Public Private Partnerships *and the* Poor

Series Editor: M. Sohail

Public Private Partnerships *and the* Poor

Case study
Revisiting Queenstown, South Africa

Edited by M. Sohail

Prepared by
Palmer Development Group

Water, Engineering and Development Centre
Loughborough University
2005

Water, Engineering and Development Centre
Loughborough University
Leicestershire
LE11 3TU UK

Public Private Partnerships and the Poor
Case study: Revisiting Queenstown, South Africa
Series Editor: M. Sohail

A reference copy of this publication is also available online at:
http://www.lboro.ac.uk/wedc/publications/

ISBN Paperback 1 84380 086 1

This document is an output from a project funded by the UK Department for International Development (DFID) for the benefit of low-income countries.
The views expressed are not necessarily those of DFID.

Designed and produced at WEDC
by Karen Betts and Sue Plummer

About this series

The purpose of the project *Public Private Partnerships and the Poor in Water and Sanitation* is to determine workable processes whereby the needs of the poor are promoted in strategies that encourage public private partnerships (PPPs) in the provision of water supply and sanitation services. One of the key objectives is to fill some of the gaps that exist in evidence-based reporting of the facts and issues around the impacts of PPPs on poor consumers. This series of reports presents the interim findings and case studies of an analysis of both the pre-contract and operational phases of a number of PPP contracts. A broad view of PPPs has been taken, and situations where the public sector is in partnership with formal private sector companies, with small-scale local entrepreneurs or with NGOs employed in a private sector capacity have all been included.

M. Sohail
Series Editor

Preface

In 2000, Water Engineering Development Centre (WEDC) commissioned the Palmer Development Group (PDG) to undertake a study on the impact of public private partnerships (PPPs) in the provision of water and sanitation services on poor residents living in the then Queenstown Transitional Local Council (TLC) area, Eastern Cape Province, South Africa. In late 2002, PDG was again approached to do a follow-up study on the Queenstown partnership. This report is an attempt to investigate if there have been any changes in the past two years that affect the way in which poor residents in Queenstown experience water and sanitation provision as delivered through the partnership.

Amiena Bayat of the Palmer Development Group and Irene Majaja of Eastern Cape Technikon's Economics Department conducted the research. Amiena Bayat wrote the report with input from Gillian Sykes. Ian Palmer provided support.

Acknowledgements

The editor gratefully acknowledges the assistance of the following people:

- The municipal manager of Lukhanji municipality, Professor Bacela, who assisted the research by arranging venues for the group discussions and other meetings.
- The households interviewed, who willingly answered all the questions.
- The councillors, who made time to meet with the research team despite their busy schedules.
- The officials of Lukhanji municipality and staff of Water and Sanitation Services South Africa (WSSA), for their time and willingness to answer numerous questions.

Contents

List of tables

List of figures

Section 1

Introduction

In 2000 Water Engineering Development Centre (WEDC) commissioned Palmer Development Group (PDG) to undertake a study on the impact of public private partnerships (PPPs) in the provision of water and sanitation services on poor residents living in the then Queenstown Transitional Local Council (TLC) area. In late 2002, PDG was again approached to do a follow up study on the Queenstown partnership. This report is an attempt to investigate if there have been any changes in the past two years that affect the way in which poor residents in Queenstown experience water and sanitation delivery.

Section 2

Methodology

As far as possible, the researchers used a similar methodology to that used in the earlier Queenstown case study.

At the onset of the study the researcher team examined literature on PPPs and in particular attempted to determine if any new research had been undertaken on the Queenstown partnership since 2000. Once this was done, a research assistant from Eastern Cape Technikon in the Eastern Cape Province was identified.

For the primary research itself, preparatory calls were made and meetings were organised with key members of the municipality, including the municipal manager and ward councillors, and with the operator, Water and Sanitation Services South Africa (WSSA). Due in part to budget and time constraints, the fieldwork was conducted over a period of two days during December 2002 using the following methodologies:

- **Informant interviews:** At the request of the Eastern and Western Cape Regional Managing Director of WSSA, a meeting was held on the 19th of December 2002 with representatives from WSSA, the municipal manager and other senior officials of the municipality who were directly involved in the PPP. A limited number of 'informant interviews' were then held separately with representatives from the municipality to clarify some of the issues that had arisen from the earlier meeting.
- **In-depth household questionnaires:** A total of 22 household questionnaires were completed in different wards in Ezibeleni and Mlungisi. As in the initial report, these interviews were conducted on a random basis and were mostly with people responsible for making decisions regarding the running of the household in question.
- One **focus group discussion** was held at the councillor's chambers of the municipality with 14 councillors representing different wards in eZibeleni and Mlungisi. The municipal manager arranged the focus group discussion in the belief that the ward councillors (as representatives of the people) had invaluable perceptions on the way in which the partnership was affecting the poor and could identify the broader opinions of the poor communities. In all cases, the ward councillors resided in eZibeleni and Mlungisi.

2.1 Limitations

As in the initial Queenstown report, it was not possible to interview a statistically significant sample. However, the issues raised in the individual questionnaires and those

brought up in the focus group session by ward councillors correlated sufficiently, indicating that conducting a statistically significant survey would not have added substantial value.

Section 3

Summary of findings from 2000

In 1989, the Queenstown municipality was experiencing financial problems which were affecting its ability to adequately provide municipal services. There were concerns that this would lead to the deterioration of existing services. This resulted in a delegated management contract being entered into in 1992 between the municipality and WSSA for a period of 20 years. Under this contract, WSSA has full responsibility for operating and maintaining the service, but does not have a direct contractual relationship with consumers.

In terms of water and sanitation services, areas under the municipality at the start of the contract had a full level of service. The WSSA therefore took over a well-functioning, well-maintained system. However, the 1995 local government elections saw the amalgamation of Mlungisi and eZibeleni with Queenstown to form the Queenstown TLC. Although serviced - with in-house water and flushing toilets in the case of eZibeleni and outside flushing toilets and taps in Mlungisi - the two townships had not been maintained since they were developed in the 1960s and 1970s and suffered neglect under apartheid. This resulted in a poor standard of service characterised by collapsing infrastructure, high levels of unaccounted for water, severe capacity constraints at both the technical and managerial level and unacceptable response times to burst pipes. The municipality saw different modes of service delivery in the different parts of town as a problem. Given these challenges, it was decided to exercise the right to extend the contract and a public consultation process in Mlungisi and eZibeleni ensued. The extension of the contract resulted in the number of people to be served from 1995 increasing by 170 000[1] from the initial 22 000 people served in 1992. WSSA's contract was subsequently amended to provide equalised services to the Queenstown TLC region.

3.1 The contract

In 2000, WSSA was responsible for the operation, maintenance and management of existing water and sanitation systems. At the time of signing the contract, the South African legal system did not allow for the delegation of billing and collection to the private sector, which is why the municipality undertakes this function. There is, however, a clause in the contract that allows customer management to be taken over by WSSA, but as of 2002 this had not been realised. At the time of signing WSSA expressed that it would ideally like to be responsible for customer management, as officials believed that this would help reduce risk on their part and indeed could reduce risk on the part of the municipality and consumers, too. Despite not being contractually liable for performing

1. Figures could be overstated.

this function, WSSA has taken a number of steps to assist with customer management. For instance, it provides funding to the municipality for the salaries of staff responsible for handling complaints about water and sanitation, and also operates a 24-hour complaints line.

Issues of public interest, such as the setting of tariffs, standards and levels of service, are the responsibility of the municipality. The municipality is responsible for paying the operator at a rate calculated from a combination of a fixed charge component and a variable charge calculated per kilolitre (kl) of water metered at the point of sale to the consumer. At the end of the contract, all assets including those that will have been installed under the contract will be handed back to the municipality.

3.2 Impact on the poor

The impact of the partnership was difficult to assess in 2000 as WSSA was not responsible for customer management and did not have direct contact with residents. The case study indicated that while the *quality* of supply had improved significantly on a broad scale, these service level improvements accrued largely to the municipality and were not felt by poor households. Had the partnership not come about, however, the quality of supply might have deteriorated, which would have had an impact on all consumers.

The 2000 report also found that WSSA reported to the municipality on a monthly basis regarding the quantity and quality of water. The report indicated definite improvements, with fewer leaks, less unaccounted-for water (UAW), improved maintenance and the replacement of more ageing pipes. Residents generally had access to better quality infrastructure, but were unhappy about tariffs and the way in which leaks on private property were dealt with. They believed this latter responsibility should not be theirs, but rather that of the water service provider.

The experience of poor households was one of increasing bills, due to a shift from flat rate charges to metered charges and stricter enforcement of credit control measures. Neither of these functions (tariff setting and credit control) is the responsibility of WSSA, forming as they do part of the municipality's customer management function.

According to the 2000 study, residents were charged for a minimum of 10kl at R2.42 per kilolitre for water. This in effect amounted to a fixed charge of R24.20 a month. For sanitation, a fixed charge of R30.26 applied. In an attempt to address residents' affordability problems, the municipality offered a rebate of 40 per cent for households earning less than R1300 per month. Seven thousand households benefited from this rebate. The total municipal bill - including rates and solid waste, and taking account of the 40 per cent rebate for households earning less than R1300 per month - amounted to R64.80 per month. The rebate is, however, poorly understood, with some people expecting that it should cover the cost of all services for poor households.

These charges were substantially higher for residents of Mlungisi and eZibeleni than they were prior to integration, which resulted as part of a broader move to ensure that the same services were offered across Queenstown TLC and the same tariffs charged. It must be noted that prior to 2000, credit control was not exercised to any significant extent. Thus many households did not pay anything for services. At the time of the 2000 case study, an amended tariff structure had been applied which was likely to see a substantial increase

in the fixed component of the tariff, and a reduction in the variable kilolitre component because of a stepped tariff. The municipality argued that the need to pay WSSA (the fixed component in the contract) necessitated this increase. However, the town engineer stated that whether the contract was there or not, the municipality would still have to increase the fixed component charge in order to cover costs.

Having fixed charges, especially for water and sanitation, resulted in consumers not being able to regulate their consumption to achieve lower utility bills. The overall result was that poor people paid substantially more than in the past and if they refused, the consequences were severe.

So despite technical improvements in the service, the experience of poor consumers in 2000 was one of higher service charges, even where the service level remained the same. There were also complaints about delays in reading meters and concerns about accuracy. Some households had accumulated debts running into thousands of Rand, and many were not in a position to repay these debts. The danger was that once disconnected, some households could not afford to reconnect to the system. Given no alternatives, such as a choice of more affordable levels of service, some households faced having no services at all.

The practice of charging households for services whether they consumed them or not, a result of the fixed charges associated with certain services, was very unpopular. It resulted in some owners of new houses being disconnected before they had even taken occupation. The vacancy rate in the new low-income housing areas was reported to be between 20 to 30 per cent at the time of the 2000 report, which is surprising in an area of housing shortage.

It was observed that quality of services for poor households goes beyond technical improvements. It is also strongly dependent on customer management and tariffs. Both of these factors were at the core of the problem for the poor living in Queenstown in 2000.

The report concluded that generally the contract between WSSA and the municipality was functioning well and roles and responsibilities were understood. However, this was not the case for those households, particularly poorer ones, who were dissatisfied.

Section 4

The situation in 2002

The following section discusses the findings of the 2002 field research. The opinions expressed in the report emerged from the meetings, group discussions and interviews conducted.

4.1 Transformation in local government

There have been changes at the local government level since the initial Queenstown report was written. Between 2000 and 2001, a new municipal system was created through the demarcation process, prior to which many rural communities had no municipal government serving their local needs. The new system provides for two tiers of local government in all areas of the country outside metropolitan areas and a few 'deep rural' areas. Through the demarcation process, Queenstown was incorporated into a larger local municipality called Lukhanji, which itself falls within the new Chris Hani district municipality.

A key issue in dealing with this two-tier system has been the allocation of powers and functions to each tier. The minister of provincial and local government has decided to allocate the authority function for water supply and sanitation services to the Chris Hani district municipality. This means that Chris Hani will need to be the contracting party in any relationship with a water services provider, which may involve some re-negotiation with WSSA. The role of the Lukhanji municipality with regard to water services provision still needs to be finalised. One option will be for it to be the water services provider for the rural areas outside the WSSA contract area. There may also be scope for extending the WSSA contract beyond its existing area of supply and even beyond the Lukhanji local municipality boundary.

4.2 The contract

The details of the contract as discussed in the initial Queenstown report remain unchanged. However, since the initial report WSSA has taken upon itself to develop a Service Charter to provide explicit guidelines for the provision of services, even though it has no such contractual obligation to customers. Some of the details of the Service Charter (particularly those that relate to performance areas and compliance standards) are outlined in Table 4.1. below.

Table 4.1. Service Charter

KPA (Key performance area)	Applicable standard	Compliance agreed with municipality	Compliance standard service charter
Water quality - network	Turbidity < 1.0 NTU	95%	100%
Water quality - treatment plant	Turbidity < 1.0 NTU	95%	100%
Water quality - network & plant	Bacteriological = 0 Faecal coliform	95%	100%
Response time - water system	Reinstate within 24 hours	95%	100%
Response time - sewage system	Clear blockage within 24 hours	95%.	100%
Pipe replacement - water system	Replace 2.5km per year	100%	100%
Meter replacement	No meter older than 10 years	100%	100%
Independent quality monitoring	Independent laboratory testing	Monthly	Monthly

An expansion of the above Performance Charter and its KPAs are currently under discussion between the municipality and WSSA.

Certain of the key contract conditions regulating conformance to contractual obligations and standards include:

- That the final water quality standards meet those set out by the South African Bureau of Standards (SABS 241-1984 (as amended)).
- That wastewater discharge quality standards set by the Department of Water Affairs and Forestry (DWAF) are met.
- That reporting and record keeping requirements are met.
- That there should be continuous water supply against minimum required pressure (2.5 bar), unless due to system and pipeline design limitations.
- That municipal bylaws be adhered to.
- That a dispute resolution mechanism should be in place.
- WSSA has to exercise the standard of care in all circumstances and contractual obligations care as that of a "reasonable and prudent operator" ... "exercising the degree of diligence, prudence and foresight reasonably and ordinarily exercised by experienced operators engaged in the same line of business under the same or similar circumstances and conditions".
- The lease agreement for the facilities imposes the obligation to maintain the municipality's assets, with a further contractual obligation to maintain the entire system in good operating condition and repair throughout the contract duration.
- That the operator is obliged to maintain the entire system, clear sewage blockages and clean the sewers in the public domain.
- That the operator is obliged to repair and replace, in consultation and agreement with the municipality:
    - the water distribution network (2.5km per annum), including valves, hydrants, pump stations and reservoirs water meters;
    - electro-mechanical equipment; and

    - all other system repair work on the instruction of the municipality, including new connections.
- That the operator work with the municipality in defining system expansion requirements and priorities.
- The municipality has the exclusive right to define which of the two raw water extraction sources should be utilised to the municipality's best interest, reviewed regularly with the operator.
- That the operator is obliged to meet environmental, water quality and effluent discharge standards (an independent laboratory service provides a monthly independent quality monitoring service and report).
- That the operator is obliged to respect the law and bylaws.
- That the operator is obliged to ensure that system performance is maximised.
- Monthly meetings with the municipality are held, with reporting on key contractual performance areas, including inter alia:
    - water balances, volumes, non-conformances if any and quality;
    - UAW reduction initiatives; and
    - planned supply disruption for maintenance and upgrade, together with customer advisory communication programme.
- The municipality can impose a penalty per hour per consumer on the operator should it fail to deliver the services to the required quality and availability (imposed once only for one day's service over the last 10 years).
- The municipality has clear recourse in the case of non-conformance to:
- demand conformance;
- appoint third parties, at the cost of the operator, to correct non-conformances; and
- terminate the contract should the operator fail to perform.

The contract provides a balanced framework for the municipality to monitor and regulate the contract in respect of all contractual performance obligations.

4.3 Service coverage

4.3.1 Quantity

As a result of the demarcation process, Queenstown TLC was integrated into Lukhanji municipality, which now consists of the following areas: Queenstown TLC, Queenstown TRC, Whittlesea TLC, Hewu TRC, a portion of Cathcart TRC and Cacadu TRC. Most of the new areas incorporated into Lukhanji are rural areas and not serviced by the contract. According to WSSA and municipal officials, these areas are mainly served by boreholes, which feed communal standpipes. In some areas, however, springs are the main water source and water is also extracted directly from surface sources. Lukhanji municipality supports service delivery in the new demarcated rural areas, pending final promulgation of the roles and responsibilities of the Chris Hani district municipality as the water services authority, and the formal appointment of the Lukhanji municipality as the water service provider. WSSA is providing ad hoc electro-mechanical support in these rural

areas, as required by the Lukhanji municipality through a pubic tender awarded in November 2001.

Water services are also provided in the rural areas by a number of other agencies including DWAF, the Department of Public Works, the Department of Local Government and Housing, Chris Hani district municipality and village water committees.

The council has not decided if it is going to negotiate an extension of the contract to cover the additional areas. There is also uncertainty as to whether or not WSSA would want to enter into such an agreement with Chris Hani district municipality. According to both WSSA and the Lukhanji municipality, feasibility studies need to be undertaken before any negotiations can take place.

4.3.2 Quality

In the initial Queenstown study, it was reported that there were a number of technical improvements since the establishment of the PPP. After discussions with officials from WSSA and the municipality in late 2002 the following emerged:

- Unaccounted for water was on average of 18 per cent.
- The number of pipe bursts was approximately 0.3 bursts per km per annum.
- The number of sewer outflows was approximately 10 per km per annum.

A comparison of the 2000 and 2002 figures shows that there have been additional increases in efficiency since 2000 (see Figure 4.1).

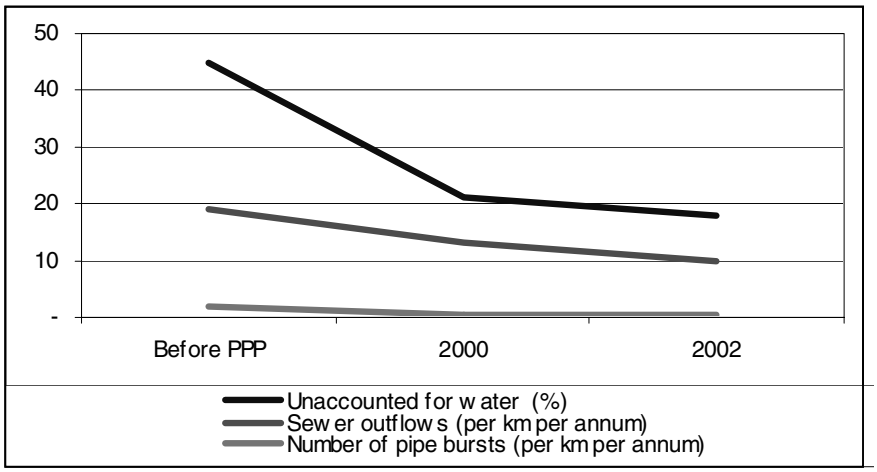

Figure 4.1. Quality indicators for water services

Source: Lukhanji municipality and WSSA.

Although there is no comparative data available on the total number of ageing pipes replaced in Mlungisi and eZibeleni, WSSA has provided a list of the water pipes that it has replaced since the inception of the contract. (see Table 4.2)

Table 4.2. Water pipe replacement by WSSA

Area	Total water pipeline (m)	Total pipeline replaced (m)	% Pipeline replaced
Town	126 000	10 147	8.0%
Mlungisi	92 000	8 637	10.7%
eZibeleni	93 000	3 771	4.1%
TOTAL	315 000	22 555	7.2%

Source: Anton Bekker, WSSA

According to Anton Bekker[2], WSSA provides the municipality with recommendations on any forthcoming annual pipe replacement programmes, prioritised in terms of network problems and ageing pipe-work. After consultation with and approval from the municipality, the amended replacement programme is implemented.

Unlike the 2000 findings, residents from both eZibeleni and Mlungisi reported an improvement in the quality of water provided and indicated that they were receiving good quality water. All respondents were aware that their meters were read on a monthly basis, and none complained of broken meters. However, as in 2000, many were frustrated with having to fix leaks within the boundaries of their properties.

Despite this and even though there were no formal statistics available, municipal officials reported an increase in the number of leaks fixed since 2000. According to one official, *"The number of leaks fixed by residents has increased as they (the people) have become aware of the costs of not fixing leaks. In many cases we have found that high consumption caused by 'leaks' reported by residents has turned out not to be [caused by] leaks at all, but taps left open or toilets continually flushing"*. It was also said that the increase in the number of leaks fixed can be attributed directly to the council's new rebate policy dealing with leaks within the boundaries of residents' properties. In line with this policy, the municipality visits poor areas and examines residents' water accounts. Officials then check these accounts for high consumption, which is often a good indicator of a possible leak. Once a leak is detected, people are asked to repair it and to submit the receipt (from their plumber) to the municipality. Once this is done, a rebate is granted to the resident's account.

2. WSSA's regional managing director for the Eastern and Western Cape.

4.4 Customer management

It was established in 2000 that there was a need for more effective communication between customers, WSSA and the municipality. At that time, customers reported to the municipality directly and WSSA had no direct access to ordinary residents.

Since then the municipality has introduced a 'ward councillor system'. This has improved the way in which customers are able to relate to the municipality and WSSA, and in turn the way in which the municipality and WSSA respond to ordinary residents.

4.4.1 Municipality's customer management

Technical

Almost all households reported problems of a technical nature to either the municipality or the ward councillors.

Meter reading, billing

Meters are read and residents are billed on a monthly basis. As in the past, residents receive one bill from the municipality for all services. From the household interviews it was established that most poor residents understood their bills (i.e. they could read their bills). These bills are paid directly to the municipality and mobile pay-points are still made available to state pensioners.

Credit control

The ward councillor system has had the greatest impact on the way in which credit control is conducted in the municipality. Previously, residents were disconnected if they failed to pay their bills by the due date. By 2002, the municipality was applying the policy outlined below.

Customers who are due to be disconnected

a) The municipality provides a list of defaulters to the ward councillor. The ward councillor then visits the customer regarding the outstanding debt.

b) The councillor and customer can negotiate an arrangement to cover the monthly account, plus a fixed amount on the arrears payable immediately.

c) Information about any such arrangement is reported back to the Debt Collection Department of the municipality within seven days to avoid disconnection.

Customers who have already been disconnected

a) The municipality provides a list of customers who have already been disconnected to the ward councillor to enable him/her to visit the customer regarding the outstanding debt.

b) The customer has to pay the applicable fee of R150.00 plus the first instalment of an arrangement before reconnection.

c) Once again, ward councillors must report back to the Debt Collection Department within seven days.

Customers who have made arrangements to pay outstanding accounts (with councillors), but who have not honoured them are dealt with in the same manner as described above.

The council has also developed an incentive scheme to motivate individuals to pay their outstanding accounts. The incentive scheme rewards customers who have honoured the arrangements made between them and their ward councillor. Residents who pay their first instalment strictly according to the arrangement will qualify for a 5 per cent credit on the amount that has been paid. If the agreement is adhered to for a period of three months, he/she will qualify for a further 10 per cent credit. After the three months, customers will be reviewed quarterly and if payments are maintained they will be credited quarterly with a further 10 per cent credit.

In addition, the current credit control system does not allow for disconnection of a household's water supply. If water services are not paid for, the resident's electricity gets disconnected. The council has taken this decision to reduce the amount of illegal connections to pipelines, because these have caused substantial damage to existing infrastructure, costing the municipality millions in repairs.

The municipality also holds regular workshops with ward councillors to identify problem areas or potential bottlenecks. According to the finance manager of the municipality, this system has reduced the number of disconnections in the municipality.

A municipal official in the treasury department reported that the new credit control policy has impacted positively on the rate of payment for services. Households echoed similar sentiments and indicated that ward councillors were fairly responsive in providing assistance.

Despite this, rates of non-payment for water and sanitation were still high in 2002 (approximately 40 per cent). This is mainly an affordability issue[3], due to the high levels of poverty and low levels of employment in the municipality.

According to the municipal manager, the council wants to retain control over customer management since it feels that people are comfortable dealing with the municipality. Contrary to the findings of the earlier report, residents also indicated that they would prefer to deal with the municipality rather than a private company.

4.4.2 WSSA and customer management

The residents of eZibeleni and Mlungisi mainly contact ward councillors and other municipal officials when they have queries or complaints. Some of the technical queries and complaints are discussed in the Technical Committee, which comprises representatives from both WSSA and the municipality. The Technical Committee meets once a month. General problems and progress are also discussed at these meetings. According to Councillor Nxele, who serves on Technical Committee, ward councillors also meet once a month with their constituents and inform them about important developments in the partnership.

WSSA is in the process of setting up a toll-free line available to all residents served by the contract. Such residents will be able to contact WSSA directly regarding technical

3. See section 4.5.3

problems such as burst pipes. At the time of the 2002 study, these queries were still handled by a support clerk who visited communities regularly.

Ward councillors mentioned that they had direct access to senior officials in WSSA. According to one councillor, "If there is a burst pipe in the middle of the night in my ward, I can contact a senior official at WSSA directly".

Overall residents confirmed a general improvement in customer management as a result of the ward councillor system. Residents also stated that they found it easier to deal with their councillors than dealing with a private company. Better communication was also thought to have resulted in better service delivery.

4.5 Financial

4.5.1 WSSA-Municipality

The municipality is responsible for paying the operator at a rate calculated from a combination of a fixed charge component and a variable charge calculated per kilolitre of water metered at the point of sale to the customers.

4.5.2 Municipal tariffs for water and sanitation

In 2000, residents were charged for a minimum of 10kl at R2.42 per kilolitre. A constant charge of R2.42 was charged for each additional kilolitre consumed. What this meant was that residents who consumed anything between 0 and 10kl were still required to pay R24.20 for water.

The tariff structure has changed significantly since 2000, partly as a result of the free basic water policy of government. The primary intention of the policy is to ensure that no one is denied access to water simply because they are unable to pay for the service. Underlying this policy is the recognition that the provision of water at a basic level has numerous positive impacts on society, including poverty alleviation. The South African standard of the basic level of water draws on the World Health Organisation's standard of 25 litres per person per day. This amount is about 6000 litres per household per month for a household of eight people.

The 2002 study found fixed monthly charges plus a rising block rate being applied to all customers who consumed more than 6kl of water per month (see Table 4.3). The major advantage of using a rising block tariff instead of the constant per kilolitre charge used in 2000 is that it reduces the costs of service provision to small users.

Table 4.3. Tariff structure for domestic customers (2002/2003)

Block	Consumption charge	Basic charge
0-6 kl	Free	Free
6-20 kl	R2.26	R18.38
21-50 kl	R2.68	R28.88
51+kl	R3.15	R41.00

Source: Lukhanji municipality

The tariff is structured so that those households consuming less than 6kl per month receive that water free of charge. If consumption increases over and above 6kl to say 10kl or 15kl a basic charge of R18.38 is levied (this would cover the cost of the first 6kl), and a further R2.26 per kilolitre rate kicks in. This means that individuals consuming between 10 and 15kl (average residential water consumption rates in Lukhanji) would pay a monthly charge of between R27.42 and R38.72 (see Figure 4.2).

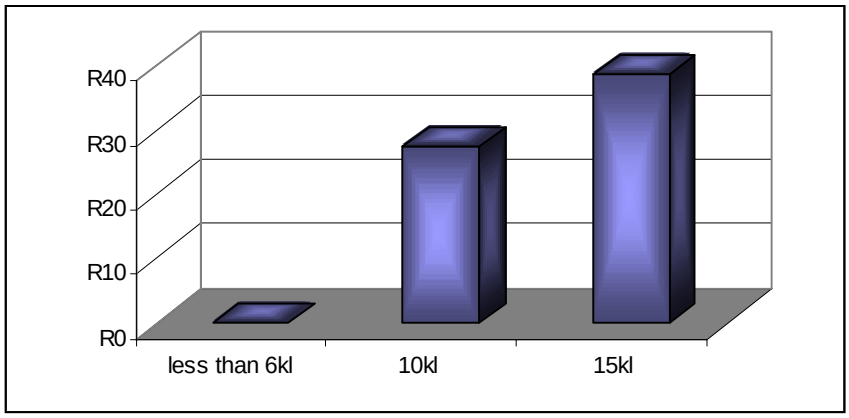

Figure 4.2. Monthly bill for consumption of 6, 10 and 15 kilolitre of water

The new tariff structure for water supply is unusual in the South African context in that it provides for an increasing fixed charge. The introduction of the fixed charge when consumption reaches 6kl may also create problems for consumers (no charge at 5.9kl, yet having to pay R18.38 if consumption rises marginally to 6.1kl). This situation occurs in Durban, which has also applied a single (not rising) fixed charge when consumption exceeds the free basic water limit of 6kl. Durban has been assisting customers in dealing with the problem through among other things using a flow limiter.

When one compares what people paid for water in 2000 with what people were paying in 2002, then the new tariff structure can be seen to benefit those consumers who consume less than 21kl per month. However, if consumers consume more than 21kl they pay more for water (in real terms) than they did in 2000.Tariffs in 2002 were therefore cheaper for poor residents in real terms than they were in 2000 (see Figure 4.3).

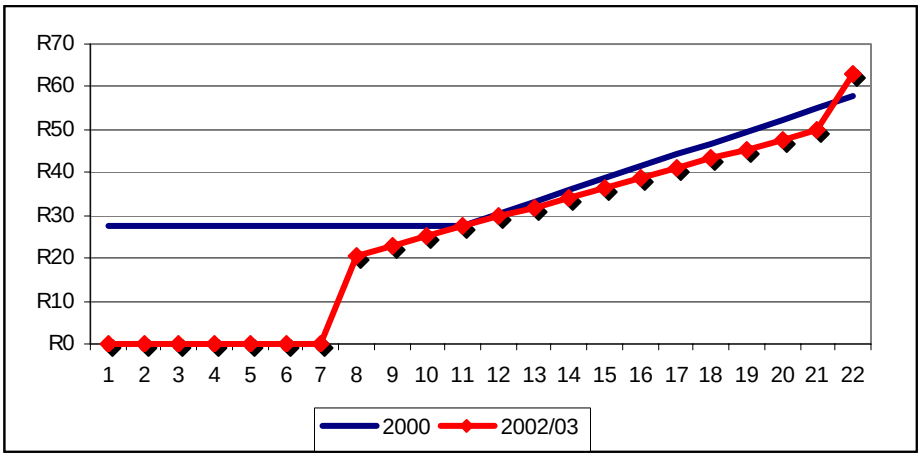

Figure 4.3. Comparison of water bills in real terms between 2000 and 2002/03 (holding Rand constant at 2002 prices)

Residents with small families and no vegetable garden expressed satisfaction with current water tariffs. However, residents with big families were unhappy with the tariffs. According to some households, the free allocation of 6000 litres of water per household per month *"does not even meet basic sanitation requirements,"* given that the average poor household has eight members.

Tariff increases have been more severe for sanitation than those for water supply, increasing from R30.26 to R36.38 per sewerage point. This represents a 20 per cent increase in sanitation tariffs in the past two years, which is greater than the increase in inflation.

On average households expressed dissatisfaction with tariffs. Many complained that despite getting a rebate of 40 per cent for all households earning less than R1300 per month (the same rebate as 2000), services were still unaffordable.

When the municipality was asked about tariff increases for water and sanitation, it maintained that tariffs had increased at rates below the annual rate of inflation. Municipal officials also pointed out that tariffs for water and sanitation in Lukhanji were lower than those of adjacent municipalities.

4.5.3 Affordability of water services

The ability of consumers to afford water services is key to the viability of the municipality. The affordability of services in turn is linked to what people are willing to pay for the services they receive. Willingness to pay (WTP) depends largely on the value each household attaches to a particular service. This is highly dependent on local conditions, and there are no universally applicable figures that can be applied. Ideally, willingness to pay studies should be carried out before a project commences. However, this is often not possible and planners must rely on 'rules of thumb' in order to make planning decisions. The following table represents a 'rule of thumb' approach based on work that the Palmer Development Group has done nationally. It illustrates households'

willingness to pay for various services. It should be noted that in most instances 10 per cent of income is the maximum amount a household would be prepared to allocate to service payments. For water services, this amounts 5 to 6.5 per cent of total monthly income. The assumption is also made that households are willing to pay more in relative terms for water and electricity than for other services. (Table 4.4)

Table 4.4. Estimated willingness to pay for various services by low-income households (R/month)

Service	Income			
	0 - 800	**801 - 1,500**	**1,501 - 2,500**	**2,501 - 3,500**
Water	16	35	50	60
Sanitation	6	14	20	30
Electricity	16	37	60	90
Solid waste	4	9	12	15
Other user charges	8	23	40	60
Property rates	4	12	20	30
Total	**54**	**129**	**202**	**285**
Total as % of income	**14**	**11**	**10**	**10**

Source: Determining Households' Affordability to Pay for Services in the Cape Metropolitan Area, PDG, 1999.

One method for analysing affordability and willingness to pay is to construct illustrative household bills using consumption assumptions and the tariff structure. For illustrative and comparative purposes, the consumption assumptions outlined in Table 4.5 were modelled using the tariff structure of Queenstown municipality in 2000.

Table 4.5. Affordability of those earning up to R800 in 2000 (R/month)

Service	Consumption	Tariffs	Bill	Bill after rebate	WTP	Affordability gap[1]
Water	6kl	24.20	24.20	14.52	16.00	1.48
Sanitation		30.26	30.26	18.15	6.00	-12.15
Total			**54.46**	**32.67**	**22.00**	**-10.68**

1. If the affordability gap is negative then there is an affordability problem.

Table 5 illustrates that very poor households living in the municipality using 6kl of water per month were faced with a total bill of R54.46 per month for water and sanitation in 2000. After the 40 per cent rebate on both water and sanitation services is taken into account, the table shows that sanitation was still more expensive than people's willingness to pay for the service (the bill is R18.15 but people are only willing to pay R6 for sanitation). This means that the bill was unaffordable to poor households in 2000.

Table 4.6. Affordability of those earning between R801 and R1500 in 2000 (R/month)

Service	Consumption	Tariffs	Bill	Bill after rebate	WTP	Affordability gap
Water Sanitation **Total**	15kl	36.30 30.26	36.30 30.26 **66.56**	21.78 18.15 **39.93**	35.00 14.00 **49.00**	13.55 -4.15 **9.40**

Table 4.6 assumes that those households earning over R800 but less than R1500 per month will consume more water than very poor households. Using the tariff structure of 2000, this translates to a typical monthly bill of R66.56 for water and sanitation. Those individuals earning less than R1300 per month benefited from the rebate and would have had to pay a bill of R39.93. Both before and after the rebate, sanitation was unaffordable to poor households in 2000.

Table 4.7. Affordability of those earning up to R800 in 2002 (R/month)

Service	Consumption	Tariffs	Bill	Bill after rebate	WTP	Affordability gap
Water Sanitation **Total**	6kl	0.00 36.38	0.00 36.38 **36.38**	0.00 21.82 **21.82**	16.00 6.00 **22.00**	16.00 -15.82 **0.17**

Table 4.7 depicts the situation in late 2002. Since government introduced the free basic water policy the overall water services bill falls within the affordability threshold of those earning up to R800 per month.

The table illustrates that the new tariff policy implemented by the city has impacted on the affordability of the overall water services package of very poor households. Assuming consumption of 6kl of water per month and one sewerage point per house, this analysis shows that a typical bill for water services would amount to just R36.38 per month. Once again, the sanitation charge is way above people's WTP and is therefore unaffordable. The overall bill is, however, within the affordable range. Nonetheless, this analysis does not suggest that very poor households find their services accounts easily payable. Such households with no income or incomes well below average for the group may well still find themselves in financial difficulty.

Table 4.8. Affordability of those earning between R800 and R1500 in 2002 (R/month)

Service	Consumption	Tariffs	Bill	Bill after rebate	WTP	Affordability gap
Water Sanitation **Total**	15kl	38.72 36.38 **75.10**	38.72 36.38 **75.10**	23.232 21.828 **45.06**	35.00 14.00 **49.00**	11.77 -7.82 **3.95**

Table 4.8 shows that the situation for poor households earning between R800 and R1500 per month in 2002 has deteriorated since 2000 in terms of their ability to pay for water services. The average bill, based on the assumption of 15kl of water consumed is calculated at R75.15 Only households qualifying for a rebate will be able to afford the overall water services bill. Those who do not qualify will not be able to afford water and sanitation services.

In general, tariffs for water services (particularly sanitation) were still unaffordable to poor households in late 2002. The above analysis demonstrates the need for a comprehensive pro-poor policy aimed at making services more affordable and accessible to low-income households. One of the main problems with the current system is that the level of sanitation service is high - onsite waterborne sewerage. Despite being unaffordable for the poor, residents show considerable resistance to accepting anything less than full-service options whether these are affordable or not. Given that residents are currently receiving a very high level of service, affordability can be enhanced through cross-subsidising from other consumer groups. As a large proportion of people in this income group are already provided with full waterborne sanitation, the subsidy option is important and allows equity principles to be applied.

Section 5

Conclusion

The report found that, despite there being no change in the contractual relationship between WSSA and the municipality, a number of changes in the relationships between the authority (municipality), operator (WSSA) and customers took place between the 2000 Queenstown case study and the one carried out in 2002. Some of these are summarised below:

- Residents reported having access to better quality infrastructure and were generally more satisfied with the service. However, there was still some discontent over tariff issues and dissatisfaction with the way leaks on private property are dealt with. The respondents believed the latter should be the responsibility of the water services provider. This issue will probably never be resolved, but a compromise measure has been introduced by the municipality in the form of a rebate policy that encourages households to take responsibility for any on-site leaks that may occur.
- Despite adopting a stepped tariff structure and 6kl of free basic water, residents still reported that water and sanitation tariffs were unaffordable to poor households, particularly larger households and those with large vegetable gardens who rely on more than the free 6kl per month. Sanitation tariffs are also beyond households' willingness to pay for the service. This is a very difficult issue for the municipality to deal with as the waterborne sanitation service is expensive to operate and collecting sufficient income from bills to cover costs is problematic.
- Interviews with poor households in 2002 indicated that water quality is good, and meters are read and bills received regularly. However non-payment is still high (estimated 40-45 per cent of households) mainly due to low incomes and unemployment in the area.
- Communication between the different parties has improved as a result of the ward councillor system. Better communication has, in turn, resulted in better credit control policies being implemented.
- There have been further efficiency gains in the form of decreases in unaccounted for water, and fewer sewer outflows and burst pipes.

It is evident that overall there has been an improvement in service delivery, particularly around the quality of the service provided. The concerns that do exist relate primarily to the tariffs, particularly the way tariffs are structured. There is also considerable uncertainty as to what will happen once Chris Hani district municipality takes over as the water services authority in the area.

Section 6

References

5.1 Documents consulted

1. Ruiters, Greg & Bond, Patrick (2000), Contradictions in municipal transformation from apartheid to democracy: the battle over local water privatisation in South Africa (MSP Background Research Series). Municipal Services Project and the Graduate School of Public and Development Management: University of Witwatersrand, Johannesburg.
   http://www.queensu.ca/msp/pages/Project_Publications/Papers.htm

2. Hemson, David, and Batidzirai, Herbert (2002) Public private partnerships and the poor: Dolphin Coast water concession. WEDC: Loughborough University, UK. Series Editor: M. Sohail.
   http://wedc.lboro.ac.uk/publications/index.htm

3. Sohail, M, and Cotton, A.P. (2001), Public private partnerships and the poor, part A: summary interim findings and lessons learned. WEDC: Loughborough University, UK.
   http://wedc.lboro.ac.uk/publications/pdfs/ppp/ppp-interim-output-a.pdf

4. National Business Initiative (NBI) (2001) Case study: the Nelspruit water concession. www.nbi.org.za via "Project related publications"

5. Plummer, Janelle (2000) Favourable Policy and Forgotten Contracts: Private Sector Participation in Water and Sanitation Services in Stutterheim, South Africa. (Building Municipal Capacity for Private Sector Participation Series - GHK Working Paper 442 01) .GHK International: London
   http://www.undp.org/ppp/library/publications/stutterheim.pdf

6. Palmer Development Group (2000) Public private partnerships and the poor in water and sanitation: Interim findings. Case Study: Queenstown. WEDC: Loughborough University, UK. Series Editor: M.Sohail

7. Palmer Development Group (1999) Determining households' affordability willingness to pay for services in the Cape Metropolitan Area. (unpublished report) Cape Town, South Africa.(unable to trace)

8. National Business Initiative (NBI) (2000) Partnerships volume 5 July 2000: the Dolphin Coast concession contract after one year: An exclusive interview. www.nbi.org.za via "Project related publications"

9. National Business Initiative (NBI) (2001) Partnerships volume 9 July 2001: changes to the Dolphin Coast concession: What is happening and why? www.nbi.org.za via "Project related publications"

5.1.1 WSSA and municipal officials interviewed

1. Prof. Bacela, municipal manager, Lukhanji municipality.
2. Chris Wilcock, Lukhanji municipality.
3. Theuns de Bruin, treasurer, Lukhanji municipality.
4. Andrew Weymouth, town engineer, Lukhanji municipality.
5. Jasper Jonker, finance department, Lukhanji municipality.
6. Anton Bekker, regional managing director: Eastern and Western Cape, WSSA.
7. Tony Sanders, WSSA.
8. Peter Ayoub, WSSA.