When we were having site meetings on issues relating to the services the Development Committee was there. They were there and could raise any issue they wanted to.

DM: Now how was that Development Committee made up, because that's obviously local politics. Were they representative, were they dominant?

NB: I really don't know. I think the community elected their own committee with the Councilor but they kept changing and part of the problem we found was that there was very little continuity and what was told to one group didn't always filter through.

DM: If I'm not mistaken a chap by the name of Tsotsi Sithole was one of the more consistent members.

NB: Yes Tsotsi and there was a lady too who was very consistent. Tsotsi also worked with the contractor.

DM: In your involvements through the project you had a Development Committee, I think that's what it was called. How much involvement, in your experience, did the Councilor have throughout this project. What sort of drive was there from a Councilor point of view?

NB: He had very little involvement in the project. In fact, I think that is one of the main problems with this development. It was probably only in the initial stages that he got involved, but thereafter, he never attended meetings. If I read between the lines I don't know if he started the ... (at this point the interviewer was asked to switch off the tape).

Towards the latter stage of the project, suddenly the property sizes were wrong, they did not agree on the property size, they didn't want that type of service and they didn't want the ground tank. It was at the end that they suddenly wanted the tanks inside the house. I believe the Councilor played a role in the failure of the water supply because he was not involved all the way through. He should have raised the problems at the beginning and not when the project was almost finished.

DM: Another thing that has been identified as one of the key issues in a success of a project is to make sure that there is political stability and I'm not talking higher level politics, I'm talking at local level. Internal politics. If there are any political problems they should be ironed out right up front, any political issues that may be a stumbling block later, you have to try and iron out earlier, but everyone has their own agenda which makes it an extremely difficult thing to tackle right up front.

NB: You see, it was only towards the end that it came up that they didn't want this type of tank. They wanted a certain type of system and they wanted to know why didn't we give them a full pressure system? That was discussed up front and signed for...

DM: Question 4. Was support provided in establishing a community committee that represented the community through those stages? Does such a committee still exist even though the project has completed um and after implementation is there any talk from yourselves at a local government level of continuing committee's even though its not to develop the project but rather to continue to run it.

NB: I'm pretty certain the developer must have done that because the developer needs to convey certain things to the community. But no, we don't go around trying to tell the community what to do. Local issues are their problem once we have provided them with water. The town planning team sometimes tries to assist in forming a ward committee. But from our side we don't do that. Whether the same development committee is in existence today is very unlikely. We deal mostly with the Councilor and he takes it to the committee but whether they are an approved committee I'm not sure.

DM: Now how would one tackle a problem say, if I'm in the community and my tank is blocked or I don't know why I'm not getting water. Who would I take that problem up with?

- NB: In terms of water services, if someone has a problem with water then we have a toll free line they can call and depending on the nature of that problem we react to it. If it's a problem in your yard then it's your problem and you have to sort it out. If it's a problem on the main line then we attend to it. Our turnaround time at the moment is very short.
- DM: Now would you see any use to having ... within communities ... to continue to keep some sort of committee going?
- NB: Yes. Not only for water but for everything so at least if there are problems someone knows about them.
- DM: If I just use an example of lets say this trickle feed system. If say that committee that was originally established, had continued to meet throughout the operation, I don't know how long it took before that ground tank system really failed, I don't know if you're talking 6 months, a year whatever, but if that committee continued to meet and had brought the problems back on a continuous basis and looked at trying to address them, do you think that that system may have had more chance of success?
- NB: No, no you must be careful. There is nothing wrong with the system. The system works perfectly. The ground tank, roof tank everything works well but it has not been accepted by the community and they now want everything to be destroyed. That is what happened. The system worked. It's not the system that is a problem but rather how the community uses the system, or should I say abuses the system.
- DM: What if there had been a committee that could have given feedback sooner rather than six months down the line when it was found 'hell this is not really working'? If there was closer liaison perhaps between the community and their committee, and the developers and yourselves?
- NB: It could have changed. If it was caught earlier and they said we don't want the ground tanks then we could have changed them to roof tanks. Its now when we shift the responsibility to the community to take care of their services that all hell breaks loose.
- DM: Question 5. International experience has also shown the importance of involving women in a project, especially in Africa where women play an incredibly important role in the family unit especially around water issues. So clearly, the importance of involving women has come through. You did mention that there was a particular woman who had been involved throughout. Is it fair to say that women were not just included in the Committee and the project as a whole, but there was an effort to actually include them?
- NB: I can't answer that.
- DM: Do you believe because of your role as the service provider thereafter, it would be wiser for the Municipality to get more involved upfront and require the developer to do A, B, & C and get involved in the setting up of working committee's, making sure that it is driven properly etc etc because of the positive impact later on when you do take over?
- NB: You see initially it is the developer that should have a good committee.
- DM: Don't you see though that it would almost be in your best interest to make sure that right up front that you almost establish that committee, you make sure that the committee stays

committed throughout the project and even continues after implementation? Wouldn't there be some benefit in that?

NB: Yes. That is controlled by the Urbanization Committee and the town planners. The way I understand it is that in this unit they ensure that the different committees liaise all the time. In Unit RR there is a lady called Emerald Mbata and she was assigned as the liaison officer. There must still be a committee but I'm not sure whether it is the same one.

DM: Question 6. Was the communities' willingness to invest in the project established during the planning stages? In other words again something that has come through in things that I have looked at, and every single successful project that I looked at, there was a common denominator; that the community provides something to the project, whether it be financial, or labour. You're your understanding, what did the community give to that project or was everything given to them?

NB I arrived after but my interpretation was that they gave nothing.

DM: Do you see that as a flaw to any project? I believe that if they contributed to that project, financially, sweat equity or whatever the chance must have been greater also further that if they had accepted the project up front, they had then given financial, sweat equity to the project, they were fully aware of the consequences if it didn't work then you start getting one community member policing the other one and making sure that if he's taking an illegal standpipe there is going to be a consequence for that person rather than the end result of "well he's getting free water so then why can't I do it because I know nothings happening to him.

NB: No I don't think there was anything like that here.

DM: Could you see then that this could well be part of the problem then?

NB: Yes, yes definitely I agree.

DM: Now I wonder, and you wouldn't be able to answer this, but I wonder whether that had been discussed at any stage?

Question 7. Were there any members of the community identified during the project implementation stage, to operate and maintain the scheme?

NB: No, I for one wouldn't encourage it because he would be the guy that may well start tampering with things and putting up illegal connections for a fee. I'm not saying that this is what happened in Newtown, but it does encourage that sort of thing to happen. What we said though was that we would try and use local labour wherever possible.

DM: Community water police, similar principal, to be your eyes and ears, even if you had to pay someone to do that, would it be worthwhile?

NB: Once there is money involved in it then who is going to identify someone. The Councilor says he's not going to appoint someone and not all the community members like the person appointed and so it goes. We cannot monitor all of that stuff.

- DM: Question 8. Were political issues that could affect the proper functioning of the project resolved during the planning stage and development stage? Were there any issues that you were aware of a local or bigger than local, political nature that could have or did create a problem with the success of that project?
- NB: No I've got no idea. I don't know of any problems.
- DM: So there is nothing obvious that surfaced?
- NB: If the community is split between the two different parties there could be problems but we didn't have problems that I can recall.
- DM: Question 9. Were the residents trained on how to maintain the water system and how best to utilize the sanitation system provided? Now that's more focused on the community as a whole.
- NB: What actually happened was that when I saw that the system was going down I went on site and I told them how the system works. Andrew Pascoe, Emerald Mbatha and myself went there on the 12th of October 2000 and met with the Development Committee – 9 of them and we spoke to them on the low pressure system, VIP's, storm water servitudes etc etc and we gave these people a full explanation of how everything works.
- DM: Do you think they would have gone back to the community and given them a feedback?
- NB: Not really. I don't think so. Highly unlikely.
- DM: So you wouldn't have called a Saturday or Sunday meeting for the whole community, and explained to them all what was happening?
- NB: No I would leave that to the Development Committee.
- DM: Now, obviously with the trickle feed system and the VIPs, there are things that they need to know. The dos and don'ts. Would you say that is purely Urbanization Unit's responsibility, the developer's responsibility, or your responsibility?
- NB: That is the developer's responsibility because when he does his social compact study, he should be telling them everything about this system.
- DM: I agree although I think...
- NB: How can one choose the level of services if you don't know anything about them?
- DM: Do you think though, that the Municipality could do more, and again why I'm saying that, I'm thinking purely from the point of view that it becomes your responsibility and its ultimately you as the Municipality who will get all the accusations if the system fails?
- NB: Because there are so many branches at the Municipality we only deal with water problems. Where I do agree is that people should know the basics of the system and how to maintain it but it's not our duty to do that.

- DM: Would you agree that the nature of low cost housing projects need a far a more integrated or more interaction amongst role players? It's more one of those projects where you have to look at it as a whole rather than the pieces separately. What I'm trying to say is that communication between the key roleplayers and the stakeholders is very important. You guys can't have the Water section doing something within a project without the Sanitation section knowing and the Planning section etc etc.
- NB: It happens. If you look at it, when we had each meeting, we had the engineering people there, which I represented for water then you found the Councilor was there, and he had his Development Committee, so you had the interaction going. If they had a housing meeting then those we did not attend but others would like Steve Crabtree, the Development Committee and the Urbanization unit. The breakdown though could come from the fact that the community members did not attend these meetings. Nor did representatives from each of the professional teams always meet.
- DM: Question 10. Are the services that have been installed upgradeable?
- NB: No.
- DM: So whatever system you had it wasn't really an upgradeable system. You would have had to, kind of obviously, I suppose um...
- NB: You see you can upgrade whatever you like but it's costly because it was designed for a certain demand. If someone came along and gave us a billion rand and told us to put in water borne sanitation and give them the full water pressure system then you would have to change some of the pipes.
- DM: So it's not really upgradeable?
- NB: No I would say not.
- DM: Now I was looking at your IDP, and there are indications there that the number of VIPs that you are installing as a Municipality is going to rise hugely which doesn't really make sense to me. Are VIP's still a viable option? Yes they are but they are not as cheap as people may think they are.
- NB: You see you don't clean VIPs after a period because they have these small worms in them and they maintain themselves.
- DM: My understanding then is that the life of a VIP before you have to remove it or clear it is about 8-10 years and by all accounts they are only lasting 2-3 years now because they are being abused which is obviously a problem with education.
- NB: We have designed a sticker, which we place in each VIP to educate the people but they don't seem to read them.
- DM: What about going out and training the communities?
- NB: They are maintained but to educate them would be the best. There are no education programmes that I know of, doing that at the moment.

DM: Question 11. Is a facility provided where complaints and queries can be addressed?

NB: Yes a toll free number of 0800 1868.

DM: How used is it in those informal communities? Obviously they don't have the same access to a telephone.

NB: Very well used.

DM: So that's taken care of and those are complaints and queries around main line problems and not domestic connections.

NB: Domestic connections are not our problem.

DM: But again within these low cost communities wouldn't you see a need to extend that?

NB: That would be very dangerous. If one person has a broken tank and we go in and fix it then we are setting a precedent. I will have to do it for all residents. Its Council policy that if you don't work on private property. Unless Council overrides that policy, there is very little we can do.

DM: Question 12. Were any punitive measures for non-compliance negotiated with the community up front? Like abuse of a VIP, illegal stand pipes etc?

NB: I don't know. Council deal with it because Unit RR was not meant to be a standpipe system. It was meant to be a trickle feed system and someone else has to deal with it. Council must tell us what to do.

DM: So Council don't have a policy?

NB: They have a credit control policy. If someone is stealing water they can be charged or if they have illegal connections. There is a control that is enforced by Treasury.

DM: Now what stops you going to someone at Unit RR and enforcing that? Is there not an illegal connection fine for example? Can a person not be fined for having an illegal connection? Or bypassing the meter?

NB: Oh yes, then we come with handcuffs but it is pointless charging someone and then not following it up.

DM: In this particular settlement, right up front before development takes place, is there anyone who goes to the community meeting, development meeting to say "if this happens then that is the consequence"?

NB: Oh no. They know that.

DM: Ok so nothing gets negotiated with the community upfront?

NB: Not that I know of. What happens is that the community gets these projects and are promised that there will be a trickle feed system and they say yes they want it. When the system is up and running then they realize they cannot just open a tap and get water continuously. Then

some bright spark in the community probably says “if we remove this thing here you can get an unlimited supply of water”. Then he removes it. Next thing he is running it as a business, by removing the stop washer for all the people around. So that’s what happens. Then you have problems with roads and drainage.

DM: So there’s no real plan to tackle those communities? What is it that you can propose or realistically do?

NB: What I have in my mind is that we take a representative of 100 houses and see what % is responsible and then report to Council and see what we can do.

DM: I would have thought that the Municipality or Council would have written a policy for tackling this sort of problem but I suspect that is still to come?

NB: No, it’s about time the communities took more responsibility for their actions. If someone has vandalized the system, then they should be fined and made to pay for the repair. What happens at the moment is that our hands are tied behind our backs. I want to charge people who have vandalized the system and make sure that until they pay, they will not get the service. Residents must be more accountable. For too long now residents have been able to demand development or services, and when they get it, they say it is not good enough and that they demand a higher level of service.

DM: Is there, or was there, any form of post-project support to the user as support after project closeout should be made available to sustain a project? I think we have already addressed this.

NB: You know if people come in here and enquire about the project then we have no problem with that but if no one asks what are we supposed to do?

DM: So you don’t promote any form of support?

NB: Yes we do. We have a toll free number where residents can log their faults and complaints. I like the idea that complaints are forwarded through the Councillor to the Municipality. So yes, there is a form of post project support.

DM: Were there any false expectations created within the community through the years in terms of the water and sanitation services that were to be provided back then or throughout the project. Were there promises made that were not carried out?

NB: I cannot tell you about what happened before my time but I say “don’t give false hope. Rather say things exactly as they are.” I’m not aware of any false hope given although I don’t think they quite understood the concept of getting restricted water. It obviously wasn’t properly explained to them and when it was finally implemented, that was when the problems came up. That may have just been a misunderstanding.

DM: Nareen, that’s all the questions I have for you. Thanks very much for your time. I really appreciate it.

Interviewee: Emerald Mbatha (EM), Development Facilitation Officer: Msunduzi Municipality

Interviewer: Dave Moffett (DM)

Date: 14 July 2003

Venue: Msunduzi Municipality office

DM: Thank you for allowing me the opportunity to interview you. I have been told that you have been and still are quite involved with the Newtown community and I'm sure you will be able to help me quite a bit with finding out more about the Newtown project and why it was such a failure.

EM: Yes I'm sure I will be able to help you. I know that community very well. I've worked very closely with them over the years. In fact, as you say I still work with them at the moment so I'm sure I will be able to answer many of your questions.

DM: My study is to look at the Newtown project from a water and sanitation perspective and see if there are any lessons that we can learn. What I did was to do a full literature review of water and sanitation services and come up with a list of evaluation criteria that could be used to evaluate the project. The questions I'm going to ask you are based around these evaluation criteria.

EM: No problem. You can go ahead and ask me the questions.

DM: What is your involvement in Newtown? Have you been involved for a long time?

EM: Yes I've been involved with Newtown community for many years now. I can't remember when I first got involved but it wasn't long after the Municipality took over in that area from the NPA. I've been the ... what do you call ... the person who is the Municipality's link with the community. I am the liaison person.

DM: You say you are still involved?

EM: Yes I still talk to the community and try and find out what some of their problems are. I am not so much involved with the development part of the project but I still communicate between the people and some of the other departments in the Municipality. But the Municipality is not so involved with the community anymore. I'm not sure why but since the problems that have happened there ... you know ... the problems with the water system and the problems with getting ownership to some of the families, the Municipality is not so involved. I know the project is basically finished but until the water problem is resolved the project can't be seen as finished.

DM: The basic water principles in the White Paper on Water Supply and Sanitation says that development must be demand driven. With regard to the Newtown project, was it driven by demand?

EM: Yes I think so. I think you can say it was driven by demand. In fact I think that water and sanitation was the most crucial demand, even more so than housing because many of the people already had houses.

- DM: Did the community make this clear right from the beginning?
- EM: I can't remember exactly but I can remember that there were quite a few new people who moved to that area. They didn't have houses, so there was a need for some houses. Even today some of these houses are still empty so I don't think they needed to build so many houses. There are quite a few houses in the top section that are standing empty but they haven't been built very well. Maybe that is why these houses are standing empty.
- DM: Are there problems with ownership?
- EM: Yes that is a big problem. Only a few people can say that they own their house. Many of the people are still waiting for title to their house.
- DM: Were the community's needs and the level of service that is affordable to them ever identified?
- EM: Yes, it was established and the community was willing to pay. The community is very poor but they wanted better services than what they got. All along they wanted taps in their houses. They were happy to have VIPs but they wanted water in their houses. They say that they were promised water in their houses right from when the NPA started the project but that these promises were never kept. I think that this is one of the reasons why the water system they were given never worked properly.
- DM: If they wanted full water pressure how were they going to pay for it?
- EM: They believed that they could have paid for water. Maybe not the full amount but the developers and the Municipality never really discussed this with them. It was not given to the community as one of the possibilities. The community was unhappy because there are many other communities in Edendale who don't pay for water, so why shouldn't they also be given the chance to have taps in their homes.
- DM: Was the community involved with the decision making during the planning and design stages? Explain who was involved and in what way.
- EM: Yes the community was fully involved. But there were problems with the Councillor. He got involved right in the beginning of the project but then he didn't stay involved during the important times of the project. It was very disappointing to not have him there all the time. The new Councillor did get a bit more involved but I think it would have been good if the Councillor spoke to the Newtown people and find out why they kept on damaging the water supply.
- DM: Who were the other people from the community that were involved?
- EM: There were many stakeholders involved during that process. There was Steve Crabtree. He was very involved especially over the last few years. I think he was the project manager. There was a man called Eugene Higginson. Then there was Pat Mbanjwa from Mvula Trust. There were community representatives and the Youth Committee. Many people were involved.
- DM: But was the community involved in making decisions?
- EM: The Development Committee were part of making the decisions but they were supposed to speak to the community all the time. I know that was a problem because they didn't always do

that. The Committee even went to Durban to look at how the new water system worked. They were part of agreeing to use that system.

DM: So the community probably weren't involved in the decision to implement the trickle-feed water supply system?

EM: No I think that the community did not want the trickle-feed system. They didn't think it was any better than what they already had. Trucks were delivering water to their house previously and containers could be filled with water from previous standpipes very quickly. The trickle-feed system tanks seemed to run out too quickly.

DM: Was support provided in establishing a community elected committee that represented the community through the different stages of the project? Does such a committee still exist because it could have been used as the body responsible for the scheme after implementation? If not, are you aware why not?

EM: The community was supported in the establishment of the elected committee and yes, the Committee still exists.

DM: Were woman involved in the project? Were woman included in the committee? If not, do you know why not?

EM: Yes women were involved in the project. The reason being is that women are the ones that look after the well being of the family. You know, sanitation affects women more than anyone else because women are the ones who are responsible to make sure that the family is healthy. Also, women are always the ones who have to fetch water and it takes up a lot of the time in a day. The women were very excited about the project in such a way that most of the things were done by them. They liked the project because it was going to empower women.

DM: Were women part of the Development Committee?

EM: Yes there were a few women who were part of the Development Committee.

DM: But were there initiatives by the developer or the Municipality to get women in the community more involved by ensuring that development decisions had the support of the women?

EM: I don't think so. I don't know of any initiative like this. The Municipality is aware that women are important in development projects and that is why we now are more involved with the community.

DM: Was the community's willingness to invest in the project established during the planning stages? Were they willing to contribute financially or by providing labour or resources? Investment by the community might have encouraged a sense of ownership of the project within the community?

EM: Yes, the community was willing to invest in the project in terms of providing free labour because the project was going to empower and help them. I'm not sure what happened because that was between the developer and the community. I think there were some people who did work for the developer but I think they were paid for their work. I don't know if anyone did it for free.

- DM: Do you know if there were any problems between the developer and the community on this?
- EM: There were a few problems between some of the contractors and community members who did some work but I never knew what it was about.
- DM: Were member(s) of the community identified during the project implementation stage, to be trained to operate and maintain the scheme?
- EM: No, community members weren't trained to provide any technical support to the project. As I said some people were employed by the contractors to do a few jobs. So these people came out of the project with some skills. Training has only recently started within the community. That's what I'm now involved in.
- DM: Not too many questions now Emerald. Were political issues that could affect the proper functioning of the project resolved during the planning stage?
- EM: There were some political issues during that stage. As I told you just now, the changing of councilors was a problem. There were also problems with the Unions thinking that the BPD project was trying to introduce privatization. But the problem was resolved because the community continued with the project.
- DM: S there were no major political problems that may have been one of the causes to the community not accepting the water supply?
- EM: No I don't think so. There were no political problems in the community because it is quite a stable community.
- DM: Were the residents trained on how to maintain the water system and on how to best utilise the sanitation service provided?
- EM: Yes members were identified and sent on training courses. They are highly trained in all water issues. These members do house-to-house education. Even at school, children are taught or trained on how to utilize the services. Mvula Trust provided some of the training.
- DM: So there was some training that was undertaken?
- EM: Yes, but this was only started by us at the Municipality recently. We didn't do it right at the beginning of the project.
- DM: Are the services that have been installed, upgradeable? Please explain how and at what sort of costs.
- EM: The services needed to be able to be upgraded. As you know the community is not happy about the drum system to supply water. They are very scared that the drums can easily be poisoned by their enemies.
- DM: Do you think this is a real problem or are they just using it as an excuse because they don't like the water ...
- EM: No no, they really do think that people can do something to the water. But in anyway the taps leak the pipes leak and all problems are there. The people don't like the system.

DM: So what is it that they want?

EM: They prefer that the system be upgraded so that the extra water can be drained away. They now have the extra water and they want the used water to drain away properly.

DM: Is there a facility where community members can forward their complaints and queries and have them seen to?

EM: Yes. Queries can be forwarded to the Municipal Office. The Water Section addresses all these queries and helps the people if they have any problems. I don't really know all about this. You must speak to Mr Todd. He is the man who is in charge of all these queries. But I think that his section will make sure that everyone gets water.

DM: How do people get their problems seen to?

EM: Oh, there is a toll free number to dial when there is a problem.

DM: Do the community know this and what about the fact that not many people have telephones?

EM: Yes, most of them know. There are stickers on all the toilet doors which give this number. The Municipality has tried to promote this but there are still some people who don't know. Even the Municipal vehicles advertise this toll free number on their car doors.

DM: Okay, were the community ever told that if they abuse their water supply and sanitation service that there would be a penalty?

EM: What do you mean?

DM: I want to know if there were any negotiations with the community on the consequences of things like illegal standpipes? Do the community even know that connecting standpipes in their property is not allowed by the Municipality.

EM: No, I don't know of anything like this. I don't think it was ever negotiated with the community. The problem is that the community don't see anything really wrong with what they have done. The water tanks are too dangerous to use and they don't get enough water out of the tanks so they connect their own taps.

DM: Is there (or was there) any form of post project support to the (community) because support after a project is finished is very important?

EM: Yes, there is an open door policy by the municipality that if the community need some help they can always come to them and ask. I even have some people coming to me to ask for help.

DM: When did this come about? Did the Municipality offer this support during the early stages of the project?

EM: Well not really. There was never any organized support given to the Newtown community. The support I am talking about is for anyone in the Municipality not just that community.

DM: Thanks Emerald, I think thats all my questions for you. You have been a great help thanks.

Interviewee: Dirk Fourie (DF) of Lategan, Wagenaar & Fourie (LWF), Project Engineer for the Newtown Housing Project. LWF was appointed by the NPA in 1994 and continued to serve as the consulting civil engineers after the Msunduzi Municipality took over the administration of the project.

Interviewer: Dave Moffett (DM)

Date: 16 July 2003

Venue: Lategan Wagenaar Fourie office

DM: Thank you Dirk for agreeing to meet with me at such short notice. I really appreciate it. I know you are in a hurry to get back up to Zululand, so I'll make this as quick as possible.

DF: Not a problem. I just hope I can help you.

DM: So Dirk, what was your involvement in the project?

DF: I was involved in the project for about eight years. LWF was appointed as the consulting civil engineer for the project. We were initially appointed by the NPA (Natal Provincial Administration) for the design of the civil services to the project that must have been ... sometime in the latter part of 1994. This project was implemented as part of the RKDP project.

DM: Did you continue to your involvement in the project even after the NPA withdrew as the responsible authority, because it took a while before the project again got off the ground with the Pmb TLC?

DF: Yes, although as you say, the project ground to a halt for quite some time while the NPA and the TLC (their name at the time) were arguing as to who was responsible for taking the project further.

DM: Do you think that the project was driven by demand or do you think that the authorities, being the NPA initially and the Msunduzi TLC latterly, perceived a need for development? Why I'm asking you this is that there doesn't really seem to be a demand for many of the houses. Some of the houses are not occupied and some have been dreadfully vandalized. So, was there a real demand for development, or was there some other reason for the development?

DF: No, no, definitely. The project was definitely demand driven. The greatest portion of the project was an *in situ* upgrade of an area on which people were previously resettled under the previous government. Natural growth in the population saw many of the extended families continue to stay on the site, but build onto the existing house or next to it. It's clear that those family members who have grown up and now want their own house don't want to move to any other area. They want to stay in Newtown, so there is a demand for housing.

DM: Ok, so the *in-situ* upgrade, which was largely Phase I, catered mainly for those people that had been there for many years and the Phase II catered for the increase in population size over the past number of years?

DF: Well, yes and no. It wasn't quite like you're saying although most of Phase I was for the people that had been there all those years. Quite a lot of new people had come into the area over the past 10 years plus there were obviously many families who had naturally expanded over the years and their grown children then wanted their own houses. I must say though that

the community has not grown anywhere near as much as some of the other areas in Edendale. Perhaps because Newtown is a bit far out of town.

DM: Do you think the demand was for housing though, or was there a greater demand perhaps for services?

DF: When I got involved there was a huge demand for a proper, reliable supply of water. Remember, before the NPA got involved in trying to get some development off the ground, there was no reliable supply of water. A truck used to supply the whole community with water and what often happened is that those who had jobs to go to during the day didn't always get water because they weren't there when the truck came around. I also know that the community wanted better roads within the community. As soon as it rained there was a problem. There hadn't been any formal development there previously, so there was no stormwater drainage or anything like that.

DM: So would you say that services were a bigger priority than housing at the time?

DF: Well, yeah, I guess so. Other funding sources had dried up so the only way to get good funding was through the Provincial Housing Board (PHB), but then it had to be a full housing project.

DM: What role did the community play in determining their own level of services?

DF: Yes they did play a role. But don't forget the Newtown community is very poor so they didn't have a big choice on what services they got. I don't think they would have been able to afford to pay for any services provided to them, so the services basically had to be free. But to answer your question, the level of service was largely determined by the available finance, which was in the form of PHB subsidies. The NPA originally did the initial planning, so you should speak to someone from the NPA to find out what role the community played in the initial project. As for the recent project, the area was allocated to the developer (Sakhumpakathi) and meetings were held with representatives of the community to explain the levels of services planned and the payment principles. If I recall correctly, Steve Crabtree even took community members, they were part of the Development Committee, to Durban to show them various water supply systems from which they could choose.

DM: But did you ever give the community the opportunity to determine for themselves whether or not they could afford to pay for services, even if it was just a little, to allow them a higher level of service?

DF: Well, there was a Development Committee which was made up of community elected people. There were meetings which were conducted by the developer and the municipality with the community representatives. There was little input from the design team. If you want more about this you will have to speak to the developer, but I can say that we were very limited in what we could offer because of the lack of money available.

DM: Was the community involved with the decision making during the planning and design stages? In other words did the community have their say as to what they wanted and how they wanted things done?

DF: I can't answer that question. Again you will have to speak to the developer. As far as I'm aware most of the decisions were taken after consultation with the Development Committee, but I'm not sure how much of this information filtered down to the community. From what I

could gather, very little information got to the community. I would say that the Development Committee didn't always fully understand what was explained to them and couldn't therefore properly report back to the community.

- DM: Um... International experience has shown the importance of involving women in a project, especially in Africa where women play a very big role in the family unit. This is especially around water issues. What I want to know from you then is whether or not women were properly involved in the project and whether or not women were included in the committee?
- DF: Again I can't answer that. That answer would have to come from the developer, although I know women were involved in the project and were on the Development Committee. If you want to know any more than that then you must speak to Steve Crabtree.
- DM: Ok then let's press on .Was the community's willingness to invest in the project ever established during the planning stages? Were they willing to contribute financially or by providing labour or in other words sweat equity, or resources? It is said that some form of investment may have encouraged a sense of ownership and perhaps a more sustainable project.
- DF: I know that people were used on site by the contractors for various tasks, but they were paid for the work they did. As for the willingness to contribute, I don't know. Sorry about that. Again, speak to Steve Crabtree or someone from the Municipality.
- DM: No problem. Was a member or members, of the community identified during the project implementation stage, to be trained to operate and maintain the scheme? And are these members still responsible? And if not, can you tell me who is responsible now.
- DF: All I can say is that yes, some members of the community were trained during the construction phase. It was decided at the beginning of the project that local labour would be used for certain parts of the development project. So those people who did get to work during the construction phase obviously gained some form of skills. But I wasn't aware of any plans to train any identified people from the community. Not to my knowledge anyway. The whole area is now the Municipality's responsibility, so ... I don't know, maybe they'll identify someone, if they haven't already. The Municipality is responsible to maintain the infrastructure and services there, so perhaps they should get someone trained to help them with services in that area ...
- DM: But would you see value in training one or two people from the community? Perhaps then the problem wouldn't have been as bad as it's turned out to be?
- DF: Yes, I guess I can see some value in having someone there in the community with the knowledge and skills to help others out. Maybe the Municipality could have used these trained people to go house-to-house and explain how to use the trickle-feed system and how to use the VIPs. But let me stop there. It really has nothing to do with me.
- DM: Were political issues that could affect the proper functioning of the project resolved during the planning stage?
- DF: That I don't know. You'll have to speak to others about that. I don't recall any political problems, well, nothing more than you would expect in a development project like this. If there were any ... and I just want to say that I don't know of any, I didn't know about it.

- DM: Ok. Do you know if the residents were ever trained on how to maintain the water system and on how to best utilize the sanitation service provided?
- DF: As I mentioned to you just now, I don't know much about that side of the project so speak to the Municipality about this.
- DM: Sorry Dirk, I won't take much more of your time. The services that have been installed, are they upgradeable? And if they are, what sort of costs would we be looking at?
- DF: Ya, the water supply is upgradeable. The network was designed as a ... a full network supplying each individual site with the quantity according to the standards for individual site connections. Um flow restrictors were put in the house connections to restrict the daily quantity of water that could be supplied to each site. That restriction was set at 200 litres per day. Then each site was supplied with a 200litre water tank that could be filled during the day. The sanitation provided are VIP's which are obviously not upgradeable to a full waterborne sewage system.
- DM: Is a facility provided where complaints and queries can be forwarded and addressed?
- DF: I am not aware of any special facilities that have been provided but I'm sure that the normal channels of communication would be used to address service complaints.
- DM: Were punitive measures for non-compliance negotiated and accepted by all and are they being strictly enforced?
- DF: If any do exist then you will have to get that information from the developer and the Municipality. I don't know of any.
- DM: Is there (or was there) any form of post project support to the users (community), I believe that support after project 'close out', should be made available to sustain a project? I think that service providers, for their own good, should make sure that the developer is easily available to deal with any complaints or problems coming from the community. This obviously can't go on forever, but for a while, at least to let the community know that they haven't just taken their money and run. Your thoughts on this?
- DF: I'm not so sure about that. I think the Municipality should be responsible for all that. Don't forget that the operation and maintenance of services is part of their normal municipal functions, but you'd have to check with them on this. I'm not really in a position to answer this now.
- DM: Do you think there were any false expectations created within the community through the years ... in terms of the water and sanitation services that were provided? In other words were promises made that were not carried out?
- DF: I believe that the levels of service that were supplied were adequately explained to the community, as well as the financial constraints. Remember, there weren't a lot of choices available anyway so the levels of service were kind of fixed anyway. So no I don't think anything was promised and not delivered. They knew from the outset what could and could not be supplied, even if the Development Committee didn't keep them fully informed.

DM: Right then, I think that covers everything. Dirk, thank you very much for your time. I really appreciate it and sorry for the urgency of us meeting. Thanks again.

Interviewee: Tsotsi Sithole (TS) Newtown Resident and member of the Development Committee.

Interviewer: Dave Moffett (DM)

Date: 17 July 2003

Notes from a telephonic interview

DM: Tsotsi, thanks for agreeing to talk to me again about the Newtown Development Project. I have a few formal questions that I'd like to ask you but I think you know what the project that I'm doing is all about. You recall I did speak to you about it that day I met you at Newtown with Councillor Mdlangathi?

TS: Yes I do remember. I remember you are looking at why the development project didn't work out so nice.

DM: That's right, now if I could ask you, do you believe that there was a demand for the project?

TS: Yes there has been a big demand for the project. We have never been properly looked after because we don't have all the services of other places in Edendale. For many years we had no water and the roads were always very bad. We had been asking the authorities for many years to help us with these problems.

DM: Okay, but did you have houses or were there not enough houses for all the people?

TS: The houses have been built here for a long time. The people here built their own houses many years ago and they are still here. They had no money to build nice houses but these houses are fine to live in.

DM: When the community knew that there was going to be a development project in Newtown were they ever asked what services they want and was it ever explained to them that they might have to pay for services?

TS: Yes we (the Development Committee) did explain to the community about all the things that the development would give to the community. The project manager (Steve Crabtree) took us to Durban to look at what the Durban municipality was giving to their people. We didn't like it too much because we knew that our people wanted to have taps in their gardens, not tanks.

DM: So did you know all along that the community would not be happy with water tanks?

TS: I don't say that the people were not happy but they didn't really want this water system. People were getting some water from the Municipality ... a water tanker was giving people water every day and there were some taps. The tank supply was not very much better and the people had been promised much more. Two hundred litres was very little. The people were very disappointed.

DM: Could the people have afforded to pay for water?

TS: Maybe just a little, not the full amount.

DM: Was the community always involved in making decisions?

TS: Yes the Committee did speak to the residents about many things but it wasn't easy to always ask the people. Many times we were not sure what was going to happen and so we couldn't always ask the people.

DM: Do you think that if the community was involved more then the water problem might not have happened?

TS: Maybe but it was not very easy ... even the Committee was changing.

DM: Did the developer or the Municipality talk to the community at all?

TS: No they didn't talk to the people. Very little. They wanted the Committee to keep talking to the community.

DM: Did the developer or Municipality help you set up a Development Committee?

TS: No, what for? We already had a Committee. They didn't help anyway.

DM: Does this Committee still operate?

TS: No. It's finished.

DM: Were there women involved in the Committee?

TS: Yes there were some women on the Committee, but I think the men were there more.

DM: Did the women from the Committee get involved with training of other women?

TS: No I don't think so.

DM: Did the community agree to help pay for the project? Maybe by giving money or agreeing to work on the project for no money?

TS: No, the people were never asked to work for no money or to give in money. The community wanted to work for the contractors to make some money and learn some new skills but they wanted to be paid for their work. I was one of the people who worked for the contractors but it wasn't for very long. There were some arguments with the contractors and they didn't want us to work for them after a while.

DM: Did the community feel that it was their project?

TS: I don't know, I can't answer that question.

DM: Were some people in the community identified to be trained to operate and maintain the water supply system?

TS: No I don't think so but you must speak to Mr Todd about this.

DM: Were there any political problems that might have affected the project?

- TS: There were some problems in the community but never any problem that affected the development. There was a bit of a problem with the Councillor because he was supposed to always inform the community what was going on with the development. He didn't always talk to the community because he was only in the project at the beginning but not when all the important things were happening.
- DM: Were any of the residents trained on how to use and maintain the trickle-feed system and the VIPs?
- TS: No, not the community. The Development Committee was shown how to use the water tanks and the toilets but it was not easy to understand how it all worked. Only those people who worked with the contractors knew how they worked.
- DM: So when the water system and VIPs were handed over to the community they had no idea of how to use them?
- TS: No, they didn't know. That's is one of the reasons why the system failed because they didn't know. Even the toilets are not working properly because people have no money to buy toilet paper and that's why they put all sorts of things in the toilet. There has been no training from the Municipality.
- DM: Are the services upgradeable:
- TS: I don't know, but we have been told that there is no money now.
- DM: If the community has a problem with their water or toilets is there someone that they can complain to or give their query to?
- TS: Yes, the Municipality has a telephone number that you can phone if there are water problems. I think that most of the people still talk to the Councillor. They don't use the Municipality's telephone number.
- DM: My last question. Did the Municipality or developer ever talk to the community or to the Development Committee about putting up illegal taps and pipes?
- TS: No, no-one ever spoke to the community about this. The people don't know that they can't put in their own taps. They think that the water is free anyway, so where is the problem.
- DM: Tsotsi, thank you for your time. I apologise that we have had to do this by telephone but it was the only way we could get to speaking to each other in the short time we had. Thank you again.